

ICONOGRAPHY OF ALL CATALOGUE ITEMS

The content of **Catalogue E** is the longest and most complex of all 8 **CANEA** Catalogues and for ease is divided into two halves. The Entries and their Art History are given in the first half, while the pages below follow on to complete the full chapter. In this half I do on occasions for ease of reference repeat original pictures from the first half so they are immediately to hand, but overall Illustration nos in **black** cross-refer to pictures in **this** section, while those in **russet** refer back to the Ill. numbers in the Art History half (and vice versa). Some late pictures are not captioned and not included in the illustration numbering sequence. If reading this on-line for more definition there is the added advantage of being able to zoom in on the maps, pictures or footnotes. In due course the entire Catalogue is likely to need revision – an easy operation given it is all published in electronic form!

ADVICE ON FOLLOWING THE MATERIAL IN THE ICONOGRAPHY SECTION

As advised at the very start of the Catalogue, compared to the Plain Chant of Catalogues A or B, this one is a complex Fugue with material doubling back on itself or repeated on different registers, thus ideally read through from start to finish in due order to fully gain an idea of the cumulative progress of *Forward Attack* use and development in terms of a narrative that at times unfolds quite dramatically. However, if interest is only in one period the best approach is to look first at the catalogue entry concerned to remind oneself of the basic facts, then jump to the related art historical commentary (under orange headings), before proceeding to *interpretations* for entries under their respective magenta headings in the second half. Discussion of some entries can lead to detailed DIVERSIONS to provide added depth of evidence or discussion to the main line of thought. It was decided best to still keep the two approaches of art historical description and interpretation more or less separate since, generally speaking, form and content give rise to quite different perspectives, narratives and conclusions, but the reader will notice how inevitably they are sometimes so closely intertwined as to be impossible to disentangle one from the other.

SEQUENCING OF ICONOGRAPHY COMMENTARY

Only **ForAtt-25** to **ForAtt-36** come under our *Chronological Focus* (1450-1000), and that discussion begins on page 53, continuing on until to the end of the chapter. As a reminder, the master headings for material *outside* the *Chronological Focus* material are starred ★. Nonetheless, it became clear in the *Art History Section* that where I would have expected to concentrate on giving the full interpretive treatment to these *Chronological Focus* items alone, because key themes connected to the *Forward Attack* arise on objects in the run-up period - prefiguring main trends - I had to consider several early pieces exhaustively too, given they were prophetic of the new iconography coming into full use from 1450 onwards. Once fully established during the *Chronological Focus* period – temporarily suspended during the hiatus and fragmentation of the so-called 'Dark Ages', use of the more novel aspects of imagery in combination with the *Forward Attack* we discussed there re-emerge (by now as common currency) over a wide area during the First Millennium.

We must warn here that we decided it was going to be less confusing in the long run to deal with this post-*Chronological Focus* material immediately *before* launching into interpretations of the *Chronological Focus* material proper. Our overview of the contribution of Central Asian and Indus astronomy to Mitanno-Mycenaean practices in the final section aim to bring all the preparatory clues gradually laid down throughout the Catalogue together in a final crescendo. To then follow it with comments on the 'lesser' 1M material in the right chronological sequence would have been an anti-climax.

**★FORATT 1-14: ICONOGRAPHY OF EARLIEST CATALOGUE ITEMS TO 2000
PRECURSORS TO FUTURE MAIN TRENDS IN THE CHRONOLOGICAL FOCUS**

In this Catalogue I have in several instances dealt with an iconographical theme as it first crops up, only to need to pick it up again at a later period when it has developed further, often in more complex form. As I moved forward I was surprised to see the overall direction our main narrative was taking because over and over again the emphasis was leaning on the side of the non-Semitic, often non-urban and nomadic, insertion of what we could call provincial images from Elam, Central Asia and the Indus into the centuries-old iconographic tradition of the core territories of Sumer, Akkad and Syria. This was particularly seen:

- in the changeover, as time went on, from the benevolent lion-headed eagle-God, Imdugud, to the demonic Anzu;

- in the development of the twisted snakes motif into its anthropomorphic version as the Snake Lady;
- in the use of BIVISUALS or even TRIVISUALS (juxtaposing images from different cultures to denote the same divinity);
- in the appearance of the horse and chariot instead of the cart, even as the vehicle of a God, starting with Baal/Teššub;
- in the depiction of the slim male nude ideal used for heroes and Gods;
- in the accentuation of strictly hieratic compositions with astronomical overtones;
- in the addition of wings to animals and humans to denote divinity;
- in the invention of hybrid monsters such as the griffin and the lion-dragon,
- in seepage of Indo-European culture such as elaborate prestige burials and reliance on the dog and horse, and
- the development of myths and images used in calendar calculation based on different star and planet priorities.

It gradually became clear that the binding factor behind these more unusual changes of emphasis could be put down to the pervasive, yet often hidden, influence of Mitanni culture, whose connections to Central Asia and India are not usually emphasised, even though the phases of their infiltration into the Near East is becoming clearer from new sparse evidence gleaned. Artefacts, carefully read, substantially add to the material mapping their presence if we rely on judicious deduction.

ASTRONOMICAL OVERTONES

Since the Vernal Point moved into Aries c. 2000, given our *Chronological Focus* deals with material from the second half of the 2M it is not surprising that, although the main motifs of earlier 5-3M astronomical iconography such as the lion-bull group continued to be used, new factors in altered sky conditions needing to be taken into account would by now have been strongly apparent after five centuries of slippage. For the efficient operation of a State Calendar, different marker constellations began to take centre stage, and the introduction of symbols for them using images drawn from the current preoccupations of the time goes a long way towards explaining the changes in iconography we come across now. The relevant myths lying behind many of these images are concerned with how the Gods bring order back to the world from the horrors of a Universe reverting to chaos and disaster. Significantly, the *Forward Attack* mode of the lion-bull group is still ubiquitous, given it stands for the fiducial point at the start of the zodiacal Cycle of the Year that always needs to be established as the fixed starting point if ordered government is to be possible. As I deal with each catalogue item it seemed best, where relevant, to at least refer in passing to such astronomical connotations as they crop up - while the image still to hand - simply to lay down a marker for its later in-depth study. The aim is to later bring together all the initially separate astronomical themes to a climax at the end of the Catalogue, centring on Jean Richer's hypothesis¹ about the westward movement of the 0° meridian involving the outreach during the 2M of the near-eastern world to Mycenaean participation in the practical administration of up-dated Calendar fixed points.

FORATT 1-2: PROTOHISTORIC SEALS AND SEALINGS

Even if we cannot give an answer - in the light of contemporary items from the earlier Catalogues and subsequent developments where we have more information - all we need reflect on about these pieces is to wonder whether the *Forward Attack* groups on them, linked as they must be to temple administrations or high-status burial, already depict and refer to a particular divinity (Venus/Inanna/Ishtar) - and thus already bound up with astronomical awareness.

FORATT-3: THE FORWARD ATTACK IN PROTOHISTORIC EGYPT, PERHAPS CONTEMPORARY WITH BALU-4

The Two-Dog Palette in the Ashmolean (**ForAtt-3**) depicts three *Forward Attacks* on the make-up grinding side, two in *Face Bite* mode. It is roughly contemporary with the Shahi-Tump lead weight (**BaLu-4**, illustrated again below for ease of reference) a clear example - contemporary with the palette - of the sharing of lion-bull iconography between India, Egypt and Southern Iran in the Protohistoric period, setting early precedents for the more fully-fledged 2M interaction discussed in full in this Catalogue. Its design consists of two *Back Lunges* separated by what Pierre Amiet of the Louvre identified as two pairs of flies.

¹ Jean Richer *Géographie Sacrée du Monde Grec* Paris 1983

We made much of this lead weight in DIVERSION 1 on METAL, but because its Protohistoric iconography betrays connections with both Susa and the Indus - a constant and crucial theme in this particular Catalogue - I give more commentary on it in this catalogue than under its *Back Lunge* entry – and also because there is an interesting connection between the very early use of the fly on it, and its symbolic survival all the way through to a Mycenaean ring (illustrated below), its symbolism clarified by lines from *The Iliad* quoted shortly. Interestingly, the fly occurs on Egyptian amulets as early as the Naqada II period², but equally it



III.9- 1: Lead weight from Shahi-Tump³ (BaLu-4) on the Makran (see map next page) 4-3M, the inlaid fly motif (top right) compared to the gold fly on a 2M Mycenaean ring from Thebes

features as a messenger in Sumerian mythology in connection with the myth of Inanna - so the Shahi-Tump weight has several implicit meanings in both lands. The lion-prey group points to the dedication of the weight to Inanna (or her Makran equivalent) since her Egyptian equivalent, Hathor, was worshipped not only as Goddess of mines and metals (coming, as these materials do, from the Underworld) but also of weights and measures (chiming with the myth of *Inanna and the Me*). The fly is almost an alternative to the scarab (given they, too, lay their eggs in dung) from whose maggot stage new flies emerge, reinforcing one aspect of the lion-prey group's meaning as a resurrection symbol (c.f. the flies on the Astrabad cup, III.9-177).

By the end of the First Intermediate Period in Egypt the Order of the Golden Fly was more commonly used as a military badge of valour handed out to male army personnel that had shown the same bravery and persistence as the fly does. It featured often on royal female necklaces, especially popular in the New Kingdom, the prototype being the three gold flies on a chain (below top left) said to have been awarded to Queen Ahhotep for her part in expelling the Hyksos from Egypt⁴, thus founding the



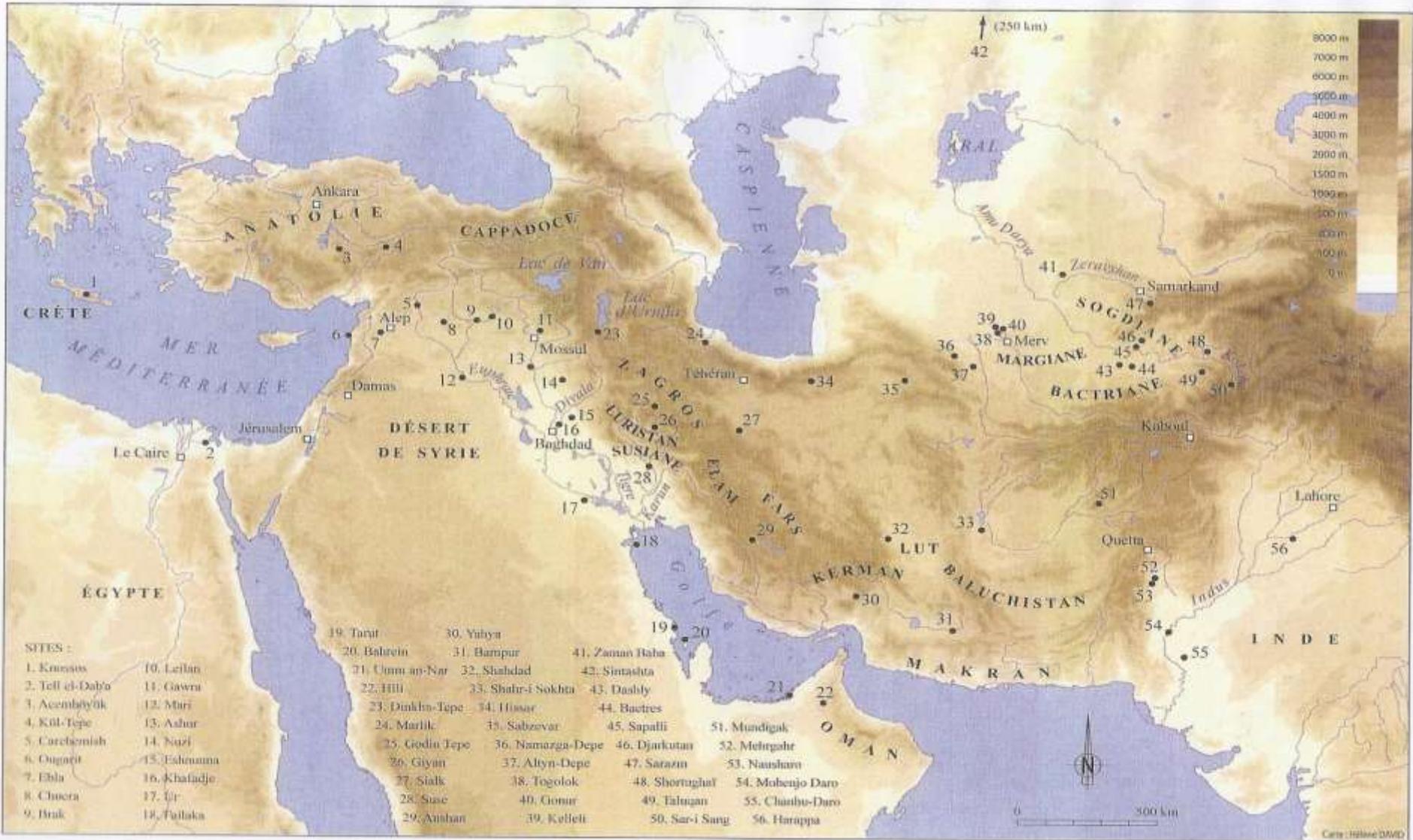
III.9- 2: The fly appears on New Kingdom jewellery in gold, silver, lapis lazuli or carnelian: (top left) necklace with three gold flies, tomb of Queen Ahhotep, Thebes; (bottom left) necklace of gold flies interspaced with gold and carnelian beads; (top left centre) silver flies and lapis lazuli beads (compare bottom centre left with two lapis lazuli flies from the Temple of Ishtar at Mari – Michel *ibid.* fig.4); (middle centre left) necklace of carnelian flies and beads sold at Christies 25 Oct 2012; (centre right) necklace of five gold flies separated by beads with a sixth fly of lapis lazuli acting as a pendant - Brooklyn Museum; (far top right) in the Aigina Treasure what look like flies on close scrutiny turn out to be small owls – linking to the Underworld/night-time connection with Athena in *The Iliad* (ref. below); (lower far right) in a BM case nearby a Minoan example of a MMIII granulated fly/bee (GR.1875-4-6.2⁵)

² For overall information on the fly in Egyptian art I have used G N Gestoso Singer 'Queen Ahhotep and the "Golden Fly"' *Cahiers Caribéens d'Égyptologies XII Feb-March 2009* 75-88. She reminds us that a small fly helps Inanna 'when the *galla* demons are hunting down Dumuzi'.

³ From B Mille et al 'Metallurgical Study of the "Leopard's Weight" from Shahi-Tump (Pakistan)' in C Jarrige et al. *South Asian Archaeology 2001* Paris 2005

⁴ Gestoso-Singer (*ibid.*) cites the stela from Karnak that commemorates her participation in the war of liberation from them (see also T G James *CAH II* p.20)

⁵ Compare with a Minoan bone stamp seal from Archanes - definitely a fly (*CMS II*,1-379) – described in J-C Poursat 'La Glyptique et les autres Arts dans L'Égée Prépalatiale' in W Müller (ed.) *Die Bedeutung der Minoischen und Mykenischen Glyptik [CMS Beiheft 8]* Mainz-am-Rhein c.2010 341-47 fig.8



The hidden iceberg feeding the Mycenaean and Mitanni worlds – map taken from Francfort et al. *ibid.* 2010 (see later footnote for full reference to the paper identifying Marhaši as Bactria)

XVIIIth Dynasty through her various male relatives. We cannot tell if NK use of the motif on necklaces had the same resurrection symbolism (fly-shaped lapis lazuli beads are sometimes found in Mesopotamian tombs), or returned to its more female inner meaning as a reference to Hathor/Venus/Inanna (see the Mari flies of lapis lazuli illustrated above). Given their roles were often interchangeable we should not, either, forget her consort Baal's Biblical epithet, 'Baalzebub, Lord of the Flies'.

Direct proof of the Mitanni role as middle-men linked to the sources of semi-precious stones is found in the later Amarna Letters⁶ - such as EA25 which, to mention but one token item out of hundreds, notes the Pharaoh receives from the King of Mitanni 'a fly whisk overlaid with gold... with genuine lapis lazuli stones [and] carnelian stones ...'. Ahhotep's tomb was full of jewellery inlaid with lapis lazuli and carnelian during a time in the mid-2M when Egypt had easy access again to Central Asian sources via both Syria and the eastern Mitanni, which is why above I have chosen examples of Egyptian jewellery using gold, carnelian and lapis lazuli - the latter two materials, as ever, telling pointers to 2M connections with the Indus - thus linking them in to our earlier DIVERSION 3 on semi-precious stones.

The closest geographical occurrence to Mycenae of the use of the golden fly we know of is one listed in the Qatna inventory⁷, a town open to élite connections with Egypt in the same way as Byblos and Ebla - an area often providing some kind of cultural stepping stone between the Levantine coast and Mycenaean Greece⁸, especially via Ugarit (Qatna was eventually sacked by the Hittites and its population deported to Hatti). Above (bottom right) a gold fly is the centrepiece of a gold ring⁹ from the Mycenaean palace at Thebes—a telling example of Mycenaean cross-cultural borrowing celebrating warrior courage. If flies were associated with the blood of dead bodies on the battlefield, whether in the Mycenaean mind associated also with the idea of loss of life in war and the hope of eventual resurrection we cannot know, but the *Iliad* at least underlines the virtue of persistence:

Athene of the Flashing Eyes was delighted to note that Menelaus had prayed to her before all other gods. She strengthened his shoulders and his knees and implanted in his breast the daring of a fly, which is so fond of human blood that it returns to the attack however often a man may brush it from his face. (Iliad VII 575-9 E V Rieu trsl.)

In the Aegina Treasure what look like flies feature as end-tassels on some accoutrements consisting of loose chains (as in the illustration above right), and though on close scrutiny they turn out to be small owls, in the light of the *Iliad* reference, this may have been a deliberate double allusion to the Goddess Athena. At the highest level, the Athenian owl was a symbol of the Goddess of Wisdom, Learning and Wealth¹⁰, and was later stamped on the coinage of the Athenian Empire (tiny owls inhabited the crevices of the Athenian Acropolis - originally a Mycenaean citadel). But in the Trojan War Athena manifests in her Warrior persona, in which context the owl could be a harbinger of imminent death - obliquely tying in with the fly symbolism - and taking us back to its use on the lead weight (on which the *Back Lunge* is likely to be a Goddess dedication). Owls, like flies, are mentioned as far back as on Sumerian tablets in connection with Inanna's journey to the Underworld (being night hunters it was obvious they would be associated with that realm - and over time they are mentioned as accompanying souls to their new, disembodied existence there (compare with the representation of winged Ishtar with bird talons alongside both lions and owls in the Burney Relief (*III.9- 17*)¹¹). For the Romans, the hooting owl was an omen of death, mentioned in the cases of the assassination of Julius Caesar and the death of Dido. It could well be that representations of the Snake Lady with bird talons (see relevant seals in the *Art History Section*, and our DIVERSION on the subject) are references to owl, rather than eagle, feet.

⁶ W Moran *The Amarna Letters* Baltimore/London 1992, 78

⁷ See *The Assyrian Dictionary XXI*, 155

⁸ See the routes given by F van Koppen in his 'Qatna in altsyrischer Zeit' in P Pfälzner et al. (eds) *Qatna and the Networks of Bronze Age Globalism* Wiesbaden 2015 81-94

⁹ The motif also sometimes featured on early Minoan ivory seals.

¹⁰ Lakṣmi, Hindu Goddess of Wealth, flies on an owl when on her own, and on the eagle Garuda when in the company of her consort, Viṣṇu.

¹¹ The choice of animals with both eyes at the front of the face (lionesses and owls) symbolises the direct gaze of the Goddess (Inanna is the only Divinity represented in this way on Sumerian seals), the ancient way of portraying the Eye of God in the Eternal Present, looking at and knowing the person gazing back. The owl can turn its head all the way round to look back over its shoulders, emphasising the idea of Athena or her predecessors as All-Seeing.

FORATT-10: FACE-BITE FORWARD ATTACK - AND BULL-LEAPING IMAGES - IN EGYPT

The *Face Bite* version of the Forward Attack was again favoured on the VD Egyptian wall paintings cited under **ForAtt-10** where images of baby animals gobbled up by predators as they emerge from their mother's womb suggest the particular season when young are born – Spring). We may therefore be looking at the conscious re-adoption from the Protohistoric period of the Sumerian idea of symbolising the New Year start-point by the Lion-Prey group (calculated on the basis of the Sun-Venus conjunction (analysed in relation to Persepolis under **Catalogue B**). The timing of that conjunction against Moon phases and the rise of Sirius then fine-tunes the measurement of the intercalary gap and whether to add an extra month (more detail on this in DIVERSION 8). It was in **Catalogue D** that we quoted Goedicke on the unusual adaptation of VD Pharaonic Sun Temples to accommodate the Hathor-Venus cult under these particular pharaohs, indicating they were actively taking into account the calendrical realities expressed by the use of the *Forward Attack*. There is no doubt its use on the VD wall-paintings plays its part in depictions of the seasons of the year through associated animal behaviour and human outdoor activities, leading one to ask whether the host of animal pairs on both sides of the Predynastic schist palette under **ForAtt-3** were intended to portray a similar idea (here without human presence other than the shamanic figure with elephant trunk merging into the animal world). When all relevant palettes and knife-handles are considered together in the **SYNTHESES** we can see if this holds good.

In the *Art History Section* we referred, in passing to the (very faded) instance of a *Forward Attack* on a Middle Kingdom tomb painting (**III. 9-51**) which at first glance appears not be symbolic, but simply a variant scenario concerning cattle-rearing, where confrontation with a marauding lion would be a danger to be taken into account in guarding the herd (Newberry notes the faint remains of a man with bow and arrow aiming at the lioness). Its association with what appears to be a playful bull-taming scene on the upper register of the same wall appears to be nothing more than a stage in the yearly story of the herd when the bull has to be captured to be taken away from – or introduced into – the company of the females at impregnation time. Yet right next to it is an acacia tree with the well-known scene that still happens today in North Africa of goats rearing up to eat its leaves – turned into an oft-repeated symbol in the Mesopotamian **CANEA** and probably referring to one of the Equinoxes. So, as with the VD scenes, we are in two minds about whether these animal groups had deliberate symbolic intent or not. The wall of the cubical tomb on which it was painted belonged to a royal official, in the inscriptions named Baqt, 'Great Chief of the Oryx Nome' and 'Confidential friend of the King'. On its north wall, and turning round to the next, are fishing scenes and processions of people in the region bringing in their tax in the form of artefacts or animals (including cows with their calves being ferried over the river) accompanied by ushers and musicians. Further round is a hunting scene and hi-jinks on the boats further along with the locals boarding each others' boats in playful games. But these games change into outright wrestling matches on the western half of the south wall (the part succeeding the section of wall we have reproduced) with more cow-herding scenes underneath. The wrestling matches echo those appearing more profusely on the top three registers of the walls of Tomb 2 at Beni Hasan¹², which has scenes of real warfare on the registers beneath where the men are now in earnest, with shields and spears. All this is by way of pointing out the rough contemporaneity of these scenes with – if not preceding – that mix of bull-leaping, acrobatics and human and animal games that were ritualised in the Syro-Anatolian world¹³ into something deliberately commemorative and symbolic – again, probably to celebrate the New Year – see our DIVERSION 5 on ENTERTAINMENT. This early Beni Hasan precedent aligns to some extent with the narrative Hittite goblets and Mitanni seals described in that DIVERSION – where the practice of bull-leaping is so often depicted in combination with a lion-prey group.

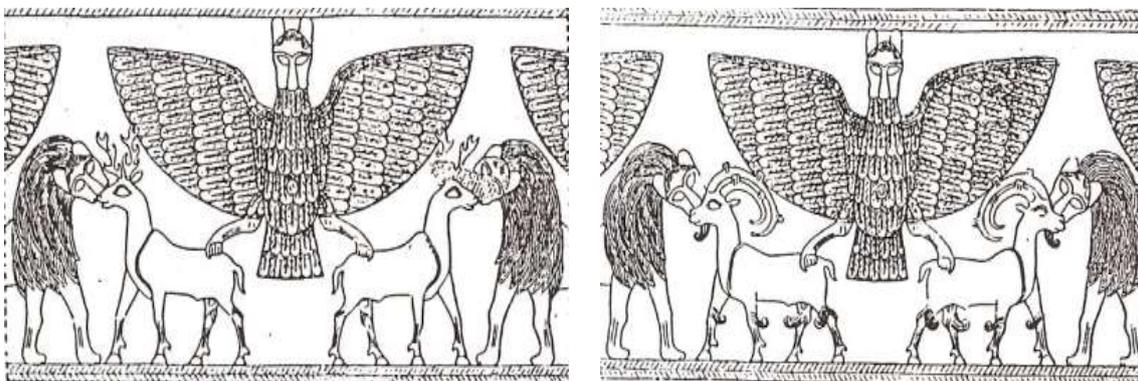
We leave it an open question whether these paintings are intended as symbolic, inspired generally by the Levant - or whether in fact they provided some kind of model that the Levant was to copy.

¹² In P E Newberry *Tombs of Beni Hasan I, London 1893 (several plates) – Tomb 3 in this volume is famous for showing Asiatic immigrants.*

¹³ See, most conveniently, P Taracha *Archeologia LIII* 2002 7-20 and its references

FORATT-4: THE FACE BITE ON THE ENTEMENA VASE AND OTHER IMDUGUD DEDICATORY ARTEFACTS

Although the neck inscription on the vase informs us Entemena dedicated it to the city god Ningirsu, it is not clear whether it was also used as a cult drinking vessel for beer, using straws. On it is shown the striking late Sumerian form of Ningirsu/Ninurta as the lion-headed eagle, Imdugud – from the texts known as representing the Storm God/Sky God - here gripping the rumps of prey attacked by lions (drawn below) – uniquely for Sumerian pieces using the *Face Bite* mode of *Forward Attack* we have just



III.9- 3: Four units of lion-stag or lion-ibex face-bite attacks on the Entemena Vase, seized by Imdugud– Frankfort¹⁴ fig.16

seen was used in Egypt – and similarly popular in Ebla (Syria) (*ForAtt-11/14*). The closest equivalent to the design is the seal of the Syrian king Niqmepa, shown in the next illustration, though the design is not symmetrical with repeated rolling, and in it the two prey held by the eagle are disassociated from the single lion confronting an ibex. We should not be distracted by differences



III.9- 4: Seal of Niqmepa son of Idrimi, Alalakh IV, Collon¹⁵ fig.17c – (not in catalogue)

of style or material from realising the eagle for Sumer/Susa was more or less equivalent to the role of the Horus falcon in Egypt, God of the Sun-in-the-Sky, with the lion-head set on an eagle's outstretched wings being the Sumerian 'take' on Utu, the Sun. So on the vase – in parallel with VD Egyptian content - we assume the four lions biting stag or ibex represent the Four Seasons eternally repeating under the the Sky, the *Forward Attacks* expressing the planetary conjunctions initiating each quarter of the Year as Sun, Moon and Venus cross and conjunct around the Ecliptic providing the benchmarks for Equinox and Solstice.

IMDUGUD ON DEDICATION PLAQUES, MACES AND SEALS

As will be seen on the cylinder seals in this catalogue, Imdugud more usually grips lions alone, or the lion's prey only (so not necessarily to be taken as *Imdugud's* prey). The same is true of the more common Sumerian plaques and maces dedicated to the Gods (sometimes Goddesses) at this time. Two straightforward examples of Ninurta/Ningirsu/Imdugud on dedication plaques from Sumerian or Syrian temples – these from Tello and Mari respectively – are shown below left and centre, numbered according to the register of these *Weihplatten* drawn up by Boese¹⁶.

The powers of the Gods who control Chaos on behalf of humanity were visualised in terms of the weapons they were imagined as using (especially maces, axes, spears or bow and arrow): they are then understood as passed on by proxy on a human scale to kings for similar victories in human wars. It is a common protocol in religion to offer back in gratitude to the God the gifts one

¹⁴ H Frankfort 'Early Dynastic Sculptured Maceheads' *Analecta Orientalia XII* (dedicated to Antonio Deimel) 1935, 105-121

¹⁵ D Collon 'Seal Owners and Sealing Practices in the Ancient Near East' in *Die Bedeutung der Minoischen und Mykenischen Glyptik (CMS Beiheft 8)* Mainz-am-Rhein 2010, 109-29

¹⁶ J Boese *ibid.*

asks of them, so the type of mace held by a Sumerian king would be dedicated in the sanctuary on a God-size scale back to the God to evoke and reinforce the reciprocal arrangement (even Mesilim, King of Kish dedicated a mace to Ningirsu at Tello (*III. 9-11*). In the myth, **Lugal-e**, come the lines: 'A celestial mace, a prosperous and unchanging rule, eternal life, the good favour of Enlil, O King, and the strength of Anu – these shall be your reward', indicating how the weapon was visualised as transmitter of the God's own powers down to the human arena. Parrot (*ibid.*) mentions that the dedicatory mace (complete with handle) could have been displayed by slotting it upright into the centre hole of the plaque laid flat as a supporting base (as below left and centre) that would either be placed on an altar or on the ground (along the lines of the Mitanni standard shown on seals, as in the last seal of **ForAtt-28** (left)). This makes better sense of the function of such plaques over their usual interpretation as wall-panels since, made of heavy limestone, if pegged into a brick wall they would have needed a metal rod to fix it (although bronze or copper pins in the form of human figures have been found at the same sites, we know these were foundation deposit pegs).

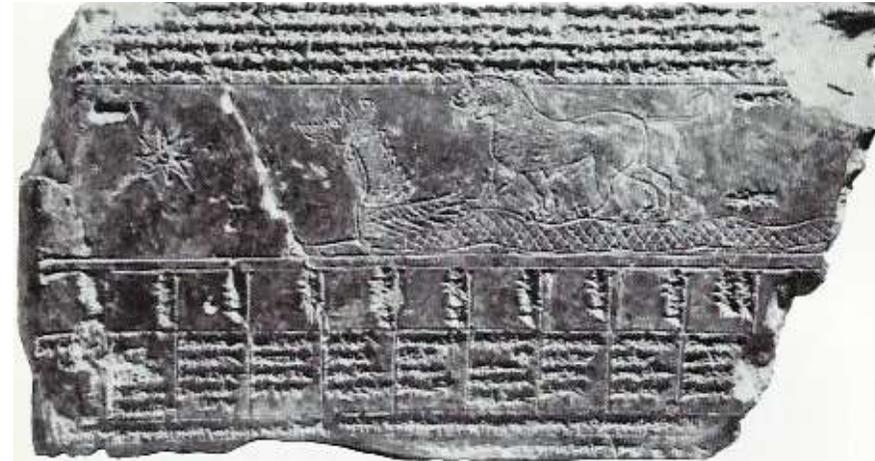


III.9- 5: (Left) Dedication plaque, like the Entemena Vase also from Tello – Louvre, Boese T1 (c.f. in Egyptian iconography two lions back to back representing Yesterday and Tomorrow); (centre)left half of a fragmentary dedication plaque from Mari palace - Damascus Museum, Boese M4, and (right) the unprovenanced Copenhagen National Museum mace (no. 5413) - Frankfort fig. 4

THE COPENHAGEN MACE: IMDUGUD WITH THE SEVEN-HEADED SERPENT

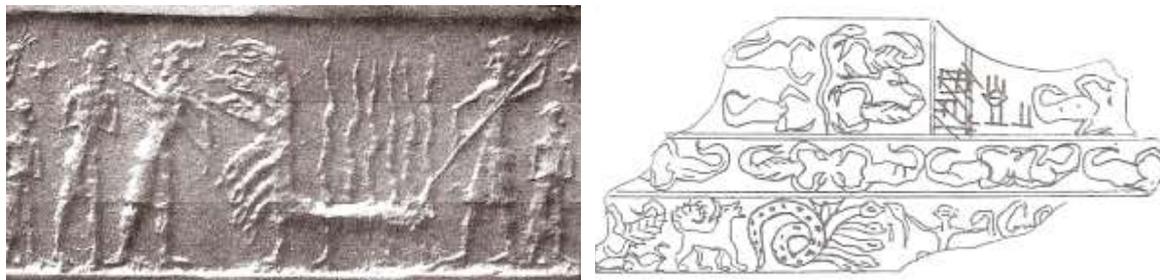
Illustrated top right is one of several maceheads whose iconography is discussed by Frankfort, this particular one now in the Copenhagen National Museum. The mace has no firm provenance but was deemed by him by the end of his paper to have come from Tell Asmar where 'The Lord of Vegetation', Abu/Ningishzida/Tammuz was honoured both as a giant human figure and as lion-headed eagle, Imdugud, involved with various kinds of serpent – including a seven-headed one (c.f. the seals below). The appearance of just such a seven-headed monster at the top of the mace is of iconographic interest given its placing over the triple Imdugud eagle clutching its pairs of animals. Frankfort reads it as the constellation Hydra (on star maps a long constellation running in one sweep underneath Cancer, Leo and Virgo – see *III.9- 6* below right, and also *III.19-201* and *III.19-232* in **Chapter 19**). Although some texts do mention Imdugud and Hydra together (dependent, of course, upon whether the cuneiform constellation names have been correctly translated in the first place), Hydra was always imagined as a straightforward serpent, with no sevenfold connotations (compare the two star maps next page). On the other hand, since Cancer, Leo and Virgo in turn run above Hydra and under Ursa Major this could be an intentional merging of images on the part of the Sumerians – in which case Frankfort's interpretation is plausible. But if, in fact, the seven-headed serpent is *Draco* merged with Ursa Major and/or Ursa Minor (rather than Hydra), designating the Polar Centre of the Sky which Imdugud represents, I believe we are on firmer ground.

Apart from echoes of the seven-headed snake on the mace possibly expressing the same idea as the unusually dramatic sealing from Kish in the Ashmolean (see the last seal of **ForAtt-6** on which the attacking lion has a similar arrangement of



III.9- 6: (Left) Star map showing Draco at the Polar Centre and (right) Hydra in relation to the positions of Virgo, Leo, Cancer as mapped today, and as stood upon by Leo on the Seleucid clay tablet (VAT 7847) (Virgo is on the other side, with Corvus). Note also for future reference in the Iconography Section (on the left map) the positioning of the lines Ursa Major, Auriga-Perseus and Taurus - and Arcturus, Ursa Major, Gemini, Dogs and Orion.

several heads on one body (three in *Forward Attack* mode and a fourth a *Rear Attack*), the mace ties in with two further Diyala seals below – both also from Tell Asmar. The seven-headed monster speared by the hunter (below left, found in Single Shrine 4



III.9- 7: (Left) Akkadian seal SCSCat 497; (right) Sumerian sealing fragment SCSCat 478 from Tell Asmar

no. As. 32.738) is in this rendition attached to a mammalian body, with four of its heads dead and three still alive, spitting at the spear-thrusting hunter. If the main neck with its seven heads is counted as one serpent, then six more rise up from its back - a seven-headed monster of double indemnity! It has the appearance of the earliest EDII seals that first introduced the intervening hunter, but the modelling of the human physiognomies point to an early Akkadian date. On the right, the remains of a sealing found in the early Northern Palace at Tell Asmar (As. 32.992) this time shows a seven-headed snake coiled up, remarked on by Frankfort as a version close to that on the mace. Along with rows of scorpions and a howling dog, two of its heads, now decapitated, are brandished by the hunter next to it. Both seals express the drama of controlling the Chaos monster – in the Kassite period named Tiamat – the female demi-urge threatening the smooth running of the Sky. Considering the Diyala's geographic positioning at an infiltration point for the Mitanni, this iconography links, unsurprisingly, to the general ophidian and draconic repertoire favoured in the Bactria-Margiana Archaeological Complex (BMAC).

The theme of the dragon of Chaos brought to order either by the Sky God *or* ruler planet Jupiter in all his names erupts throughout this *Iconography Section*. Maul¹⁷ drew up a most interesting recapitulation of all eleven 'Ungeheuern' summoned by Tiamat to form the cohort she needs to protect her against Marduk-Jupiter, embodiment of Order, putting them under the leadership of her partner in crime, Kingu. It is worth quoting in full since we recognise most members of this cast already, as

	NAME	FORM	COMMENT
1	BAŠMU	'Schlange'	Mischwesen
2	MUŠĤUŠŠU	'Furchtbarer Drache'	Schlangendrache mit Löwenleib
3	LAĤMU	Sechslotziger Held	Menschengestalt
4	UGALLU	Löwenmensch	Menschenkörper mit Löwenkopf und Vogelfüssen
5	URIDIMMU	'Tollwütiger Löwe'	Oberkörper und Kopf eines Menschen; Unterleib und Beine eines Löwen
6	GIRTABLULLŪ	'Skorpionenmensch'	Oberkörper und Kopf eines Menschen; Flügel und Vogelbeine; Skorpionschwanz
7	ŪMŪ DABRŪTU	'Aggressive Stürme'	(Ikonographie unbekannt)
8	KULLULLŪ	Fischmensch	Oberkörper und Kopf eines Menschen; Unterleib eines Fisches
9	KUSARIKKU	Stiermensch	Oberkörper und Kopf eines Menschen; Unterleib und Beine eines Stieres
10	MUŠMAĤĤŪ	Siebenköpfige Schlange	
11	UŠUMGALLU	Gross-Schlange	(Ikonographie unbekannt)

¹⁷ S Maul 'Der Sieg über die Mächte des Bösen: Götterkampf, Triumphrituale und Torarchitektur in Assyrien' in E Zenger (ed.) *Ritual und Poesie: Formen und Orte Religiöser Dichtung im Alten Orient, im Judentum und im Christentum (Herders Biblische Studien Vol. 36)* 2005 Freiburg etc. 47-71 (his fn..61)

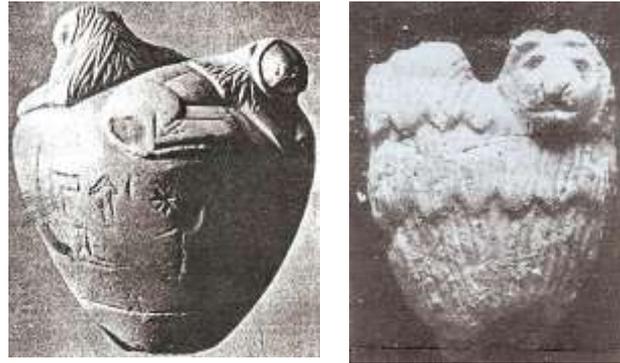
minor protective hybrid divinities¹⁸ - one of them, in fact, the seven-headed snake (no. 10 in the table). No.7 (ÜMÜ DABRÜTU) we could well associate with the Hedammu storm illustrated on Mitanni seals at *III. 9-107* - and indeed no. 2 (MUŠĦUŠŠU) is shown under the control of Marduk in *III. 9-108*. Looking at the rest of the table in numerical order, starting with No. 1 (BAŠMU), all we can say is that this entire Catalogue revolves round snakes and the Snake Lady – note Maul’s comment that the BAŠMU is a *Mischwesen*/hybrid who might indeed represent the Snake Lady, if not Tiamat herself! No. 3 (LAĦMU) needs no introduction, and Nos 4-6 and 8-9 are combinations of the male human form with Lion (two of these), Bull, Scorpion and Fish (representations of the Four Quarters blended with the Orion hero/Aquarian Man) – all familiar to us, the Bull-Man (KUSARIKKU) often featuring on Mitanni seals as the protectors of the Winged Standard . With No. 11 (UŠUMGALLU), we end with the really big Big Snake with all many possible connotations, best initially visualised as the huge ophid coiling up and around Kassite kudurrus such as the ones illustrated in DIVERSION 12 under the subheading, *Snakes And The Snake Lady On Kassite Boundary Stones*.

The Copenhagen macehead thus appears to have on it images of Abu-Ninurta as Imdugud/Sky (to which God the mace must have been dedicated) with the seven-headed monster MUŠMAĦĦÜ sometimes shown as subdued by him set above him, curled around the Polar Centre to mark the Axis of the World. It is gratifying that Frankfort spontaneously thought to make astronomical correlations, at least, between the seven-headed snake and the constellation Hydra, as also between Imdugud and the constellation Aquila – though I would read the eagle wings more literally as representing the over-arching background of Sky-God Enlil alone, from whose circumpolar zone the rest of the night sky can be identified and oriented. The seven-headed snake as a form of *Draco* merged with Ursa Major/Minor would provide the anchor for Ninurta to bring the Sky to order, being an early formulation of the Seven-God, the *Sibitti* (fully discussed in **Chapter 19**). Yet as ways of representing Ninurta/Marduk’s battle developed, Imdugud in his particular form becomes part of the problem since - as described in DIVERSION 6 – through mid-2M Indo-Iranian influence he is demoted into the demon Anzu. In the many definitions of Ningirsu/Ninurta we gave there, at one period he is described as the hero who kills Tiamat – in which case Imdugud - or the hunter figure holding the lion’s tail on the Akkadian seals of **ForAtt-12** - have a level of meaning as representing either Ninurta – or Ninurta’s human proxy. It was in that same DIVERSION that we went through the ensuing perpetuation of the Sky God and the Dragon of Chaos story in both Mitanni and Assyrian mythology, validating our interpretation through later material with its added iconographical embellishments to be read along the same lines. Let us consider the role of three planets in the re-ordering of the sky undertaken by Ninurta-Imdugud.

SUN, MOON AND VENUS IN THE SUMERIAN CALENDAR

Starting from the end of the 5M, observing Sun-Venus-Moon interplay was the linch-pin of calendrical calibration - on which the Ruler’s efficacy depended - explaining the high number of lion-prey artefacts found in Inanna temples of all compositional types, in this instance on the Sumerian mace-heads and plaques under discussion. Where male lions on them are likely to be solar, embodying Utu the Sun-God, maces were sometimes specifically dedicated with incised Sumerian texts to other Gods, and the inscription on the next mace below left is a dedication to Inanna/Venus – visualised by the Sumerians as daughter of Nannar the Moon and sister of Utu the Sun (see our *Gods Table* at *III. 9-109*). From what we have logged in previous catalogues it is no surprise that again the connection between the lion-prey group and Venus/Inanna emerges, and I have just suggested the *Forward Attacks* on the Entemena Vase embody the Sun-Moon-Venus junctures so crucial for ascertaining the start point of the Venus Synodic Period, explained in **Chapter 19** as the fiducial day from which to recalibrate any slippage in the State Calendar roughly every 25, 50 or 100 years. Overall, from precedents given in **Catalogues C & D**, where anthropomorphic Ishtar is sometimes shown actually standing on a lion-prey group (**Ratt-28/Urusta-27f**) or seated on a throne with the lion-prey group immediately behind her (**Urusta-27**), it was already becoming clear that the lion-prey attack, as well as the lioness alone, could

¹⁸ This list was compiled with the help of F A M Wiggermann *Mesopotamian Protective Spirits: The Ritual Texts* Gröningen 1992



III.9- 8: Macehead from Khafaje (left) dedicated to Inanna, sister of Utu¹⁹, and a second (right) from the same site presumed by Frankfort also to be dedicated to her, though without inscription. Pairs of lions could simply refer to the solstice extremes.

be a symbol for the Goddess, and we thus automatically view the Sumerian seals in this catalogue – and dedication plaques of **ForAtt-8** - with that thought in mind.

SUMMARY: THE ENTEMENA VASE AS HIGHEST FORM OF DEDICATION TO NINURTA

To look ahead to the early Second Millennium when the roles of the Gods were more precisely defined, one interim conclusion we can come to from the Sumerian pieces related here in their iconography to the Entemena Vase is that the image of Imdugud seizing lion-prey attacks on the Entemena Vase adds up to being one of the earliest portrayals of the Ninurta-Baal and Inanna-Ishtar couple in archaic animal form, the implications of their joint mission to the Underworld and their victory over Death and Disorder implicitly conveyed in a cleverly combined pair of motifs – whereby the Sky God as eagle grips the lion attacking prey of Venus-Inanna. The Entemena Vase – made as a special, more than usual ‘thank you’ to the God from a king – could have been made on the occasion of Entemena’s victory over Tello/Girsu, a special prize in Entemena’s repertoire of conquered cities (which included Ur and Nippur, also in our purview for using the *Forward Attack* on seals and plaques). Its design has such an immediate *Gestalt* and high currency in the Syro-Sumerian region wherever it spread (as, for instance, to both Ebla and Karashamb) that - quite aside from its astonishing workmanship - it stands as a masterpiece using the pre-anthropomorphic, animal-based Baal-Ishtar iconography.

We explained under the last **DIVERSION** how the God Ninurta under different cultures over following centuries in other territories takes on the role of Storm God Teššub or Warrior God Baal (yet is still fondly retained as Ninurta in human guise by the Neo-Assyrians centuries later). Suffice it from the vase alone to confirm, as already spelled out in that **DIVERSION**, that Imdugud and Ninurta/Ningirsu must to some extent be interchangeable, since the dedication on it is to Ningirsu, God of Girsu, even though the imagery does not use the giant human figure representing him, as on the Stela of the Vultures. Apart from the Sky, on the basis of some texts commentators judge Ninurta/Ningirsu to also embody Saturn/Jupiter (the most common ‘handle’ on Baal) but we have seen from texts that the nature of this combined Planetary force is not so straightforward, especially since the nature of his atmospheric behaviour leads to the cross-overs (explained in **DIVERSION 6**) with the Lord of Vegetation Abu/Tammuz/the Goats, or the entwined snakes of Ningishzida - as much as with the more common winged Sky-God Imdugud.

If the ritual mace dedicated in the temple is an objectification of the God’s power as a weapon, so Entemena’s dedication of his solid silver vase to Girsu’s City God Ningirsu/Ninurta in the form of the most advanced metalwork possible in that period not only expresses gratitude for victory in war, but – by the fact that Imdugud uniquely grasps lion and prey groups referring to Venus (and not single animals) - I believe also acknowledges acceptance of the king’s devolved calendrical duty and authority now acquired by him as conquering leader - a power that can only be passed down from the Gods as an essential component of statecraft implemented through the temple observatory system.

¹⁹ For instance, Frankfort’s fig 13 illustrates the macehead of Anbu of Ur in the British Museum, dedicated to the Sun god.

As suggested, the four lion-headed eagles on the vase holding alternate pairs of lions and stags or lions and ibex must on their own surely refer to the Equinoxes and Solstices, their starting points unusually expressed by the lions biting the faces of the stag or ibex, expressing the concept of Ningirsu/Ninurta as 'Ruler of the Four Quarters' at the heavenly level (of course from Akkadian times we know the term was adopted in geographical terms as an epithet of conquering Rulers of the time). Discussion of the ED and Akkadian cylinder seals in this Catalogue next coming up for discussion (**ForAtt-5/6/7/12**) provide more early versions of the quaternary of separately standing (rather than interacting) Eagle, Bull, Lion and Human - later canonised - even into Christian times - as the Four Cardinal directions of the Cosmos (see **Chapter 19**). Although we have already pointed out how the seals and sealings of this period – whether Proto- or Predynastic and Early Dynastic to Akkadian – have counterparts in previous Catalogues using other compositional types, a new thread comes in from the pieces under **ForAtt-9** signposting the earliest 3M outreach from Egypt and Mesopotamia to Crete and Byblos.

FORATT-5/6/7/9/12 (SEALS) & FORATT-8 (WALL PLAQUES) – MORE ON THE SKY GOD IMDUGUD

Descriptions in the entries themselves often speculate on pointers to possible levels of meaning as they arise, all to be pulled together in the **SYNTHESES** Section, bearing in mind that the Sumerian cities these sealings come from (most notably Kish, Nippur and Ur) all made Inanna (sometimes with variation of name) the central female divinity of their cultic life alongside the more numerous male gods. To take one hymn in praise of Ishtar/Inanna of Nippur²⁰ (a city whose purpose is described in the hymn as 'bringing Heaven to Earth') it describes how Ea of Eridu, God of Wisdom, in giving recognition to Ishtar/Inanna names her 'Queen of Eridu' and 'Queen of Nippur' – calling her 'most excellent in name' and raising her to the top assembly of Gods:

With Enlil She decrees Fate: She guideth aright the thoughts of the great Gods with Anu; daily the Anunnaki assemble unto Her in the Council of Affairs and the Igigi gather about Her to know their portion, to receive their libation ... [as]... She considers Her decision.

These descriptions express the indispensibility of Venus in calculating a reliable calendar, due to the close fit of Her Synodic Cycle with those of Sun and Moon - see **Chapter 19** - the Anunnaki are all the days and the Igigi all the nights of the full Year.

Polonsky²¹ describes how in certain texts Enlil, the chief Fate-deciding God, hands over to Goddess Ninmah the determination of a baby's future as it emerges from the womb, the birth seen as an existential 'sun-rise' witnessed by Shamash, God of Truth and Justice. (Close in concept to the Egyptian visualisation the journey of Ra^c through the Underworld, the foetus is imagined as a boat making its journey to greet the sunrise - a possible new angle on the seal under **III. 9-194**). In surely the earliest mention of the custom on record, the foetus boat is described as loaded not only with perfume but also with carnelian and lapis lazuli (pink for the girl and blue for the boy) as indicators for which sex the child will turn out to be! Elsewhere, not only is Inanna 'Goddess of the Powers of the Gods' but she also channels power to humans, most notably in ratifying Kingship. If, therefore, we have a ruler on his throne backed by the lion-prey group, we understand it as the authentication by the Goddess of his authority – and his authority derives partly from his ability to manage the State Calendar.

There is no need at this point to say much else about the significance of the recurring *Forward Attack* on the seals under these entries, other than to notice the added twist on the last seal of **ForAtt-7** that the prey (a cow, not a bull) is attacked by the lion at the moment of giving birth (we have already seen this idea on the VD wall paintings of **ForAtt-10**), heightening the contrast between the powers over Life and Death embodied not only in the lion, but in turn also by the hunter who intervenes, as if conquering Death itself. It is worth at least mentioning in passing that the inner significance of prey giving birth at the moment of attack could be a reference to gestation periods – governed by the Moon – so quite possibly an alternative allusion to the Moon

²⁰ S Langdon 'Hymn in Paragraphs to Ishtar as the Belit of Nippur' *AFO I* 1923, 12-18

²¹ J Polonsky 'The Mesopotamian Conceptualization of Birth' in *If a Man Builds a Joyful House: Assyriological Studies in Honor of Erle Verdun Leichty* Leiden and Boston 2006, 297-311.

in place of the usual crescent often placed over the lion-prey group with the Sun. A Ruler portraying himself as hunter or herdsman (predecessor of The Good Shepherd concept - as also in **ForAtt-12**) would know the analogy would be understood, easily explaining why the lion attack, in letting the core connotation of the Venus measures of the calendar to fall to the background, could change into a state symbol for both divine power *and* the royal power upheld by it.



III.9- 9: EDIII seal in the Louvre (photo author) with feasting scene above lion-ibex Forward Attacks indicating New Year celebrations

On the two additional Early Dynastic plaques under **ForAtt-8**, the *Forward Attack* (also with weapon-bearing hunter) is shown beneath feasting scenes at a state occasion just as depicted on so many Sumerian cylinder seals. A typical example from the Louvre illustrated above (not in the catalogue) has in the lower register two lion on tumbling goat *Forward Attacks* woven into a Master of the Beasts group.

We have seen how the added ingredient to the content of such plaques and seals is the presence of Imdugud the lion-headed eagle in the sky which, because of its frequent juxtaposition with the lion-prey group and in the light of later changes to his image under Mitanni influence, required further scrutiny in DIVERSION 6 on NINURTA.

FORATT-11 & FORATT-14: COURT ART AT EBLA

In **ForAtt-11** it is more the *Throat Bite* that is favoured, as seen also in the last few items of **ForAtt-10f**. There is not much to add about the significance of these *Forward Attacks* on the pieces of burnt furniture from Palace G that cannot already be said about the contemporary seals from Ebla that use it frequently – other than to note that, even if there is a whiff of Egypt behind the choice, on balance it is clear the Eblans at this time still lived by core Sumerian mythology, using Sumerian prototypes, mostly of the **Crossover Attack** which with the associated importance of the Gilgamesh myth is looked at in **Catalogue G**.

When it comes to the ritual basin of **ForAtt-14**, as is our method look at which images are juxtaposed (in fact, they show much the same associations as found on the Karashamb Goblet coming next, suggesting borrowing of iconography between courts – or a common source inspired by the Mitanni). On the visible long side (the other long – blank - side is against the wall) is a feasting scene along the lines of those we have seen on the plaques and seals, described by Matthiae (*ibid.*) as presided over by the Ruler with peaked cap and his Priestess/Consort, served by attendants, with a procession of livestock beneath them no doubt representing the stock count of the fat of the land at New Year. At one short end is the Master of the Beasts figure in high relief holding up two lions, the livestock procession continuing beneath him; while on the other end we have a continuation of the attendants procession at the top ending in an early version of the Mitanni hybrid dragon or MUŠĦUŠŠU (No. 2 on the table above) representing the Four Quarters of Sky and Earth, here wearing the Crown of Anu . Underneath is a *Forward Attack* in confrontation mode – not forgetting the bowman squeezed in next to it, very much along the lines of the Marlik/Akkadian seal iconography just considered. In the light of our painstaking DIVERSION on Ninurta earlier, and our recent look on the Entemena Vase at a ruler's concern for establishing Order over Chaos in astronomical terms these four adjacent astronomical indicators (*Laḫmu* - Gilgamesh with the lions of the Equinoxes; *MušĦuššu* - Dragon of the Four Quarters brought to Order; *Forward Attack* - New Year/Calendar start - and Sirius-as-Ban-the-Bow) all come together to signal the New Year celebrations.

FORATT-13: EBLA AND BMAC ICONOGRAPHICAL ELEMENTS ON THE KARASHAMB GOBLET

This goblet reveals a provincial culture aping the by now archaic practices of high urban culture long after they had moved on within the Syro-Sumerian region itself. We have indicated in several ways in the *Art History* section how important a centre of cultural and artistic influence Ebla was in the mid-Third Millennium, and when considering the iconography of the Karashamb goblet (**ForAtt-13**) – hammered into shape as was the Entemena Vase, then decorated with small, engraved repoussé reliefs in several registers – we almost have an Eblan wall panel in a miniature metal version. It is the sequencing of the friezes, the contrasting subject themes chosen and several details of individual attributes that all - at least at first glance - point to mainline Eblan inspiration. But the second-register figures wearing curled, pointed shoes point to a Central Asian culture (as seen also in **III.9- 23/III.9-188**), and the dog(s) under the bull-legged table on both it and the Trialeti cup indicate their masters are Āryan.



III.9- 10: (Left) the Karashamb Goblet and (right) the Trialeti Cup

EBLA AS MEDIATOR IN CHANNELLING RITUAL ICONOGRAPHY

Looking back to DIVERSION 5 on ENTERTAINMENT, which has already analysed some interesting ritual cups, jugs or goblets, apart from the Entemena Vase the Karashamb goblet (only comparatively recently discovered in the 1980s) precedes them chronologically. We linger on it for some time, its anachronistic retention of the Gods in animal form evidently taken from an Eblan context (Imdugud as proto-Baal and lion/lion-prey groups as proto-Ishtar) possibly belonging to the Aleppo-based cultural sphere, and revealing how far afield into Eurasia by the end of the 3M specific pictorial traditions could spread (though we also need to allow for borrowing in the reverse direction). The care taken to emboss on it mythological or ritual scenes important to their cultic life (including two lion-prey groups) indicates the high significance the goblet must have had for its owner and his retinue and for the art historian it is instructive in the way it quaintly spells out the inner content of its near-eastern or Central Asian prototypes. Indeed, in some ways it can be read as a Caucasian version of the Standard of Ebla (**III. 9-14**), and both use the War –v- Peace programme of the Standard of Ur in layout and message. Not to be misled by differences in material, since we can place it in the period even preceding Early Dynastic Sumer (when feasting scenes with lion and prey juxtaposed were so common) we could indeed rank the goblet’s significance as parallel to the spate of limestone cups found in Uruk from the Early Uruk period that fill up the early section of **Catalogue B**, decorated with *Uruk Stance* lion-prey groups - quite clearly marking an early stage of cultic drinking that again involved Venus/Inanna as their focus.

In the period the Karashamb goblet was made (along with the Trialeti cup which serves as a useful foil, given it shares some of its iconographical idiosyncrasies), such a goblet was a highly unusual piece for the country where it was found, since (along with the crescentic axe and elaborate necklace found next to it) it undoubtedly proclaimed the status of an owner whose social climbing had attained tangible results, much as the Eurasian Maikop chieftains a millennium or two before (*Ratt-10* - and also *III.9-92* reminding us 'the oldest sword in the world' was Eurasian). Ritual drinking cups are shown in use in one cultic scene on the goblet itself, giving an idea of the high occasion it must have been used for – as also on the Trialeti cup where an entire procession of men each holds up a cup as they process towards the figure of authority (God or Ruler) seated before a similar table and bowl on stand. This latter is from a nearby site in Armenia and was probably made in the same workshop or even by the same craftsman – though on it neither lions nor lion attacks feature. Thanks to the full drawings of their iconography (next illustrations) made by Boehmer (*ibid.*) for their systematic analysis, one further, perhaps startling conclusion emerges about the goblet's cultural borrowings – that although the mainline iconography owes inspiration to Eblan culture, small details more familiar from artefacts made in the mountain regions of Akkadian Susa-Susiana or the desert sites of south-western Iran like Tepe Yahya or Shahdad (see Kohl's map *III.9-23*) provide supplementary clues to enable complete decoding of the pictography, proving the nomads of Eurasia were also linked by alternative networks between the mountain or foothill communities of Central Asia that completely by-passed societies living in the urban complexes along the riverine plains further south.

THE SIX REGISTERS OF THE KARASHAMB GOBLET

Omitting the petalled calyx at register 5 and a row of criss-crossing lions and lionesses/leopardesses round the goblet foot at Register 6 (led by a single lion facing outwards), *III.9- 11* below delineates the top four registers of the vase (Register 4 is again a procession of contrasting lions and leopardesses, probably representing days and nights).

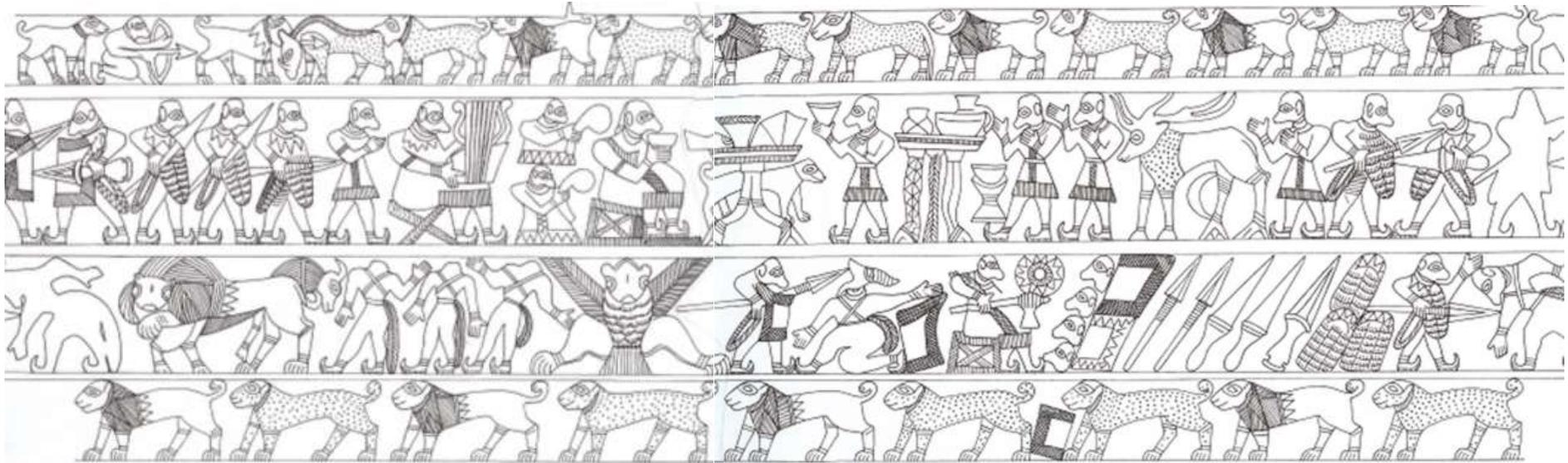
OVERVIEW

- ◇ On *Register 1* at the top, the kneeling bowman aiming at a lion biting a boar on its face (another arrow pierces its shoulder) forms the focal point for a procession round the circumference of lions and leopards - perhaps representing days and nights (a plausible astronomical interpretation given the possible significance of the Bowman as Sirius).
- ◇ On *Register 3* a lion looking out as it attacks a goat from the front is more or less on the same vertical as the upper *Forward Attack*, crossing right over its prey as in the second seal of *ForAtt-12*.
- ◇ The skewed vertical line-up between the two lion attacks and the lion facing outwards from the procession in *Register 6* – the view given for our catalogue entry – appears to be one 'front view' for the goblet.
- ◇ The main narrative bands in *Registers 2* and *3* then have independent culminating centrepieces further round the vase, each centring on an enthroned figure.
- ◇ We see at once a deliberate contrast between a feasting scene on *Register 2* and a war scene on *Register 3* – noting in general that all the men represented have big proboscis noses and shaven faces and heads and wear the typical pointed shoes we associate with mountain people; all the soldiers have leggings and top coats short at the front to allow movement, with a back tail stretching down their calves, in some respects giving the same effect as the Mitanni hero loin-cloth worn in the Perati seal (*ForAtt-25*). In contrast, at the feasting scenario officials indoors have bare legs and wear short tunics with woven borders much like the courtiers' dress on the Inandik Vase (*III.9-167*).

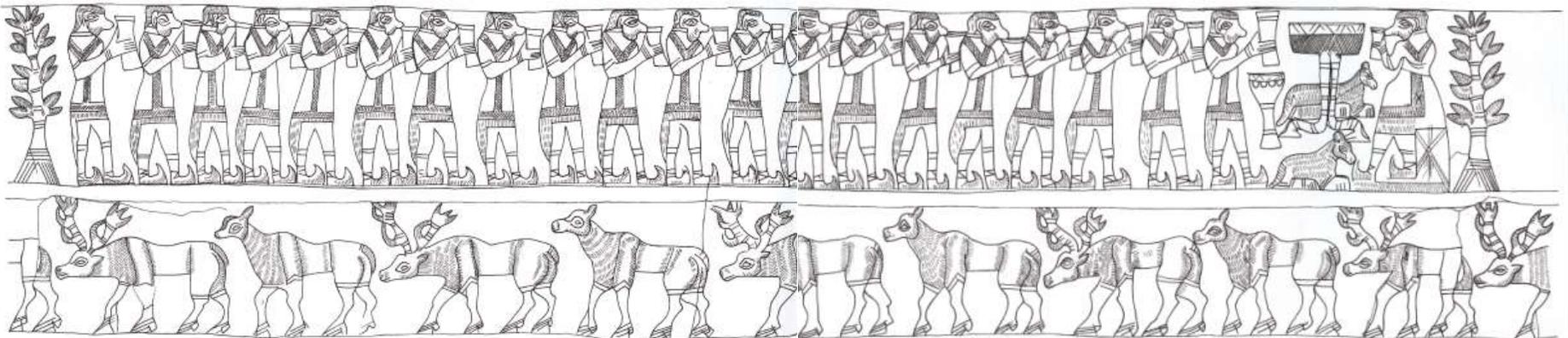
We can now proceed to analyse in detail the contrasted scenes of Peace and War on the two main registers.

REGISTER 2 ON THE KARASHAMB GOBLET

The feasting scene centres on a seated man Boehmer interprets as a Ruler, possibly the owner of the cup himself, and in contrast to everyone else's shaven heads he has a topknot and fringed edge to his wrapped robe. Backed by soldiers with shields and over-sized spears or daggers with crescentic handles led in by a courtier, he is entertained by a musician playing a

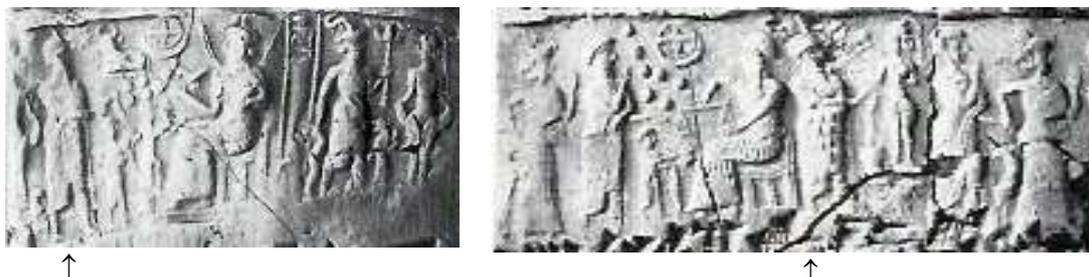


III.9- 11: Main registers of the Karashamb beaker iconography– from Boehmer et al. *ibid.*, Beilage 1



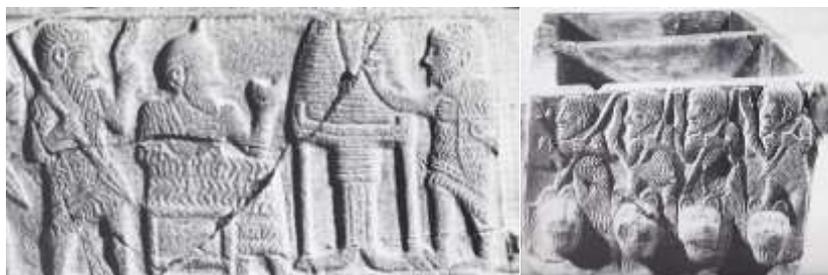
III.9- 12: The two registers of the iconography of the Trialeti silver beaker – from Boehmer et al. *ibid.*, Beilage 2

lyre-type instrument along with two crouching percussionists²² (the crouching figures truncated at the hips, often with bulging forelegs – is a stylistic feature found on seals or figurines from places in southern Iran such as Susa, Shahdad or Tepe Yahya (e.g. *III.9-168* and *III.9-172*). Perhaps the most interesting parallels to be seen are with the troupes of seated musicians that appear not only on the Trans-Elamite seals discussed by Edith Porada (*III.9-167* and *III.9-168*), but also on the Hittite narrative vases of Hüseyindede (*III.9-164*) and Inandikdepe (*III.9-167*) described in the *Art History Section*. In the next register, the ruler holds a goblet to his lips whilst a dignitary at the first table in front of him also holds up a beaker to join the toast. Such an audience scene portrays similar iconography to that on the cluster of Syro-Cappodocian seals featuring the peak-capped Ruler²³ discussed in *Catalogue C* under *Ratt-18* (repeated below)²⁴ at the moment Shamash raises the cup in the presence of Baal, Ishtar and the *Sibitti* (Ursa Major/Minor). Michel²⁵ quotes Karum texts referring to Eblans living in Kanesh and in another paper on-line²⁶ gives precise information about metal availability in Anatolia (mostly copper and silver), that would have



III.9-13: Seals 692 and 693 from Özgüç (ibid.) originally discussed under Ratt-18

attracted such visitors. Matthiae²⁷ points out that the peaked cap was the early headgear of the bearded Eblan ruler, seen worn both on the long side of the double basin of *ForAtt-14* and on that of c.1900 found in the entrance area of Temple B1 (below), corresponding to the timing of his appearance on the Kültepe seals and relevant to our analysis of the Mitanni 'Baal heroes'.



III.9-14: (Left) Audience scene with peak-capped ruler and dignitary making the toast either side of a bull-legged table on the long side of the Eblan Temple B double basin (right) now in the Damascus Museum – Matthiae I Tesori da Ebla pl.58

COMPARISON WITH THE TRIALETI BEAKER ICONOGRAPHY PROGRAMME

A telling detail on the Karashamb goblet is what Boehmer presumes is the Ruler's dog standing under the nearest table to him, as if behind it. The fact that the Trialeti beaker shows exactly the same group in front of the Ruler (*III.9-12*) is a key reason why the two cups appear to have 'come from the same stable' (but the fact that dogs do not appear anywhere in Eblan art also indicates the goblet owners are likely to have been Indo-European – on which much more in a later DIVERSION). The narrative on

²² Boehmer has other ideas about what the instruments they hold could alternatively be, since on a seal from Tchoga Mish, instruments of the same shape are being blown, and thus may be bagpipes.

²³ See especially pl.XLII, nos 692 and 693 illustrated above, as originally photographed in N Özgüç 'Vorläufiger Bericht über die 1948 und 1949 Gefundenen Siegel und Siegelabdrücke' in T & N Özgüç *Bericht über die im Auftrage der Türkischen Historischen Gesellschaft 1949 durchgeführten Ausgrabungen* Ankara 1953.

²⁴ See also F Pinnock 'Some Thoughts about the Transmission of Iconographies between North Syria and Cappadocia 3-2M BC' in P Matthiae et al. (eds) *Proceedings of the 1st International Congress on the Archaeology of the Ancient Near East [CAANE] Vol.2* Rome 2000 1397-1415

²⁵ C Michel 'Central Anatolia in the Nineteenth and Eighteenth Centuries BC' in Cancik-Kirschbaum op.cit. 111-135

²⁶ http://www.mae.u-paris10.fr/arscan/IMG/pdf/Michel_2008_ArScAn8.pdf

²⁷ P Matthiae 'The Lions of the Great Goddess of Ebla: A Hypothesis about some Archaic Old Syrian Cylinders' (1993), reprinted in Matthiae & Pinnock *ibid.* 2013, pp 383-391 (paper B13)

the Trialeti beaker is more basic, consisting of only two registers. Contrasting with the single stag on the Karashamb goblet, the second register on the Trialeti vessel shows a procession of stags and hinds without the threat of any predator or hint of hunting or battle, as seen on the bowl under **ForAtt-30**. The top row, as already mentioned, shows a procession of the participants in the drinking ceremony, each holding up their own beaker, like the very beaker on which they are shown. The procession moves towards a standing Ruler in the act of raising his goblet, this time simply backed by a sprouting tree, perhaps representing growth and life – but to Lambert’s thinking possibly an alternative representation of Baal as an early form of the Tree of Life²⁸.



III.9- 15: Basalt tripod bowl from Ebla, Northern Palace, c.1800 – Pinnock and Matthiae 2013 pls 164b/165b

Before him are, in fact, *two* pets crouching by the bull-legged pedestal table – next to what could be an incense burner or raised container whose purpose we can only guess at, but evidently copying equipment as actually found at Ebla (above).

REGISTER 3 ON THE KARASHAMB GOBLET

Returning to the Karashamb goblet, *Register 3* illustrates scenes of war, centring again on a seated person in authority holding an axe – this time taken by Boehmer to represent the God in charge of the outcome of the war to whom the Ruler in register 2 signifies his obligations of thanks and allegiance. In fact, three Gods are represented along the line: Shamash (the seated figure holding the axe is marked by a 12-rayed Sun disc in the sky; God of War Ninurta/Ningirsu/Imdugud is already familiar to us as the lion-headed spread-eagle; and Inanna/Ishtar is represented by the lion-prey group (an interpretation we can now take for granted, validated over the four previous catalogues). More king’s soldiers in the same dress as *Register 2* are shown killing members of an alien tribe wearing long animal tails (men on the Perati seal also wear tails) as part of their war apparel (possibly of a wolf²⁹, fox or similar creature). In Boehmer’s opinion the latter could be demons, and the battle a mythical one taking place in heaven but in the light of our discussion of the slim athletes on Mitanni seals (e.g. **III.9- 21**) I think we can read them simply as human warriors of a particular tribe – though these are ugly creatures rather than beautiful young men! Three of their bodies are shown headless, making hectic signalling gestures with their arms in their final death throes, while further along piles of decapitated heads, weapons and shields are stacked up as war booty before Shamash, God of Justice (because with his axe he seems in the same hand to also be holding a saw) meaning the role of Teššub/Baal does seem to be implicitly covered by Imdugud. Again, comparison of this scene with the more ‘ironed out’ iconography of Old Anatolian seals under North Syrian influence (**III.9- 13**) (discussed at length in **Catalogue C, Ratt-18** in the section on *REPRESENTATIONS OF THE TRADITIONAL GODS ON EARLY 2M SEALS*) shows that by 1800 BC in most throne scenes before Ruler or God, the three predominant deities/planets represented at the time are, again, Shamash, Baal and Ishtar. It is the old-fashioned use of the Imdugud version of Ninurta-Baal on the Karashamb goblet that to my mind places it earlier, more to the end of the Third Millennium – even though the presence of a tripod table, if the Ebla pieces are rightly dated, may push it into the early Second Millennium, still making it a roughly contemporary dovetail with the Kültepe seals of **Ratt-18/III.9- 13**.

²⁸ W G Lambert ‘Trees, Snakes and Gods in Ancient Syria and Anatolia’ *BSOAS XLVIII* 1985 435-451

²⁹ Parpola (1988 – see ref. later) points out that the Gurgan Plain round the south of the Caspian Sea was known as ‘Wolf Country’ in the literature - and tribal wolf iconography appears on Turanian items in this catalogue (e.g. the Altintepe wolf head and the Quetta goblet).

★ **FORATT 15-23: PRE-CHRONOLOGICAL FOCUS, TRADITION –v. INVENTION 2000-1500**

Bearing in mind most seals have contemporary counterparts in *Catalogues C* and *D* already analysed in exhaustive detail in relation to rituals concerning Baal and Ishtar in Syria, we deal with this stretch of the material summarily, dwelling only on new motifs not noticed in the Near East in previous catalogues - but pointed out in this one as emerging in embryonic Hurrian/proto-Mitanni form. We will try here simply to sum up the iconographical essence of each entry in short sentences where they point in particular to upcoming mature Mitanni or Mycenaean designs following in the second half of the 2M – to be referred to in more depth in the *Iconography of Chronological Focus* material. Although these new trends appear to come to an abrupt end with the fall of both the Mitanni and the Mycenaeans, many then re-emerged during the First Millennium recovery.

FORATT-15: THE STANDING NECK BITE: REPEATING MESOPOTAMIAN CLICHÉS

Tradition died hard in the Syro-Mesopotamian world, and it is almost endearing to see how it stood by the same Ur-type Early Dynastic isocephalic standing attack formula on these seals well into the 2M – here in particularly Syrian versions.

FORATT-16/17: CAPPADOCIAN ANATOLIA, THE HITTITES AND OLD BABYLONIA

This Cappadocian seal joins similar seals from other catalogues, the overall idea of the presence of the lion-prey attack on them being a pointer to the astronomical level on which the scene should be read. The separate groupings in the overall scene on both cylinder sealings of *ForAtt-16* roughly echo the narratives on items such as the metal beakers in *III.9-22/III.9-158/III.9-159*. The ivories from Acemhüyük (see also the ivory group in *III.9-15* from the same site) show how deeply into Anatolia a local community could still remain loyal to Sumerian mythology, with the same Elamite dislocations of scale as on the Proto-Elamite seal beneath.

FORATT-18/19/20/23: THE COLLAPSING PREY

Early Mesopotamian formulations of the *Forward Attack* showing the utter capitulation of the prey (*ForAtt-8/9*) was another version faithfully adhered to over the centuries and sometimes adopted by the Mycenaeans, mostly in Mitanni formulations portraying a similar mood of pathos (see *ForAtt-26f*). The one Hittite stamp seal design on the *ForAtt-18* page provides a cruder prototype that could have been available during the Achaeans' osmotic relationships with both Anatolia and the Levant. At the same time the Mycenaean love of single, impossibly contorted animals, as seen on other seals, reveals an extravagance and ingeniousness in solving the design problem of fitting them into a restricted field quite different from that detached interest in animal anatomy and behaviour that puts symbolism aside (as seen in some of the other animal studies in the Vapheio hoard, *III.9-107*) prophetic of the even more pronounced Classical Greek preoccupation with life-like physical realism.

FORATT-20/21: THE CONFRONTATIONAL STANCE

This second type of *Forward Attack* was used by the Mycenaeans most appropriately on a monumental scale (as in *ForAtt-27*, last entry) since it conveys divine or royal power with heraldic formalism where both animals have equal power. It is surely significant that the heads of almost every one of the confronted bull-lion pairs on the seals of these entries (as also the one under *ForAtt-9*) was defaced in later times, a form of iconoclasm in the light of a succeeding new régime or religion that knew just what this group meant.

FORATT 22/23: EARLIEST SIGNS OF IMPORTED MITANNI MOTIFS FROM CENTRAL ASIA

The mature Mitanni seals of *ForAtt-24* onwards - the centerpiece of our iconographical enquiries - embody a clear step-change from the still conventional Anatolian, Syrian or Mesopotamian-style seals in this group, but *ForAtt-22/23* - although still favouring the *Face Bite* or *Collapsing Prey* versions of the *Forward Attack* - have brought in non-conventional features not yet understood as an acceptable alternative convention - such as the way the God Baal is given a chariot and horses as his steed, rather than a bull (the astronomical implications of this for later entries absorb our attention in DIVERSION 10), whilst small details

such as the kneeling figures in **ForAtt-23** that balance on the point of their knees in Central Asian fashion (c.f. **III.9-169**) should be understood in terms of the BMAC idiosyncratic ‘turn of phrase’ they represent.

PREVIOUS INSTANCES OF THE WINGED SNAKE LADY ON OLD BABYLONIAN SEALS AND SEALINGS

We linger a little longer on **ForAtt-22** due to the presence of another Central Asian indicator probably introduced by the Mitanni, and already broached at some length under the *Art History* section. As pointed out within the **ForAtt-22** entry, we witness the introduction of the Goddess with twisted snakes as legs as a sign of Mitanni infiltration into Babylonian culture, with such strong implications for the new counter-culture to the **CANEA**’s treasure-house of images that she earns a DIVERSION under the *Chronological Focus Iconography Section* very shortly – but let us prepare for it with a few preliminary remarks here. In this landmark Old Babylonian sealing we in fact have a TRIVISUAL for the Goddess Ishtar - in Mitanni, Sumerian and Syrian versions respectively: the Snake Lady, the *Forward Attack*, and the half-dressed standing female. In other words, I believe the Snake Lady on most artefacts she appears on is juxtaposed with the more familiar images in order to make her intelligible, and I believe this was a particularly Mitanni device.

On the **ForAtt-22** sealing the appearance (sideways) of a winged, double-serpent-legged woman with human torso³⁰ near the head of Baal might at first sight strike us as purely Old Babylonian/Old Syrian³¹ in character, in the way it perpetuates the twists and turns of Gudea’s Ningishzida images, but topped by a winged female torso that through her wind-blown hair expresses that aspect of Baal/Indra-Varuṇa’s power as Wind, and the twisting of her serpent legs the Aśvin-Nāsatyau’s Vortex (this will make sense after our analysis of the Rgvedic Gods revered by the Mitanni as equivalents to Syro-Mesopotamian Gods). On the basis of the following quotation, the Wind Gymnasts surrounding her on other seals (**Ills 9-150/164**) can be understood as expressing the full reach of the ruler’s power in terms different from the Akkadian kings who boasted of conquering the Four Quarters:

The south wind, Elam; The north wind, Akkad;
The east wind Subartu and Gutium; The west wind Amurru ³²

As seen on the seal below left from the Chicago Oriental Institute archives, in fact it was not unusual on Akkadian seals to show Ishtar with wings supplemental to the usual protrusions sprouting from her shoulders in the older renditions of Inanna (**III.9-11**),



III.9- 16: (Left) Akkadian Seal impression of Ishtar with wings and maces sprouting at her shoulders - Chicago Oriental Institute A27903; (right) Old Babylonian version of Ishtar with double-lion mace – WardCat-91/PierMorCat-371

though note the absence of the double row of feathers later to be the hallmark of Mitanni wings. On a later, Old Babylonian version (above right, one of several closely similar seals in the same collection (**PierMorCat-371-378**)), it is not easy to distinguish whether Ishtar has vestigial wings at her neck or whether they are maces: Venus only holds the *harpé* when emphasising her warrior aspect, hence the substitution of plain maces growing out of her shoulders for the original wheat-ears the benign and fruitful 3M Inanna usually displays (clear in the Chicago seal). The main point of showing this seal here, though,

³⁰ We return to these unusual figures (**III.9-163**:) when considering the link between **ForAtt-22** and Mycenaean chariots.

³¹ Buchanan was early in spotting in Frankfort’s *Cylinder Seals* (pl.XXIXe) the purely Babylonian seal with a tiny version of the serpent woman to one side of the usual conflict groups (Berlin Vorderasiatisches Museum-827) needing close scrutiny to see it (included under **III. 9-196**) and we have shown other examples establishing the Neo-Babylonian pedigree for this figure, probably examples of one-off individual contact with Central Asia and the BMAC at that stage.

³² From tablet 4 of *Šumma Sīn ina tāmartišu*, quoted by U Koch *Mesopotamian Astrology* Copenhagen 1994 , p.106

is that along with the *harpé* in her left hand³³, in the right she brandishes a double lion-headed mace whose shaft, on close inspection with magnifying glass, consists of a *Caduceus-like staff entwined by two snakes*. Her part-interchangeability with the Snake Lady is thus established.

Below, on a small handful of Old Babylonian sealings of the early 2M we start to see the transition towards the definitive 2M version of the entwined serpents of Ningishzida transformed into the Snake Lady, where the semi-anthropomorphic version of the deity is introduced (no doubt alluding to the Underworld stage of Ishtar's journey), perhaps to emphasise the figure's femaleness and differentiation from the male Ninurta (as discussed in DIVERSION 6). Different combinations of the animal parts involved are chosen for different versions – so that, for instance, (centre below top) the magnifying glass reveals the figure (bearded) has bird talons for feet instead of bird wings - and what appear to be lion heads growing out of the shoulders (instead of holding the mace with lion-heads as in III.9- 16). [S]he and her worshipper are separated by two fishes while on her other side is Baal 's lightning fork - with Ishtar unclothed on the other side of it – perhaps, as Stein points out, because sometimes she shares this weapon with her consort, or even has her own separate one - as on the Ithi-Teššub seal (III.9-164). All three seals give us the general Old Babylonian background, not only for Minoan priestesses but also for the 'Burney Relief' (below right) on which Ishtar, again with wings and bird talons, is flanked by lions and owls representing not only Day and Night (or Life on Earth –v- Life in the Dark of the Underworld), but also the idea of Venus as Morning Star as opposed to her different identity as Evening Star, when She rises at night. In this variation no snakes are present: she is simply the stripped Ishtar who has arrived in the Underworld, still with the power to assign kingship. She holds the rod and ring of royal authority in each hand, instead of the snakes held by the Minoan priestess below left. The latter has a predecessor in the middle centre seal below showing Ishtar in a tiered dress holding up two snakes, on one side separated from her worshipper by Ursa Major/Minor upended between



III.9- 17: (Left) Mid-2M Knossos snake priestess figure of ivory and metal - Boston Museum; (centre column) Old Babylonian/Syrian haematite seals that replace the twisted snakes motif either by a woman holding two snakes or as snake lady (with apologies for the reproduction): (top) WardCat-118/PierMorCat 386E ; (centre) WardCat-205/ PierMorCat 990; (bottom) also with short, horizontal snakey guilloche and 'sacred marriage' couple in the sex act –WardCat-250/ PierMorCat-961; (right) The Burney Relief, British Museum, from the time of Hammurabi – originally of painted clay tempered with straw

Sun-Moon and the Ankh symbol for Life and contrasted with the naked Ishtar and Baal pair against a small palm tree with three crouching animals above it. The Snake Lady flanked by worshippers on the third (slightly damaged) seal above bottom centre

³³ in a paper on such seals I have identified the *harpé* as representing Ursa Major, against whose field Venus is described in rare texts as 'exalted' – see link: <http://www.layish.co.uk/venusworship.pdf>

does have wings, with her legs in a single twist ending in a fish tail, this time on a 1:2-height-type seal where the double panel is very roughly divided by a wriggling snake on its way to becoming a guilloche but still looking like a snake! From the latter seal we might also conclude that the twisted snakes – with or without the winged female human torso – may partly be a shorthand way of alluding to the Sacred Marriage - which the two figures to the Snake Lady's right are clearly enacting (in the same way as on the Inandiktepe vase (*III. 9-167*)).

THE CHRONOLOGICAL FOCUS ENTRIES (FORATT-24-36) WILL NOT BE DISCUSSED NEXT IN THEIR DUE CHRONOLOGICAL POSITION AS MIGHT HAVE BEEN EXPECTED - SINCE FOR REASONS EXPLAINED EARLIER WE THINK THEY ARE BEST DEALT WITH LAST. WE COME BACK TO THEM AFTER CONSIDERING IN THE FOLLOWING PAGES THE ICONOGRAPHY OF ITEMS FROM THE FIRST MILLENNIUM (CHRONOLOGICALLY THE LAST GROUP OF MATERIAL) WHICH IN CATALOGUE F COMES UNDER ITS OWN VERY DETAILED CHRONOLOGICAL FOCUS IN RELATION TO THE BILATERAL ATTACK.

★FORATT-37-60: ICONOGRAPHY POST-CHRONOLOGICAL FOCUS 1000-323+

Bear in mind, in dealing with this material before the main thrust of our *Chronological Focus* analyses yet to come (from page 54 onwards) that items under here will often show complete versions of what had been new trends pioneered during 1500-1000.

COLONISATION OF THE MEDITERRANEAN BY THE GREEKS FROM 800 BC

The simplest appreciable backdrop for discussion of coming artefacts is the run-up to - and then the execution of - a decision made by influential Greek City States to found new colonies, notably into the Western Mediterranean. The colonisation was marked by a spate of temple building in the new Greek idiom in countries all round its basin. Was it instigated as a search for more land, power and trade, or was there a deeper reason behind it? Jean Richer's argument is that an unknown highly informed group set the whole operation in train in order to secure observation footholds over an extended orbit, to enable the calculation of a more accurate calendar – and that it was not temple sculpture alone that spelled out its programme, but also the many small artefacts linked to different territories, whether metalwork, pottery or coinage. With the *Forward Attack* examples as our *leitmotif* to go by, we will concentrate on Richer's particular angle of interpretation to test its validity - in combination with our own theories and findings – to prepare the ground for an even more specific line of enquiry in this direction in *Catalogue F*.

Since we are looking at entries often packed with very evident astronomical features *before* the main *Chronological Focus* material, it is understandable if the reader may find it too sudden a leap to take in seeming to read more into them without fuller explanation, but I ask them to wait until this entire *Iconography Section* is completed - when they will have become more aware of how a seven-century-long process dating back to the Mycenaean era saw the germination of the first seeds of knowledge leading to the establishment of a corrected Archaic Greek Calendar.

The prelude to that vast project of colonisation was the sporadic recovery during the centuries before of petty kingdoms in small enclaves in the Near East and Greece itself – as sketched out under the *Art History Section*. None attained real statehood until the Assyrians in the end brought most of them under their parasol (though not Greece) – in a period when the Heraion of Samos and the Temple of Zeus at Olympia had become international centres of pilgrimage (see *ForAtt-42*) from all over the Mediterranean, once the four-yearly Olympic Games were used from 776 onwards to mark the measurement of the Venusian Octaëteris. We could see these Games as an updated version of the entertainments and games long held in the Ancient Near East to mark the New Year (described in DIVERSION 5 on ENTERTAINMENT), its emphasis on sports, chariot races and physical fitness revealing the Mitanni heritage at its core (see our DIVERSION 7 on the MITANNI CULTIVATION OF THE SLIM PHYSIQUE).

FORATT-37-39: FORWARD ATTACK ITEMS AT THE START OF THE FIRST MILLENNIUM

For items coming under this period this starts as a 'grey area' – which we have already pointed out was probably a lot shorter than the 300 years usually allocated to 'The Dark Ages'. What we detect – and will try to demonstrate item by item - is that

Mitanni precedents in design are retained and built upon by the small chiefdoms establishing themselves in what used to be Mitanni territory, now broken up and sandwiched between the failing Hittites and emergent Assyrians (to take one obvious example, the version of the winged disc carved on the Carchemish reliefs (as below right) still used the double row of feathers and bird feet rendered as spirals, as found on the Perati seal (**ForAtt-25**).



III.9- 18: (Left) Mitanni-type winged Sun disc on the Perati seal; (right) winged disc from Carchemish (a further example is shown on the last of the Nuzi seals under ForAtt-28): in due course we may see the wings as referring to *Ursae Majoris et Minoris*

FORATT-37: FIRST SIGNS OF RECOVERY IN PROVINCIAL NEO-HITTITE AND ARAMAEAN PALACE RELIEFS

Given the *Forward Attacks* on the Gargameš/Carchemish and Guzana/Tell Halaf orthostats are the only relevant pieces in this Catalogue representative of the first stage of the long recovery process triggered by the demise of the Hittite and Mitanni Empires, we can postpone assessing the importance of their role - in terms of the full sculptural relief programmes at the two sites - until all the Catalogues are completed. All we need note on the emergence of these two small kingdoms is the brief general background given in the *Art History Section*. It is in **Chapter 17** that these provincial palaces come into their own as guides to piecing together the full **Canon of Ancient Near Eastern Art (CANEA)** since both spell out almost the whole cycle in one decorative programme – in the rather quaint, archaic mode seen earlier on the Karashamb goblet.

A SILVER CUP OF THE PERIOD

Talking of which, as this Catalogue refers to a variety of ritual goblets and since its decoration involves snakes, I bring in here the *repoussé* sheet-silver cup (below right) found at Ain Samiya in the Shechem area north of Jerusalem overlooking the Jordan Valley. It was found in a side-chamber of looted Tomb 204 - Tomb 204a – that was still sealed at the time of excavation. Its discovery was initially reported by Shantur et al. followed by an analysis of its iconography by Yeivin³⁴. Not only does it show the



III.9- 19: (Left) All four facets of a stela from Terqa showing the Storm God with Serpent; Apkallu in fish dress and a Corn God, possibly Dagan – Bonatz³⁵ pl.XII; (right)roll-out of the Ain Samiya cup design above, with b/w photos below – Yazein fig.2/pl.9 and centre colour photo by Carl Rasmussen

³⁴ B Shantur et al. 'Tomb 204 at Cain-Samiya' *IEJ XXI* 1971 73-77 and Z Yeivin 'A Silver Cup from Tomb 204a at Cain-Samiya' *IEJ XXI* 1971 78-81 & pl.9

³⁵ D Bonatz 'Art' in H Niehr (ed.) *The Aramaeans in Ancient Syria* Leiden and Boston 2014 pp. 227-31

same squat human type with stocky physique and skull-hugging turban as on the Carchemish and Tell Halaf orthostats, but it is evidence of the spread of Central Asian/Elamite ophidian iconography to as far south as Samaria-Judea³⁶ – in its use of snakes chiming in with the 1M Aramaean stela from Terqa (above left), concerning which Bonatz *ibid.* points out there is only a handful of other Iron Age representations of the battle between the Storm God and the Serpent, including the well-known Malatya Lion Gate orthostat A8 (below right c.f. *III.9-107*) and part of a Neo-Assyrian relief from Dur-Katlimmu³⁷ (the latter with Venus, Crescent and Sibitti stars at the top). Though the cup is dated from the end of the 3M to the start of the 2M, since on the Terqa stela there are also close similarities between the figure of Baal holding up the vanquished serpent and the same group on 2M Old Syrian seals (discussed in great detail in **Catalogue C**) it seems reasonable to place it in the 2M against a time-frame when Hurrians, Arameans and Mitanni were increasingly making their presence felt in the region and using snake iconography. Below we set the cup³⁸ next to the Malatya orthostat, which we will have cause to discuss in relation to the Kumarbi myth later.



It raises the question of how far south Hurrian/Aramean and Mitanni influence eventually spread, and to what extent they became involved with the tribes that in Avaris came to be known as the Hyksos - discussed decades ago by Van Seters³⁹ and revalidated by Tubb. The question was reassessed in a recent paper by Tubb⁴⁰ in relation to the spread of megaliths and dolmens down Syria/Jordan at the time (Schechem itself had a single, large *maššebōth* in front of its temple, and Hazor a group of them - compare with the Troy South Gate group - in this case set alongside the seated statue of a deity. Tubb sees an association with incomers from south-west Anatolia, moving down the Levant and using stone-lined graves (see his map below)



FIGURE 1. Distribution of stone-lined graves. 1, Baghouz; 2, Tawi; 3, Hammam; 4, Tell Amarna; 5, Ras Shamra; 6, Arqa; 7, Tell et-Tin; 8, Sidon; 9, Rafid; 10, Yabrud; 11, Tel Dan; 12, Tell es-Sa'idiyeh; 13, Tiwal esh-Sbarqi; 14, Ras el-Ain; 15, Gezer; 16, Jericho (mud-brick); 17, Tell el-'Ajjul; 18, Safi; 19, Tell el-Dab'a (mud-brick).

which often contained a standard 'kit' consisting of 'veined dagger, socketed spearhead and duckbill axe' (as at Tell el-Tin) that amounted to low-key warrior graves – even if unspectacular compared to the Mycenaean or Central Asian equivalents. Taken

³⁶ In the opinion of M-H Carre-Gates in 'Casting Tiamat into Another Sphere: Sources for the Ain Samiya Goblet' *Levant XVIII* 1986 75-81, it is 'an import from Central Asia' (quoted by K Prag in her addendum on the Ain Samiya Goblet to her paper, 'The Late Third Millennium in the Levant: A Reappraisal of the North-South Divide' in P Parr (ed.) *The Levant in Transition* 2009 80-89

³⁷ He cites W Orthmann's *Untersuchungen zur späthethitischen Kunst* Bonn 1971 for Malatya A8 and H Kühne 'Interaction of Arameans and Assyrians on the Lower Khabor' *Syria LXXXVI* 2009 43-54 fig. 11 for the Dur Katlimmu slab (the entire *Syria* volume is devoted to papers on Aramaean-Assyrian interaction).

³⁸ Exhibit 36 in the Metropolitan Museum of Art exhibition, *Treasures of the Holy Land: Ancient Art from the Israel Museum* New York 1986

³⁹ J van Seters *The Hyksos: A New Investigation* New Haven and London 1966

⁴⁰ J Tubb 'Aliens in the Levant' in P J Parr (ed.) *The Levant in Transition (Palestine Exploration Fund Annual IX)* 2009 Leeds 111-117

all together as a group, along with the usual pottery the warrior kit was often accompanied by beads of semi-precious stone, mainly carnelian and quartz (as at Tiwal esh-Sharqi). The Ain Samiya silver cup (though not in a stone-lined grave) had with it a carnelian necklace and spear-butt, spear-head and dagger all of copper, so although by the copper (rather than bronze) of its weapons it is given an early date range, overall it is prophetic of the typical 2M assemblage betraying Asiatic connections (the carnelian being a dead giveaway). However, Tubb favours Schaeffer's interpretation of the *Porteur des Torques* as coming from Central Europe, reckoning that the people retaining their own burial customs in this way 'may represent an earlier wave of the same general movement of Indo-Europeans who would bring the Hurrians to Syria in the latter part of the Middle Bronze Age'.

The cup's iconography is curious and atypical, showing on the one half a bearded, centaur-like figure with two sets of bull hind-quarters either side of an eight-petalled rosette (the symbol for Venus), joined together by a Janiform human torso holding out on each side (like the right-hand figure on the Terqa stela) what appear to be bunches of wheat, palm branches (or even fish skeletons) to an upreared serpent (the author presumes there was another serpent (or dragon) on the other side, now lost). The other half of the cup depicts two dumpy Aramaean figures (one conjecturally restored) holding on to either end of a Crescent with small circles in it (maybe representing the counting of days), a 12-sector Sun-disc with face at the centre nestled inside it, over a folded, horizontal serpent lying underneath, perhaps suggesting a dormant time of year. Yeivin noticed that the horizontal serpent is hatched with lines, while the upreared snake is covered in small circles – exactly the same differential treatment as given to snake -v- dragon on Gudea's Ningishzida Vase. Although commentators such as Yadin reads the serpents as referring to Tiamat, there is certainly no sign of battle, and the serpents do not look malevolent. It is the contrast between their vertical and horizontal positions that suggests opposite conditions in relation to the the cycle of the year governed by Sun, Moon and Venus, with the Janus hybrid hinting at the juncture between past and future Time at the start of the year. We could also bear in mind the possibility that the different serpents allude to the rising and falling nodes of the 'Dragon of the Eclipse'.

FORATT-38--39: THE NEO-ASSYRIANS TAKE BACK THEIR HERITAGE

With the Assyrian pieces under these entries we can mostly leave the entry information as sufficient to speak for itself until we are in a position to consider some key narrative programmes in the Neo-Assyrian palaces⁴¹ as a whole. Evidently as the Empire became established, it was convenient for the court authorities to turn to the repertoire already to hand from its immediate mixed Syrian and Mitanni heritage, either making its own minor artefacts at court workshops in metal and ivory, or importing ready-made minor arts pieces from Syria. The use of wings on hybrid creatures is a Mitanni fashion the Neo-Assyrians fully canonised, as also is the heraldic unit, now with genies either side of a tree of life, repeated over and over again as a leitmotif in the sequences of palace reliefs. We note already the coining of a particularly fierce and strenuous Neo-Assyrian version of the lion, whilst depictions of the griffin now lose their slim peacock elegance and are replaced by thick-set eagle-headed hybrids with lion or human bodies. The Neo-Assyrian contribution that amplified such familiar icons was the portrayal of the Gilgamesh hero ideal from king-as-hero simply grappling with a lion to realistic presentations of current royal deeds in lion-hunts and real-time wars all over the empire, and the emphasis in public rooms of the palace on overt propaganda proclaiming royal omnipotence, legitimised by the Gods.

The *Forward Attack* in the minor arts, as seen on the bowl under **ForAtt-38**, though perhaps superficially applied for surface decoration, would still have retained the undertow of its core meanings, and allusions to Ishtar as the primary Goddess of Nineveh would especially have been implicit. The large-scale reliefs of **ForAtt-39**, on the other hand, were consciously serious, and the embroidery on the robes on certain renditions of Aššurnasirpal II from the NW Palace proclaim in an understated way the central tenets of belief and propaganda forming the spiritual infrastructure of royal power adopted from the past, and the

⁴¹ For the Ashurnasirpal programmes in key NW Palace rooms, see in particular S M Paley *King of the World: Ashur-nasir-pal II of Assyria 883-859 BC* New York 1976 and J Meuszynski *Die Reconstruction der Relieffdarstellungen und ihrer Anordnung im Nordwestpalast von Kalhu (Nimrud)* Mainz 1981

regular appearance of the *Forward Attack* in these incised embroideries must again overtly refer to Ishtar who legitimises kingship, as well as referring to the New Year day and the king's authority over the State Calendar. Stearns *ibid.* informs us that Aššurnasirpal holding up two arrows on the Hood Museum slab means he is emulating Ninurta, equally the bestower of kingship and the Neo-Assyrians' favoured warrior God who sorts out Chaos in his fight against Anzu. Nonetheless, the King's very name indicates that Aššur⁴² was the central, all-encompassing State God (who appears on other embroideries not shown here - see Canby *ibid.* for examples). It is Aššurnasirpal II in particular who allowed the device of embroideries on the royal robes to provide a more esoteric counterpoint to the ritual pacings of the large figures standing or processing round the walls of key rooms in the NW Palace - quite soon the lion-prey motif is dropped altogether from Assyrian palace relief art, though in other Catalogues we have seen that it is retained on their obelisks.

The two representative blocks we have chosen from Room G under **ForAtt-39** are of the type showing the king sprinkled with water by a winged genie using a pinecone dipped in a small bucket held on the arm or being administered to by a eunuch-courtier. Such scenes - almost alike but with little differences - were most commonly interspersed with eagle-headed protective spirits either side of a tree of life and in a the centerpiece in the British Museum the king is enthroned. But it is almost exclusively on the Aššurnasirpal II blocks for the NW Palace at Nimrud that we see this convention of depicting embroidered panels on the robes of the king to add a subtext to the iconography of royal propaganda - it was barely taken up by later kings. Canby⁴³ notes only two instances where embroidered narratives are *not* placed on robes worn by the king: clearly the cosmic symbols are regarded as the trappings of royalty alone, when in dialogue with the Gods.

We should bear in mind that in early Neo-Assyrian history the court still very much rested on the laurels of its 2M reputation for making and trading in beautiful textiles, which had been traded through Syria and into Kanesh since c.1900. The detail of tasselling, weaving and embroidered borders on the king's robes in these Aššurnasirpal reliefs give a tantalising glimpse of the height of finesse and elaboration that could be attained in Assyrian textiles still, as the kingdom regrouped following the destructions of the Sea Peoples and the chaotic aftermath. It is on these embroideries that we also see repeated in miniature many of the the large scenes on the blocks - but the lion-prey groups are shown *only* in the embroideries and there are no parallel monumental sculptures to be found anywhere in Neo-Assyrian art - though they do appear sometimes on seals and on metalwork such as bowls as if now considered an old-fashioned, yet preciously traditional, way of referring to Ishtar. Layard was particularly interested in the lion-prey groups in the embroidery, and tried to draw most of them, and as Canby pointed out he sometimes made the drawings look better than the originals! We therefore chose for our entry the two blocks best supported by the drawings of Layard.

PROVINCIAL FORWARD ATTACK ARTEFACTS IN ASSYRIAN BORDERLANDS: FORATT-40-43

The next handful of entries we look at from the perspective of provincial manifestations of Assyrian design.

FORATT-40: LURISTAN/KASHSHU

The **ForAtt-40** belt fragment from the Louvre is likely to have come from the unusually elaborate (for nomads) Luristan temple site of Surkh Dum where many votive pins - and another belt (Dussaud *ibid.*'s fig.10) - were also found. Throughout his paper on the Luristan bronzes cited in the entry Dussaud dwells on the Zoroastrian/proto-Mithraic implications of the kneeling man spearing the bull with his arrow - a bull that in turn is part of a straight-forward Syrian-type stand-off *Forward Attack*. He draws attention to the plummeting eagle behind the group holding in its beak what he sees as a hare (signifying predator and prey in another form). He draws from it all the conclusion that in the Central Asian version of human/divine intervention it is the bull that is pierced, and the lion he sees as the *alter ego* of the kneeling God, its solar implications close to those of the staring Gorgon

⁴² See G van Driel *The Cult of Aššur* Assen 1969

⁴³ J V Canby *Decorated Garments in Ashurnasirpal's Sculpture* *Iraq XXXIII* 1971 31-53

with swastika bent-legs position on Archaic Greek pottery (and probable cross-reference, too, to the God Aššur drawing his bow and arrow – seen by him as equivalent not only to the Luri-Kassite God Kashshu, but also to the Iranian Ahura Mazda). On



studying the full belt (initially discussed by Dussaud in an earlier paper⁴⁴) we realised we should take into account the scene depicted along its full length (shown in his pl.xxv and reproduced above). It shows a hunting scene with three more archers and their dogs hunting boar and antelope (with insertions of a hare and predatory fox⁴⁵ in the gaps), culminating in the *Forward Attack* at one end standing for the New Year point. He thus argues the entire hunting scene should be understood in Mithraic terms (with echoes of the well-known Assyrian relief scenes of libation over lions killed in the lion hunt), its implication being the dedication of the entire calendric ritual and its booty to the God, making the belt a dedicatory object.



Lion with prey or rampant lions on their own often feature on the elaborate votive pinheads also found at Surkh Dum, and Dussaud goes into great detail about the Zoroastrian imagery he reckons is to be read on them. Seen on the two examples above (his figs 4 and 7), the figures of priests in some instances hold snakes (c.f. III. 9-19) and either hold barsoms (bunches of tamarisk twigs) or the clubs used to stun animals for sacrifice. Sometimes they are shown preparing with pestle and mortar the haoma/soma drink to offer as sacrifice along with animals (bearing in mind their stated aim 'to sacrifice through barsom, haoma and flesh in ritual action with well recited word in strong voice'). It means the last three categories of the Zoroastrian Heptad:

⁴⁴ R Dussaud 'Ceinture en bronze du Louristan avec scenes de chasse' *Syria XV,2* 1934 187-199

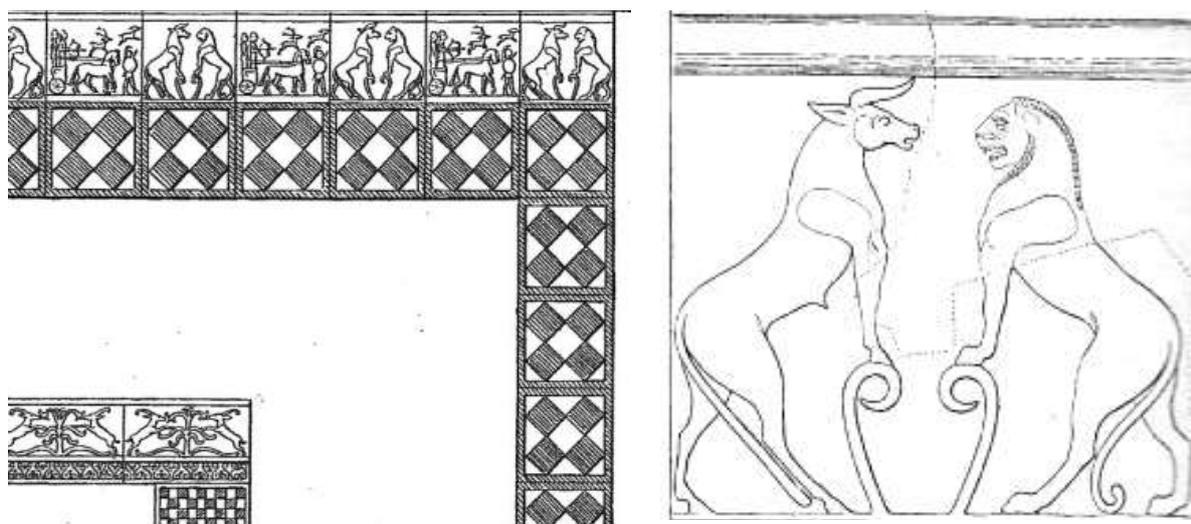
⁴⁵ We are reminded here of the fox-tail-wearing warriors on the Karashamb goblet.

Plants (the barsom and haoma drink - probably a mixture of ephedra and poppy opium); Animals (mostly in the form of Cattle) and Mankind –are each represented in the iconography, with the Four Elements of Water, Air, Fire and Earth implicit (the snake here could represent Earth, but we have already noted its many other possible connotations). (The Heptad in its astronomical dimensions was initially tabulated in our discussion of Persepolis at *III.6-34, Catalogue B*, but for ease of reference we show the table again in this Catalogue at *III.9*).

The Luristan votive pinheads are usually centred on a face staring out, Inanna-like (Dussaud equates her to Anahita), flanked by her lionesses – a continuation of the floating head feature on 2M Mitanni seals which we shortly associate in the *Chronological Focus Iconography* with the newly important star, *Al-Gol*. Whether these pins did have astronomical significance we need not go into, but Dussaud points out the 7- or 8-petalled flowers (as above left) referring to Shuriash and Anahita are often present, hinting at the level on which the imagery should be read. In the end, as Dussaud says, 'l'action des cultes iraniens est difficile à saisir parce qu'elle se combine avec d'autres croyances': and the same is the case with Mitanni iconography.

FORATT-41-43: PHRYGIA, GREECE, CYPRUS AND INTERMEDIATE ISLANDS 900-700

The wooden handle made for the largest cauldron in Tumulus III at Gordion (**ForAtt-41**) provided the funereal keynote for the brewing of beer in it. Post-funeral, the cauldron was stuffed with smaller vessels, some containing a red substance found out later to be pieces of resinous pine for use as incense. The huge number of strainer jugs and drinking vessels of pottery amongst the grave goods would also have been related to the drinking ritual (see our DIVERSION ON ENTERTAINMENT). On the temple hillock opposite the necropolis at Gordion, although no foundation footprint remained, from the very damaged pieces of tile-

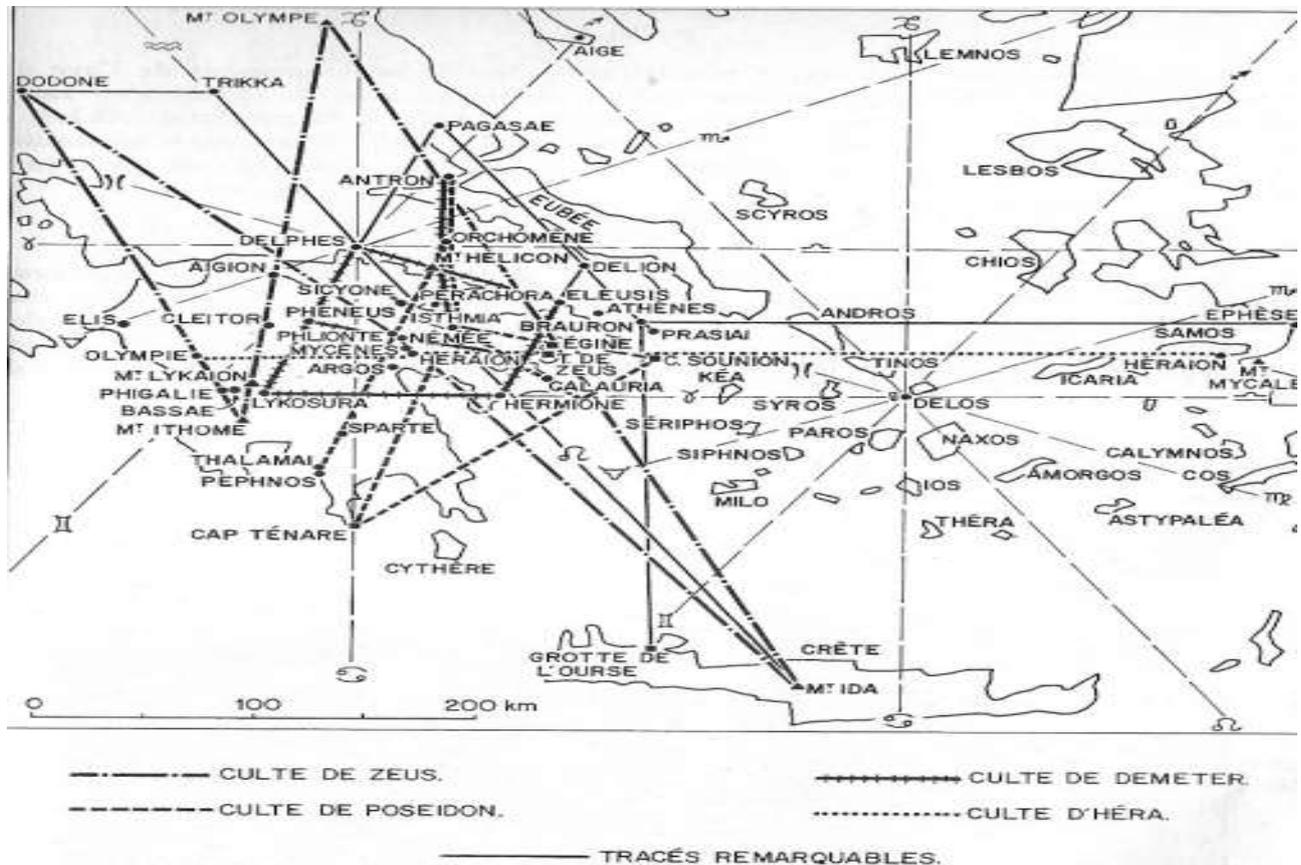


cladding picked up on the site it was concluded that a simple temple had stood there, with two core images from the **CANEA** featuring on them, enabling its theoretical reconstruction (Körte *ibid.* plate. opp. p168 - see details above). There were 7 pieces showing pairs of goats either side of a hillock over the doorway and 16 of seated bulls and lions confronting each other on the top frieze (reconstruction line drawing illustrated above right), alternating with scenes of chariot and soldiers part hunting deer, part setting out to war (2 almost complete pieces – see *Art History Section*). This last subject - noted by us earlier as a common theme in Hittite iconography - is often paired with the lion-prey motif since between them they express Life -v- Death polarities at a divine level and as mirrored in state activity. The Phrygians are said to have arrived from the Balkans during the general changeover of populations initiated by the Sea Peoples: by this period the use of these quaternary **CANEA** heraldic groups suggests Gordion was able to run its own local calendar – and as neighbour to Sardis in Lydia its more tempered influence filtering through to the Greek world was tangible - see the patterned jug from Gordion below with cardinal astronomical animals. As for the other two entries under this cluster, we can take as read the common meanings of the lion-prey group are being alluded to, most notably the invocation of the Goddess Venus/Ishtar by warrior users in the context of war.



FORATT-44-45: CONSOLIDATION OF GREEK ASTRONOMY IN GREECE AND MAGNA GRAECIA

As the colonization of the Mediterranean by the Greeks⁴⁶ got under way during the 8C it was marked by an astonishing programme of temple building from Sicily to Attica, dedicated to Gods or Goddesses that in previous catalogues I have constantly had to remind readers represent the powers of planets or zodiac signs – observed over many millennia in order to understand their characteristic influences on human affairs. One of Jean Richer’s maps below pinpoints the main 1M cult centres on the Cyclades devoted to Poseidon, Demeter, Zeus & Hera established 800-600BC (if not already existing from Mycenaean times). (It would have been clearer to make out if separated into four maps – please consult in the original book.)



⁴⁶ For the hard facts of this deliberate colonisation operation see John Boardman and N G L Hammond (eds) *The Expansion of the Greek World, Eighth to Sixth Centuries BC (The Cambridge Ancient History 2nd Edn VOL.III, part 3)* Cambridge 1982 (1st edn published 1925)

Richer⁴⁷'s work began almost by accident when he initially noticed a significant orientation line linking Delos, Athens and Delphi (see III. 9-207), as a consequence of which he realised the omphalos at Delphi - under the aegis of Apollo - might have marked the centre of a vast land zodiac (not all of its sectors having equal emphasis) that embraced Greater Greece, having a similar astronomical purpose as the megalithic alignments of Egypt, Europe and the Levant in previous eras. This line he later identified as one side of the Virgo/Athena Sector, with Apollo the Sun-God (originally a Hittite God - see III.9-75) as Lord of the Zodiac. From temple dedications and artefact iconography he found confirming evidence that the next alignment round from it anticlockwise must have been 'l'axe cosmique Lion-Verseau' (see the same illustrations). As he puts it in an introductory chapter, 'Cet axe signe véritablement la Grèce est en fait l'image de l'Harmonie céleste, celle même des planètes du système solaire et du zodiaque'. Even if we shall probably never be able to find out what enlightened élite group devised and set it in motion, and how many generations it took, we can go quite far in endorsing Richer's overall vision in spite of disagreement on some of the detail. This is the angle we now focus on when trying to understand in general terms the mid-millennium material - until we can build on it in fuller detail in the *Chronological Focus* to **Catalogue F**.

A clear majority of temples built during this Greek expansion c.700-500 were dedicated either to Apollo or Athena - possibly indicating how, as Richer noticed, these were prime coordinating observatories in the grand design. Temple references to Athena and/or the Gorgon – or her foreign counterparts – are a recurrent leitmotif throughout the Catalogues so far and need no reminders but, even before coming to the great Archaic Apollo temples in colonies such as South Italy or Sicily, Jean Richer's list of a first wave of Delian Apollo sanctuaries in Cycladean Greece - with Delos at their centre - seven of them on small islands in the Cyclades, a handful on the Greek mainland and two on the Anatolian side –bears quotation in table form (his pages 51-2):

SIGN	PLACE	NAME OF TEMPLE
♋	HERMIONE SYROS	Old temple of Helios (Sun) Delion, north of Hermopolis
♌	CAP EPIDELION	Sanctuary of Apollo
♍	CRETE	Dictynnaion (probably had a temple of Apollo in the immediate vicinity)
♎	PAROS NAXOS	Temple of the Delian Apollo Delion
♏	AMORGOS	Delion of Minoa
♐	NISYROS COS	Delion Delion (both on the Delphi line)
♑	ORTYGIA	Temple of the Delian Apollo
♒	CLAROS	Temple of Apollo
♓	CHIOS	Temple of the Delian Apollo
♈	LEMNOS	Temple of Hephaistos
♉	MARATHON ERETRIA	Temple of the Delian Apollo Delion
♊	PRAISAI PHALERA	Temple of Apollo Delion

We will argue that the use of the *Forward Attack* and the other compositional types of lion-prey attack on metalwork, pottery and sculpture of this time can often be read as indicators of that grand colonizing operation. The main question for the next few

⁴⁷ Jean Richer *ibid*.

entries is how these artefacts in some way reveal what Richer saw as that more hidden impetus behind Greek colonization – not so much trade, as the establishment of an entire *koine* joined together by an operatively coordinated Calendar, progress on its rudimentary version in Mycenaean times (studied in the *Chronological Focus* material) having suffered a major setback due to the Sea Peoples invasions. The fact that stories from the *Iliad* and *Odyssey* now emphatically start to appear on these artefacts seems to have been one way the Greeks signalled their debt to foundations laid by their ancestors in the Mycenaean world, expressing their desire to regain continuity with it by the impetus it gave to their own new attempts to bring a civilization to order. Richer's book is difficult to read, partly because fragmented in its presentation. He had to marshal large numbers of pictures before the age of digital scanning made it easy and the material is presented almost in random gobbets as if he is thinking aloud without proceeding to organize his material more digestibly, but if we are to keep on track with our particular enquiry centred on the lion-prey group, many of his lines of thought will not come into the picture anyway. However, his overall approach in reading Greek iconography as largely astronomical in nature (in other words, devoted to the Gods) was confirmation of the direction emerging from my own findings concerning the primordial **CANEA** that forms its foundation. In the coming pages, whilst continuing to run with my own readings (following twenty years of grappling with the decipherment of **CANEA** imagery), some 'spot check' points incorporated from his most relevant insights are indispensable. The overall hypothesis - intuited by a single man (backed up in the original sources when you look for the evidence) - is nothing short of visionary after a long gap of 2000 years of blindness on the matter – and the recent papers on the archaeoastronomy of the Aegean that I have quoted from in **Catalogues D & E** at last serve to back up his original pioneering probings and guessings with precise observational data.

The relevance of all this to us is that Apollo was represented on the pediment of his original Temple at Delphi - as Athena was on the Old Parthenon - by lion-prey sculptures, for reasons we can only look into fully in **Catalogue F**, suggesting the lion-prey group in this context did not simply stand for the New Year but - as so often for earlier ancient governments - also proclaimed the administrative authority of the astronomer-priests in overall charge of keeping the State Calendar on track. For the coming few entries taking us up to 479 BC we keep this viewpoint to the forefront of our mind.

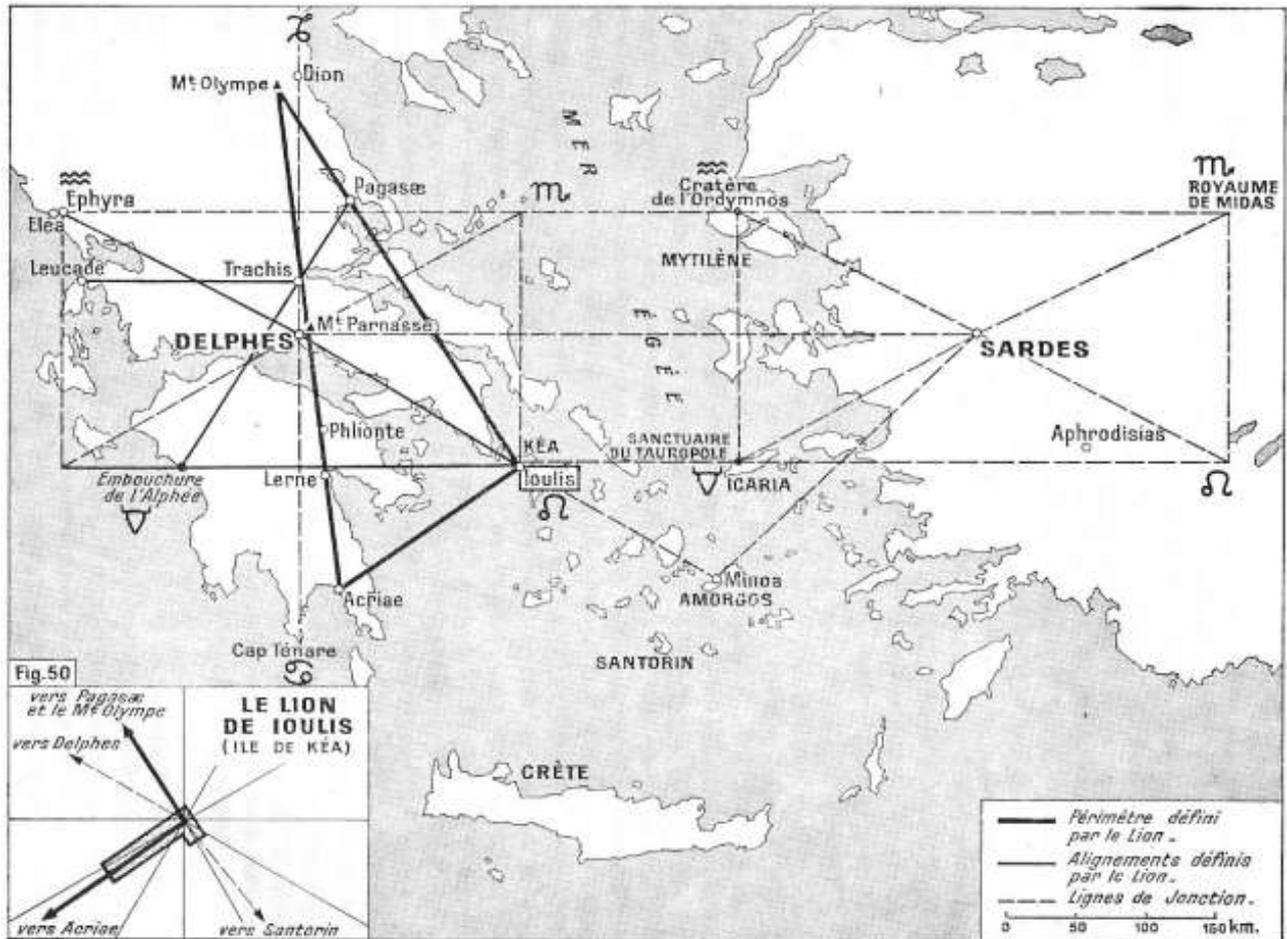
FORATT-44-45: ARCHAIC GREECE AND ITALY 700-600

We will see that *after* the Persian Wars, from 479 the Parthenon and Apollo Temple pediment sculptures were replaced with subjects from Greek myth or epic alone. But previously - on artefacts from the Proto-Attic period (and even as early as on the armour pieces under **ForAtt-42** - we saw a growing sense of Greek national identity expressed through the illustration of specifically Greek epic stories, often in combination with the lion-prey group. Thus on the amphora of **ForAtt-44** the story of Odysseus and his men using their cunning to escape the clutches of Polyphemus is shown on the neck, over a *Forward Attack* on the body of the vase below, perhaps not simply an evocation of the Goddess Athena or her foreign counterparts, but also a reference to all the levels of astronomical and imperial meaning implicit under Her aegis. The choice of the story might also be seen to convey some idea of the perilous adventures and journeys undertaken to establish the land calendar far and wide, with the *Forward Attack* implying Her protection in a grand demarcation operation that was only starting to germinate in the Mycenaean Age, in the end taking centuries to implement fully.

Despite the fluctuating machinations of the Gods of Olympus described in the *Iliad*, most notably of Zeus, Hera, Poseidon and Apollo (we are reminded of Richer's map above), Athena was pre-eminent as the most constant supporter of the Mycenaean in helping them to victory in the Trojan War, and it is not surprising that the near-eastern lion-prey symbol used for Her (it could just as much signify Astarte or Anahita in surrounding territories) should be repeated on pottery made around the Athenian Akropolis at the time (**ForAtt-45**), its use spreading even as far as Naucratis in Egypt. Indeed, our example in the entry has a dedication to Aphrodite on it (often elided with Athena by ordinary mortals, remembering it was Paris who had to choose between Hera, Athena and Aphrodite, choosing Aphrodite as the easy option!).

The map marks Richer's interest in the fact that Delphi and Sardis are on the same latitude, leading him to posit further specific significant connections between Delphi and Sardis - which we already know about from Herodotos – see this relationship more clearly expressed in Richer's Map VI below.

The two East Greek mirror backs in **ForAtt-46** appear to have been items for specific female use connected with their ministrations in the worship of the Prime Goddess (whether Athena, Artemis, Kybele or Aphrodite) so often represented by the lion-prey group (or even plain pairs of lions as the Solstices as in the Corinthian vase painting of Athena (see drawing on the previous page (Reinach *ibid.* p.501)). On such artefacts She is depicted in terms of her association with the divisions of the Calendar, its starting point being the lion-prey group (indeed, the Keleermes mirror forms an eight-fold zodiac – an *octaëteris*).



The Lion of Ioulis marked on this map (illustrated in DIVERSION 11 on LIONS) we return to when we jump back in time to our *Chronological Focus*: it seems to be one of the few survivals dating back to initial Mycenaean attempts to set up an observational network across the Cyclades between the Greek and Anatolian mainland coasts that might also have drawn in Motya's *Kothon* in the west Mediterranean). Interestingly, in our discussion of the myth of Perseus and the Gorgon in the *Chronological Focus*, when considering the astronomical significance of the Archaic metopes on Sicilian temples and assessing the Gorgon as representing the Perseus star group on Athena's aegis, we found that lion-prey groups do *not* feature at all - possibly because the Phoenicians also tended to use this group in Sicily, notably at Motya itself (see **Catalogue F**).

The ostrich egg design under **ForAtt-46ff** is one of a handful associating the *Forward Attack* lion-prey group with a scene of men setting off for war - just as on the Gordion temple decoration - often with horse and chariot and even by ship, invoking the Goddess' protection in battle. We bring together in the **Amalgamated Catalogue** the same juxtaposition in iconography in both the Lycian tomb under **Belland-18** and the bronze chariot of **Belland-19**, which happens in any case to also include a *Forward*

Attack – see **ForAtt-49**. The next pieces in the entry are the two stamp seals, simply showing allegiance to the Goddess, whilst the elaborately decorated pyx from Chiusi once more has the juxtaposition of war preparation scenes with animal processions of sphinxes, griffins and lion-prey group.

It is the threshold step from Tarquinia coming last that reintroduces a traditional near-eastern (indeed Hittite) feature into the scheme of images – that of the human sacred marriage mating scene, the kind of event celebrating the New Year (alluded to by the *Forward Attack* on the same step) at which votaries and priestesses would have worn gold diadems of the kind illustrated under the ostrich egg scene, the egg a perennial symbol of the unified Universe and its renewal at the New Year when Ishtar/Easter is honoure.. Given the date and country of its position (Aeneas comes to Italy as a refugee from Troy) this could even be a deliberate allusion to Paris and Helen, cause of the Trojan War (the ritual is also shown on the Inandik Vase, **III. 9-167**). It also brings to mind the much fuller iconography on the Tragliatella Oinochoe⁴⁸ (Etruria c.600BC shown below) on which Troy is named in the maze/labyrinth inserted between warriors on horseback and the human mating scenes (though on this jug there is no lion-prey group). Other panels further round and above (all drawn out in Giglioli *ibid.* pl. xxvi) again show similar lines of warriors marching off to war as on the ostrich egg group - and even a human couple naming the female as Helen with the male (presumably Paris) holding up an Apple (sadly my Italian is not good enough to read all of Giglioli's commentary).



FORATT-47: THE FRANÇOIS VASE

The iconography of the monumental François Vase of c.570 (**ForAtt-47**) has no need to compress its narratives into short-cuts, since it is large enough to devote entire registers to hunting, racing or war scenes, with an animal procession on a lower register that includes the four *Forward Attacks* - shown as separate line drawings in the entry. In a way we could see it as an expanded version of the Tragliatella Oinochoe – and more than that. Apart from noting how the vase keeps to the Archaic convention of again showing scenes from the *Iliad* on the register above the four *Forward Attacks*, it is nonetheless worth spending some time on the full iconographic programme, only recently satisfactorily analysed in telling detail by Hedreen⁴⁹ - since we can class it as the Greek equivalent of the Karashamb goblet or Inandik vase (**III. 9-11** and **III.9-167**). Unfortunately apart from the front view given in the entry (unenlargeable), I could not track down a comprehensively drawn roll-out of all the registers⁵⁰ running round to include the back - like the ones we have been able to reproduce for the Karashamb Goblet or the Inandik Vase.

⁴⁸ G Q Giglioli 'L'Oinochoe di Tragliatella' *Studi Etruschi III* 1929 pl.26

⁴⁹ G Hedreen 'Pictorial Subjectivity and the Shield of Achilles on the François Vase', Chapter 5 in his *The Image of the Artist in Archaic and Classical Greece* Cambridge 2015

⁵⁰ Apart from Hedreen's rather small illustrations, the next most comprehensive coverage of the imagery is given by K-H Pridik via this link <https://www.kiho-wb.de/wp-content/uploads/2015/01/PridikDieFrancois-Vase.pdf>

Of a monumental size, even in vase terms, overall this Black-Figure volute krater - found in Chiusi but made and painted in Athens - adheres to the comparatively new Archaic idiom of bringing together the theme of war – notably the Trojan War and two of its key heroes, Patroclus and Achilles – with four *Forward Attacks* punctuating an animal procession. Its principal register is devoted to a display of the newly canonical Pantheon of Gods (reproduced as a line drawing at the end of DIVERSION 9) in a grand procession on the occasion of their attendance at the marriage of Peleus and Thetis (almost, but not quite, duplicating the procession of Gods⁵¹ in closely similar order and appearance on the Sophilos Dinos (British Museum - *III.9-137*) made ten years earlier. In our DIVERSION 10 on the HORSE AND CHARIOT we point out how these processions of Gods no longer stand on their animals, but now fashionably drive chariots – just as described in the *Iliad*.

Hedreen argues for three overarching themes that link the different subjects on the registers of the François Vase together, which we give after tabulating the register themes below. Starting from the top of the vase (1) and working down, these are the main subjects (A and B refer to Front and Back). Hedreen’s book is about the self-awareness of Archaic Greek artists, who were

REGISTER	SUBJECT	REGISTER	SUBJECT
1A	Calydonian boar hunt with Peleus and other heroes	1B	Celebrations of Theseus in a crane dance with the 14 Athenian youths and maidens saved from Crete’s labyrinth and its Minotaur
2A	The battle between the Lapiths and Centaurs at the wedding of Lapith King Peirinthoos, with Theseus fighting on the side of the Lapiths	2B	The funeral games of Patroclus, concentrating on the chariot race
3	A procession of the Gods (all of them named) attending the wedding of mortal Peleus to the Goddess Thetis, mother of Achilles – almost a replica of the one on the Sophilos Dinos from 10 years earlier – see Kothar discussion in DIVERSION 9		
4A	Achilles’ pursuit of Troilos on horseback, while his father, Priam looks down from the walls of Troy	4B	The first ever representation of Hephaistos’s return to Olympus to free his mother, Hera, from the throne he made for her as a trap
5A	A band of mythical animals such as sphinxes and griffins, interspersed with four <i>Forward Attacks</i>		
6A	The battle of the Pygmies, riding goats, with the cranes		
On the sides of each handle is a Gorgon, Artemis as Mistress of the Animals and Ajax carrying the body of Achilles			

now not only signing their work, but also in subtle ways showing off. Magisterially, he gathers together all the sources and all the arguments to show that the François Vase is as much about its creators as attempting to be a *speculum mundi*. Signed twice by its potter and painter, though at first reading it might appear from the *Iliad* scenes that the chief protagonist holding it all together is Achilles, it is in fact the many references to Hephaistos on most of its registers that leads us to realise the vase is almost a votive offering to the God of metalwork and craft - successor to Daedalos of Crete - on the part of the two artists who made it. The hero Theseus starts the story off at the top of the vase, who has escaped Daedalos’ labyrinth⁵² and saved the 14 potential victims of the Minotaur from being sacrificed (he features again in the battle of Lapiths and Centaurs on the next register).

In the procession of Gods on the next register Hephaistos, though not strictly one of the Gods of Olympus, nonetheless brings up the rear of the procession, riding a mule to indicate his lower status, his lame feet dangling in twisted directions. They all ride forward to attend the wedding of Thetis to Peleus. They are the future parents of Achilles – and we then remember it is to Hephaistos Thetis runs during the Trojan War, when she comes to ask him to make a new suit of armour for Achilles. On the corresponding other halves of registers 1, 2 and 4 Peleus features once, and Achilles twice, providing the crossovers with the Hephaistos tale. We have not yet finished with the story of Hephaistos and Achilles’ new suit of armour (including the shield), but stop at this point to warn the reader that we re-run of some of these *Iliad* events in more depth in a coming DIVERSION (8) on SIRIUS that covers three astronomically significant moments in the Trojan War, involving Achilles’ Shield. Hephaistos decorated

⁵¹ Well analysed in ‘Gods on Earth: The Wedding of Peleus and Thetis’ in Tyler Jo Smith et al (eds) *A Companion to Greek Art* Oxford 2012, section 20.3.

⁵² (Reminding us again of the labyrinth on the Tragliatella Oinochoe above.)

it with Night and Day sky scenes in the centre⁵³, surrounding it with bands illustrating human activities in everyday society (see *III. 9-75* and *III. 9-76*) – one or two of them even repeated on the François Vase – see Hedreen for details).

Back to finishing our journey down its registers, Hephaistos the uncouth newcomer, manual worker God features again on the back of the Vase on the fourth register which recounts how Hephaistos, an outsider God with a new function, like Dionysos, is nonetheless summoned by the Gods to come back to Olympus. He had taken revenge on his mother, Hera, for disowning him (horrified at his disability she had tossed him from Olympus down onto the island of Lemnos) – by creating a throne from which she could not rise once she sat in it. The Return of Hephaistos shows the Gods receiving him as he comes back to release Hera from the clutches of the throne, preceded by Dionysos as go-between. Dionysos also appears in the Gods' procession holding a golden vase Hephaistos has made - linked to another story - but because he looks out at us, the onlookers, it probably doubles as the artists' reference to the François Vase itself as if made through the invocation and power of Hephaistos in person.

The very bottom register shows the battle between the Pygmies and the Cranes, a choice of subject one might not understand – but Hedreen shows from the sources that the Pygmies were once understood as 'the children of Hephaistos', living far south in Africa, while the Cranes - usually living in the far north of Central Asia along with creatures like boars - in the winter fly south to Africa. Hence the top and bottom registers of the Vase refer to the extreme North and South of the Greek-known world, making the Vase, like the Shield of Achilles, into a microcosm of the world itself. One might at first think that the Vase lacks the astronomical ingredient seen at the centre of the Achilles Shield of Hephaistos, but the second-last register with its sphinxes, griffins and four *Forward Attacks* does at least by its summary references to the Four Seasons, Solstices/Equinoxes and the matter of Intercalation, allude to the fixed turning points in the framework of the Greek Calendar. For its conscious emulation of the Achilles Shield, we must mentally hold it over to add as an exhibit, in vase form, to our SIRIUS DIVERSION.

FORATT-48: THE POROS PEDIMENT FORWARD ATTACK AND GORGON AS PATRON OF SCULPTURE

From both processions of the Pantheon of Gods on the Sophilos Dinos (c.580) and François Vase (c.570) we might gauge both as marking the 'equilibrium decades' that were tipping away from animal embodiments of the Gods to their anthropomorphic versions, even if still at times bringing in their animals attributes alongside as BIVISUAL glosses. This had not yet happened with the Poros sculptures of c.560 made for the Hecatompedon, the immediate predecessor to the anthropomorphic Parthenon pediment sculptures we know so well today, carved to replace the Hecatompedon pediment sculptures destroyed by the Persians after the Battle of Marathon. What remains of them includes under **ForAtt-48** an Archaic end-pediment corner sculpture of a lioness *Forward Attack* that flattens the bull-calf under her teats. Other damaged pediment sculptures from that temple (shown below) feature the zodiacal hero Heracles welcomed to Olympia by an enthroned Zeus and Hera from the centre of one and, from the outer angles of the other, Heracles and Triton in one corner and Typhon opposite with three blue-bearded male heads (the centre is missing).



⁵³ Hedreen refers to the description by a slave of the ceremonial tent in Euripides' *Ion* (the play begins in front of the Temple of Apollo at Delphi) as 'lined with spoils he took from the Amazons' that included one tapestry showing the Sun-God in a chariot drawn by four horses and another - as on the Achilles' Shield centre boss - with 'the Pleiades and sword-bearing Orion, and above them the Bear pivoting round the pole on his golden tail'.

In Italy, on the now repainted pediment sculptures from the Temple of Apollo at Veii below centre, Apollo appears to Hercules during his third labour (to capture a pet of Artemis, the hind of Ceryneia – shown on its back under his feet), while below right is a restored Gorgon antefix from the same temple. We discussed in our long analysis of **ForAtt-25** the disembodied head, which features on this key Mitanni seal from Perati, as in use a millennium before of the myth of Perseus and the Gorgon became the paramount subject for sculpture after the 'Dark Ages'. In our *Chronological Focus* material we inspect the Gorgon sculptures of Sicily from this period in relation to the astronomical implications of Athena/Apollo and the Perseus myth, the new mnemonic story behind the reformed Greek Calendar (**III. 9-112** to **III. 9-115**). The terra cotta from the Metropolitan Museum below left, from Richer's book, probably shows Agamemnon in the guise of Perseus with his Gorgon-head shield (in *Iliad II* 36-37 described as 'gazing dreadfully [causing]... Terror and Fright') – seen again on the Etruscan biga discussed in the next entry.



The point of all this is that - thanks to a side line of enquiry expertly unearthed by Hedreen - complementing the François Vase artists' view of themselves as 'children of Hephaistos', we now understand the Gorgon came to be honoured as patroness of sculpture, for reasons that are obvious. As Hedreen puts it, 'The equation of the petrifying power of the gaze of the Gorgon with the making of statues is a familiar motif in ancient literature' (for the source references see the section, '*Hipponax, the Gorgon and Iambic Poetry*' in his Chapter 3). As late in time as Ovid's *Metamorphoses* (4.780/1) the approach to Medusa's home is described: 'along the way, in fields and by the roads, I saw on all sides men and animals like statues – turned to flinty stone at the sight of dread Medusa's visage'. Sculptors were understood as playing the same role as the Gorgon by freezing living beings into life-like statuary for ever. Thus it is not surprising the genesis of Greek sculpture should be presided over by frequent use of the the Gorgon and her octopus- or snake-like tentacles as a subject in itself, not simply as an oblique reference to her position on Athena's aegis, but also to draw attention to the sculptor's work - in the process, as Hedreen points out, enabling the viewer 'to adopt, ... vicariously, the point of view of Perseus at the moment when he looked into the polished surface of a shield, saw the face of Medusa as he sliced it off her body, and lived to tell of the experience'.

FORATT-49-52: GREECE, PHOENICIA AND PERSIA - THE RUN-UP TO MARATHON 550-479

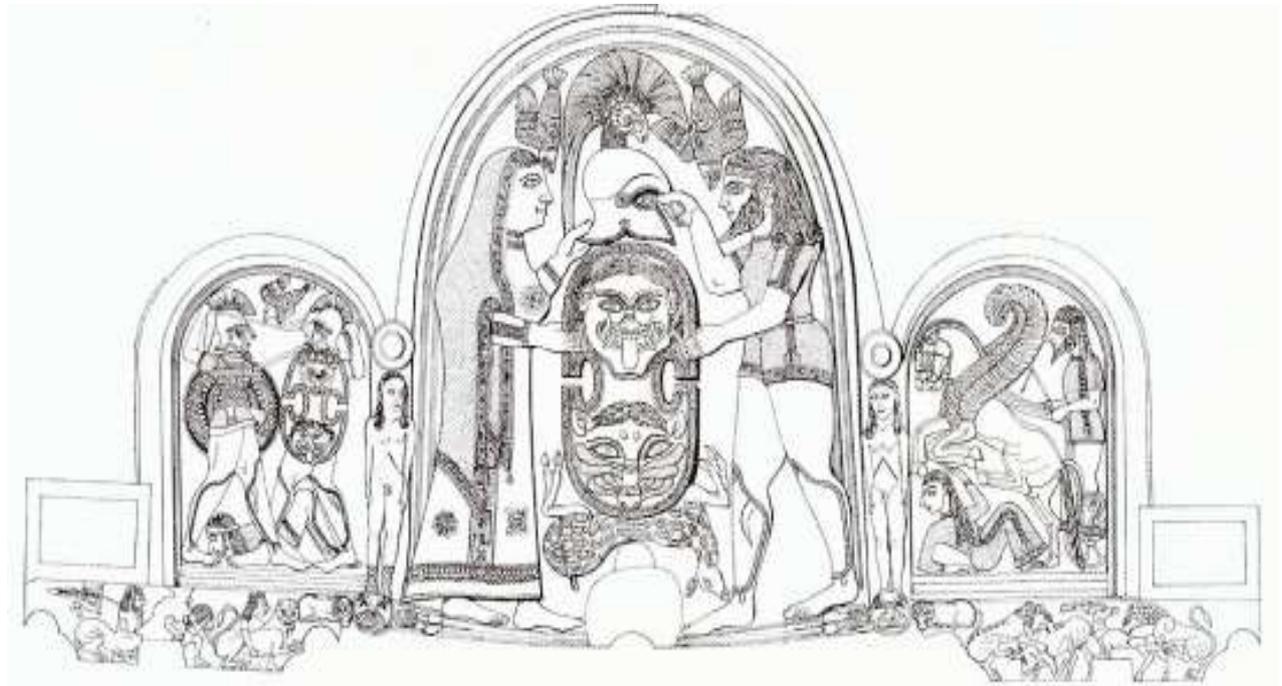
In this short period of less than a century we see the equally strong use of the lion-prey group in both the Greek and Persian worlds (in our *Chronological Focus* for **Catalogue B: The Uruk Stance** we dealt with the many lion-prey sculptures at Persepolis and the supposition that the high use of this compositional type signalled the site's astronomical function in relation to the Goddess Anahita, counterpart to Greece's Athena, also a virgin goddess.

FORATT-49 – THE ETRUSCAN BIGA OF MONTELEONE

Another instance of the juxtaposition of themes of War, Love and the lion-prey symbol is the remarkable chariot from Monteleone, already looked at in other Catalogues. In the the drawing of the front and sides folded out below, we see the placing of our panel with the *Forward Attack* and charioteer matched on the other side panel by two warriors confronting each other with differently shaped shields, quite likely a Trojan and a Mycenaean, with the eagle of Zeus swooping above them. The

Mycenaean holds a Boeotian figure-of-eight shield with a lion-head in the top half and a Gorgon head in the bottom, precisely mirroring the more elaborately worked shield making up the centre panel of the chariot itself, this time with the lion-head gripping a deer in its jaws (classified as a *Belly Landing* in our **Catalogue A**).

In the Florence Archaeological Museum is a stray piece of bronze-cladding from a tripod (next illustration, below left), probably from Chiusi, interpreted by Mühlestein (*ibid.* – his no. 157) as showing Thetis handing Achilles his new suit of armour, including



the shield - in this instance undecorated. On one side of a similarly decorated vehicle from Castello San Mariano (now in the Munich Glyptothek), vividly described by Mühlestein as a '*Prunkwagen*' (from which, again, most panels survive - his nos 158-161) his panel 161 reproduced below right shows the Gorgon in apotropaic childbirth position flanked by two rearing lions, whilst one long panel (his no. 158) includes lions attacking a boar in a *Bilateral Attack* (featuring in our **Catalogue F**) – so that, again, the two subjects appear together on one cart, not this time shown particularly as shield decoration as in the case of our **ForAtt-49**. The role of the Gorgon on Agamemnon's shield mentioned above indicates the two go together on other artefacts too.

If the chador-covered woman handing helmet and shield to the warrior on the chariot also represents Thetis handing over the new armour just fashioned by Hephaestus to Achilles - including shield - then the choice of decoration on it, made so much of this time, is fascinating given that it brings in the Gorgon again (the 'dark side' of Athena) with the lion-prey subject, confirming the presence of the Goddess behind the power of the Gorgon on the shield as the power to turn the enemy looking at it to stone.



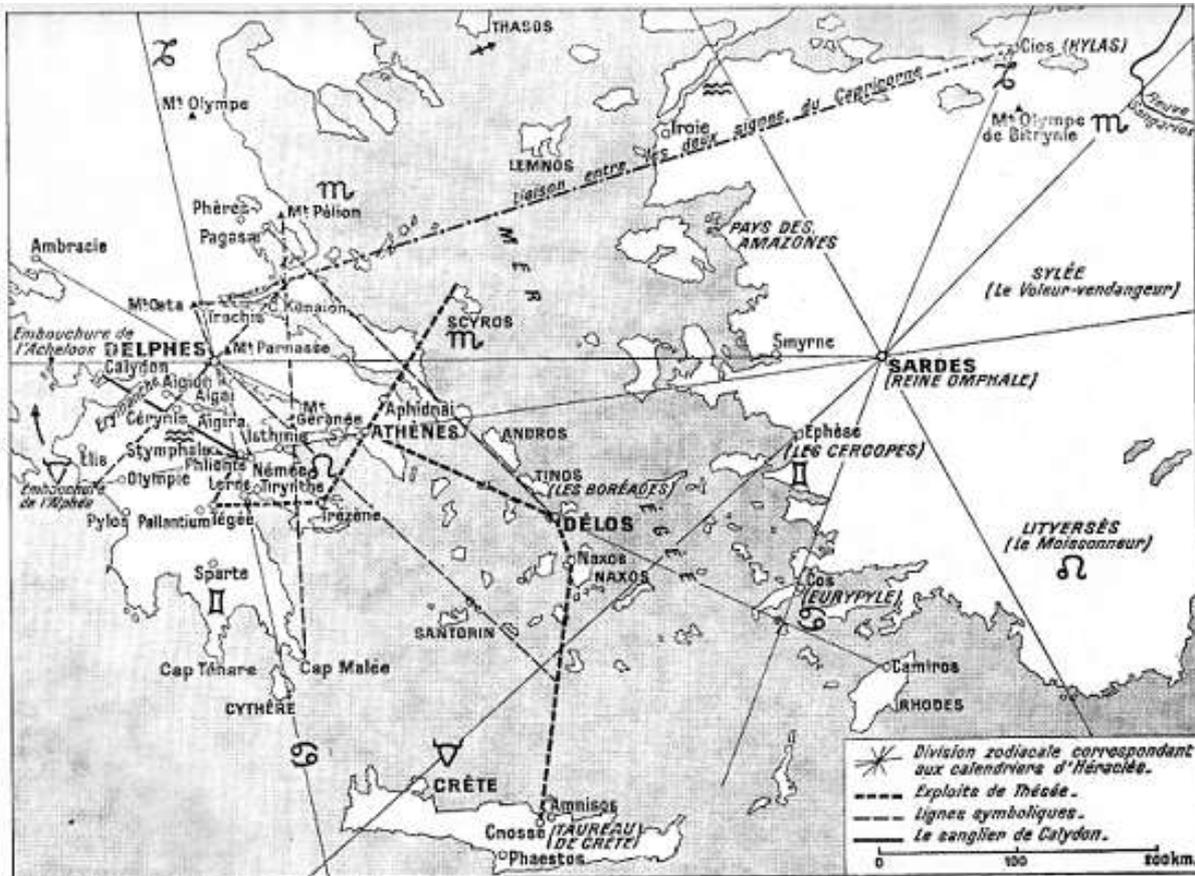
Nonetheless, since the shape and design on the shield does not fit its description as given in the *Iliad*, one might venture to suggest, given the Italian context, that the hero depicted is Trojan refugee, Aeneas, with Gorgon on his shield like Agamemnon.

FORATT-50 – ETRUSCAN TRIPODS

The frequent use of the *Forward Attack* on Etruscan tripods suggests they supported bowls with potions used in sacred celebrations such as the festivities for the New Year (with a tray on the top they were also used as braziers). Apart from the three *Forward Attacks*, the British Museum gives a description of its own tripod's iconography thus: *Three sets of paired figures are at the top of the legs. Herakles (Hercle) and Hera (Uni) ... and two satyrs can be identified: the third pair of almost identical male figures may be the Dioskouroi (Kasturu/Castur and Pulutuke/Pultuce). Reclining satyrs decorated the circular strengthening element joining the legs at the lower part of the stand: two of the original three survive. ... Haynes suggests these figures illustrate a myth ... popular in Italy in the second half of the 6C, where Hera was pursued by satyrs and then rescued by Herakles, but the satyrs stand decorously with no indication of pursuit, and the significance of the pair of male figures is unclear.*

FORATT-51 – LYDIA AND THE COINS OF CROESUS: PERSIA ON THE DOORSTEP

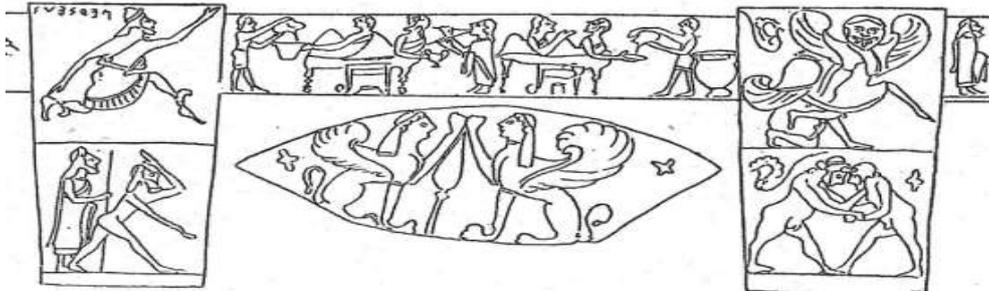
Ian Carradice, Keeper of Greek Coins in the British Museum, is clear that after the capture of Sardis (and its mint) by the Persians, Croesids continued to be issued by the Persians – at least under Cyrus. Achaemenid Persia itself did not use coinage



but continued to weigh out small pieces of metal from ingots on a transaction-by-transaction basis. It has even been suggested Croesids were not publicly issued *until* the Persians occupied Sardis - then under Darius II's occupation of Sardis the flat, gold Daric was introduced, using four different designs featuring Darius in warrior stances. This means the *Forward Attack* on the coins of Croesus cannot refer to Persian occupation as such, so much as adaptation of honour shown to Sardis' presiding Goddess, Kybele/Kubaba, pointing to the Lydian capital's possible role as an observational hub in terms of sacred geography. Note in Richer's Map V above his certainty that the East Greek calendrical time-zone was centred on Sardis, which lies on the same latitude as Delphi, with its own time-zone and local land zodiac. This and Richer's proposed Athens zodiac are analysed more closely in the *Chronological Focus* for **Catalogue F** (both cities' Archaic temples used *Bilateral Attacks* in their pediments). Note in the above map the alignment between Delphi and Delos (birthplace of Apollo) via Athens, the very first Richer identified.

FORATT-52 THE GREEKS IN SICILY AND PERSO-PHOENICIAN BASES

Due to the often funereal connotations of the lion-prey group, the small terra cotta altars like the two from Sicily forming our main entry were commonly placed in or over tombs in Magna Graecia in honour of the dead. The statue base from Loryma⁵⁴ near Xanthos, too, is also thought to have come from its necropolis. The decoration on the little clay tripod (there is only room for half of it in the entry itself) is unusual, not just for featuring the Gorgon on two of its struts, but because on the third Perseus is represented, with his name spelled out next to him in Greek (see below top left, giving the second half of Reinach's drawing and bringing in the second Gorgon appearance). In our iconographical commentary on **ForAtt-27/28** we dwell at length on the



significance of the myth of Perseus and the Gorgon for understanding the adjustment of the ancient Near-Eastern Calendar in the Second Millennium, noting it especially as an oft-repeated theme in the Archaic sculpture of Sicily and South Italy (*III. 9-112 to III. 9-115*). The myth went through different phases, and it is also worth noting Boardman *ibid.*'s reminder that Lycia, in turn, 'was Bellerophon's base of operations, riding Pegasus against the Chimaera' (Bellerophon being a later persona either of Chrysaor, or Perseus himself). The fact that on this small clay tripod the *Forward Attack* should be integrated as part and parcel of the Perseus-Gorgon iconography (along with feasting, athletic and dancing scenes) is surely an allusion to how the precessed Vernal Point (represented by the *Forward Attack*) brought in new constellations for priority attention - with celebrations marking the new New Year that we know under the Greeks included Games (not only at Olympia).



⁵⁴ F Hölscher *ibid.*

FORATT-53-54: AFTER THE BREAK: GRAECO-PERSIAN COINS AND TOMBS 479-350

After the Battle of Marathon the lion-prey *symplegma* is used with reasserted Persian overtones: the fact it was no longer used on pediment sculptures at the sites of mainland Greece is a strong indication that the stand-off between East and West had ended in total rupture. The falling-off of the use of the lion and prey group in Greece itself is as obvious as its continued use in those countries now in the thrall of the Persian Empire. In these and the next few entries the use of the lion-prey group on coins, metalwork, sarcophagi or even larger monuments, though sometimes pointing to the already existing traditions of certain cities going back millennia (such as Tarsus), usually indicates current Persian overlordship of western Satrapies, both in Anatolia and on the Islands – as well as a bleed-in of Persia-controlled Phoenician/Canaanite involvement (as in the case of the coins of Mazaïos). The map above, focusing on centres skirting the Aegean, is taken from Carradice's map of the principal minting cities of the Greek world in the Archaic period but serves also for generally locating the rock-cut tombs of Lycia and Paphlagonia on the Black Sea (**ForAtt-54**). The lion-prey group on the coin entry (**ForAtt-53**) provides precise factual detail of particular instances, not only of continuity of tradition in religious terms, drawing on ancient respect for the Goddess Venus in all her names as also a symbol of imperial power but, more pragmatically, reveals political nuances of the time.

Post-Alexander, however, it was swallowed back into the Hellenistic world of Greece and Rome - as we see in the final entries.

FORATT-53: THE FORWARD ATTACK ON COINS OF THE AEGEAN ISLANDS AND ANATOLIA

The coins coming under this entry provide further examples reminding us of the question of whether coin designs overall played a role in flagging up sectors of the Land Zodiac demarcation as proposed by Jean Richer, seen in his three maps on the next two pages. In fact, the *Forward Attack* coins in our entry do not feature in these maps, so we will not stop to look at their detail (though in DIVERSION 8 on SIRIUS we do discuss the coins of the island of Kea - Richer's fig. 6 - showing the dog of Sirius and head of Aristaeus).

For us the main thing is to bear in mind his overall theory and remember that other artefacts lie behind his other maps helping to validate his arguments, though he did say coins were one of the main sets of artefact he used as evidence for building up his hypothesis. *It looks as if lion-prey groups define central calendrical hubs, rather than separate zodiacal sectors.* The presentation of his information was, by present standards, a little clumsy and very much 'work in progress', requiring further building up and clearer graphic presentation – but we have to remember the maps were first devised by him for the first edition of his book in 1967, literally using scissors and paste, and sadly he did not live into the computer age which would have helped him exponentially.

FORATT-54: TWO ANATOLIAN ROCK-CUT TOMBS

Clearly on both tombs the *Forward Attack* as central feature confirms the funerary nature of the monuments, at this level referring to the Underworld Journeys of Ishtar and her consort, now applicable to the person buried in the tomb - such that the *Forward Attack* in this context can be paraphrased by the entombed person's message from Beyond: *Resurgam*.

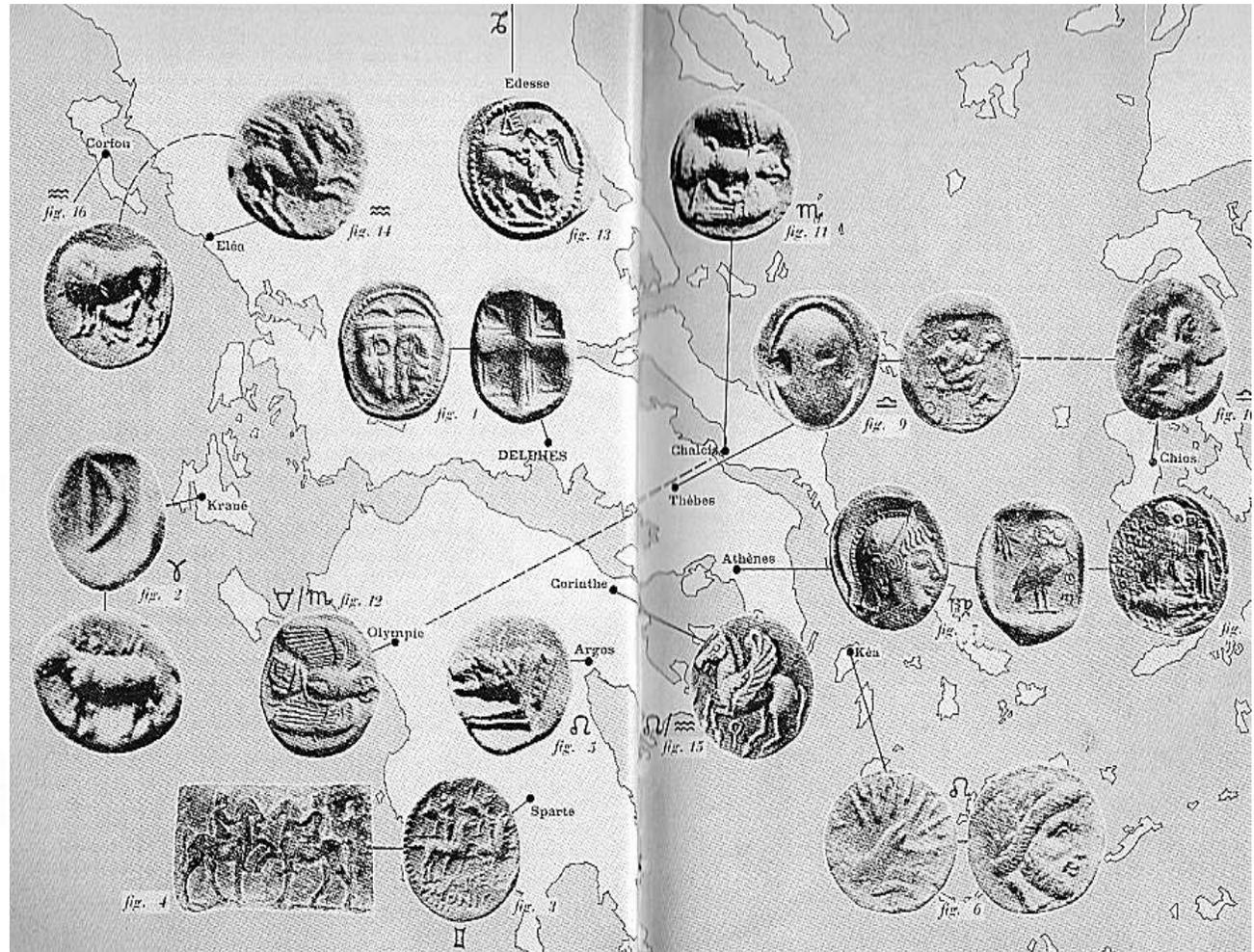
FORATT-55-57: THE RISE OF THE HELLENISTIC WORLD 350-300

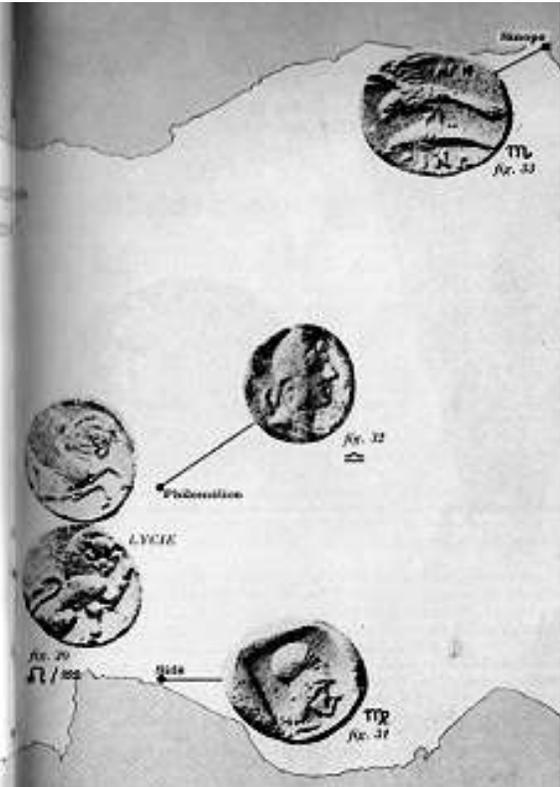
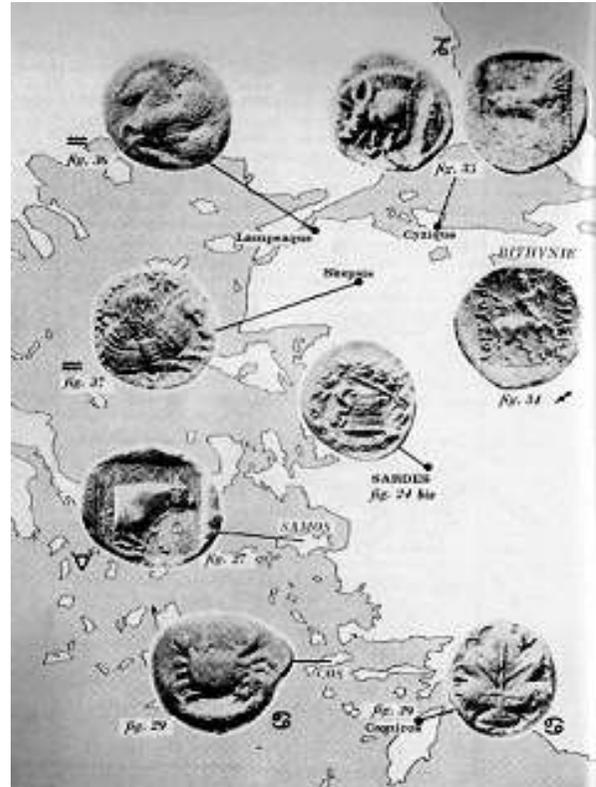
After Alexander's appropriation of the Persian Empire the conscious adoption of a Persianizing fashion in a new fusion with now predominant Greek ideals is the new 'mix' for the Hellenistic entries, along with a strong dash of a two-way Scythian infiltration and imitation, first of the Persians, then of the Greeks and finally of the eclectic Hellene 'mix', often adapted to the Scythian nomadic background.

CATALOGUES OF EVIDENCE

E: THE FORWARD ATTACK ICONOGRAPHY

- FIG. 1. -- Monnaie de Delphes : dauphins et têtes de bélier.
 FIG. 2. -- Monnaie de Krané (Céphalonie) : bélier et sabot de bélier.
 FIG. 3. -- Monnaie de Sparte : les Dioscures à cheval.
 FIG. 4. -- Stèle des Dioscures (Musée de Sparte).
 FIG. 5. -- Monnaie d'Argos : protomé de Loup.
 FIG. 6. -- Monnaie de Kéa : chien aboyant à Sirius et tête d'Aristée.
 FIG. 7. -- Monnaie d'Athènes : tête d'Athéna et chouette.
 FIG. 8. -- Monnaie d'Athènes : Chouette et statue d'Apollon délien tenant les trois Vierges de Délos.
 FIG. 9. -- Monnaie de Thèbes : Harmonie et le bouclier d'Arès.
 FIG. 10. -- Monnaie de Chios : Sphinx.
 FIG. 11. -- Monnaie de Chalcis : aigle et serpent.
 FIG. 12. -- Monnaie d'Olympie : aigle et serpent.
 FIG. 13. -- Monnaie d'Edesse (Aigai) : chèvre.
 FIG. 14. -- Monnaie d'Eléa : Pégase.
 FIG. 15. -- Monnaie de Corinthe : Pégase.
 FIG. 16. -- Monnaie de Corfou : vache allaitant.
- Pl. II. -- La roue zodiacale centrée sur Délos.
- FIG. 17. -- Monnaie de Délos : lyre et delta.
 FIG. 18. -- Monnaie de Siphnos : aigle.
 FIG. 19. -- Monnaie d'Ephèse : biche et palmier (Balance).
 FIG. 20. -- Monnaie de Thrace : Centaure et nymphe (Sagittaire).
 FIG. 21. -- Monnaie de Scyros ou de Lemnos : chèvre (Capricorne); symbole axial; ligne de terre.
 FIG. 22. -- Monnaie d'Olynthe : vache allaitant (Verseau).





- FIG. 23. — Monnaie de Delphes : omphalos et serpent.
- FIG. 24. — Monnaie de Sardes : corbeille-omphalos, serpent et arc d'Apollon.
- FIG. 24 bis. — Monnaie de Sardes : corbeille et serpent.
- FIG. 25. — Monnaie de Sardes : corbeille et serpent.
- FIG. 26. — Monnaie des rois de Lydie : lion et Sirius.
- FIG. 27. — Monnaie de Samos : protomé de Taureau.
- FIG. 28. — La triple Héra de Samos (ornement frontal de cheval, probablement utilisé dans les processions) : la triple déesse et le signe du Taureau.
- FIG. 29. — Monnaie de Cos : le Cancer.
- FIG. 30. — Monnaie de Lycie : protomé de cheval ailé et lion.
- FIG. 31. — Monnaie de Sidé : Athéna.

- FIG. 32. — Monnaie de Philomélion : le dieu Lunus ou Mên (associé au signe de la Balance).
- FIG. 33. — Monnaie de Sinope : aigle et dauphin.
- FIG. 34. — Monnaie de Bithynie : Centaure.
- FIG. 35. — Monnaies de Cyzique : protomés de sangliers.
- FIG. 36. — Monnaie de Lampsaque : Pégase ou hippolectryon.
- FIG. 37. — Monnaie de Skepsis : Pégase.
- FIG. 38. — La ligne d'Héra représentée par les monnaies : de g. à dr., monnaie d'Olympie (tête d'Héra) ; monnaie d'Argos (tête d'Héra, loup et dauphins) ; monnaie de Samos (tête d'Héra).
- FIG. 39. — Monnaie de Camiros : feuille à cinq lobes, symbole de l'Arbre du monde.
- FIG. 40. — Monnaie de Smyrne : tête tourelée de Cybèle.

FORATT-55: THE ALEXANDER SARCOPHAGUS

The entry text describes the distribution of the main subjects carved on the four sides of the sarcophagus. Greeks are shown wearing short tunics with hard helmets and shield – and even sometimes nude - whilst the Persians or those under them according to their dress code are covered from head to toe in draped clothing except for hands and face. The owner of the sarcophagus, Abdel-Nemos⁵⁵, is portrayed in Persian dress, and is the one whose horse is attacked by the lion from the front, contrasting with the figure of Hephaestion on horseback opposite, bareheaded. One wonders whether the transfer of royal power from Hephaestion to Abdel-Nemos is bound up in any symbolism the *Forward Attack* might imply, or whether it really is meant simply to be a lion hunt scene along Assyrian lines. The appearance of Abdel-Nemos in the other scenes certainly asserts his individual identity in proclaiming parity of power and influence with that of his overlords. Since Alexander claimed descent from Heracles, on the sarcophagus he is shown wearing the skin of the Nemean Lion as his helmet – and once also with a ram horn sprouting behind his ear, symbol of the Egyptian god Amun⁵⁶ whose temple at the Siwa Oasis on the borders of Libya he was to visit in order to confirm from its oracle a further title for himself as ‘Son of Zeus’ (see Richer’s map ten pages back, that places the Zeus-Ammon Oracle at the Ammonion within a network of alignments connecting it to the oracle centres of Greece (Delphi) and Anatolia (Didyma)).

The sarcophagus would have been commissioned by King Abdel-Nemos after his appointment by Hephaestion, on Alexander’s orders, and at first glance looks like his acknowledgement of their patronage. However, the short end depicting Abdel-Nemos at the Battle of Gaza of 312, at which he died, must have been finished off during 312-11 before he was placed in the Royal Necropolis of Sidon. The Battle of Gaza took place during the struggle between Alexander’s generals to inherit his Empire in the aftermath of his death in 323, and involved Seleucus, Ptolemy, Demetrius and Abdel-Nemos. As we know, in the end Ptolemy went on to secure Egypt and Seleucus was to take over the Syro-Mesopotamian areas of Alexander’s empire - for which Abdel-Nemos at the Battle of Gaza could well have been a pretender. On the sarcophagus we see him hedging his bets between Persian and Macedonian alliances, both of which in the end were fruitless.

FORATT-56: THE CASTELLORIZO SARCOPHAGUS AND A PHOENICIAN RAZOR

This sarcophagus clearly continues the tradition established by the Alexander Sarcophagus though its message on the long side uses a Greek myth whose life-death/love-loss theme is underlined by the lion-prey group, rather than political polemic. Difficult to bring out in a photograph, there is nonetheless enough of the engraved outline of a *Forward Attack* on the Phoenician razor to be able to associate its cutting function (potentially death-dealing) with the lion-prey symbol long operative in Canaan.

FORATT-57: HELLENISTIC SCYTHIAN ART

The Scythian bowl under **ForAtt-55** is a good example of that interaction between urban and nomadic worlds that had already been going on for millennia, now reflecting incidents from the world of Alexander by repeating the *Forward Attack* group on the Alexander Sarcophagus. In the case of the Chertomyk scabbard the general message about the ever-present threat of death in battle faced by its wearer is conveyed both by battles scenes in current news and the exaggerated *Forward Attack* of griffin on stag, whose antler tops double as the griffin’s mane. The lion-prey symbol also expresses the idea of immortality after death – a heartening thought for the warrior who owned it and was buried with it.

⁵⁵ His name does *not* mean ‘Servant of God (Abdullah)’: Looking into the Semitic root *N-M-S* the word Nemos has more to do with ‘The Sacred, Hidden Truth’. The currently used Graecising *Abdalonymos* usually repeated in accounts of the sarcophagus obscures the Canaanite lineage of this interesting man.

⁵⁶ Much of the detailed information on the sarcophagus is taken from A Pasinli *The Book of the Alexander Sarcophagus* Istanbul 1997 (and reprints)

FORATT-58-60: FORWARD ATTACK SURVIVAL IN ROMAN/JEWISH/CHRISTIAN WORLDS

Although our cut-off date is the end of the Hellenistic period, it is fascinating to note the continued relevance of the *Forward Attack* within Roman art – as also in the iconography of Judaism and early Christianity under Rome or Byzantium. We give brief comments below on how these groups - which still needed and relied on a liturgical calendar – had to adopt new approaches, starting with a continuation of the Scythian story.

FORATT-58: ROMAN PERIOD CENTRAL ASIAN NOMADIC/SCYTHIAN ART

Apart from the Life-Death associations of the *Forward Attack* on these pieces, they might also have represented local chieftain authority as a reflection of the imperial might of the former Persian or Greek Empires. One or two could even stand as invocations to the local Goddess equivalent to Venus, but harder to prove is whether they can in any way be aligned to the spread of aspects of Graeco-Babylonian astronomy to Mongolia (and, ultimately, China). It is probably unlikely.

FORATT-59: THE SIDAMARA SARCOPHAGUS AND THE THRACIAN HORSE AND RIDER STELAI

The Sidamara Sarcophagus in the Istanbul Museum shows similarities in style and content to the Alexander Sarcophagus, now in the same museum - and to the earliest columnar sarcophagus of the Mourning Women⁵⁷ (some with draped heads) made for an earlier Sidonian king (below), found in the same royal necropolis (the plan for which is given in the *Art History Section*):



Apart from small inclusions by me, for the iconographical information and interpretation given here I am mostly guided by Elderkin⁵⁸ who remarks that the females shown on the Mourning Women sarcophagus in the Sidonian Royal Mausoleum (1 on Mendel *ibid.*'s plan), are likely to represent the Nine Muses⁵⁹ in accordance with descriptions of Achilles' funeral in *Odyssey XXIV* 50-90 *passim* (Fagles' translation):

This is Achilles' mother rising from the sea with all her immortal sea-nymphs – she longs to join her son who died in battle... and the Muses, nine in all, voice-to-voice in choirs... Not one soldier would you have seen dry-eyed, the Muses' song so pierced us to the heart. ... Over your bones we reared a grand, noble tomb ... high on its jutting headland over the Hellespont's broad reach, a landmark glimpsed from far out at sea by men of our own day and men of days to come.

This is all by way of introduction to the central, covered woman on the front of the Sidamara sarcophagus who at first glance might be a representative Muse mourning for the seated figure at the centre, taken to be a philosopher or poet of the time –

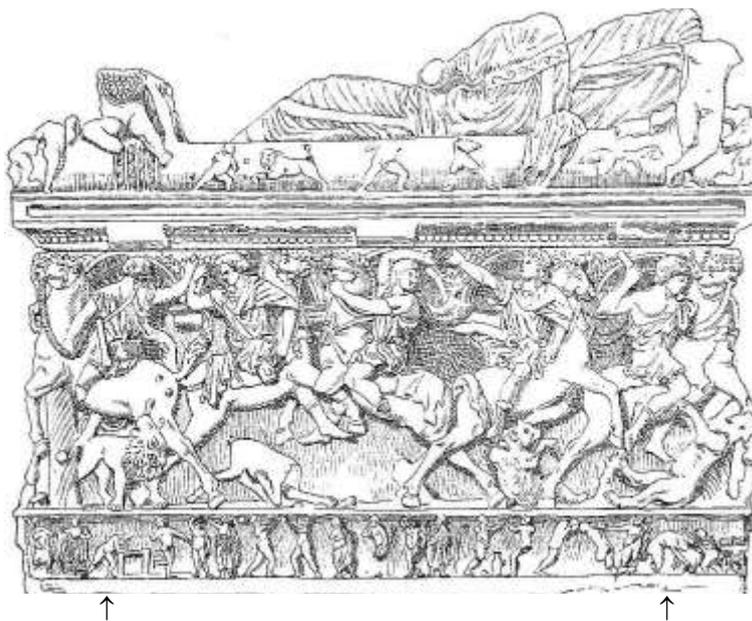
⁵⁷ A Paslinli *The Istanbul Archaeological Museum* Istanbul 2004

⁵⁸ G W Elderkin 'The Sarcophagus of Sidamara' *Hesperia VIII,2* 1939 101-115

⁵⁹ Although there are 18 women shown round it, only 9 can be seen at any one time (the combination of a long and a short side seen from the corner).

possibly Plotinus who died in the 3C – or the poet Menander, of whom a statue was made for the Dionysian Theatre front at Athens along with other standing poets and playwrights. This could explain why the figures on the main scene at the front of the sarcophagus seem to be placed on a theatre stage, the columns more in the background. The covered woman is counterbalanced - behind the seated poet - by another female figure, that of Artemis⁶⁰, Goddess of the Hunt and of all animals, in her typical short tunic and standing directly under the *Forward Attack* in the narrow frieze above (we cannot tell if this was intentional). Since the material of the Mourning Women sarcophagus - like the Alexander Sarcophagus - is Pentelic marble, Elderkin comes to the conclusion both must have been carved in Athens and then shipped to Sidon, whereas it is due to the many Athenian cultural overtones of the Sidamara coffin (and its almost identical twin, the Selefkeh sarcophagus - Elderkin fig. 2) that he believes these slightly more provincial narrative coffins are likely to have been carved at a centre such as Tarsus in Cilicia in emulation of an Athenian original, now lost, by immigrant Attic sculptors who in the Hellenistic world travelled throughout Asia Minor. Certainly all four sarcophagi follow the classic 2:1 proportions of long to short sides – a strong sign of Athenian origins due to their basis in the proportions of the temple of the Erechtheion, built over the Tomb of Cecrops.

For the next step in unravelling the iconography we move to the standing male nudes holding horses at each corner by the reins. Elderkin recognizes them as the Dioscuri, brothers of Helen of Troy, the very person who enjoined Homer to recount the



⁶⁰ Artemis was especially revered in Sparta, and strongly associated with Helen and the Dioscuri.

story of the Trojan War to give it immortality – meaning the seated poet or philosopher must instead represent Homer himself. In the *Iliad* Castor is described by Homer as good with horses, and Pollux as a good boxer - which helps explain the boxer and chariot groups in the small frieze above, going round to the short side, where cleverly the Dioscorid horse on one side runs round into a hunting scene in turn running on to take up the whole of the other long side (as on the Alexander Sarcophagus). In the hunting scene Elderkin reckons the Dioscuri appear again as the main protagonists (his fig.3) - they were famous for their participation in the Hunt for the Calydonian Boar - Castor with a leopard under his feet and Pollux rearing over a lion chasing a deer from behind (Elderkin fig.5B), again as described in the texts. The second rearing Dioscorid horse at the other end of the main scene turns the corner into the second short side (Elderkin fig.5A) where the Helen and Philosopher/Poet figures are repeated, standing either side of a temple doorway, perhaps to be understood as the Gate into Hades. The cult of the Dioscuri had originated in Sparta but found its way to Cilicia after the Trojan War (Menelaus the Spartan was Helen's original husband) and appears to have been popular there and in nearby Seleucia/Selefkeh where the Twins (a personification of Gemini, ruled by Mercury) were sometimes approached as the protectors of poets – and along with Helen also regarded as 'patron saints of the dead' (tying in with the idea of Hermes' role as Psychopompos). Elderkin concludes that the sarcophagus could have been made for someone of Spartan origin living in Lycaonia – and that since it was Helen who enjoined Homer to tell the story of the Trojan War, on the sarcophagus she adopts the role of Muse, which explains her dress.



The precise significance of the *Forward Attack* (and *Bilateral Attack*) on the small frieze over the front scene (above), as also of the three lion-prey attacks integrated into the hunt scene (see Mendel's drawings of the two hunt scene sides on the previous page) - on the Sidamara Sarcophagus underplayed compared to the central position of the *Forward Attack* on the Alexander Sarcophagus - eludes us, but there is no doubt the interplay between hunter and hunted, where the predator in turn is hunted by man, was an ancient theme used by kings even in Hellenistic times, in this Catalogue going back to ED Sumer (**ForAtt-6/7/8**).

Then from territories centred on Thrace on the other side of the Dardanelles, *Forward Attacks* again crop up in a group of intriguing votive or funerary stelai, examples of which make up the second half of this entry, with a powerful ethos of military heroism inspired by remembrance of the Trojan War further perpetuated by the feats of Alexander later cultivated by soldiers in the Roman army thereafter for another three centuries. The Thracian Hero on Horseback stela convention – which followed various compositional traditions⁶¹ and taken together bore invocations to nearly all the Gods of the Pantheon - began in Seleucid times and continued in use well into late Roman times in provinces like Dacia. Those with a lion-prey group under the military rider I would surmise are intended especially to be funerary memorials. Their relation to the Tauromachy sculptures of Mithraism, also a Roman military cult - where Mithras as soldier with sword plays the role of the attacking lion - seems uncannily close (we indeed know the Dacian version of the Roman military cult had a simplified three degrees of initiation as compared to the more elaborate Mithraic seven-degree hierarchy). Sadly we are outside our remit to delve into any further detail at this point.

FORATT-60: THE BETH ALPHA SYNAGOGUE MOSAIC

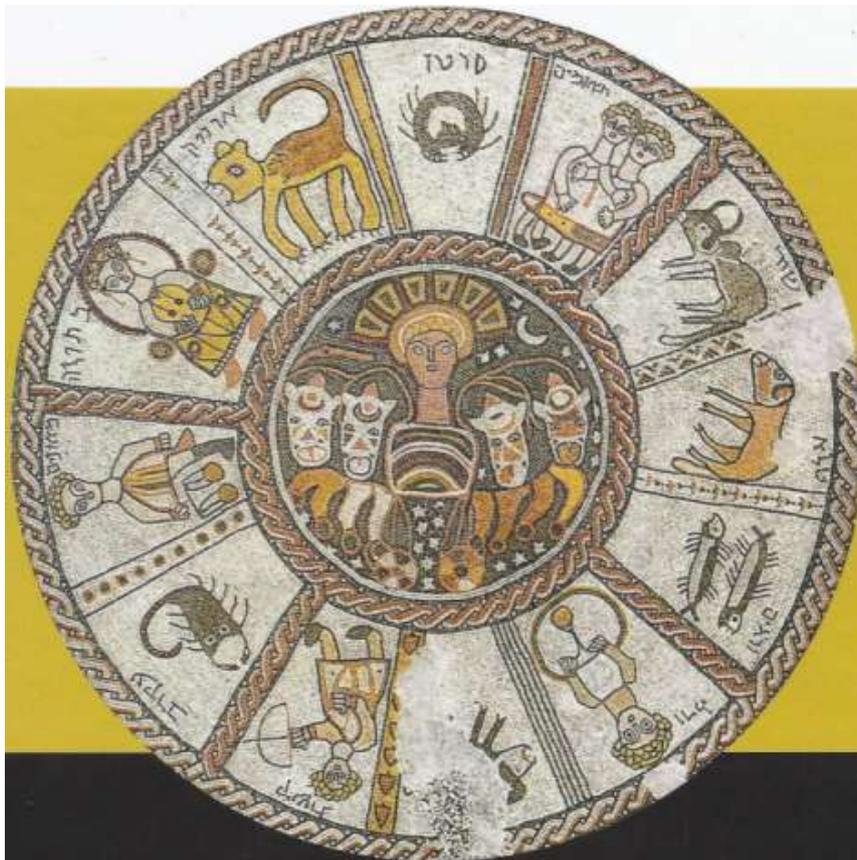
Around eight synagogues with zodiacs dating from the period 3-6C AD are known - see detail of map following taken from Hachlili⁶², on which key sites are circled. Most are in a ruinous state and one or two merely vestigial. The Beth Alpha zodiac is

⁶¹ N Dimitrova 'Inscriptions and Iconography in the Monuments of the Thracian Rider' *Hesperia LXXI,2* 2002 209-229

⁶² R Hachlili *Ancient Synagogues: -Archaeology and Art : New Discoveries and Current Research* Boston 2013



only seriously disfigured on the goat of Capricorn (below). It uses the same naïve provincial style as seen on the Venus Mosaic



at Rudston on the other side of the Roman Empire, in Britannia (near Hull, in Yorkshire, cited in our **Chapter 19**), which is the closest Britain got to a zodiac floor - with one or two exceptions we will come to. We cross-refer to mosaics at the opposite side of the Empire simply to show how at this period the Jews of the Levant - for very particular reasons – bought into the adoption of a universal language of Roman cosmic iconography in turn inherited from the Seleucids.



Ness⁶³ enumerates the key synagogue mosaics, starting with Na'aran, the first discovered in 1918 war-time conditions (below, bottom right) and ending with Hammath-Tiberias (below left), one of the latest to be discovered and second only to Beth Alpha in its high quality of workmanship and good condition, aside from a disfigurement caused by the former wall built diagonally across it. Adding in Sepphoris, it is the Sun Chariot at the centre of these four zodiacs that highlights diagnostic comparisons:

- The Beth Alpha Sun God and his four horses we might categorise as in the 'naive Byzantine style', though there are niceties of detail, not only of the God's Seven-rayed halo, scattered stars and crescent moon, but also the rainbow across the front of the chariot is a reminder of God's atmospheric Covenant to Noah;
- The Hammath-Tiberias Sun-God (below left), on the other hand, is personified in the anthropomorphic convention of the pagan world, also with rayed head, but holding the sphere of the Sun separately in one hand;
- The two wheels of the Na'aran chariot - almost all that remains of its Sun God representation (below bottom right) are shown as simple hexagonal geometric exercises, perhaps referring to the Six Days of Creation as well as to the other six of the Seven Planets (the head of the Sun God, similar to the Hammath-Tiberias rendition) is obliterated, but the rays surrounding it remain, whilst
- The Sepphoris Sun and its rays is shown aniconically as a disc positioned in its chariot, next to crescent moon and a star, and the rearing horses are more skillfully rendered than those pulling the Beth Alpha Sun-chariot (below top right – but see also the clearer line-drawing in the calendrical paragraph at the end of this discussion).

Ness also lists Husifa, Susiya, Yafia, Ein Gedi and Gerasa but apart from Gerasa (which brings in Noah and the animals of the Ark) these three are sufficient to take as foils in discussing the iconography of the Beth Alpha zodiac (the only one of the four to include a *Forward Attack*). The zodiac, of course, implies consideration of the nature of the Jewish Calendar, which in fact has deep roots in Sumerian and Babylonian history⁶⁴. This can only be done briefly here, through comparison of the Beth Alpha and

⁶³ L Ness *Written in the Stars: Ancient Zodiac Mosaics* Pennsylvania 1999

⁶⁴ Sacha Stern *Calendar and Community: A History of the Jewish Calendar, 2nd Century BCE to 10th Century CE* 2001



Sepphoris zodiacs – and strictly only in relation to the meaning of *Forward Attack*! So as a first step we should finish dealing with the Noah's Ark story, as initially evoked by the rainbow on the front of the Sun-God's chariot on the Beth-Alpha zodiac.

FORWARD ATTACKS AND THE NOAH'S ARK THEME

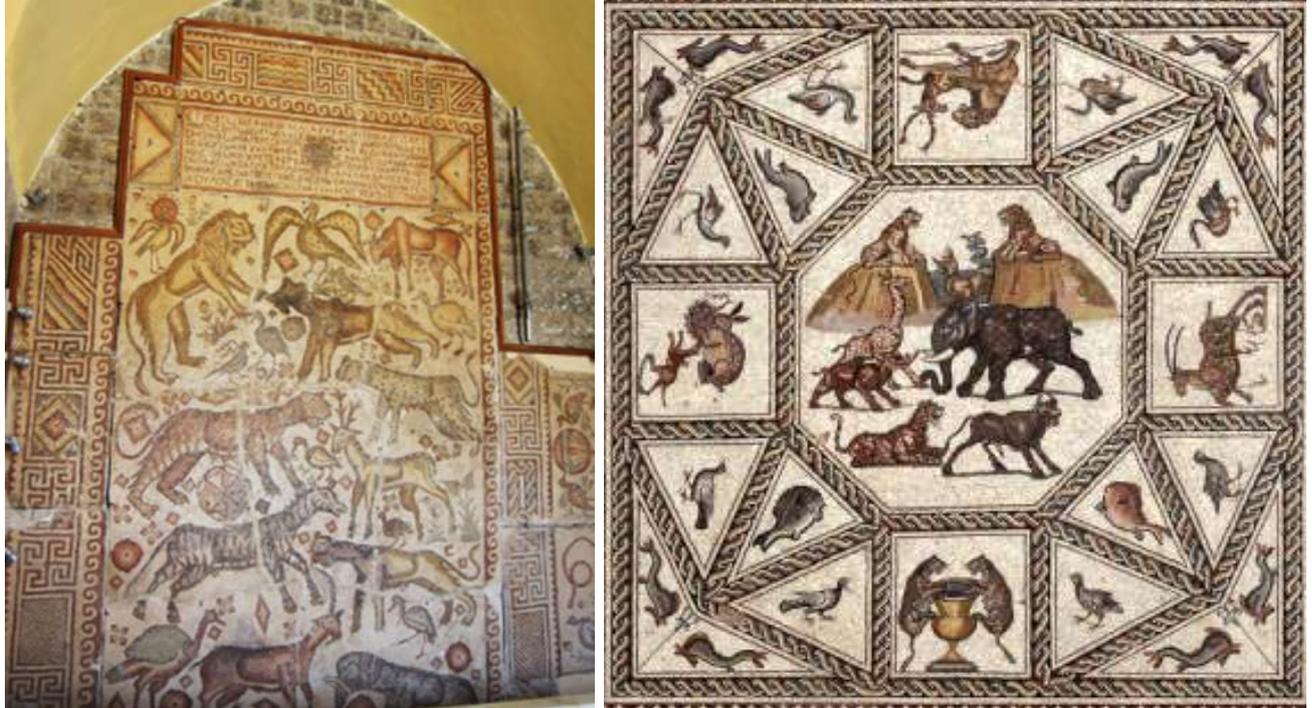
Another building in Sepphoris known as the *Nile Festival Building*⁶⁵ includes a mosaic showing vigorous lion-prey and other animal groups all over it (one being a high-quality *Forward Attack* – detail below left). The floor calls to mind a simpler nave



mosaic at St George's Church at Houad in Syria (below left). It is the *Forward Attack* mosaic from a side-aisle there that is the second item in our **ForAtt-60** entry, showing how the lion-prey group at this time had relevance for all bodies of belief (in a footnote later we shortly also note two other church examples). Although not strictly a zodiac mosaic, taken alongside the repeated pairs of animal confrontations on the St George floor (compare with the rows of pairs of animals - many of them lion-prey groups – on the Dog Palette under **ForAtt-4**), for the sake of completeness, we can set them not only against the floor of the Jerasa synagogue with its animal processions that represent the narrative of Noah's Ark as its signature Bible story, but also

⁶⁵ Z Weiss and R Talgam 'The Nile Festival Building and its Mosaics: Mythological Representations in Early Byzantine Sepphoris' in J H Humphrey (ed.) *The Roman and Byzantine Near East III* 2002 54-90

against the Lod floor (below right, already considered under **Ratt-61**) with its more formalized medley - almost zodiacal in its arrangement - of animals and lion attacks within a geometric framework⁶⁶. It is from a short framing strip detail on the latter that we illustrate (above centre) the only *Forward Attack* on the Lod floor, while next to it is a less-known *Forward Attack* from the Emmaus synagogue - from Talgam *ibid.*).



Looking at all these animal-only floors we have to ask whether these were sometimes intended as unofficial zodiacs along less idolatrous lines (we are reminded from **Chapter 19** that the earliest zodiacs began literally as zo(o)diacs, using only animal representatives for each sign (apart from Aquarius, originally represented by a pot, only later by a man pouring water from it).

Here the art historian interpreting Jewish art can draw on the huge body of supporting texts from the Old Testament, and there are several alternative scriptural interpretations. In the case of Jerasa we know the animal display refers to the story of Noah's Ark, yet at the same time the depiction of unusual animals (such as the giraffe on the Lod mosaic) might also simply reflect current curiosity about exotic animals brought in from Africa by the Romans for their circuses (it is interesting that monkeys rarely feature). The depiction in particular of peacocks, tigers and leopards betrays the age-long connection of the Levant to India and has Dionysiac overtones, given Dionysos was described as bringing his cult from India. These aside, floors in a sacred context showing a profusion of wild animals point either to an evocation of Eden at the start of Creation – or at the End of Days to the longed-for restoration of the Garden of Paradise with all animals at peace with each other. It is in this context that Talgam and Weiss take the lions with paw on a bull-head at Sepphoris⁶⁷ as representations of one of God's last promises to the Jewish people - that at the End of Days the lion (often identified with Judah itself) would sit down with the lamb, meaning these animal scenes are certainly often eschatological in nature and not simply decorative⁶⁸.

Again looking further afield for comparison across the Roman Empire to another example - again from Britain - the roughly contemporary Woodchester Great Pavement⁶⁹ (the largest Roman mosaic in Britain) though damaged, was restored and also

⁶⁶ Israel Antiquities Authority *The Lod Mosaic* New York 2015 (with an essay on the Late Roman Mosaic by Rina Talgam)

⁶⁷ On the Paradise Mosaic at Madaba lion and bull also confront each other - but taken to be in friendship - as also on the floor of the presbytery of the Church of the Deacon Thomas in the ^cUyun Musa Valley.

⁶⁸ Many other convincing possibilities are discussed in the papers given in L Levine et al. (eds) *From Dura to Sepphoris* Portsmouth Rhode Island 2000

⁶⁹ D J Smith *The Great Pavement and Roman Villa at Woodchester, Gloucestershire* 1973

uplicated at Wotton⁷⁰, showing the importation as far as Britain of the theme of Orpheus surrounded by a circles of small animals and birds and a circle of 12 Animals looking like a seasonal procession of creatures that could be read as a Zodiac:

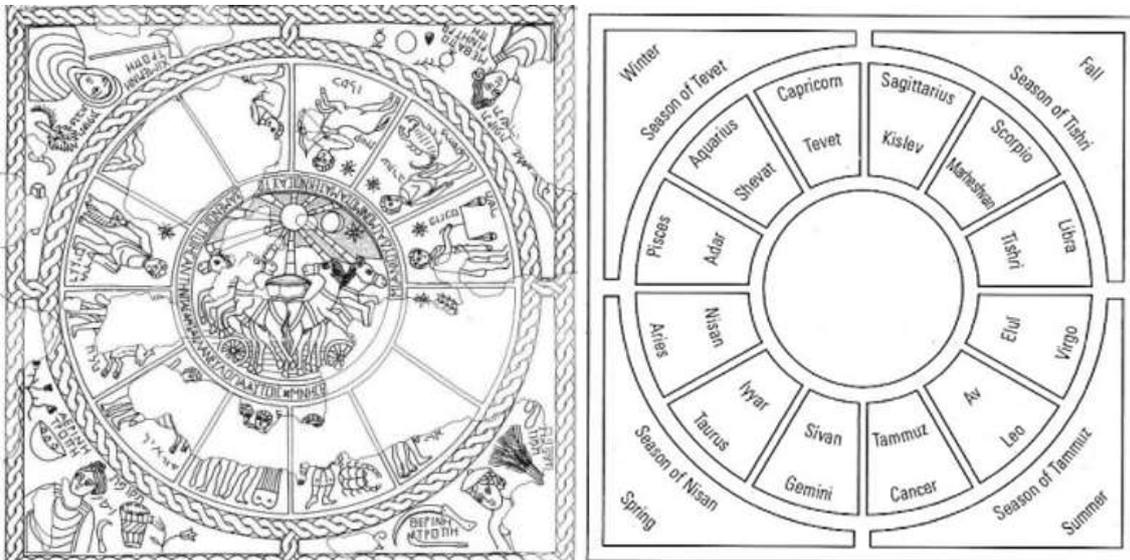


⁷⁰ R Cull et al. *The Wotton Mosaic: An Illustrated Guide* 1980

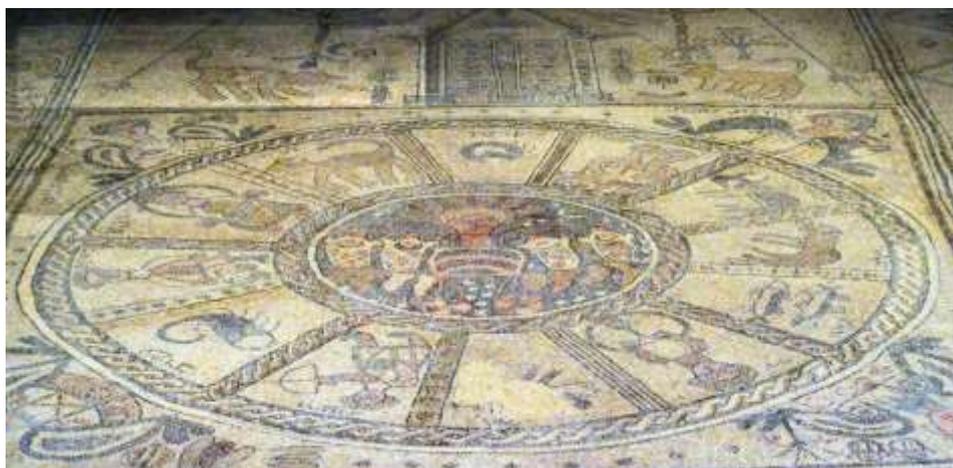
All this means we should bear in mind the overall Calendrical context of the pavements we are considering here. Going back to the Beth Alpha and Sepphoris zodiacs let us consider the Jewish Calendar in itself, especially bearing in mind our Catalogues so often see the lion-prey group as a New Year symbol - which means there is no reason, on the synagogue floors, that it should not stand for Rosh Hoshanah.

THE SYNAGOGUE ZODIACS AND THE JEWISH CALENDAR

In the *Art History Section* we mentioned Hachlili's comment that synagogues appear to have preferred using the Zodiac, rather than representing the labours of the months as churches of the territory tended to do. This means - as Weiss and Netzer (*ibid.*) point out - direct equivalences were made between each month in the Jewish Calendar and its corresponding zodiac sign (see their drawing of the zodiac below, and next to it the diagram of correspondences it covers), while the zodiac in turn is aligned with the Four Seasons personified as female figures in the corners (they are similarly present on the Woodchester Great Pavement, above). The Beth Alpha zodiac also has representations of The Seasons as four female types of varying maturity, but the craftsmen unfortunately wrongly synchronized them to the zodiac (Sukenik also blames them for their clumsy Hebrew lettering - they were clearly not Jewish!). The Sepphoris zodiac itself is unfortunately badly defaced (it is unusual to see, of



those Signs remaining, that each one has additional humans accompanying even the animal symbols). So for the perfect synagogue zodiac we still go back to Beth Alpha, even if its Seasons in the corners are misaligned. This is fitting, given the



Lion-Bull opposition preceding it could well refer, at the calendrical level, to Rosh Hoshanah - New Year 's Day.

END OF DISCUSSION OF 1M-6C AD ICONOGRAPHY ITEMS

ICONOGRAPHY OF THE CHRONOLOGICAL FOCUS MATERIAL 1500-1000

PRELUDE

Looking back in time from the standpoint of this last item in our iconography study featuring a lion-bull opposition - underneath a zodiac - it is appropriate the last section should have ended on an all-embracing astronomical viewpoint covering the entire heavens, since it sums up how far the divisions of the sky and their uses in the liturgical calendars of all the religions of the Ancient Near East had been systematized since tentative beginnings in the second half of the Second Millennium. In our discussion of the iconography of *Chronological Focus* period artefacts that now follows, we must back-track to pin down aspects of the astronomical developments in mid-process that finally led to that ultimate consolidation, involving work that I believe was shared between all kingdoms round the Mediterranean consciously using the lion-prey symbolism. From c.1500 Mitanni encroachment southwards from the Central Asian heartland was becoming apparent as they built up their own North Syrian empire, upsetting the balance between the Great Powers of Egypt, Anatolia and the Levant. In the process they became the conduit to the Aegean of Central Asian traditions filtering through Elam and Mesopotamia that appear to have drawn on links as far east as India - we have seen how an Old Babylonian tablet (**ForAtt-22**) has the imprint of the snake-legged Goddess at least a century or two before the public rise of the Mitanni (depending on which dates we use for Hammurabi).

As I said before, the main reason for dealing with the *Chronological Focus* Iconography very last is that it has its own momentum whereby one sub-theme leads naturally to the next: it will not necessarily cover the entries in strict chronological order, since it introduces comparative material from earlier or later periods where relevant, so strict sequence of entry order cannot always be followed.

The *Forward Attack* plays a full part – as a visual indicator - in the story of the Calendar changes needed from the outset of the Second Millennium whose impetus, it appears, was taken on by outsiders such as the Mycenaeans and Mitanni, perhaps less impeded by the weight of past tradition and better able to embrace innovative adjustment - and implement it. It would have been an anti-climax to stick to due chronological order and end with the First Millennium material, built upon the foundations of that work brought almost to a halt by the interlude of the chaos brought on by immigrant 'Sea Peoples'. (It took until 800 BC for the Archaic Greeks to pick up the pieces and proceed with that implementation.) In relation to particular artefacts under the Catalogue entries, we try to track changes in the ancient near-eastern Calendar through individual stars or new constellations - as and when their related myths arise - deploying in-depth DIVERSIONS where appropriate (identifiable as before by indented text within the main layout) that often apply to many entries and skate across several periods of history. They cover themes such as the ideal warrior physique; the Mitanni and Greek Gods; the cultural significance of Mycenaean horse and chariot, dogs and lions – and a final overview of the Snake Lady.

As done in the *Art History Section*, as we now work through the special focus entries again from the iconographical point of view, the core significance of the *Forward Attack* gains new layers as we continue to concentrate on the Mitanni/Mycenaean interface. After individual entries and before we summarise our final conclusions we take stock of the extent of Mycenaean adoption, not only of elements of the **CANEA** (which includes the lion-prey group itself), but also assess those elements absorbed from Central Asia Aryan imagery not identified before. Altogether this section opens up even more detail on the debt owed by the Near East to the Central Asian Oasis cultures of the Second Millennium (especially the BMAC and Indus). But the flow was not one-way, since the incoming Mitanni also had their own 'take' on Mesopotamian iconography on which they rang their own changes – these appear in turn to have had indirect knock-on effects on Aegean artefacts. We therefore need to look both ways during discussion of the following catalogue entries, hugely important for the subtle cultural information they convey to those looking at the fine detail.

By the end of this *Iconography Section* we hope to have brought together key iconographical threads mostly of an astronomical nature (all germane to the significance of the *Forward Attack* itself), prompting a quite different take on Mitanni and Mycenaean colonisation, diplomatic missions, trade - and culture share. Astronomical themes are especially specific under the DOG and HORSE AND CHARIOT DIVERSIONS that deal respectively with two sets of key constellations central to the Mycenaean world view. That discussion provides the groundwork for understanding the astronomical iconography of the *Bilateral Attack* items studied in **Catalogue F**.

A more comprehensive overview of the interplay between Minoan, Mycenaean and Levantine calendars will not be attempted until **Chapter 20**, where it is appropriate to consider at length Jean Richer's controversial geo-astronomical theories explaining the development of 9-8C Greece's mainland State Calendar - probably initially set up by the Mycenaeans using the Cyclades and East Anatolia as their hub.

FORATT-24: BULL-LEAPER HEROES ON SYRIAN, MITANNI OR INDUS SEALS AND THE LITHE PHYSIQUE

The datable Catholic University sealing, our main entry under **ForAtt-24**, is a later OB sealing than **ForAtt-22**, showing on one half a basic heraldic unit of two bearded, six-locked mature men using the inscription as the axis. These are the mature nude type common in archaic Sumerian tradition (No.3 on the minor gods table above). Mirroring each other in a loose embrace, as Lambert (*ibid.*)⁷¹ explained, the *lahmu*, or senior hero, is twinned with his other half, the *lahamu*, to form a duo of minor Gods who carry out tasks for the main Gods through animal struggles, or acting as guardians and standard-bearers. As one of the few text experts to make meaningful matches between text and image, Lambert points out that the bull-men who on Sumerian seals witness the rising sun on either side of mountain crests - identified in the texts as *kusarikku* (No.9 on the minor gods table above) - on Mitanni seals through ignorance or deliberate cultural elision are merged with the *lahmu* and *lahamu* roles though on this seal they still remain distinct. Thus the other half of **ForAtt-24** consists of a heraldic unit with two Mitanni slim heroes as *kusarikku* flanking an ibex, the whole group over a *Forward Attack*. Dussaud in his paper on Luristan bronze designs linked to **ForAtt-40** suggests - plausibly I think, given their known mention in the Mitanni-Hittite treaty - 'que les deux gardes ne sont autres que les deux Nāsātya' (see *Gods Table* at **III.9-**). Their distinguishing features are their lithe bodies, the long hair lock and Libyan-type cod-piece and apron they wear (see another clear example in **ForAtt-25**). They also wear a tight waisted belt - which until recently led people to identify them Minoan youths visiting from Crete - but these features could as much be pointers to the influence of Egypt (given relations between the two kingdoms were strong⁷²) as to our ever-awakening perception of Mitanni links to India and later tradition there of the three-strand belt worn by young male initiates in the Vedic religion that, again, dwells on upright deportment and the cultivation of the spiritualised physique through spirit-mind- body exercises - presaging that interest in body development that became dominant in Greek athletics and sculpture (*mens sana in corpore sano*) still pursued in the West today in yoga, sport and gymnastics.

In the Catalogue entry I thought it helpful to show this sealing next to **Ratt-26**, the Alalakh design with a *Rear Attack* group over a pair of bull-leapers depicted in exactly the same way as on the Metropolitan Museum Classical Period Syrian seal in the next row (left) in the entry, again symmetrically positioned on the bull's back with Sun-in-Crescent under another bull leaping towards a seated lion, all set against the two full-height figures of Baal accepting a ruler's obeisance, Ishtar's flower between them. Both bull-leaper seals should be looked at in the light of our DIVERSION on Mitanni composition, since both also show how (as in the Perati Seal of **ForAtt-25**) the figures on Mitanni seals are more hieratic and strictly symmetrical than their Sumerian heraldic

⁷¹ Typical of a text specialist, Lambert throughout his paper, though usefully pinning down certain characteristics of Mitanni seals in general, does not illustrate a single image of the ones he discusses - opposite to the art historian's general policy of 'don't discuss it if you don't show it' since most people will abandon the task of looking up the host of references to different seal catalogues which can rarely be brought together at one library desk to allow a seamless read!

⁷² Amenhotep II-period inscriptions in the columned hall at Karnak mention a diplomatic reception of the Mitanni, including column descriptions saying the Mitanni chiefs came to ask the Pharaoh for 'the sweet breath of life' (O'Connor & Cline p.34).

prototypes. Quite apart from the *kusarikku* role, the bull-leaping groups show the same Mitanni preference for lithe youths as leapers, concern for the fit body being an Āryan trait explored in our upcoming DIVERSION. In fact, given the bull-leaping scene



III.9- 20: (Left) Bull leaping scene on an Indus sealing from Mohenjodaro – AFCCat fig 300b ;and (right) on a moulded clay tablet from Harappa (AFCCat-100c) – both shown in the MMA NY ART OF THE FIRST CITIES exhibition 2003)

on the Hittite Hüseyindede Vase - and man-bull gymnastics on Indus seals (as above), these more recently noticed bull-leaping representations from well beyond Crete suggest the Minoan tradition is more likely to have been adopted on the island by way of Anatolia. Thus – and not just because the *Forward Attack* often features in such images - at this point we should take another DIVERSION to study this focus on *the noble youth* (the Mitanni *marya*/Greek *kouros*). Already in DIVERSION 5 on music and acrobatics we saw how bull-leaping often featured in the ritual entertainment spectacles in honour of the Gods in Central Asia and the Hittite world, thus a further factor to be taken into account in our analysis of Mitanni-Mycenaean cultural exchange. We think the Āryan cultivation of the naked male physique was so influential a preoccupation that it eventually not only took centre stage in the Classical Greek world through the athletic games events, but permanently impacted on the representation of the human form in painting and sculpture (thus in constellation visualization) through the application of a Canon of Ideal Proportion.

DIVERSION 7 THE SLIM, LONG-LOCKED ATHLETE - AND ORION

It is surprisingly fruitful to look into the cultural origins of the physical type chosen for the slim young men with long hair-lock down their back who appear on the handful of Elaborate Mitanni seals carved in the Syrian Classical style coming under our *Chronological Focus*, and we even mentioned them in the *Art History* section as a style indicator. The problem, as von Dassow (*ibid.* p.29) puts it, is that we have to ‘work backwards from observable phenomena to posit the invisible processes and structures that generated them’. As prologue to our interpretation of the seals predominating in the earliest stage of our search for sources behind Mycenaean use of the *Forward Attack*, as in the *Art History* section we try to pinpoint the often understated influence of a culture that began to filter (more appealingly than that of the Hittites) into Anatolia, the Aegean and the Levant from 1500 onwards –in certain ways absorbed by the Mycenaean at the very period they were starting to look outside their own borders and come into their own.

The squat, indeed ugly, male physical types on ritual vessels such as the Karashamb goblet (*ForAtt-13*) and lack of concern for anatomical shapeliness highlights a key contrast with the Mitanni physical ideal apparent on their seals which I believe can be ascribed to long-cultivated Indus and/or Egyptian attitudes towards the body. The ‘body beautiful’ is a preoccupation we might read as an Indo-Central Asian legacy, feeding in not only to the elegant bull-leapers of Crete but also adopted in the ivory sculpture of the Palaikastro *kouros* (III.9-47/III.9- 105), an unexpectedly early signpost to Archaic Greek sculpture whose full interpretation we dwell on in our final conclusions. We try to explore here the rise of a male self-image inspired not only, it appears, by Āryan culture in its cultivation of good looks and noble deportment, eventually leading to the establishment of the Canon of ideal human proportions in Classical Greek sculpture - but also, it seems, by the already existing Egyptian Canon of Proportion that also played its part. We surely have to take into account the *Iliad*'s descriptions of Achaians with long locks and beautiful bodies as striking evidence of a male ideal shared between Mitanni and Mycenaean at the height of their interaction, another strong pointer to the period in which the story of the *Iliad* is set. Taking a quick scan through E V Rieu's translation,

- ◆ the first instance, in **Book IV**, describes blood running down Menelaus' body as akin to the purple dye used to colour ivory: *thus, Menelaus, blood stained your comely thighs and legs and ran down your shapely ankles:*
- ◆ then in **Book XI** we see the son of Antenor, *the tall and handsome Iphidamas*, and
- ◆ *Patroclus suddenly appeared in the doorway, like a God.*
- ◆ In **Book XV** Hector following a conversation with Apollo speeds away, *[knowing] how beautiful he is.* (We come back to this description in the horse and chariot diversion where we quote the full description.)
- ◆ In Book XVII Menelaus kills Euphorbus who falls with a thud to the ground. *His hair had been as lovely as the Graces' locks – he used to bind the little curls with gold and silver twine. Now, all was drenched with blood, and he lay there like a fallen sapling.*
- ◆ The battle between Achaeans and Trojans swirls round the body of Patroclus, here rallied by Aias, *who next to the peerless son of Peleus [Achilles] was the finest Danaan of all in looks and the noblest in action.*
- ◆ In **Book XVIII** when Achilles learns of Patroclus' death *he picked up the dark dust in both his hands and poured it on his head - he soiled his comely face with it...*
- ◆ In **Book XXI** when Lycaon begs for his life, Achilles replies, *Even Patroclus died, who was a better man than you by far. And look at me. Am I not big and beautiful, the son of a great man, with a goddess for my mother?*
- ◆ In **Book XXII** when Achilles finally kills Hector, *the Achaean warriors came running up and gathered round. They gazed in wonder at the size and excellent good looks of Hector.*
- ◆ In turn, in **Book XXIV**, Priam, father of Hector, visits Achilles and *let his eyes dwell on Achilles and saw with admiration how big and beautiful he was, the very image of a god. And Achilles noted with equal admiration the noble looks and utterance of Dardanian Priam. It gave them pleasure thus to look each other over.*

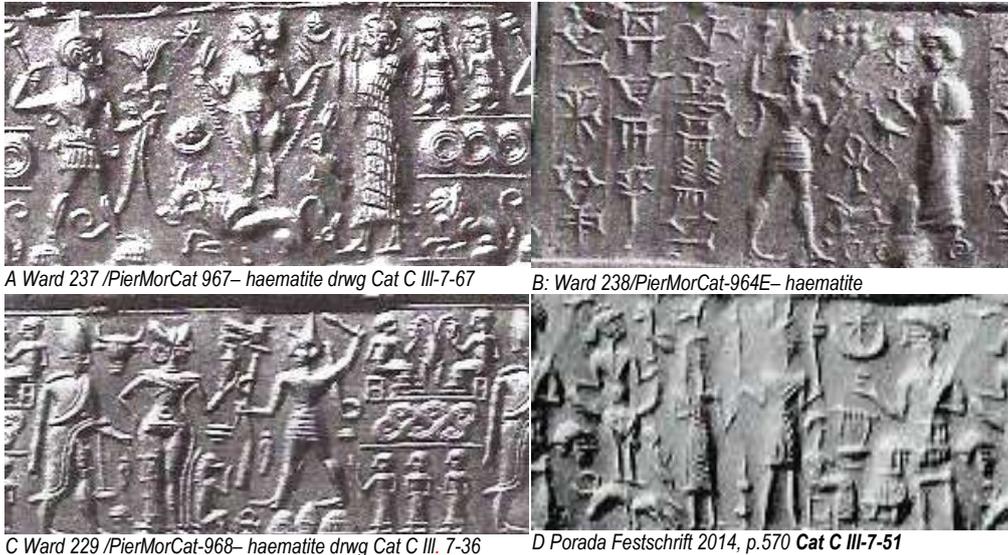
In our general Introduction to the *Chronological Focus* we gave some general ideas on the *maryannu* class based on Mayrhofer's thoughts. Interestingly, von Dassow (*ibid.*) elicited from Syrian lawsuit documents involving the Mitanni that they categorised society into four classes – a concept still holding sway in Hindu society today as the Four Castes. At the top were the nobles and chariot warriors known as the *maryanni*, followed by ordinary citizens, then the helplessly poor and finally those 'saved' from indigence' through a skill useful to society (such as craftsmen).

On the slim evidence available, the overall picture appears to be that when the Mitanni Empire first established itself in Northern Syria it was the élite *cadre* who instigated it, establishing their particular system of vassalage, and Mitanni Elaborate Seals cannot but be the product of this early short-lived period as it occurred in Syria, where the male ideal appears as a combination of the *kṣatriya-cum-brahmin* Indo-European concept of the knightly priest caste. On reading the Amarna correspondence between Mitanni kings and the Pharaoh, it is also not unreasonable to imagine Egyptian craftsmen were sent on loan to the Mitanni from Egypt, reinforcing their aesthetic ideal of the human supporter from examples of the Egyptian male physique in their own art, even down to their emphasis on the single, long lock of hair worn by royal Egyptian youths (*III.9- 22*) known as 'the sidelock of youth' - sometimes plaited - to celebrate the innocence and purity of young royalty – so certainly not the exclusive characteristic of the Minoans. That blueprint aside, we can also look beyond the Mitanni regions to North-West India where proto-yogis were cultivating the lean, smooth, but non-muscular physique, their near-nudity emphasized by the use of a wasp-tight belt securing a kilt/*dhoti* to best display the results of physical exercise.

THE GOD BAAL AS POSSIBLE ROLE MODEL

As happened later with Greek sculpture, up to and during our *Chronological Focus* period this male ideal was projected onto the fit, scantily-clad forms of their Gods. In **Catalogue C**, mainly aided by the iconographical analyses

of Elizabeth Williams-Forte and the work of Othmar Keel⁷³ – and further underlined by a key paper from Edith Porada⁷⁴ on the subject - we spent a considerable time analyzing the earliest representations of Old Syrian Baal/Hittite Teššub on North Mesopotamian seals during the early 2M. (some are repeated below from **Catalogue C** for ease of reference, A/C being the photographic originals behind the Keel/Williams-Forte drawings and B/D two of the Porada illustrations). Looking again at these early representations of the God, we could be looking both at the inspiration



A Ward 237 /PierMorCat 967– haematite drwg Cat C III-7-67

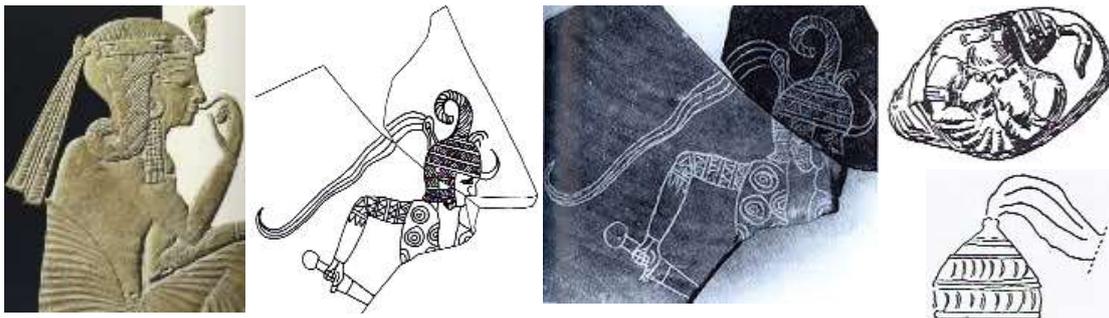
B: Ward 238/PierMorCat-964E– haematite

C Ward 229 /PierMorCat-968– haematite drwg Cat C III. 7-36

D Porada Festschrift 2014, p.570 Cat C III-7-51

III.9- 21: Early 2M representations of Teššub /Baal: A-C from PierMorCat; D repeated in Porada Festschrift: these all show Baal with the long hair-lock running down his back, helmet with wedge-shaped, pointed crest and leg greaves

behind the Peak-capped Ruler of Ebla (in the use of the Baal crest on the helmet - **III.9- 14**) as well as – just as importantly – versions of a warrior with wasp waist and short kilt once thought characteristic only of the ‘Minoan athlete’, but now known to be so prevalent on sculpture or seals - as in **III.9- 23** - that it may be that this ‘look’ originated on the part of these newly initiated aristocratic heroes emulating ‘Baal/Teššub as the male ideal by personally cultivating a fit, slim physique and long lock of hair down the back, in war threaded through a hole in the helmet to keep it out of the way (as in the examples below). It may even be more accurate to say they visualized the



III.9- 22: (Left) Relief of the child Ramesses II with the traditional ‘side-lock of youth’; (centre left and right) drawing on clay bowl fragments of Aegean warrior c. 1400 from Bogazhköy with both long lock and helmet crest – Neimeier *ibid.* fig.38; (right) plumes on Mycenaean helmets – Mylonas *fig. 7g*, the latter as depicted on a silver rhyton from a Mycenae Grave

God in terms of their own specially cultivated appearance. Bearing in mind the nomadic Central Asian or Indus pony-tail warrior convention, and looking at the youths’ long locks on the seals of **ForAtt-24** and **ForAtt-25** (in one instance also threaded through the helmet as seen in the repeat illustration of the Erlenmeyer seal at **III.9- 23**), we turned to

⁷³ See especially the drawings in his Chapter III in *Das Recht der Bilder Gesehen zu werden* Freiburg 1992 on ‘Tauben- Stier- und Schlangendarstellungen aus Palästina/Syrien’ which Williams-Forte used for her own exposition on Baal and snakes.

⁷⁴ ‘The Warrior with Plumed Helmet’ reprinted from *Berytus VII* 1942 57-63/pl.VIII

Mylonas⁷⁵ discussion of Mycenaean helmet crests and hair arrangement (two of his clearest examples are shown above right) where the hole served to keep long hair out of the way in battle. This does not mean the helmet could not also have a crest, as the incised drawing from Bogazhköy/Hattusas (above centre left and right) indicates.

Whether the pony tail itself, or just one lock of it, at the funeral of Patroclus, Homer describes how Achilles, *stepping back from the pyre... cut off from his head an auburn lock he had allowed to grow ever since, in dedication to the River Spercheus*⁷⁶, saying - 'now, since I shall never see my own country again I propose to part with this lock and give it to my Lord Patroclus'. As he spoke, he put the lock in the hands of his beloved comrade. There is certainly some convergence between the physical gear of the Mycenaean warrior, accounts in the *Iliad* (some quoted in our DIVERSION ON METAL PROCUREMENT) and Mitanni representations on seals of athletic slim youths with helmet and long hair-lock – the latter usually part and parcel of the iconography of the Storm God paired with naked consort Ishtar/Venus. As suggested for the Mitanno-Syrians, did the Mycenaeans, too, deliberately dress their hair and helmets to emulate their version of Storm God Zeus - or Poseidon⁷⁷ - and how did the sharing of this warrior convention with their cousins come about?



III.9- 23: (Left) 3M Copper statue in the Brooklyn Museum – originally analysed by Barnett⁷⁸, subsequently by Porada⁷⁹; (right top) one-piece carnelian ring and bezel, Mycenae chamber tomb 58 – Athens Museum (BBCat-173); (bottom right) the Metropolitan Museum seal (formerly Erlenmeyer collection no.2 ,the last entry under ForAtt-24)

There is an early precedent for this physical type in the 3M Sumerian copper statue of a man (above left) with ibex- or goat-horn headdress and raptor bird carcase round his shoulders (seen also on the Shaushtatar seal (III. 9-65). He is otherwise nude, apart from pointed mountain shoes and the same constrictive waist belt, so the statue's early date underlines quite definitively how the Minoans must have been at the end of the chain in adopting this Central Asian mode some centuries later, perhaps in the period before they left Anatolia to colonise Crete. We should also not forget astonishing Indus precedents dating to c.2300-1700, as seen in the two small sculptures from Harappa below. If it

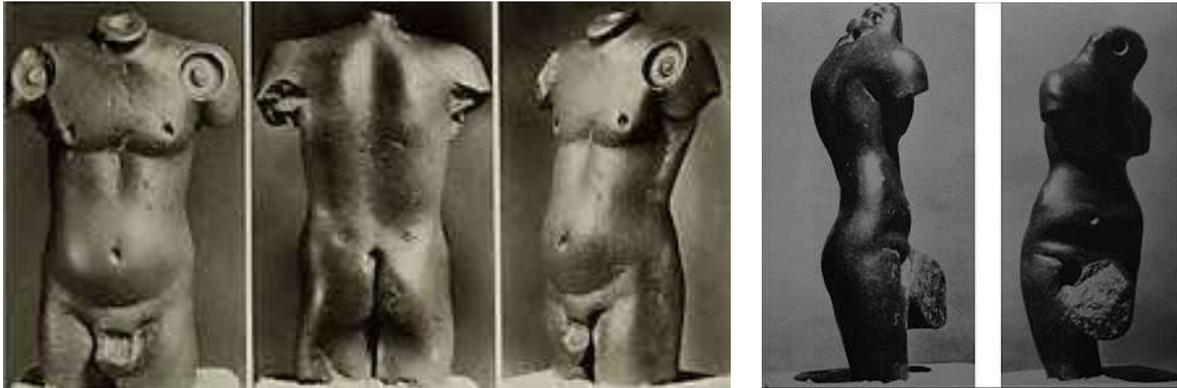
⁷⁵ G Mylonas 'The Figured Mycenaean Stelai' *AJA LV* 1951 134-47

⁷⁶ Translations from the *Iliad* are by E V Rieu for the Penguin Classic series (continually reprinted since 1950)

⁷⁷ A Nur & E Cline 'Poseidon's Horses: Plate Tectonics and Earthquake Storms in the Late Bronze Age Aegean and Eastern Mediterranean' *JAS XXVII* 43-63

⁷⁸ R D Barnett 'Homme Masqué our dieu-ibex?' *Syria XLIII* 259-76

⁷⁹ E Porada 'Seals and Related Objects from Early Mesopotamia and Iran' in J Curtis (ed.) *Early Mesopotamia and Iran* London 1993 44-53



were'n't for the hard facts of the strata they were found in at Harappa in Mount F, the red sandstone male torso would be taken to be a Hellenistic piece, and the contrapposto of the second, in grey sandstone, is pure Henry Moore!

Other features stand out on the last seal under **ForAtt-24** (repeated in the previous illustration above right for ease of reference). In the *Art History Section* we characterized its elegant and polished design and style as Mitanni. As to content, the scene contains common **CANEA** motifs such as the the griffin-prey pair and 'Gilgamesh with lions'- group – but the double-headed eagle- as on the seal below left (like the double-headed demon of **ForAtt-29** on other Mitanni seals) is more common on Hittite - or Central Asian - seals (as below right). Unique is the smaller Master of Beast group consisting of a smaller slim nude - this time bald - with no dress other than the tight waist belt, and holding up two dogs (see also the detail in **III.9- 25**).



III.9- 24: (Left) Nuzi seal with double-headed eagle – from Stein in Wihelm op.cit fig.24b; (right) double-headed eagle on three Bactrian chamber stamp seals – from Sarianidi⁸⁰ nos 126/7/8

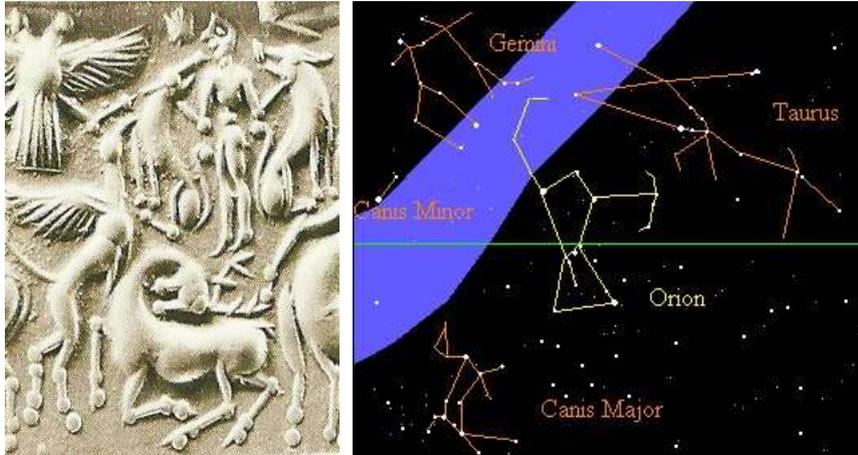
As just pointed out, the larger Master of the Beasts has his long hair-lock kept in place by a close-fitting cap or helmet, unusually holding aloft counter-directional lions. His slim physique at first led scholars to class the figure as Minoan, though this is not at all likely for the reasons just given: this distinctive physique and minimal dress appears on Mitanni seals as far east as Nuzi. The Mycenaean ring-seal shown in **III.9- 23** top right shows a Mycenaean version of just this kind of Master of the Beasts since he also holds up two lions from opposite ends and wears just the same kind of dress (wasp belt fixing a tight loin cloth) - though he is short-haired. As we make matches between the griffin-stag *Forward Attack* on this Metropolitan Museum seal and the Mycenaean seals at **ForAtt-26f** (we could not make it the main entry since it had to give way to the provenanced seal providing the date anchor) this further cross-reference to the Mycenaean seal ring reinforces our argument about a seemingly natural interchange between Mitanni and Mycenaean cultural spheres regarding the ideal male physique.

FORATT-26 -v- THE ERLLENMEYER SEAL: MORE POINTERS TOWARDS ASTRONOMICAL INTERPRETATION

Because of the matches we have pointed out between *Forward Attacks* under **ForAtt-26f** and that on the Erlenmeyer seal we jump forward to **ForAtt-26**, our next step being to consider the likelihood that the slim athletic youth of the Mitanno-Mycenaean ideal was in certain cases projected onto representations of Orion – this in turn will take us to a very long DIVERSION on SIRIUS.

⁸⁰ V I Sarianidi *Myths of Bactria and Margiana on its Seals and Amulets* (with a Foreword by P Amiet) Moscow 1998

In our DIVERSION above on the ideal Mitanni physique, both Master of the Beasts groups on the Erlenmeyer seal, positioned next to and over the griffin-stag *Forward Attack* respectively, show the same human physical type as the Mitanni-style bull-leapers



III.9- 25 (Left) Slim-waisted man as master of the two dogs group on the Erlenmeyer seal under ForAtt-24 (the full seal is reproduced in III.9- 23); (right) night sky position of the two dogs under Gemini and in relation to Orion and Taurus

and *kusarikku* analysed from the other seals. We see this cluster of three groups as a particularly clear-cut instance of the Mitanni device of using analogous BI- or TRI-VISUALS - in which Central Asian and Levantine motifs reinforce or repeat each other – here, I believe, relaying associated calendrical information:

1. on the change in direction of the Sun at the Winter Solstice (larger group, showing Orion holding the lions of the Solstices);
2. key New Year star markers (smaller group, with ?Gemini (or Orion again) holding up the Two Dogs that bestraddle the New Year meridian), and
3. the New Year point on that meridian, involving intercalation (griffin-stag *Forward Attack*).

THIS AREA OF SKY AND THE STARS IN IT WAS CALLED ‘THE DUAT’ BY THE EGYPTIANS AND WAS EQUALLY SIGNIFICANT TO THE MYCENAEANS. Based on the supposition that the groups on this seal - especially since all three are juxtaposed - represent the calendrical truths just itemized, we will gradually build on this approach, concentrating on increasingly complex star maps of the Duat, starting with the close-up detail shown above right. Why is there a concept of *Twins* standing above left of Orion? Perhaps because they vertically line up with the Two Bears higher up, as also with the Two Dogs below– or is it to do with the fact that these pairs lie along the Intercalation Zone, when a second month of the same name is sometimes inserted? It is worth taking note of a line early in the *Iliad* (I, 491) that indicates awareness of the 11-day shortfall between Solar and Lunar years: ‘*Eleven days went by, and at dawn on the twelfth the everlasting Gods returned in full strength to Olympus, with Zeus at their head*’.

For Orion iconography we will keep coming back this figure throughout the *Chronological Focus Iconography Section* filling out the picture further in our finale (for a preview see **III. 9-45** and **III.9.47**), but at this juncture we simply stay with current seal images as a stepping stone to dealing initially with the Two Dogs. If the large Master of the Beasts on the Mitanni seal under **ForAtt-24** refers to Orion holding up the two Solstitial Lions of the Sun’s rising and falling colures, we know from **Chapter 19** that the position of the Two Bears over Orion and the Dogs could also be used as rough stellar indicators for the cycle of the Four Seasons (**III.9- 70**). As seen in the map above right, Canis Major and Canis Minor feature lower down in the same part of the sky as Orion and Gemini, which is why we sense the smaller Master of the Dogs group on the seal refers to Gemini and the Dogs because star-map-wise it is in the right position! In stylistic terms we remember Edith Porada’s comment on an Ugarit seal (**III. 9-68**) about the ‘square’ treatment of the lions’ jaws being typically Mycenaean, but looking at the similar modelling of the dog heads on the Erlenmeyer Mitanni seal (and of the Mycenaean dog-headed Minoan Genius in **III.9- 5352**) we think it more likely to be a Mitanni stylistic trait for dogs or lions transferred to Mycenaean seals – maybe the same craftsmen were involved.

It is only the Āryan cultures that name the large and small Sirius constellations as Dogs – so we need to consider why dogs were important to them, and why they should choose to project dog images onto the Sirius constellations. Apart from dog burials found at sites in Central Asia - or in cities at one time occupied by the Mitanni (*III.9- 33* lower right), the fact that dog remains often feature in key Mycenaean warrior burials means we should explore their full cultural significance straight away in a further DIVERSION, in order to be able to handle their astronomical significance within the iconography of our *Forward Attack* entries. In fact the Perati seal (*ForAtt-25*) was found with dog remains, but we jump straight to *ForAtt-26* iconography first, not just because its many grave goods were found together intact, but also while we still have the Erlenmeyer seal in mind.

Social custom connected to ownership of dogs helps explain why it was particularly during the 2M that *Canis Major* and *Minor* were called the Two Dogs, tying in with the Indo-European Zoroastrian mode of thinking. Much factual material on Sirius comes down to us from the later Roman Period, so it is useful to have already brought in the Classical World catalogue entries as context, before dealing with this *Chronological Focus* material. During our enquiry we will also start to bring in surrounding Age of Aries constellations that also began to feature more and more prominently in 2M iconography –necessitating yet one more DIVERSION on the HORSE AND CHARIOT in Mitanni/Mycenaean culture. This will throw light on the choice of imagery used for newly prominent constellations coming to the forefront as the Age of Taurus finally receded into the background.

DIVERSION 8 SIRIUS, DOGS AND BEARS - AND THE DUAT⁸¹

DOGS IN THE ARCHAEOLOGICAL RECORD

Before embarking on our main aim of making sense of the Mycenaean evidence, we begin by citing precedents from prehistoric Eurasia/Central Asia to see how early dogs were used by mankind in the combined role of hunter and guardian as well as being revered as fellow-members of the human pack (interestingly they never feature in Palaeolithic art). The proof for how dogs came gradually to be trained from certain wolf species is dealt with by Shipman⁸², who tracks its first beginnings in the archaeological record of Russia and Eastern Europe going back to as early as c.32,000BC. Dogs' cooperation in the hunt for game made a crucial difference to the eventual success of *homo sapiens* over the Neanderthals, and Shipman quotes from the many publications of Darcy Morey: 'Nothing signifies the social importance that people have attached to dogs more conspicuously than their deliberate interment upon death'. Rice⁸³ tracks the first wolf-dog remains to Palaeolithic Europe, and the earliest dog-with-human burials to Natufian Israel (c.10,000BC), while at Ashkelon c.3000-2200BC, 1000 dogs were individually buried in a separate canine cemetery. Thus steps towards making the dog a pet, enabling their increasingly reliable use for guarding domesticated herds *and* hunting their predators, was a slow genesis pursued first in Europe and then in the Neolithic Levant and North Africa. Recently more evidence for dogs in Neolithic Egyptian society has come through (perhaps due to better preservation conditions). Shipman has also recently cited added information on the Mesolithic record:

In the Cis-Baikal region of East Siberia domesticated dogs were buried with humans in the same cemeteries and sometimes in the same graves during the early Neolithic period (8000-7000BC). The most remarkable example is from the human habitation site of Ust'-Belaia where a dog was buried wearing a necklace made of eight canine teeth of red deer and with a bovid horn core and shoulder blade, two antlers of roe deer and other identified bones.

Although our main focus for our understanding of dogs and astronomy in 3-2M cultures is the Mycenaean – our closest European ancestors - I lean on Rice's information gathering on the immediate post-Natufian picture in

⁸¹ This DIVERSION has been extracted to form a more tightly edited core to my *OCTANE Newsletter no. 6* (see top right square at www.layish.co.uk/home.htm)

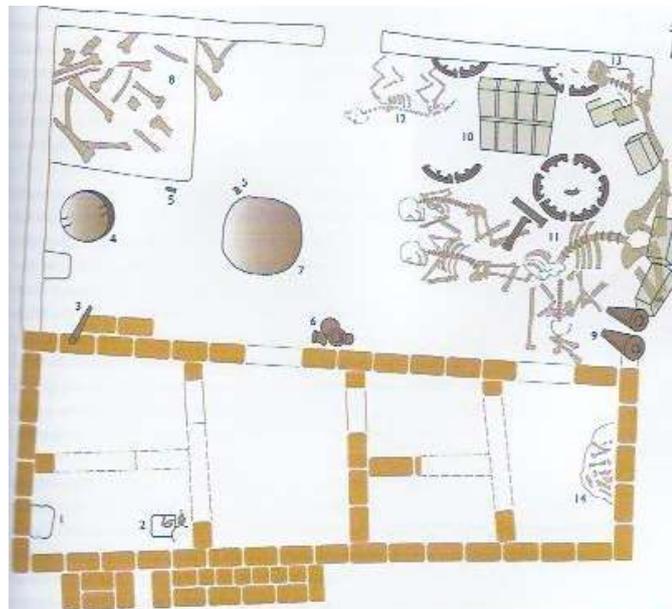
⁸² P Shipman *The Invaders: How Humans and their Dogs drove Neanderthals to Extinction* Cambridge Mass and London 2015

⁸³ M Rice *Swifter than the Arrow: the Golden Hunting Hounds of Ancient Egypt* London 2006

Syria/Sumer, leaving it to the reader to follow up on his more detailed references if they wish. He conveniently tells us canid remains were also disinterred at Jericho and Tepe Gawra, and describes a touching burial at Eridu of a young boy with pet dog provided with its own bone to take with it to the Afterlife. As for Egypt, in the 5-4th Millennia slender hounds start to appear on the rock carvings of North Africa and Egypt's Western and Eastern deserts - as well as Nubia and Arabia - and appear to have included not only their own type of hunting hound but also the Saluqi, 'associated more with Mesopotamia, Persian lands and Arabia'. Then in the Middle Kingdom they start to be represented as pets in tomb paintings of the court officials of Nilotic Egypt.

THE DOG TOMBS OF GONUR IN THE BMAC, CENTRAL ASIA

For the most immediate bearing on the Mycenaeans we will look first at precedents in Central Asia and Europe. In the *Art History* section we mentioned the chieftain's pet dog under the tripod table in relation to the Karashamb goblet (**ForAtt-13**), at the time cross-referring to a Neolithic Orkney tomb with 24 dog skulls in it (**III. 9-27**) to illustrate Eurasian cultural cross-reach of the kind taken for granted by Cunliffe *ibid.*. To support the idea they were predominantly developed as pets useful in the hunt by Āryans as much in the East as to the West, we find there are precedents to the Vapheio (**ForAtt-26**) and Perati (**ForAtt-25**) tombs and their dog remains (just teeth at Vapheio and



III.9- 26: Simplified plan of the Dog Mausoleum with skeleton of a dog in the doorway at 12, camel bones at 8 and 11 and horse bones in the corner at 13 (marked in the top wall) - Cunliffe⁸⁴ 2015 fig. 4.12

an entire skeleton at Perati) in three 2M burials from the Gonur necropolis in Central Asia, the first two simply involving a dog skeleton presumed to be a former pet and guardian. Thus Grave 1172⁸⁵ had a full dog skeleton laid under a 9-10 year-old human dwarf skeleton, while the second was found in what came to be known as the Dog Mausoleum (see plan above). This was of high status like the Vapheio tomb, being one of a circle of élite mausolea dating c.1800-1600 built to imitate small houses (an Aryan custom – see **III. 9-199**). Though partly plundered, it was one of only a handful still containing rich grave goods, and inside its entrance was a small grave with the skeleton of a dog (at 12 on the plan above), clearly to be understood as guarding the doorway.

This particular mausoleum initially contained a woman of around 35, beside whom was added later the body of a man of around 45. The grave goods remaining (aside from ceramic or alabaster vessels) came in one small cache

⁸⁴ Sir Barry Cunliffe *By Steppe, Desert and Ocean: The Birth of Eurasia* Oxford 2015

⁸⁵ Dwarves featured often in the archaeological record of prehistoric Hieraconpolis, and were represented in bone/ivory carvings – *Nekhen News* passim.

overlooked after four lootings and included (many of them illustrated below) a strainer for the sacred drink (presumed to be Soma – from plant remains at Gonur this was probably a mixture of brewed ephedra, poppy and cannabis plants



Ill.9- 27: Composite photo of main items of the Dog Mausoleum cache – from Francfort and Rossi-Osmida⁸⁶

all available in the area); a jar with bridge spout for pouring and skimming the liquid from the lees; a box lid for a mirror case with inlaid stone mosaic pattern on it; a silver pin for applying makeup with crouching lamb at the top and slender silver bottle to contain colourant; a silver vase of tortoise-shell shape⁸⁷ and silver gored sphere like a poppy head; a small flared gilt-silver bowl and goblet (plain – but of elegant, stream-lined form) and a more humdrum chlorite container of the type churned out at Tepe Yahya. Evidently from or for a necklace, there were also seven carnelian beads which must have come from India, two spheroid beads of lapis lazuli from nearby Badakhshan, and ten spheroid beads covered in gold sheet (gold dust being available in all the local rivers of the Oxus basin). In relation to other female burials at Gonur in general, in DIVERSION 3 ON SEMI-PRECIOUS STONES we gave samples of the necklaces found at Gonur uncannily similar to the earlier jewellery of the Ur tombs. The richness of the woman's possessions in the Dog Mausoleum indicates the same special status accorded to this high-class priestess or queen as to her counterparts in the Mycenaean Shaft Graves, or at Uruk – often a pointer to Aryan attitudes (certainly in Hittite culture the Queen Mother ranked next to the King). As to the dog skeleton, we do not know whether in fact it was buried at the door after the body of the man was later put in, or before. All the man's grave goods – if any – were looted, so we do not know if he had corresponding warrior accoutrements such as swords and daggers, which from other male graves at the site looks likely. We also do not know how much later than the woman he was inserted – whether a decade or so, or generation(s) later.

It is the third, most recently excavated Gonur tomb (Great Pit 3900 – 5m in diameter and 2m deep – illustrated next) found to the south of the royal necropolis proper, that is truly thought-provoking (in quantity of dog remains on a par with the Orkney example or the Hierakonpolis dog graves discussed later (Ill.9- 30)). Sarianidi⁸⁸ described it thus:

Remarkably, in different parts of the large pit, but mainly in its western section, there were found skeletons of seven people (different ages and sex) together with seven big dead dogs like modern Turkmenian sheep-dog 'alabays'. At the upper edge of the pit there was a skeleton of the eighth dog that bore signs of deliberate murder, its head was undoubtedly broken and the impression is formed that it was carelessly

⁸⁶ H-P Francfort & Gabriele Rossi-Osmida 'The Dog Mausoleum' in *Margiana, Gonur-depe Necropolis* Venice 2002, 121-31

⁸⁷ P Blomberg (his papers on Minoan astronomy are cited in due course) interprets tortoise/turtle shells at sanctuaries or graves with lyres or the Lyra stars.

⁸⁸ V I Sarianidi *Long Before Zarathustra* Moscow 2010

thrown down at the last moment. It is worth mentioning that at the main necropolis of Gonur we found pits burnt inside that contained dead dogs carelessly thrown down at the edge of a grave – that makes us believe it was most probably not just an accidental position but on the contrary had deep symbolic meaning.

Coming across this information quite late on in my pursuit of this theme, I felt increased justification in proposing this DIVERSION when I read Sarianidi had no hesitation himself in devoting a section to *The Dog Cult* in which he reminds



III.9- 28: (Left) View of Great Pit 3900; (right) closeup of one dog covered with remains of a beaded textile –Sarianidi *ibid*.

us of their central role in Zoroastrian culture - though their attitude was two-sided. Dogs were the hunter or shepherd's companion and faithful guardian – sufficiently adored (as described in the *Bundahishn* – see our **Chapter 19**) to be equated to the star Sirius, Orion's Companion (a theme we shall see accords with the Mycenaean perspective). In Zoroastrian culture there were severe punishments for killing a dog (even the death penalty) and feeding a dog 'was [a deed] meant for the souls of dead relatives or friends'. Indeed, the inclusion of a dog (*sagdid*) was 'an integral part of every Zoroastrian burial ceremony' (compare with further details on Patroclus' funeral given in our HORSE AND CHARIOT DIVERSION). In the *Avesta* the different personalities of dogs are minutely described, much as camels are for Arabs today. But equally, in other contexts dogs were seen as unclean, since along with the vultures they were used to strip the flesh off dead bodies in the *dakhkma* before the skeleton's eventual burial, earning their keep through carrion disposal, thus disposers of the dead in the fullest sense – to leave the earth uncontaminated. The *Iliad* is full of mentions of a wretched end feared by all soldiers – of their corpse being gnawed to pieces by scavenging dogs.



III.9- 29: (Left) Actual night sky with Orion, Sirius top left – and above Orion the rectangle of Auriga with the fainter stars of Perseus cascading alongside lower down, the brightest stars of Taurus lining up with the top of Orion; (right) Blomberg's⁸⁹ interpretation of clay figurines from Crete's Petsophas peak sanctuary of constellations mostly below the horizon in the Southern Hemisphere, except when they rise in the Winter night sky (note the double triangle used for Orion and the two dog models beneath)

⁸⁹ P E Blomberg 'An Attempt to Reconstruct the Minoan Star Map' in *Astronomy of Ancient Societies* (SEAC 2000) Moscow 2002 99-101

When we come to chart their background in the archaeological record of ancient Egypt, we find Dogs - and Sirius - were again central to the culture - but in a quite different way. To fully make sense of these oldest remains we will sometimes need to jump forward to Roman times to fill in telling intermediate stepping stones in dog iconography as shared or re-articulated in the light of the later Egyptian, Syrian, Mesopotamian or East Mediterranean experience.

PROTOHISTORIC AND EARLY DYNASTIC DOG BURIALS IN EGYPT

The earliest skeletal canid remains in burials in Egypt come from Merimde in the Delta, dating to c.4800, at a time when other individual domesticated animals such as cats, jackals or sheep could sometimes be buried alone in their own graves (at Matmar for instance one dog had its own coffin, and at Badari and Adaima over the next millennium



III.9- 30: (Left) Two entwined dogs from a group of at least ten found in Tomb 48; (centre) closeup of the jumble of nine dogs in a pit burial in the HK6 area; (right) detail of HK6 - all from Hierakonpolis (FROM Nekhen News vols 23 and 20)

buried dogs had first been wrapped in mats). Overall it appears such dogs were coming into Egypt via the Levant as well as from Punt (several mass graves of dogs are known from Nubia over the centuries). Those of thickset, mastiff appearance would have been of West Asiatic origin, figurines of which have been found at Hierakonpolis indicating immigrants had brought them in. We remember that the Master of the Beasts on the Gebel el-Arak knife-handle, itself a West Asiatic motif, is flanked by two dogs with pointed ears and muzzles, and on the wall painting of Hierakonpolis Tomb 100 (which also has a Master of the Beasts group) it looks as if two dogs are harrying oryx at the top right of the panorama. The dogs framing the Dog Palette (**ForAtt-3**) have bushy tails, so we should not rule out the possibility that, rather than being hyaenas as suggested in our entry, they could be representations of the wild African Dog, still surviving in Namibia today (below), on the palette possibly even a conscious reference to *Canis Majoris* et *Minoris* - or even that Sirius Major is a binary star. From a conference on Hierakonpolis⁹⁰ held at the University of London that



III.9- 31: The wild African Dog of Namibia with large ears and bushy tail: they hunt in packs - and are impervious to domestication

⁹⁰ Held on 20 June 2016 at University College, London chaired by project leader Dr Renée Friedman and including a leading contribution by Liam McNamara, Curator for Ancient Egypt and Sudan, Ashmolean Museum Oxford

dramatically updated the overall picture of the site's archaeology from past decades (which had tended to linger over former finds such as the Narmer Palette and the gold Horus head), we now know of a host of newly discovered animal tombs and sacred enclosures which will bear proper assessment in our SYNTHESSES – for the time being we simply take cognizance of the discovery of the new Naqadan mass dog graves there illustrated in *III.9- 30* above.

Although certain single Gerzean/Naqadan/Badarian dog burials had already been recorded in Egypt during the time Petrie worked there, we now have a much fuller picture of how common dogs already were at the earliest large-scale



III.9- 32: Skeleton of the dog buried at the entrance to the 1D tomb of Queen Horneith at Saqqara – Rice fig.8

cult centre at Hieraconpolis in Protohistoric Egypt. By the time of the Middle Kingdom and on into the New Kingdom the Egyptians became fond of displaying themselves with their pet dogs sitting under their chairs - as seen on the reliefs of court officials (Rice fig. 15). Yet even as early as the First Dynasty favourite dogs buried round their masters were sometimes portrayed and named by early pharaohs on stelai over individual graves at Abydos (Rice fig. 11) – and at Saqqara a hound was buried at the entrance of the Queen Horneith mastaba c.3000 (above).

SIRIUS THE DOG STAR

EGYPT'S DOG GODS AND PROBABLE CULTURAL EXCHANGE BETWEEN ELAM, SUMER, EGYPT

From relevant – but rare - textual sources we know that not only did Āryans find dogs amenable to domestication, creating uses for them in human society in a number of roles, but also that in astro-mythological terms they imagined the star Sirius as a Dog chasing behind Orion, the Hunter. From myth we know the Egyptian 'take' on the symbolism of their dogs took on a slightly different allocation of duties - yet with similar meanings associated with the same region of the sky, known as the *Duat*. Bearing in mind that pure Egyptians are in fact Hamite, related in race to the Tuareg of North Africa and quite different in temperament from the Semite mentality, we gain in depth by taking into account not only the long back history of the dog in Egypt but also their attitude to its Dog God roles concerning the Afterlife. As in Āryan cultures, for Egypt the dog or jackal-headed therio-anthropoid Gods *Wepwawet* and *Anubis* guard the routes and entrance to the Underworld⁹¹ and were thought to be in such close contact with that world that, ready to show the way to lost souls, they stay ready and permanently crouching at its entry-point. This chimes in with the Zoroastrian idea of the dog as disposer of the dead.

THE PROTOHISTORIC SOTHIC PERIOD BEGINNING 4240BC

From the very period there is artefactual evidence of contact between Protohistoric Sumer, Elam and Egypt, from backward looking mentions in later texts, clearly Sirius observation was the foundation, not only for the Zoroastrian calendar but also the ancient Egyptian one. This perhaps explains how this star remained crucial to both calendars despite totally differing local geographical observation conditions (a contrast of Iranian mountains or manmade

⁹¹ K Brecher 'Sirius Enigmas' in K Brecher et al. (eds) *Astronomy of the Ancients* Cambridge Mass 1979 91-115

ziggurats as against flat desert, the river Nile and low rocky outcrops). The one outstanding event in the Egyptian Year was the Nile Inundation, associated with the first dawn rising of Sirius heralding the event several days before. The association made between geography and star behaviour I think explains why a Nile animal, the Hippo/*Taweret*, was also seen as a form of the Goddess Isis, since the hippo living in that river represented not only the Inundation itself, but its massive body suggested pregnancy and the abundant fertility brought in by that river. The Milky Way in the sky seemed to correspond to the Nile on earth below, so that the Water Monster Cepheus in the Circumpolar region they identified with Taweret aligns downwards with the star Sirius-Isis at the foot of the Milky Way, under her name Sopdet. This needs much fuller explanation in coming pages, but for the time being it should not be underestimated that this unique correspondence between the annual Nile Inundation and the astral round provided the dramatic and tangible benchmark that underpinned the presumed opportune Protohistoric cooperation between Susa and Egypt - at both Abydos and Saqqara. This exchange seems to have involved a deliberate mission from Susa via the Zanzibar Triangle route seeking optimum observational conditions (flat, far horizons and a Nile running N-S) to observe Sirius behavior, entailing observation points at both the Upper and Lower Egyptian ends of the Nile that made it possible to precisely measure the interaction of Sirius risings with the Sun's solstitial cycle at a time when the two coincided - thus to establish a reliable calendar - more of which later). Cunningham⁹² wrote, 'I am firmly convinced that the founders of the Monarchy came from Babylonia and brought with them the astronomical knowledge acquired from the Chaldeans, and that the priests became observers of the heavenly bodies in the Temples of Egypt as they had been in Chaldea - and proofs are not wanting to substantiate this position.' (His vocabulary is anachronistic, but he was writing before Protohistoric archaeology existed so we have to mentally update it - the main idea holds water). When we look at Sarianidi's view of 2M Protozoroastrianism in Central Asia we find - as is the present academic fashion - he has a contracted view of the duration of the Zoroastrian tradition - whose beginnings some like myself still prefer to date back to at least 6000BC⁹³ since it makes much better sense of the Susa-Egypt contact (taking into account the first significant Protohistoric Sothic Period, given credence by Flinders Petrie as consciously operative, is calculated to have begun in 4240BC⁹⁴). The nature of the Sothic Period cycle is spelled out in due course.

KEY DOG TYPES IN EGYPTIAN AND MYCENAEAN ICONOGRAPHY

Compared to the thick-set physique of the shepherd dog mastiff with square face and flabby, wrinkled jowls (*III.9- 42* right) bred in Central Asia, two distinctive dog types take centre stage from the earliest period in Egypt. Later, in the Levant in the second half of the 2M, we can almost predicate Mitanni presence from dog burials (as compared to the donkey burials of Amorite rulers) at Alalakh, Qatna and Ebla (example given below lower right), either of the Central Asian mastiff type, or of breeds available via sources linked to Egypt.

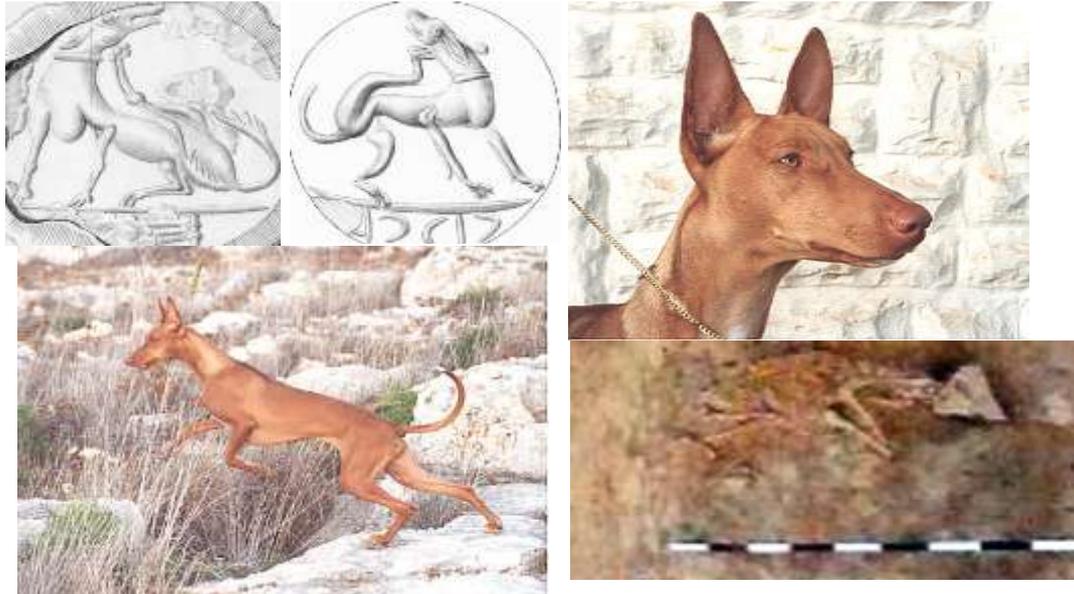
THE TJESM, OR PHARAOH HOUND

The Egyptian *fenek*, or russet-pelted hunting dog with pointed face and ears known as the 'Pharaoh Hound', seen on the Jebel-el-Arak knife, and hunting in the *ForAtt-10* hunt relief (which dates to the time a new Sothic Period had begun in the Old Kingdom, in 2780) is still bred today in places like Malta, off the coast of Libya (illustrated below), and by other specialist rare-breeders all over the world (more of its lineage shortly). From the Vapheio seal pictures (re-illustrated below top left) it would seem the Vapheio warrior had round his neck images of this particular breed. Rice (*ibid.*), owner of a Pharaoh Hound/*Tjesm* himself, thinks the aristocratic look of the dog was the result of wolf

⁹² F A Cunningham 'The Sothic Cycle used by the Egyptians' *JAOS XXXIV* 1915 369-73

⁹³ G Gnoli *Zoroaster's Time and Homeland* Naples 1980

⁹⁴ The Yezidi calendar starts at 4750 BC, though if this is the date in lunar years it becomes a later year when converted to solar years.



III.9- 33: The two Vapheio dog seals compare well against the Kelb tal-Fenek - Pharaoh Hound - from a Maltese website about the breed; (bottom right) dog burial at Alalakh (sq. 32.57) made either as a 'termination ritual for the old building, or foundation offering for the new'⁹⁵ (such burials were also found at Qatna and Ebla – all pointing to Mitanni presence)

interbreeding with the golden jackal – as he explains: 'The wolf and the golden jackal share territories in Greece, Turkey, the Levant, the Arabian peninsula, Iraq, Iran, Afghanistan and down into India. The wolf is not indigenous to Africa, whilst the golden jackal certainly is'. Significantly, a more primordial Dog God with the title *Khentiamentiu/ Foremost of the Westerners* was worshipped as guardian of the Abydos acropolis and ruler of the Underworld until the cult of Osiris/Orion succeeded there. Thus in Egypt, since Sirius and Osiris headed Middle Kingdom coffin Star Lists in the roles of Isis and Osiris (III.9- 72), the Dog Gods themselves were not associated with Sirius as star, but simply with the Underworld – the mythological reasons for which are explained via some Louvre Protohistoric objects shortly.

DOGS AND MONKEYS ON 2M AEGEAN JEWELLERY AND SEALS

Precedents for the paired dogs with short curly tails standing on monkeys in the earring design of the Aigina Treasure (III.9- 35 centre left), now considered to be Mycenaean (Fitton *et al. ibid.*), are to be seen in the earlier Egyptian two-dog pendants (III.9- 34 right and III.9- 35 centre right). Fitton *et al.* think the pendants were worn round the neck as part of an agate-beaded necklace (illustration below). It is no coincidence, I believe, that the Vapheio warrior wore his amethyst and rock crystal necklace with the two dog seals at the centre in conscious imitation of this convention. The



III.9- 34 (Left) Sets of polished agate beads found at Avaris (fitting into the context of our SEMI-PRECIOUS STONES DIVERSION); (right) suggested positioning of a dog pendant from Avaris as centerpiece of one such agate necklace - Fitton *ibid.*

⁹⁵ K A Yener 'Material Evidence of Cult and Ritual at Tell Atchana, ancient Alalakh: Deities of the Transitional Middle-Late Bronze Period' in P Ciafardoni et al. *From the Treasures of Syria* Leiden 2015 203-217

dogs' association with monkeys⁹⁶ could refer to the agitation of Egypt's baboons (usually thought of as Thoth's animal) at sunrise - as if the designs allude to Sirius' dawn rising. On the other hand, baboons in other contexts also represent



III.9- 35 (Left) Monkey seal precedent to those on Aegina jewellery, Phaistos - CMS II,5-297; (left centre) one of four gold earrings in the Aegina treasure⁹⁷ with carnelian beads centring on paired dogs on crouching monkeys surrounded by fly/owl tassels; (top centre right) two-dog gold pendant 1780-40 from Palace Tomb F1 at Avaris - BBCat-62, found with a dagger⁹⁸; (below centre right) MK two-dog silver pendant (1980-1640 - BBCat-63, now BM); (right) 2M stone monkey figure from Kar Tukulti-Ninurta – BM ME116388 – c.f. the Yezidi bear and baboon in the next illustration

Moon activity and, according to Sylvie Cauville⁹⁹, on the Denderah Zodiac (III.9- 39 at top right) Isis holding a baboon by the tail inside a circle is the hieroglyph for a solar eclipse (Moon covering the Sun), while the eye of Horus inside a circle just under it is the hieroglyph for a lunar eclipse (Sun covering the Moon) - which took place in 51 and 52 BC respectively, helping to date this particular Zodiac. If the paired dogs (here a hybrid of our two main dog-types) indicate awareness of Sirius Major as a binary star this may be the reason, somewhere along the line, for separately assigning two different constellations/Gods to the same animal. It follows that the Vapheio warrior celebrated this too.



III.9- 36 Yezidi travelling gypsy with performing bear and baboon photographed by E S Drower in 1941¹⁰⁰ at Baashika, N Iraq

Compare this idea with the two-dog statue of Allāt (III.9- 64), one of whose dogs is smaller than the other either because Sirius Minor is less important than Sirius Major or because Sirius B is small and faint compared to Sirius A, round which it revolves, being mostly occulted behind its brighter partner and appearing in view only briefly every 50-51 years, probably the origin of the Jubilee periodicity¹⁰¹.

THE SMALL FAT DOG TYPE WITH CURLY TAIL

As early as on the 5-4M rock drawings of Egypt's Western Desert another kind of dog favoured by the Egyptians sometimes appears with the Tjesm, which has short legs, a squat body and tightly curled tail – as illustrated below left.

⁹⁶ In Egyptian funerary art dogs were often paired with monkeys as pets on separate leashes - as shown on officials' reliefs (Rice *ibid.* fig.12a/b) – in one instance one such pair was even mummified together in death – Rice fig.22

⁹⁷ For an account of the entire treasure see J L Fitton (ed.) *The Aegina Treasure: Aegean Bronze Age Jewellery and a Mystery Revisited* London 2009

⁹⁸ M Bietak 'Connections between Egypt and the Minoan World: New Results from Tell el-Dab'a/Avaris' in W V Davies et al. (eds) *Egypt, the Aegean and the Levant* London 1995 19-28, pl.14

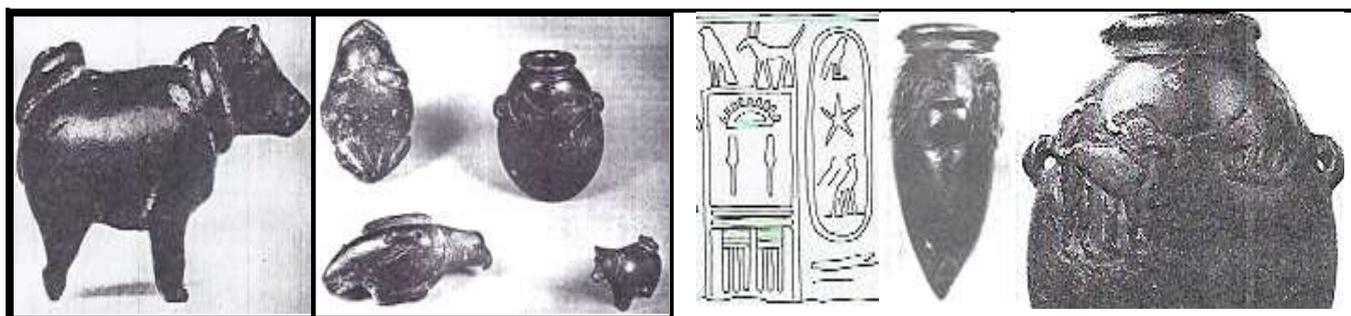
⁹⁹ S Cauville *Le Zodiaque d'Osiris* Leiden 1997

¹⁰⁰ E S Drower *Peacock Angel: being some account of Votaries of a Secret Cult and their Sanctuaries* London 1941

¹⁰¹ This periodicity is reflected in the plant world in the bamboo, which only flowers every 50/51 years, and then dies.

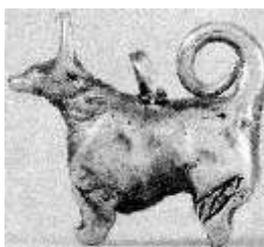
GROUP OF PROTOHISTORIC ARTEFACTS ACQUIRED BY THE LOUVRE ASSOCIATED WITH SIRIUS

This usefully takes us to a group of objects acquired by the Louvre, worth closer inspection for information about Sirius which helps to square its Dog symbolism with Egypt's key star myth assigning it to both Isis and Horus. Due to the early and many archaeological enquiries led by Flinders Petrie during the time of the Mandate in Egypt, initially the British were the most closely involved in excavating the Predynastic sites of Egypt, such that most artefacts from places such as Hieraconpolis, Badari, Naqada or Abydos are to be found in British museums. However, in the 1970s a collection of four chlorite objects (below left centre) was offered to the Louvre by The Friends of the Louvre

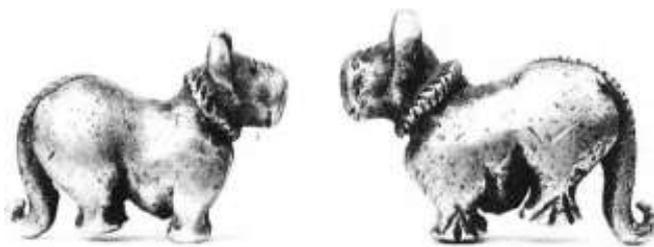


III.9- 37: Louvre acquisition of four chlorite objects likely to be from around Hieraconpolis: frog, vulture, pouch pot with dog and Horus falcon either side, and a small plump dog with corkscrew tail – Desroches-Noblecourt figs 11a, 1, 8a/c/d; (centre) detail from a cylinder seal of the 2D Pharaoh Khasekhemwy with both Horus and Seth standing on his serekh

consisting of three containers in the form of a frog; vulture with folded wings; pouch pot decorated on each side with a long-legged hound and Horus falcon perched on a crescent standard (two views are shown above right with apologies for the poor reproduction), and the fourth a figurine of a little plump dog with corkscrew tail and wide collar shown above left. These items were purchased as a group from a collector operating, not in Upper Egypt - whence they must have originated – but in the east Delta area of Egypt, perhaps Alexandria. Desroches-Noblecourt¹⁰² in a Louvre bulletin describes with great expertise the implications of these items (examples of all of which she matches to similar Protohistoric pieces from other sites in other museums), beginning with the comment (tying in with our discussion on Elam-Egypt interchange) that chlorite/steatite is a material usually to be associated with Protohistoric Iran. We see the dog in the context of two other acquisitions by the Louvre of small dogs (shown below) - from Susa (left) and Bactria:



Gold pendant from Susa Amiet¹⁰³ fig.1



Pair of small silver dogs from Bactria (Amiet fig. 24)

As general background to understanding the choice of animals depicted on the pouch pot, Desroches-Noblecourt reminds us of slightly later Early Dynastic seals from Abydos that under a handful of pharaohs featured the jackal figure of Seth standing next to Horus on the royal serekh (**III.9- 38** centre), interpreting the duo on either side of the pouch pot as *precursors* of that same contrast made between opposing Gods Seth and Horus on the *serekh* - the pouch pot emphasizing more the dog aspect of Seth than the jackal (see Rice's description above of dog evolution as a mixture of jackal and wolf, and our description of the three main Dog Gods of Egypt as later officially formulated).

¹⁰² Christiane Desroches-Noblecourt 'Quatre objets protodynastiques provenant d'un "trésor" funéraire' *La Revue du Louvre* XXIX,2 1979 108-117

¹⁰³ P Amiet 'La pendeloque au chien de Suse' and 'Nouvelles Acquisitions...' in *La Revue du Louvre* 1987 Parts 3 (176-9) and 1 (13-25) respectively

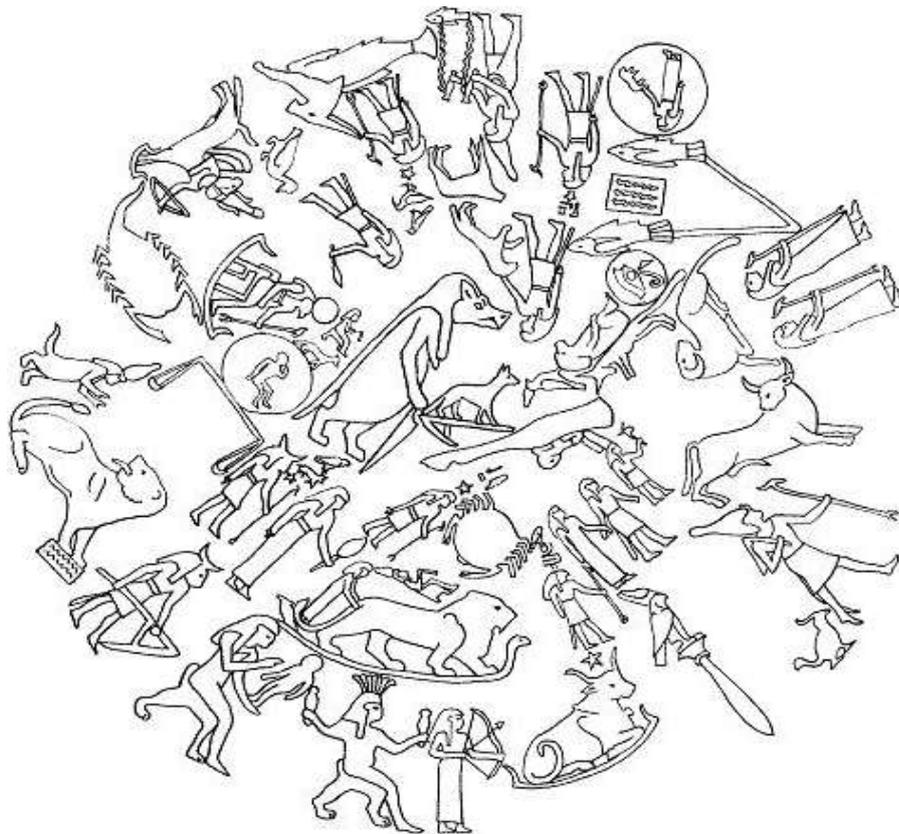
SOTHIC PERIODS INITIATED IN 4240, 2780, 1320 & 139AD AT THE SUMMER SOLSTICE

SIRIUS AND THE ROMAN SOTHIC PERIOD BEGINNING 139AD¹⁰⁴

To back up her Dog interpretation Desroches-Noblecourt jumps to Roman times for explanations – a device we gladly follow, for Sothic Cycle renewal reasons, given that under the Roman Empire the implications of Sirius as Dog/*Canis* /Greek *Kuon* were more publicly explicit, providing new retrospective information from the ancient temples. She writes:

On se souvient aussi que près de la porte Catularia à Rome, au jour fixé par les pontifes, au moment où le grain se forme, on immolait un chien rouge qui procurait des présages sur la qualité de la future moisson (augurium canarium). Ce dernier chien symbolisait sans doute la contrepartie masculine de Sothis, car cette étoile si brillante... est double – Clément d'Alexandrie l'avait déjà observé – et cette contrepartie devait être rouge comme l'animal de Seth. On cherchait à deviner dans ses entrailles si ce serait Seth, la puissance desséchante, ou Osiris, la puissance productrice, qui triompherait.

Looking at the Denderah Zodiac in outline below, carved in the Ptolemaic period, Horus/*Sopdu* perched on a standard marking the meridian is still used 3,000 years after the start of the Pharaonic period, marking the 0° line of the New Year start, while Sirius/*Sopdet* is represented as an Isis/Hathor Cow (not a Dog) on a barque behind, with Osiris-Orion striding forward before it. From the positioning of the planets - and the two eclipses referred to above in circles either side of Pisces - it is now deemed to show the night sky some time between 15 June and 15 August 50BC. Egypt became a Roman Province in 30BC under Octavian 20 years later following the death of Kleopatra and Mark Anthony.



III.9- 39: Summary outline drawing of the Denderah Zodiac with Horus on standard¹⁰⁵ beneath Gemini and in front of Sirius/Sopdet as Isis the Cow (due to her interface with Venus/Hathor) - more or less beneath Leo, both possibly intended to signal, not only the New Year fiducial point, but also the Sirius 0° meridian for the new Sothic Period looming ahead

¹⁰⁴ R D Long says in 'A Re-examination of the Sothic Chronology of Egypt' *Orientalia XLIII* 1974 261-274 that this date is the only accurately calculatable one.

¹⁰⁵ Compare with the modern-day concept of the Peacock Angel *Sanjak*, illustrated in *III.9- 63 (right)*

From Roman contact with Egypt the Latin writers knew Horus at the New Year was viewed by the astronomer-priests as the new-born Sun/Son of Isis, the male version of Sirius: if the same idea is intended on the pouch pot, the Dog behind Horus on the crescent standard¹⁰⁶, possibly an early *Doppelgänger* of Seth, may consciously represent the role of Sirius in Predynastic times, not just as herald of the Nile Inundation and the start of one kind of New Year (Egypt used up to five different calendars over the millennia) but in the light of the separate small dog figurine with the group could even be seen as a *commemoration* of the start of the *Protohistoric* Sothic Period (we discussed in detail the calculation of the Sothic Cycle of 1460 years in the **Catalogue A Chronological Focus**, whereby Meyer¹⁰⁷ deemed prior Sothic cycles to have started in 1320 BC, 2780 BC, and 4240 BC).

Desroches-Noblecourt, fully aware of the writings of Latin writers on astronomy, then reminds us that 139 AD marked the start of a new Sothic Period– with the anticipatory years leading up to it evidently just as momentous a juncture for the calendar as the movement of the Vernal Point into Pisces announcing the Christian era would have been some 139 years earlier (its significance not necessarily noticed at the time, other than by the Magoi). Hadrian erected a kiosk on the Island of Philae in the middle of the Nile down-river from Denderah, long revered as the terrestrial sanctuary of Isis and Osiris, and we can be sure the Romans at this time were able to gain direct knowledge on the Sirius cycle from Egyptian astronomer priests in their temples – including Denderah’s Temple of Hathor where the mysteries of the resurrected Osiris were celebrated and where - in one chapel at roof level - its up-to-date Zodiac already heralded the coming of that next Sothic Period. It is therefore no surprise, she writes, that it became the custom for the Romans to make figurines of dogs with a female head or full female figure representing Isis/Sirius on its back (like the one in the Berlin Museum below left), as well as ‘des lampes épousant la forme de la tête d’une femme sortant de l’échine d’un chien ... fabriquées pour servir à l’illumination de la nuit qui précédait le lever héliaque de l’étoile Sothis, au Jour de l’An égyptien, le 18 juillet Julien’.

Renewed interest in Sirius, perhaps attributable to public excitement at the dawn of a new Sothic Period – along with the whole-hearted adoption of Isis as one of their own goddesses - explains coins of Trajan (109-110AD) and Hadrian (134-38AD) showing Isis reclining on a dog¹⁰⁸. In other words, given Rome’s equally strong exposure to the syncretic traditions of the Seleucid Levant (more of which below), it indiscriminately merged the Indo-European with Egyptian Sirius images. Desroches-Noblecourt writes that the type of dog chosen by the Roman populace for their clay dog figurines celebrating Sirius and the New Year tended to be the small dog with pointed ears and curly tail like the Protohistoric chlorite dog, while some statuettes were of a baby in nappy or with the Egyptian sidelock of youth (alluding to the New/Baby Year) holding the dog in their arms.



III.9- 40: (Left) Isis-Sothis mounted on the small dog-type with short curly tail and star on its head – Erman *Die ägyptische Religion* 1905 fig. 143; (right) Middle Kingdom funerary table sculpture of basalt showing Isis as Kite impregnating herself from Osiris, who is protected head and foot by more sacred kites or vultures – Cairo Museum (photo author)

¹⁰⁶ Drower was told the Yezidi *qawwāl* used to parade the *sanjak* (peacock standard) into Russia, India, Turkey, Palestine and Syria’ (see ref. under **III.9- 63**)

¹⁰⁷ E Meyer *Ägyptische Chronologie*. Berlin 1904

¹⁰⁸ Clerc (her fn.109) mentions several other brief coin issues featuring Isis-Sothis by Roman Emperors, to as late as Julian the Apostate (her pp. 260-265)

Importantly, Desroches-Noblecourt reads the chlorite dog as female - and pregnant - due to the play on words recorded by the Classical authors between the Egyptian *sopedet* 'to be pregnant, impregnated', and the word used for Isis-as-Sirius, *Sopdet* (= *Impregnated*) the very name given to Isis in her role as Mother of the [solstitial] Sun of the New Year (Horus/*Sopdu*, male aspect of Sirius/Sirius as Sun – whose standard/meridian on the Denderah Zodiac is placed right behind his striding father Osiris/Orion (III.9- 72). The myth recounts that, as the Old Year/the dead Osiris reached its dying days, Isis as a Kite hovered over the penis of the otherwise inanimate God in order to be impregnated with the New Year as Horus-the-Sun (an event poetically expressed in the Middle Kingdom funerary sculpture above right). To her fluttering wings as She hovered over Osiris were attributed the winds of Summer that encourage the Nile flow on into the Delta (more on the Winds again shortly). We remember, too, that in Egypt it was the hippo Taweret-Isis who was associated with pregnancy, embodying the fruitfulness of the Inundation.

SIRIUS AND THE MYCENAEAN SOTHIC PERIOD OF 1320 - HERALDING ATTIC COLONISATION

When we deal with the *Chronological Focus* material in **Catalogue F** and as a consequence eventually fully analyse the mature Greek Calendar in **Chapter 20**, we will understand how its foundations lie in the renewal of the Sothic Precession cycle previous to the Roman one which dates back to 1320 - when the Mycenaeans were at their *apogée*. Leading to the development of the Archaic Greek Land and Island Zodiac centred on Delphi which Jean Richer *ibid.* suggests was laid down from c.800BC, he nonetheless makes much of the evidence of 'Bronze Age first steps' - in the form of a huge stone Lion carved into the hillside of Ioulis on the island of Kea just off the coast of Attica - as lying in the 'Leo sector' (Richer's Map VI marking its position was referred to under our discussion of **ForAtt-46** above - (the lion with a smaller view of the the map in **Catalogue D, III. 8-181** is illustrated again in DIVERSION 11 on LIONS, p.34).



III.9- 41: (Top centre left) Coin from Kea showing laurel-wreathed Aristaios/Apollo with radiating Dog-Sirius on the verso (bee beneath): c.f) Minoan seals from Phaestos: (lower left CMS II,5-299 and lower centre left CMS II,5-314 - bees and dogs also feature in the repertoire of the Aigina Treasure; (centre right) Roman Isis-Sirius as Hathor with sistrum riding on a dog – Clerc¹⁰⁹ pl.XXXIII; (right) basic life cycle of bee/wasp, taking place inside wax or clay hive cells (c.f. III.9- 59/III.9- 60))

Not until later in Kea's history do we have textual and material evidence of the island's particular association with Sirius observation as rising in 'the Dog days' in July with the Sun in Cancer/Leo. In myth, Kea's legendary starry hero, Aristaios (compare with *Asterion* - the true name of the Minotaur, son of the bull that mated with Pasiphaë) is particularly associated with Sirius and said to have been responsible for the Pelasgic diffusion of apiculture (bees) and viticulture (grapes) and in the process is even said to have travelled as far India's Hydaspes River (the river feeding into the Indus and scene of a major battle under Alexander). He is named a son of Cyrene (a North African Goddess who tames a lion) and on marrying Autonoe became son-in-law to Kadmos of Thebes (brother of Europa) then co-parent to none other than Actaeon, torn to pieces by dogs for seeing Artemis naked. It is only much later, on the Kean coins of the 3-2C BC (above top left) that we have proof of the particular association between the island of Kea and

¹⁰⁹ G Clerc 'Isis-Sothis dans le Monde Romain' in M B de Boer et al. (eds.) *Hommages à Maarten J Vermaseren Vol.I/III* Leiden 1978

the Dog Sirius, on which Aristaios' head on the recto is sometimes interchanged with Dionysos of the Grape, or Apollo, Lord of the Zodiac: Sirius is shown on the verso in *Fenek* form with pointed muzzle and ears, surrounded by rays, sometimes with a small bee or bunch of grapes underneath it. Rather than the popular small fat dog, or shepherd mastiff type shown on the Phaestos seals above (and at the end of the row on the Halai skyphos, III.9- 50) it seems the more aristocratic *Fenek* type was generally favoured by the Hellenes and Romans for official representations of Isis-Sothis riding on a dog, whether on coins or on the façade of the Temple of Isis in Rome's Champ de Mars – and even on the Iseum of Szombatheley, Hungary (above centre right).

Laoupi¹¹⁰ sees in the account of the hero Aristaios (whose very name suggests starry matters) the mythologising of Kea's specialist function in Sirius observation (we come to Brauron's role with *The Bears* later). George Thomson's work on the Classical Greek Calendar (see **Chapter 20**) mentions that certainly later on, the Athenian New Year was based on the first rising of Sirius (Kea and Athens both being in Attica). We thus gain a sense from myth *and* artefact of how the division of astronomical activity in Greece – Sirius observation being fundamental – had been secured in a Minoan/Mycenaean world that benefited continuously from interchange with Syria, Mesopotamia and Egypt. As M Blomberg and Henriksson have argued in many papers over the years, the core of Aratos' *Phaenomena* relies on Minoan star-names dating to as far back as 2000BC, and P E Blomberg *ibid.*'s idea that the small clay figurines (III.9- 29 right) found at peak sanctuaries such as Petsophas were used as 'visual aids' for those officiating at such observatories is attractively plausible. As he points out¹¹¹ in a different paper, 'in Classical Greek ξώδιον (diminutive of ξωov) is used for a small figurine, a painted or carved statuette, as well as for an [animal] Sign of the Zodiac'.

THE ILIAD, SIRIUS AND ORION IN THE DUAT - AND THE MYCENAEAN SOTHIC PERIOD

We should distinguish between two complementary solstitial benchmarks involving Sirius and its surrounding stars in the *Duat* – a key part of the sky continually dwelt upon in both Egypt and Mycenaean Greece for eschatological reasons - and described twice in *The Iliad*:

- ★ Sirius rising *at dawn* at the same time as the Sun rising at the end of Cancer going into Leo, marking the SUMMER SOLSTICE – after which brief half hour *all* stars are rendered invisible by the brightness of the Sun, and
- ★ Sirius rising in the *night sky* and shining brightly all night at the WINTER SOLSTICE, the Sun at this time having risen at dawn in Capricorn then proceeding into Aquarius.

But there is a third - usually overlooked - daytime variation on the *Duat* stars being observable high in the sky *during the day* at the Summer Solstice – usually not visible - which comes into the picture when we deal later in the DIVERSION with a Trojan War event where it was important that the presence of the *Duat* be invoked as witness to it. It is surely significant that it was in the Second Millennium – in the decades either side of 1320 during the Mycenaean *floruit* - that the *Sothic Period* preceding the Roman *Sothic Period* attained *renewal point*, and there must surely have been a preliminary period of conscious effort to calculate the year of the event in advance - similar to the Roman preparations for celebrating that cosmic turning point – that would have involved fine-tuned observation of the starry benchmark of the *Duat* and all the planetary cycles against it and could have lasted as long as two or three generations (the last few paragraphs in this DIVERSION will give some of the key calculations involved).

This *Sothic Period* date swings the matter of the Mycenaean practice of astronomy round to an entirely new perspective: those Egyptian, Babylonian, Levantine and Aegean kingdoms in power 1500-1300 shown on our

¹¹⁰ A Laoupi 'The Sirius Cult in Ancient Greece: Aristaios and the Formation of the Attico-Cycladic Mythological Substratum' *Mediterranean Archaeology and Archaeometry [Special Issue] VI* 2006 129-141

¹¹¹ P Blomberg 'An Astronomical Interpretation of Finds from Minoan Crete' in C Esteban & J A Belmonte (eds) *Astronomy and Cultural Diversity (Proceedings of the International Conference Oxford VI and SEAC 99* Laguna, Granada 2000 311-318

Chronological Table (III.9-38) - notably the New Kingdom pharaohs, the Mitanni, Mycenaeans and Kassites – surely all contributed towards its measurement and celebration. Where the Minoans had used mountain peaks as *points de repère*, the Mycenaeans offered control over a web of small island bases and coastal sites as observatories making use of a reflective expanse of water ending in uninterrupted horizons offered by the surrounding sea. Kea and Mochlos were such islands – as also Motya which, perhaps because the surrounding sea was rough, also had a 'Kothon'¹¹², or rectangular pool of water constructed as the central feature of the contiguous temple complex on its SW shore, oriented to reflect the Age of Aries rising of Auriga/Perseus¹¹³ above the by then disappearing stars of Orion at the Spring Equinox¹¹⁴. Although Motya is known for its 6C temples with sighting baetyloi dedicated to both Baal/Orion and Demetra/Astarte/Venus, the co-naming of the Baal temple with Poseidon¹¹⁵ – and the fact that a Mycenaean dagger with rock crystal pommel was among the finds on the site (along with continuous occupation marked by Mycenaean pottery 1400-1100) - gives a striking and tantalizing token glimpse of some kind of interaction between Mycenaean Greece and the Levant extending all round the Aegean, not only in astronomical matters but also, unsurprisingly, in the related cult of Underworld mysteries. More of a chain of sacred pools in our final conclusions.

For a rounded picture we should also take a quick look at the Sothic Cycle Period preceding 1320, which would have begun during the Old Kingdom in 2780BC, 1460 years after the Protohistoric Sothic Cycle start of 4240. This phase also provides us with interesting artefacts linked to Sirius, and new information.

THE EARLY DYNASTIC SOTHIC PERIOD 2780 AND THE MESOPOTAMIAN DOG GODDESS, GULA

The Dog God in Mesopotamia might appear to take back stage to the Bull God or Lioness Goddess, but most are familiar with the appearance of a dog on Kassite kudurrus crouching under Gula's throne, as on the example below left. Indeed, dating to the 2M, several dog tombs were found in her main sanctuary at Isin¹¹⁶ (she was sometimes simply known as The Lady of Isin). Gula/Bau, like Isis in Egypt, was the female Goddess especially associated with Sirius¹¹⁷, signalled by the presence of her dog companion, usually with tightly curled tail and pointed ears as seen on the smaller dogs – but often sometimes represented by the Central Asian mastiff type on its own, as in the container figurine from Tello, below centre left. Were these dogs, too, imagined as female?



III.9- 42: Rare examples of dedicatory inscriptions against Gula's image specifically naming Gula: (left) on a Kassite kudurru of Marduk-Apluddin – Göhde¹¹⁸ Fig.1; and (centre left) receptacle from Tello - Parrot Sumer fig. 357B; (centre right) Rory Stewart¹¹⁹ with travelling companion Babur on his walk through Afghanistan; (right) Kassite seals often include dogs, as in this detail on one in Berlin with the symbols for the Sun and Venus above it and Cosmic Tree of interplanetary conjunctions below – VA6935

¹¹² F Spagnoli 'Demetra a Mozia: Evidenze dall'Area Sacra del Kothon nel V Secolo A.C. *Vicinio Oriente XVII* 2013 153-164

¹¹³ This information was initially given in a paper by L Nigro., 'L'Orientamento Astrale del Tempio del Kothon di Mozia' in E Antonello (ed.) *Il Cielo e l'Uomo: Problemi e Metodi di Astronomia Culturale* Rome 2010, repeated in a Palestine Exploration Fund lecture at the British Museum on 9 June 2016

¹¹⁴ The choice of subject for the well-known Archaic sculpture of Charioteer of Motya may therefore be more than mere celebration of an Olympian victory. For a description of the sculpture, see Carlo Odo Pavese *L'Auriga di Mozia* Rome 1996

¹¹⁵ L Nigro *The so-called "Kothon" at Motya: The sacred pool of Baal 'Addir /Poseidon in the light of recent archaeological investigations 2005-2013 Stratigraphy, Architecture and Finds* Rome 2014

¹¹⁶ E Will 'La déesse au chien de Palmyre: Note Additionnelle' *Syria LXIII* 383-4

¹¹⁷ Gula was also sometimes associated with the Rainbow, and the number 7.

¹¹⁸ H Göhde 'Zwei altbabylonische Siegelabrollungen aus Tell ed-Dēr: Identifizierung von zwei weiblichen Göttheiten' in O Loretz et al (eds) *Ex Mesopotamia et Syria Lux: Festschrift Manfred Dietrich* Münster 2002 159-168

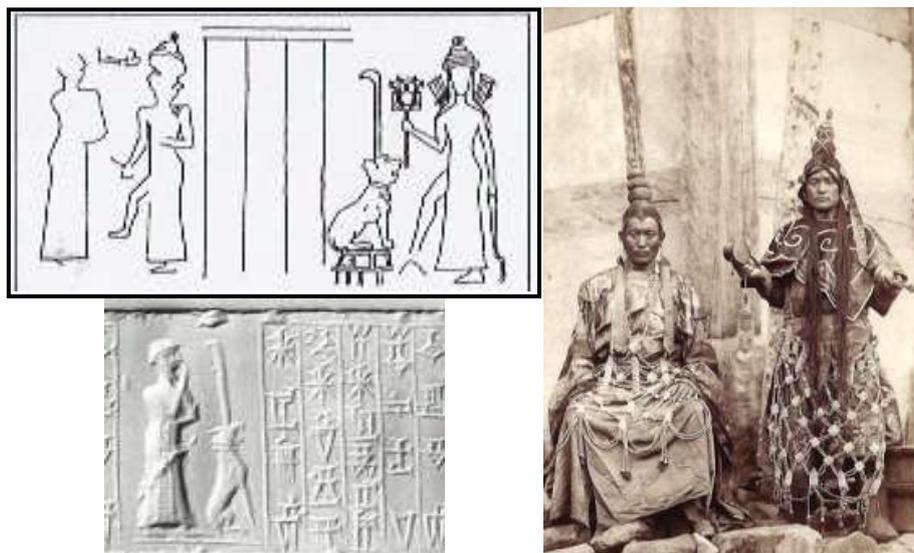
¹¹⁹ R Stewart *The Places in Between* London 2005

We have a hymn to Gula, 'Mistress of Heaven' from the Neo-Assyrian period translated by Ebeling¹²⁰ which is interesting for the different roles she is praised for - as Star governing the planets: 'Ruler of the Rulers of Heaven' and 'Fixer of Festivals' which certainly fits the role of Sirius as master regulator of the entire calendar. In the kind of multitasking interchangeability we have seen in the case of Ninurta (sometimes named as her consort), like Inanna and Ninmah she was credited with deciding Fates and often appealed to as 'Great Healer'. More than that, like Isis as the Kite, She is 'Resurrectress of the Dead'.



III.9- 43: Left) Neo-Assyrian seal c. 800 depicting the Mesopotamian dog type for Gula; (centre) late Babylonian gold dog amulet, c.700, British Museum; (right) Kassite clay dog in the Metropolitan Museum, NY

The Neo-Assyrian examples above show the mastiff type of dog, but with the tightly curled tail that usually belongs to the smaller dog: its possible separate significance is pursued under our discussion of 'The Bears', but for the moment simply note the line-up between Sirius and Ursa Minor, III.9- 66 right. When shown on its own the type of dog most favoured in Old Babylonia in Sumer and Akkad at this period, and in Kassite Babylonia and Assyria later, appears to have been the mastiff with straight tail and square head, more readily to hand in NW Iran than the *Fenek*. In the rare instances it appears on Old Babylonian or Kassite seals (as below left),



III.9- 44 (Top left) Old Babylonian seal from Sippar alluding to Venus rising with Sirius- Göhde fig.3; c.f. (below left) Kassite seal showing dog with a similar rod on its head, referring to the Sirius meridian; (right) Tibetan monk and consort with cosmic headdress

like the emergence of the Snake Lady on OB tablets it is another indication of Old Babylonia's early receptiveness to Central Asian trends. On more roughly carved seals or plaques, dogs can often be confused with lions and should not be cited as definitive examples. The appearance of Gula as enthroned Dog on the Old Babylonian seal from Sippar analysed by Göhde above shows the dog next to Ishtar in her characteristic pose of stepping up onto a mountain peak brandishing her double-lion mace (c.f. III.9- 16) in conjunction with the Sirius dog marking the 0° meridian with a rod on its head, in the same way Horus on his standard marks it on the Denderah Zodiac. These are pointers to consider briefly why it is that in both Egypt and Mesopotamia Venus and Sirius were often considered to be the same Goddess.

¹²⁰ E Ebeling 'Ein Loblied auf Gula-Baba aus neuassyrischer Zeit' *Orientalia XXIII,4* 1954 345-50

THE SIRIUS-VENUS INTERFACE AND THE LONG-TERM CALENDAR

I explained in full detail the astronomical reasons for the convergence of Sirius and Venus in a short paper written in 2011¹²¹, when the predictive Aztec calendar based on Venus cycles was about to end in 2012. For those not wishing to read the whole paper (though it does give useful grounding) I will in the final paragraphs of this DIVERSION quote key conclusions from it on how the dovetailing of Venus and Sirius works in purely counting terms, in relation not only to Sun-Moon cycles and eclipse patterns, but also to the overall process of Sirius/Sun precession. Immediately to hand from texts referring to the particular period under consideration now, there are clues from Mesopotamia about that convergence from discussion of calendrical texts lying behind the figure of Gula (*III.9- 42*).

Though she may sometimes have ceded Sirius powers to Inanna, daughter of Nannar the Moon-God – or to have leased them to Ninurta in male form (*III.9-199*) often cited as her consort, Gula was usually important enough to have a firm separate identity as Gula/Sirius, either when represented by a Dog alone - or in female human form accompanied by one. Here we quote an apt if slightly contradictory passage from Langdon¹²² (his footnotes left out) regarding ‘the most important of all the Sumerian yearly feasts, that of Bau/[Gula]¹²³, in the first month of the year’, which in the case of Lagash, he writes, ‘appears ‘to have begun ... in July ... possibly based on the rising of Sirius’. The same seems to have been true of the Nippur and Ur calendars, whose barley harvest ended the year in May-June - ‘which certainly points to a system based upon the rising of Sirius and if so must be put back to before 4000BC’:

In the sixth month (December-Jan) fell the famous feast of the Mission of Innini, in earlier times the Feast of Tammuz, a festival which gave its name to the month. At Ur this month bore the name ‘Festival’ simply. The important text LEGRAIN 323 states plainly that in this month the feast of the Mission of Innini was held. In this period, then, the Descent of Innini to Arallu and the sojourn of Tammuz in the lower world were placed - in the period of nature’s lowest activity when the lord of life was supposed to be dead - and not in the hot season when the heat destroyed him. This seems to be at least one fact about the Nippurian and Lagash calendars which we can firmly lay hold upon. The identification of Innini with Sirius was already made and the myth of her descent probably connected with the heliac setting [?rising] of Sirius in the hot season but this astral mythology had not yet overcome the more ancient nature myth which placed the wailing for Tammuz at mid-winter’. (p.156)

Like Isis in Egypt, Inanna (later known as Ishtar /THE STAR) - mainly equated to the planet Venus - is here by Langdon also identified with Sirius. We should perhaps see Gula, therefore, as a local variant of Inanna specifically embodying the star Sirius, and associated with the Āryan dog due to geographical and cultural contiguity to NW Iran/Central Asia.

LAST PHASE OF THE EARLY DYNASTIC SOTHIC PERIOD AND ANTICIPATION OF THE AEGEAN 1320 SOTHIC PERIOD

It might not be meaningful to try to associate the Isin dogs or the Avaris dog pendant (*III.9-34/35*) as anything to do either with celebrating the Sothic Period initiated much earlier in 2780BC (in Egypt and Sumer), or as anticipatory indicators of the new one to come - we simply lack documentary backup for such linkage. If they do not qualify, at least in the Isin case referred to earlier it shows some observatory temple cities along Sumer’s much simpler land zodiac gave primacy to the Sirius observation that we know had already been going on in the region during the Protohistoric Sirius era when there was contact with Egypt. In terms of any possible anticipatory observational

¹²¹ ‘Babylonians, Mexicans and the Total Count’ <http://www.layish.co.uk/Venuscycles.pdf>

¹²² S Langdon, Review of B Landsberger’s *Der Kultische Kalendar der Babylonier und Assyrer* in *Revue d’Assyriologie* XV 155-8

¹²³ She is cited variously as Ninurta’s consort, and as elder sister (or daughter) of Anu is head of the female pantheon. As mother of Ea she is progenitrix of plants and mankind and thus a healer Goddess through plants coming to be known as ‘great doctor of the Black-heads [the Sumerian race]’.

cooperation aiming towards what I dare to call 'the start-year of the Aegean Sothic Period', what is certainly worth asking is why the star ceilings of the New Kingdom (instituted by Hatshepsut's vizier, Senenmut, in his second tomb c. 1450) emerged when they did, as if out of nowhere - in just the decades we know Egypt and (probably Mycenaean) Crete were cooperating on the Avaris palace bull-leaping and lion-hunt wall-paintings which will be discussed in full in **Catalogue F**. After the time of Hatshepsut such star ceilings were repeated long into the Ramesside period, always following the same formula of framing the *Duat* stars in a rectangular centerpiece - the last examples being the star ceilings of Ramesses VI at Medinet Habu and his Valley of the Kings tomb. An inscription of Hatshepsut's successor Tuthmoses III¹²⁴ mentions the heliacal rising of Sirius on 28 Epiphi, a year when it is thought a Sed Festival took place after a 30-year interval - a Sothic date in itself implying the monitoring of Sirius was certainly still going on in Egypt in the run-up to the new Sothic period that would be inaugurated in the coming century, when Sirius would start to rise on the 1st of the month of Inundation (the original Protohistoric starting point for the Sothic Cycle). Knowing the engagement of Egypt with the Aegean at this time, it is the kind of expert knowledge that could well have been shared with the Mycenaeans, just as later Egypt divulged it to the occupying Romans.

Certainly Tuthmoses III (following notable battles there) instigated exchange of knowledge with the Levant - as seen in the case of the botanic samples from there, recorded in his Festival Temple at Karnak - in the end laying the foundation for Amenhotep III's diplomatic missions around the entire Aegean (documented in the well-known inscriptions on his statue base at Kom el-Heitan as cited in the *Art History Section*). The updating of Sirius information throughout the Levant and Aegean would just as much have been confirmed to participating Mycenaeans by Egypt as by the astronomer-priests of Babylon through the Mitanni and Kassites - but in the end we come back to Senenmut as the likely instigator of cooperation with foreign astronomers after a reassessment of Egypt's own ancient tradition.



III.9- 45: (Top) The detail either side of the ceiling centre on the Senenmut star ceiling, Horus not perched on a standard, but as therio-anthrope angling his spear at Ursa Major/Foreleg of the Bull to indicate the meridian while on the side opposite, Osiris/Orion on his barque (the three stars of Orion's belt emphasized) leads Isis/Sopdet at the head of a procession of the 36 Decans (not shown); (below) on the rectangular Denderah Zodiac 1400-1500 years later, Taweret/Cepheus anchors Meskhetiu, again aligned to Horus' spear to signify the starting point of the New Year, such that we might treat it as a BIVISUAL for the Forward Attack

¹²⁴ (cited by Cunningham *ibid.* p.372)

Looking especially at the central section of his star ceiling (above top) it shows Horus, not on a standard now, but using a spear to line up to the Foreleg of the Bull/Ursa Major (implying pinpoint accuracy of aim and alignment). On the *Rectangular* Zodiac of the ceiling of the Ptolemaic Temple of Hathor at Denderah centuries later (lower image above) - also made at the threshold of a new Sothic Period, this time the Roman one - Horus with spear adopts the same stance, likely to be the fruit of a 'renaissance' of that iconography after study of the 18D ceilings. On the opposite sloping panel of the Senenmut ceiling directly opposite the Meskhetiu/Ursa Major scene (above), the figures of Isis as Sirius and Osiris as Orion lead the procession of Decans, these three constellations being the key *dramatis personae* of the *Duat*, persisting in Egypt as the central focus of their cosmos all through the second half of the Second Millennium - until the impact of the Sea Peoples literally 'unstrung the sky' as the new Aegeo-Levantine calendar implementation was held up in its tracks. I would argue that *if a new Sothic Period was comparatively imminent in 1320 at the height of Mycenaean trading and administration*, the latter would not only have learned of it from their many Egyptian contacts – but because of their coverage of the Aegean *koine* are also likely to have been actively co-opted to help measure it in the practical ways just earlier - explaining why there is no record of conflict between Greece and Egypt – nor for that matter with the Mitanni. The Mitanni contribution in all this is more elusive, but their knowledge of northern skies was, I believe, an important ingredient. With the Mycenaeans it is easier to find visual and textual evidence from which to make reasonable deductions about their focus on the *Duat*, and we now try to pin down their relationship with dogs and Dog Stars in more detail.

SIRIUS AND ORION

From the evidence of the New Kingdom star ceilings I believe the expectation of the start of a new Sothic Period was triggered in the Egyptian court - and then shared with opposite numbers in the Levant and Crete/Mycenae – in the process instigating an operation to extend all possible observational checks throughout the Aegean (clues for which we have already noted on the islands of Kea, Motya and Mochlos (*III.9- 47* right)). The impetus may not have all been one-way: certainly when several large-scale additions were made to the Karnak Temple at Luxor under Hatshepsut, a rectangular lake similar to the Kothon at Motya was added, presumably to be used in the same way, as a reflective surface for star observation. An important precedent for the use of flat water as a mirror goes back, I believe, to the setting of the Ness of Brodgar in the Orkneys c.3000BC (still under excavation by Cambridge University led by Nick Card¹²⁵), an isthmus surrounded by water on both sides in a sheltered bay, with stone circles at either end known as the Ring of Brodgar and Stenness - and corbelled observation chambers to the side, one of them Maes Howe (c.f. also the corbelled chamber in *III. 9-27* with its many human skeletons and dog skulls inside).

DIODORUS SICULUS ON COOPERATION BETWEEN MYCENAEAN GREECE AND HYPERBOREA/BRETAGNE

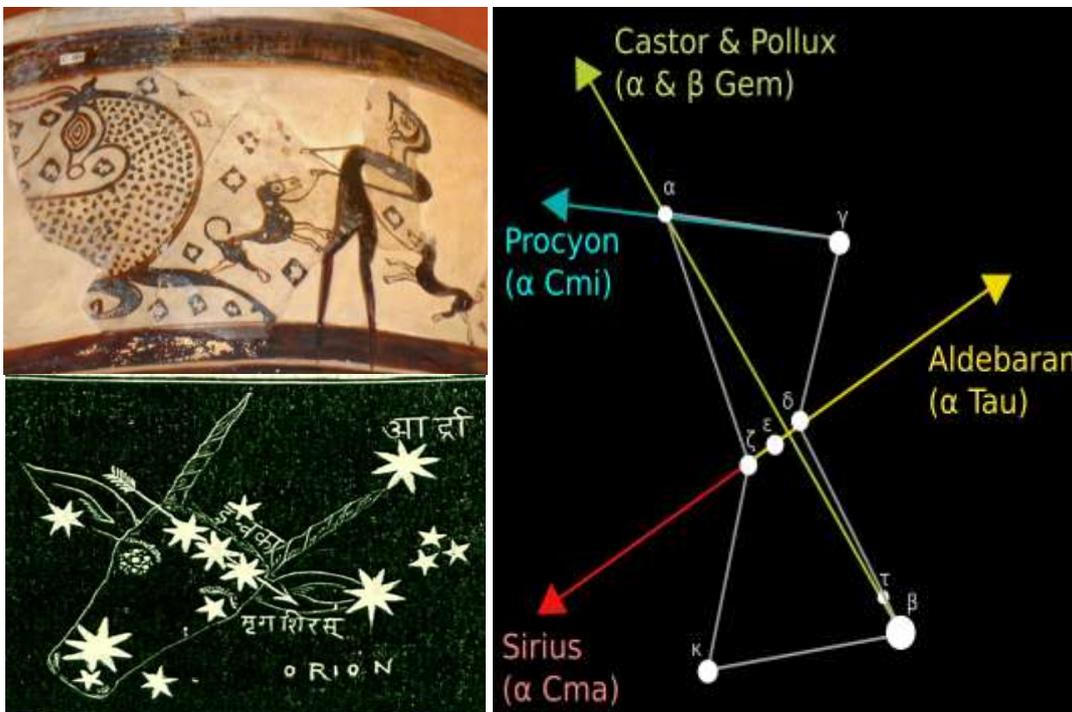
In the regions beyond the land of the Celts there lies in the ocean an island no smaller than Sicily. This island, the account continues, is situated in the north and is inhabited by the Hyperboreans, who are called by that name because their home is beyond the point whence the north wind (Boreas) blows; and the island is both fertile and productive of every crop, and has an unusually temperate climate... There is also on the island both a magnificent sacred precinct of Apollo and a notable temple which is adorned with many votive offerings and is spherical in shape... The Hyperboreans also have a language, we are informed, which is peculiar to them, and are most friendly disposed towards the Greeks, and especially towards the Athenians and the Delians, who have inherited this good-will from most ancient times. The myth also relates that certain Greeks visited the Hyperboreans and left behind them there costly votive offerings bearing inscriptions in Greek letters. And in the same way Abaris, a Hyperborean, came to Greece in ancient times and renewed the good-will and kinship of his people to the Delians. They say also that the moon, as viewed from this island, appears to be but a little distance from the earth and to have upon it prominences, like those of the earth, which are visible to the eye. The account is also given that the god visits the island every nineteen years, the period in which the return of the stars to the same place in the heavens is accomplished; and for this reason the nineteen-year period is called by the Greeks the "year of Meton." At the time of this appearance of the god he both plays on the cithara and dances continuously the night through from the vernal equinox until the rising of the Pleiades, expressing in this manner his delight in his successes.

¹²⁵ Roy Towers et al. *The Ness of Brodgar* Kirkwall 2015/ <http://www.orkneyjar.com/archaeology/nessofbrodgar/>

As pointed out in other booklets Orkney structures using corbelled ceilings precede their use in Egypt's Great Pyramid by at least half a millennium. The intriguing passage in Diodorus Siculus¹²⁶ reproduced above deserves attention:

DOGS IN MYCENAEAN KṢATRIYA-WARRIOR GRAVES

Dog remains in Mycenaean burials have been assessed by Y Hamilakis¹²⁷ in a key paper, and their presence in the Perati (**ForAtt-25**) and Vapheio (**ForAtt-26**) tombs fits the picture we are building up of a core group of warrior graves that more or less bring together the qualifying status possessions of the high-level Mycenaean leader - in Indo-European terms understood as a *kṣatriya* or warrior-king - probably equivalent to the Mycenaean idea of the *wanax* – a tribal steppe convention holding sway for more than 250 years in line with international nomadic cultural practices. These included the boar-tusk helmet, the bronze swords and daggers, precious and highly decorated drinking vessels and display of valuable materials crafted into native or foreign-made luxury items from around their known world – and a dog or two buried nearby - if not also parts of donkey or horse and chariot (examples of the latter variations, looking at the wider picture, are found in élite Central Asian/Levantine male burials).



III.9- 46 (Top Left) Detail of kylix showing Mycenaean with two dogs next to Taurus; (bottom left) Ancient Indian visualization of Orion as Deer Head pierced by an arrow (the 3 stars of Orion's Belt), from Tilak - c.f. (right - as in III.9- 25 right) actual Orion, Dogs and Taurus star positions

ÉLITE BURIAL CONVENTIONS IN THE ANCIENT NEAR EAST AND THE AEGEAN

We can go much further with such generalisations now that an overall pattern is starting to emerge¹²⁸. First, Philip¹²⁹ looked at the 3-2M overall spread in the Near East of male burials containing weapons, which quite evidently conveyed messages about status that would not have been applicable to ordinary soldiers – especially seen in:

1. The Ur tombs, where knives and daggers were usually located around the waist, axes in the hand (and whetstones included in the kit);

¹²⁶ As quoted from *Diodorus Siculus II*, 47-48 by H Crowhurst in *The Nebra Sky Disc: Cycles in the Cosmos* Plouharnel (France) 2012

¹²⁷ Y Hamilakis 'A Footnote on the Archaeology of Power: Animal Bones from a Mycenaean Chamber Tomb at Galatas' *BSA XC* 153-66

¹²⁸ Though see the conclusion of J Curtis in 'Gold Face-Masks in the Ancient Near East' in S.Campbell et al. (eds) *ibid.* (next footnote) 226-231

¹²⁹ G Philip 'Warrior Burials in the Ancient Near-Eastern Bronze Age: the Evidence from Mesopotamia, Western Iran and Syria-Palestine' in S Campbell et al. (eds) *The Archaeology of Death in the Ancient Near East* Oxford 1995 140-154

2. Tomb 92 at Beth Shan - or Tomb 2 from Tell Rehov – that relate to similar tomb assemblages elsewhere in the Levant that tend to repeat a kit comprising fenestrated axe-head, grooved dagger, spearhead and (sometimes) small projectile head like a nail (his fig. 16.2). Again and again the dagger tends to have the crescent-shaped pommel (depicted in milder form on the Karashamb goblet), a type also found in northern Palestinian tombs such as Tomb 1100D at Megiddo, Jericho and up as far as Ugarit. Inland in Syria, such weaponry is found in graves at Hama, Homs, and Yabrud, sometimes along with metal belts as a variation on the standard assemblage.
3. A number of examples at Tell el-Dab'a in Lower Egypt from the Second Intermediate Period which appear to continue trends from the Southern Levant, many notably close to those of Tell Rehov itself.
4. Cyprus, too has examples 'most likely to represent the extension of the mainland idea of warrior burials to the island in the later Middle Bronze Age' (many with especially long dromoi);
5. The convention seen at Ur was also found at other sites in the Middle Euphrates valley (some going back to the Isin-Larsa period) - such as Baghouz near Mari, where stone-lined cists were often used, sometimes marked by tumuli (in this regard, note the views of Tubb given earlier about who the stone-lined grave users were). Again spearheads and fenestrated axes were the most common items, but so also were curved knives, representing 'yet another regional variation on the Middle Bronze Age warrior burial theme'.
6. Blades from Chaghar Bazar show the more extravagant twists and twirls more common on the Central Asia axes of the BMAC and in warrior burials in the Hamrin area generally (Tell Madhhur/Tell Sabra) the pairing of dagger and axe is usual, commonly enhanced by the addition of jewellery and equid remains.
7. The dagger, axe and spear combination appears in many of the graves of 2M Luristan and Elamite Susa (despite being more difficult to make sense of in hindsight, consequential on the patchy recording methods associated with those sites – sometimes the combination was a pairing of axe with macehead instead.

Philip's interim conclusion was that 'The warrior burial clearly represents a concept understood and deemed appropriate throughout a wide area, *and emphasises the long-range contacts between élites in otherwise quite different regions*' [my italics], probably with its earliest beginnings in ED Mesopotamia/Central Asia. What is more, he says, 'The uniqueness of the phenomenon of the MBA warrior burial is emphasized by its complete absence in the succeeding Late Bronze Age'.

This is the general picture into which we should mentally insert known contemporary Mycenaean élite burials as part of the family - most notably the Vapheio tomb, which has taken up so much of our attention in this Catalogue for various reasons. Though there might have been Levantine influence on Mycenaean practice, we should also consider reciprocal influence and see what Gilmour¹³⁰ has to add, in a paper in the same publication, following that of Philip. Leaving aside his explanation of the spread of cremation practice which seems clearly to have been an Anatolian custom – and also of the use of the larnaka (clay coffin), sometimes also used at Levantine sites, we simply mention the tradition of the chamber tomb with stone-lined cist burials inside it (like Dendra Chamber Tomb 2 - *III.9- 51*), also used at Tell Far'ah South, Tell el-Ajjul and Beth Shan – as well as in special cases the building of corbelled tombs that, apart from the beehive tombs of Crete and Mycenae (bearing in mind this building technique was already in use both the Orkney settlements and later in Egyptian pyramid chambers) was also at times found in the Levant at sites such as Megiddo, Dan, Apeh and Minet el-Beida, usually accompanied by Mycenaean and/or Cypriote pottery,

¹³⁰ G Gilmour 'Aegean Influence in Late Bronze Age Funerary Practices in the Southern Levant' in S.Campbell et al. (eds) *ibid.* 155-170

jewellery, ivory and other rich grave goods. Both these tomb types are ascribed to Mycenaean or Cypriote influence but in a wider perspective because of the Neolithic Hyperborean examples one does need to take in the Eurasian factor beyond them all, and allow the possibility of a vaster current of transmission.

Returning to Philip for some final thoughts, two of his conclusions are interesting for all warrior burials. First, metals and weapons are frequently mentioned in the Ebla texts (we have mentioned the important metalworker's tomb at Ebla), often in terms of elaborate ritual, non-functional decoration – and of their sheer bullion weight, the connotation being that they were used as ingots and/or diplomatic gifts. Second, he ascribes the quite abrupt end to the practice of rich warrior graves to the knock-on effect of the introduction of the chariot and the different battle equipment that went with it, such as the composite bow and scale armour, altering concepts of what possession of certain weapons gave to establish high status. Chariot armies tended to be under palace control and operating within larger political units, making the individualism of free-lance chieftains co-operating between each other a thing of the past. This rings true to a large extent, but does not explain the early representation of chariots on the Shaft Grave stelai.

Taking these burial similarities as an analogy, the above factual detail serves to prove a level of internationalism that I am presuming also existed on a similar basis in the case of astronomical knowledge and practice in the same regions. Now back to the dogs.

ASTRONOMICAL SIGNIFICANCE OF DOG REMAINS IN MYCENAEAN WARRIOR GRAVES

From the detail of Philip and Gilmour's papers we now see more distinctly that dogs in Mycenaean tombs were a variation on the equid remains (both donkey and horse) often found in parallel burials elsewhere in the Near East). In the tombs of relevance to our lion-prey study, dog remains (usually the skull, or just teeth) were found in

- the Vapheio tomb;
- the Dendra Royal Tholos,
- Pit 2 Mycenae chamber tomb 533;
- Asine chamber tomb 1/1
- and a full dog skeleton in the tomb at Perati.

Altogether Hamilakis cites eleven Mycenaean tombs with dog burials, most of them the kind containing high-status grave goods - including large numbers of seals that probably belonged to personnel in the man's retinue that had defined their now defunct roles, stripped of them at the ruler's death as substitute for their own demise, leaving it to the dog alone to be killed and buried with its master.

Hamilakis uses the account of Patroclus' funeral in the *Iliad* (already referred to above in relation to Achilles' hair lock) for textual backup on the significance of the dog in Mycenaean burials, since two of his nine favourite dogs were put on the pyre with him (although the Mycenaneans preferred inhumation, being in a foreign land they followed native Trojan practice). Other connotations are drawn out by Hamilakis for dogs in tombs – who sees their inclusion as illustrating 'the strategy adopted by élites to claim an association with hunting ...as an activity that signified their ability to control distant, unfamiliar, and often dangerous realms...'. This could well be a general social meaning but underlying that is the entirely Indo-European bond between man and dog which – certainly for the Central Asian Zoroastrians – had astronomical and spiritual meaning. Since Sarianidi from his earliest excavations at Gonur (some just cited above) interpreted its occupants as 'Proto-Zoroastrian'¹³¹, we think it relevant to keep that idea at the forefront of our mind.

¹³¹ His *Margiana and Protozoroastrism [sic]* Athens 1998 is a case in point, obtainable now only from Greek booksellers.



III.9- 47 ((Left) The Two Dogs in the Vedic vision of Orion, visualised as *Mrga-Shiras/Head of the Deer*¹³²; (right) dog lid of steatite from Mochlos Tomb 1 (no container for it was found) – the cylinder seal of III.9- 71 was in the same tomb - Seager¹³³ figs 1/5

INDO-EUROPEAN VISUALISATIONS OF SIRIUS

The fact that two dogs are mentioned as buried with Patroclus - and two dogs on leads feature on the figured Mycenaean pot in the British Museum (III.9-142 and detail at III.9-45) – leads us to wonder if they are not deliberately shown as a pair because of their role in star geography (III.9- 25). Dogs were revered by Āryans, including the Zoroastrians who we know visualised Sirius as Dog Star following on the heels of his master, the hunter Orion¹³⁴ on clear nights with a line of smaller stars clearly visible in front of him forming an upheld bow aimed towards Taurus - as in the photo below¹³⁵. In contrast, in Semitic mythologies Sirius is called BAN/the Bow, and not identified with a dog at all, given this creature is regarded by them as unclean, like the pig. In purely Indian, Vedic astronomy on the other hand, the dogs are still dogs, and the arrow is retained as if fired from Sirius, but identified with Orion's Belt - the full outline of Orion visualized, not as a man, but *Mrga-Shiras*/the Deer-Antelope Head pierced by that arrow, as above left (and detail at III.9- 46 lower left). From this choice of animal we might loosely associate with it the Hittite deer cult scenes on the metal rhyta described earlier (and on the Trialeti Cup) – all Āryan pieces. Certainly if taking an astronomical angle on the Hittite Deer God - or the much later antlered Celtic God, Cernunnos - it is worth considering Garcia et al.'s interpretation¹³⁶ of the higher-than-usual number of horn-tips on stags depicted on Galician Iron Age rock art (c.1200-1000) as being mnemonics for Moon-counting up to the Solstice, with extra knobs to take into account intercalation every third year (depending on Moon position lining up with the Sirius-Orion benchmark). And coming back to to Minoan/Mycenaean iconography, we will later consider current interpretations of the ivory Palaikastro Kouros (below right) as possibly made to be a cult figure of Orion (assigned the slim physique favoured by both the Mycenaeans and the Mitanni *maryanni-kṣatriyas*) – though there is still room for Blomberg's interesting

¹³² From Bal Gangadhar Tilak *The Orion: Researches into the antiquity of the Vedas* Bombay 1893. The relevance of the Indo-European visualisation of Sirius is explained on the next page – premature insertion of Tilak's illustrations here is to take advantage of the star map of Orion alongside for comparison.

¹³³ R Seager *Explorations in the Island of Mochlos* Boston & New York 1912

¹³⁴ See, for convenience, W B Henning 'An Astronomical Chapter of the Bundahishn' in *Selected Papers: 2nd Series, Hommages et Opera Minora (Acta Iranica 15)* Teheran & Leiden 1977 229-248

¹³⁵ During his search for Zoroastrian and Vedic manuscripts in India, Anquetil DuPerron reports, 'From the place where I stood I saw the Nasāsālārs perform the *Sajdid* (that is to say the ceremony of presenting the dog to the dead), and carry the dead body into the *dakhma*'.

¹³⁶ A C G Garcia et al. 'Calendrical Deer, Time-Reckoning and Landscape in Iron-Age North-West Spain' *Archaeologia Baltica* 10 2008 66-70



III.9- 48: (Left) It is rare to see so clearly in the sky as here the figure of Orion with sword, belt and bow, the two Dogs below left, and lowest star of Gemini over Orion's right shoulder top left (Taurus is off-scene above his bow); (right) the Palaikastro Kouros

interpretation of the aniconic Double Axe outline made by the stars of Orion (III.9- 29 right), even if in the Mycenaean ring seal iconography coming up I temper that idea with a curvilinear adjustment.

THE HALAI CUP

From some centuries later at first sight we appear to have an interesting representation of both Canis Major and Minor on a cup recently unearthed in a pit on the 7C BC Acropolis of Halai, some 15 miles north of Thebes (see map below).



III.9- 49: (Left) Cepheus/Tawaret is sometimes overlooked as a member of the Circumpolar stars; (right) location of Halai

Where the local museum label simply described it as a hunting scene, the *skyphos* was recognized for what it is by John Barnes¹³⁷. On what remains (a quarter is missing), on *initial interpretation* three of the four Cardinal signs are shown (the rear of Taurus, all of Scorpio and the forepart of Leo, in reverse order) with 'Delphinus' in front of Leo, and the Two Dogs and Krater either side of Hydra (c.f. their actual positions on the star map under III.9- 6) running under or over the constellations of the Two Dogs, Cancer and Leo. Barnes' identification of the fish as Delphinus – a tiny

¹³⁷ J Barnes 'Asteras Eipein: An Archaic View of the Constellations from Halai' *Hesperia LXXXIII* 2014 257-76 (sadly, he does not transcribe the inscriptions)

constellation tucked in near Aquila and Pegasus and too insignificant for the top league - may rather refer to *Fom-el-Hut* under Pisces – or most likely Cepheus the Sea Monster near Cassiopeia (probably the equivalent of the Egyptian



III.9- 50: Skyphos from Halai, Lamia Archaeological Museum H91-648 , photos J Barnes - National Geographic June 2016

Hippo constellation Taweret across from the Dippers as rendered on the Denderah Zodiac (III.9- 71) - the Mycenaean variation on which was morphed into the Minoan Genius, seen on two of the Vapheio seals (last two seals in the table at III. 9-107). What is material to us here is the central place it appears is given to both Dogs on the skyphos, more convenient - in their role of lower paranatellonta - than Orion in marking the opposition to Scorpio on the other side of the firmament (on the cup Scorpio is placed right next to them). ‘Convenient’ since, thinking practically, for the design band all round the cup, the insertion of the human figure of Orion instead would have meant extending the height of the entire register, leaving empty spaces over the rest of the animal images.

But on closer inspection there are alternative readings for Barnes’ and my combined readings as summarized above.

ALTERNATIVE READING OF THE HALAI SKYPHOS

Having earlier identified the Mesopotamian images of Gula’s dog (see III.9- 431 and III.9- 64), so often characterized as the Central Asia mastiff type with pointed ears and square jowl, on reflection I came back to the animals on the Halai skyphos realising the animal so far identified as Leo could not possibly be a lion head – since in fact the head is that of a mastiff dog - lions have round ears (see detail in Barnes *ibid.* fig.7). If, therefore, this head belongs to a dog representing Sirius, it means the two running creatures identified as the Two Dogs (or Sirius and Lepus in Barnes’ thinking) must instead refer to the *Two Bears* – which also play such a central role in Mycenaean and later Greek culture. Their placing between Taurus and Scorpio makes complete sense, being the two equinoctial Signs at exactly 180° in opposition to each other, with the Bears at the Polar Centre that intersects that line half-way. The Hydra section of the design would refer to the Summer Solstice, opposite the Winter Solstice section which would be on the missing side of the cup (c.f. our discussion of the Nebra planisphere, III.9- 78). And in fact, Barnes himself writes, ‘The argument could be made that the two quadrupeds and the serpent on the skyphos represent the two bears and Draco in the sky’.

We leave it to the reader to make up their mind. Barnes noticed that the temple in front of which the *skyphos* was buried at Halai was aligned directly east, and that ‘this alignment would have allowed the eastern risings of the constellations depicted on the skyphos to be viewed from the entrance to the temple.’ Test sighting from this viewing point would help to clarify which interpretation looks the most relevant.

MYCENAEANS AND THE AFTERLIFE: THE DOGS, ORION AND ARKTOS

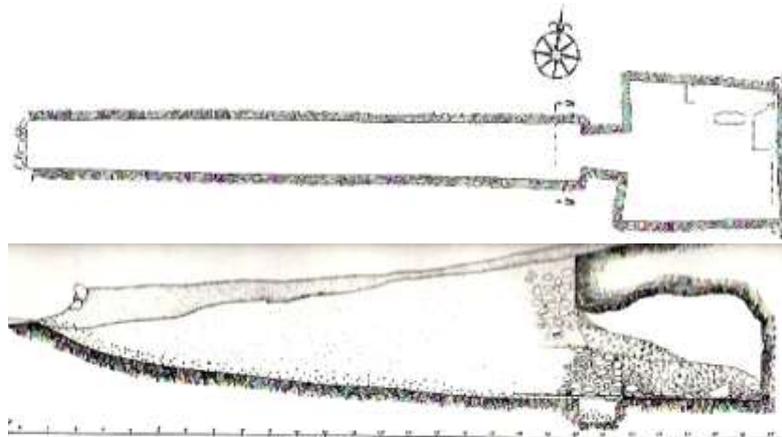
Making a new start at the New Year is symbolic, on a higher plane, of resurrection - and it appears that just like the Egyptian pharaohs the greatest Mycenaean *kṣatriya*/warriors were in death seen as taking on the role of Orion/Osiris to embark on a new cycle of existence involving the soul’s last journey to its final resting place at the Polar Centre, the

last signpost being Ursa Major/Foreleg of the Bull – known to the Greeks in Homeric times as the Wain/Wagon or Bear - circling in the sky above Winter Solstice constellations at night, and looking down on Sirius-Orion rising.

This is why the sky-zone mapping the star staging-posts in the journey to the Afterlife was known by the ancient Egyptians as the *Duat* (see the photograph of the *Duat* stars in *III.9- 87* repeated from **Chapter 19**). It covers the area of sky whose constellations we have already returned to on several occasions (*III.9- 25* and *III.9- 48*) which form a rough hexagon marked by Gemini, the Two Dogs, Orion, Taurus (featuring both Aldebaran and-the Pleiades). These create a symbolic curtain marking off the Old Year – or Old Existence - from the New, with (in later Greek terms) the Milky Way as a river leading to it. Implicit in that star-map is a vision of Sirius at the foot of the Milky Way as Guardian and Gatekeeper of the Underworld zone, given it lies below the horizon most of the year. In other cultures, too, the Dog, burning brightly (*seirios = dazzling/scorching*), was understood as crouching over the entrance to the Underworld, waiting to guide souls at the start of the perilous journey like any hunting dog eager to point the trail.

EGYPTIAN PRECEDENTS IN THE ROYAL THOLOS TOMB AT DENDRA

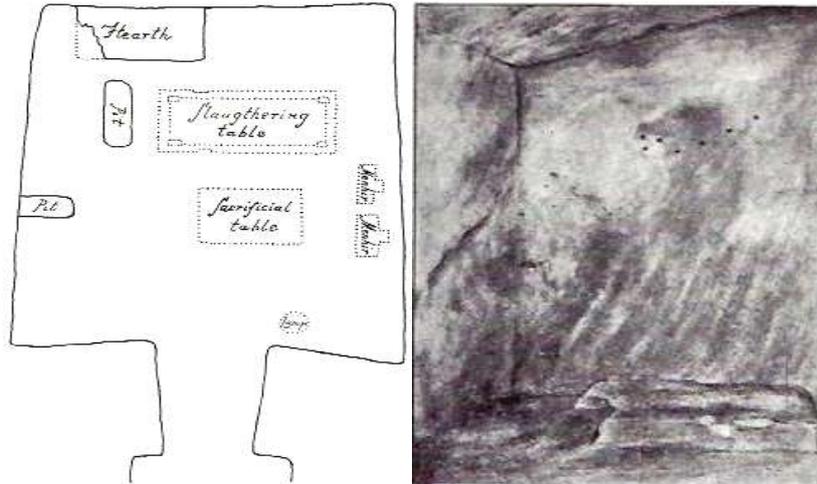
So far in this Catalogue from amongst the royal tombs of Dendra we have only mentioned (in *DIVERSION 3*) the amber in Tomb 10 and the warrior's agate beads in the Tholos Tomb since it is not until **Catalogue F: The Bilateral Attack** that we deal with Dendra's preponderance of *Bilateral Attack* seals. But here we should bring Dendra to the fore in considering Mycenaean warrior graves overall because its excavator, Persson (*ibid.* 1931 and 1942), dwelt at length on links between Egyptian and Mycenaean afterlife concepts on the basis of evidence from Chamber Tomb 2 (below). Over the remains of the altar/hearth on the north side of its back wall - which at certain times of the year would be illuminated by any direct light coming down the entrance tunnel - were the remains of metal pegs forming the upside-



III.9- 51: Dendra Chamber Tomb 2 plan and section, the altar and the Ursa Major decoration being on the back wall

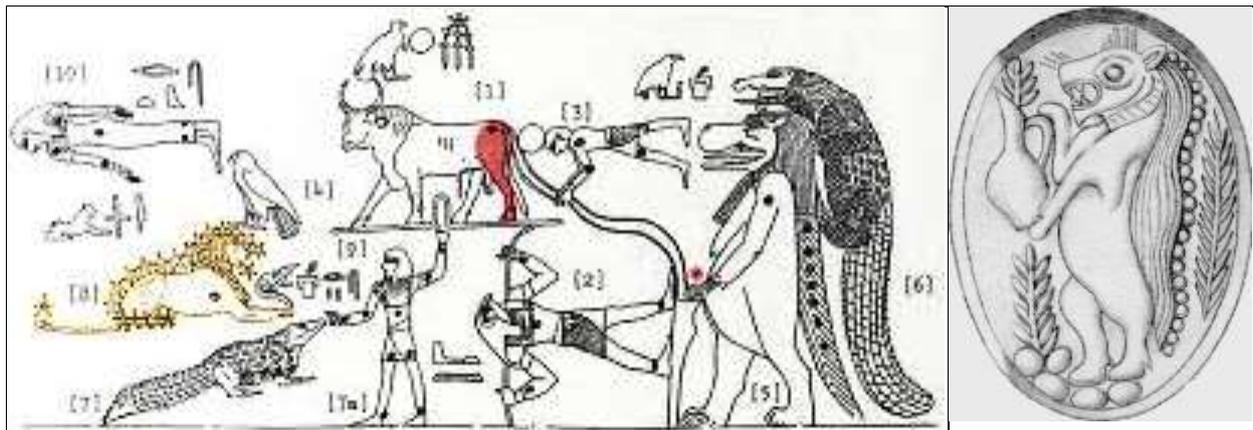
down outline of Ursa Major (see Persson's less-than-clear drawings in the next illustration), no doubt indicating the Winter Solstice period – c.f. *III.9- 70*). Persson imagined metal stars would originally have been fixed on these pegs to make the image more striking, likening it to the central position given to *Meskhethiu*/Foreleg of the Bull (Ursa Major) on Egypt's New Kingdom royal tomb star ceilings (as in *III.9- 45* and *III.9- 54*) – whose Egyptian visualisation here merits further investigation shortly.

Along with the image of the man with two dogs standing next to Taurus on the kylix which started off this line of enquiry in the first place, Dendra's Ursa Major iconostasis surely provides an irrefutably firm precedent for this vein of Egyptian astronomical-cum-eschatological interpretation as being adopted for warrior leader/*kṣatriya* burials within the Mycenaean cultural framework – and is another strong indication of cooperation between Egyptians and the top Mycenaens on such matters. Indeed, the use of the Minoan Genius on seals (*III.9- 522* below right) is another clear



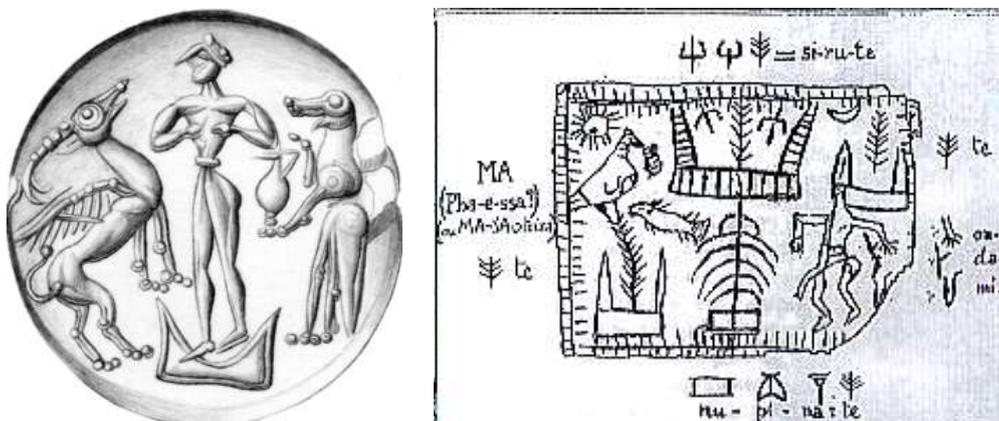
III.9- 53: Dendra chamber tomb no. 2 plan with outline of Ursa Major on back wall behind the hearth/altar – Persson figs 53/54;

instance of their adoption of Egyptian New Kingdom star ceiling iconography - based as it is upon the original Egyptian hybrid monster (shown in the centre of the Seti I star ceiling version, below) consisting of *Draco*/the Crocodile/*Sobek* draped down the back of Hippo *Tawaret*/*Cepheus* who, in anchoring the Bull Foreleg/*Meskhethiu* at the Polar centre to Horus' spear, acts as upper paranatellon to Sirius-Isis below the zodiac stars, and is still shown in



III.9- 54: (Left) Centre panel of Seti I star ceiling (with Isis-Sopdet sideways over Leo- and Cancer as crocodile); Horus horizontal with spear pointing up to Meskhethiu/Foreleg of the Bull(the whole bull is shown, as if including Taurus) and Taweret-Sobek holding the Peg of the New Year to the right; (right) Minoan Genius on a Phaistos seal with libation jug and plants – CMS II,5-322

hippo form centuries later (without the crocodile) on the Dendereh Zodiac (III.9- 71, detail right). Cepheus' role as northern paranatellon to Sirius-Orion is confirmed on a seal from Khania (III.9- 55 below left) on which the Minoan



III.9- 55: (Left) Seal from Khania of lapis lacedaemonius that could well show Orion rising between sighting horns, flanked by the winged goat of the Cancer-Capricorn colure and a dog-headed Minoan Genius – CMS V-201; (right) the name of Sirius (si-ru-ti) for the Minoans, presumed to be carried over to Linear B (PS Zf1, Ashmolean Museum AE617) – from Faure, both cited by Emilia Banou

Genius is given a dog head instead of the usual hippo-cum-lion head, turning it into a two-way reference to the Sirius-Orion line-up with the Circumpolar stars. We have cause to study more closely what is in essence a *fiducial corridor* between the two in star-map form shortly (*III.9- 66* right/*III.9- 69* left) since the pair repeatedly takes centre stage in descriptions of *Duat* star scenes given in *The Iliad* (details given shortly, after more seals).

ORION ON SEALS AND OTHER VISUAL DOCUMENTS SHOWING SYMBOLS OF DEATH AND RESURRECTION

The image of Orion rising between sighting horns on the seal from Khania above left reminds us of similar representations of slim, athletic males (including the Palaikastro kouros, *III.9- 48* right) on Mycenaean gold seal rings floating in the sky – possibly also to be associated with the image on an offering inscription found in the sanctuary at Petsophas¹³⁸ (not far from Palaikastro) engraved on a copper plaque (above right - Faure *ibid.* pl.IV). It shows the characters for Sirius (*sirute*, at that time also referring to the Sun) inside sighting horns, but as it is between Sun and Crescent symbols, with what looks like an Orion figure to the right, it probably refer to Sirius alone. According to Faure, the two other main names on the offering plaque, *matesa* and *nupina ondami* must to refer to New Moon and Full Moon Goddesses (note the character *pi* is a fly – more of which below). In passing, we remind ourselves of precedents on Akkadian seals showing the Sun rising between two mountain peaks, as on these two examples:



III.9- 56: (Left) Central scene on an Akkadian seal showing the risen Shamash, having cut his way through the mountain peaks with his saw, the dawn symbolized by the opening of lion and lioness gates – Louvre A139; (right) detail from the seal of Adda (BM89115) showing Inanna/Venus with her date bunch already risen, conjunct with Shamash not far behind under her feet, half-way up through the cleft flourishing his saw

ORION ON MYCENAEAN MYTHOLOGICAL SEAL RINGS

For direct proof of the importance of Orion to the Mycenaeans, on several gold Mycenaean seal rings, Kyriakidis¹³⁹ makes comparisons between floating figures and the arrangement of the Orion stars which are convincing – the most clearcut of his examples shown below. (To bear comparison with the outline of the constellation, it needs to be viewed as carved in the ring, and not from its reversed impression). Under Orion in the sky is a semi-nude woman against two rocks contrasted with a fully dressed lady, for which there are endless precedents on Syrian seals where Ishtar is represented as two such contrasted figures - or as one combined figure half-clothed, half-dressed (as in *ForAtt-22*).



III.9- 57: (Left) Image as on seal, rather than sealing, of mythological gold ring in Ashmolean Museum- CMS VI-278; (right) Kyriakidis fig.19 (c.f. also with the Khania 'Master Impression', III.9- 73)

¹³⁸ See P Faure 'Écritures Prehelléniques dans dix Cavernes de Crète' *Cretan Studies VII* 75-88

¹³⁹ E Kyriakidis 'Unidentified Floating Objects on Minoan Seals' *AJA 109* 2005 137-54

The half-undressed woman mourns at twin baetyloi with vegetation sprouting between, almost sexually suggestive in evoking the entrance to womb and tomb. Near Orion float a heavenly eye and ear (there are 18D precedents in Egypt for the ear, such as the 'Hearing Ear of Amun' on the outside back wall of Karnak temple's perimeter, and some Diyala seals show ziggurats with horns and ears on them).

On other rings the floating male is depicted behind a warrior's figure-of-eight shield - as on the unmistakably astronomical gold ring from the acropolis at Mycenae illustrated below - where a case can be made for his shield representing a *circular version of Orion's double-axe star outline*, given Orion was viewed as a warrior figure as well as a hunter. This means (*pace* Blomberg, *III.9- 29* right) the four-fold double axe standard under the Sun and Moon embodies the solstitial extremes; the poppy-heads held by the Goddess must allude to the Winter Solstice and Underworld period (at the time of Orion rising); the lilies and the small girl stand for Spring/the Young Year; and the fruit-laden tree the Autumn equinox (here Hesiod's words fit the image well: *But when Orion and Sirius are come into midheaven and rosy-fingered Dawn sees Arkturus, then cut off all the grape-clusters, Perses, and bring them home*). This leaves the drooping flowers in the woman's hand on the left next to the Summer months depicted as lion-heads, signalling the nadir of the Year bringing drought and death.



III.9- 58: Gold ring-seal from the Ramp House, Mycenae – CMSI-17

SIRIUS, ORION AND THE JOURNEY TO THE UNDERWORLD – FROM LIFE TO DEATH

Remembering that dog remains were found in the Vapheio burial – and that the warrior lying there wore a necklace with two dog beads (*III.9- 33* top left) as its centerpiece to me is a strong indication the man was an astronomer-king, being the only tomb apart from the Griffin Warrior's that gives us the full material context against which to assess his role. Similar iconography to the ring seals just looked at appears on the only gold ring found in the Vapheio hoard with him (below top left), and we contrast it with two more of the rings discussed by Kyriakidis, for some of whose readings for individual motifs I offer alternatives in the next paragraph. All three seals have symbols in the sky concerning changes in nature and the insect world that, along with the stars, evoke the promise of the New Year and new life. This lyrical iconography expressing aspects of the eternal story of life, death and immortality might on first viewing appear to be the special innovation of the Mycenaeans, being almost exclusively found on gold seal-rings clearly

owned only by those initiated into knowledge of the Mystery of the Underworld Journey and Life on the Other Side - an inevitable cycle to which the commemorative baetyloi, vegetative sprouting - and insect transformation from caterpillar to chrysalis to butterfly or dragonfly on the rings - all allude.

On the Vapheio ring seal itself, a chrysalis and ear of wheat (*Spica*) sail in the sky next to what Kyriakidis identifies as a 'tasselled double axe' (to me doubtful, but I cannot identify it better). In a clever visual *double entendre* an Isis Knot (symbolic of the idea of 'conjunction' and/or tally counting) is positioned on two baetyloi to make it look like a chrysalis turning into a butterfly, referring to the process of self-transformation, contrasting in anthropomorphic terms with the dying Adonis figure at the potted tree – all presided over by the mourning maiden in the centre, grieving on one side, joyful on the other. The Hagia Triada sealing below it shows the maiden herself down in the Underworld, stripped of all her clothing but with the promise of transformation made by the pair of courting butterflies and Isis knot in the sky under a serpent which, rather than representing the stars of Hydra, I think refers more to its ability to slough off its skin and emerge out of the ground in evolved form (though Kyriakidis' interpretation of it as Hydra is quite plausible). However, on the Isopata ring below right, a snake again appears in the sky, this time parallel to a caterpillar and

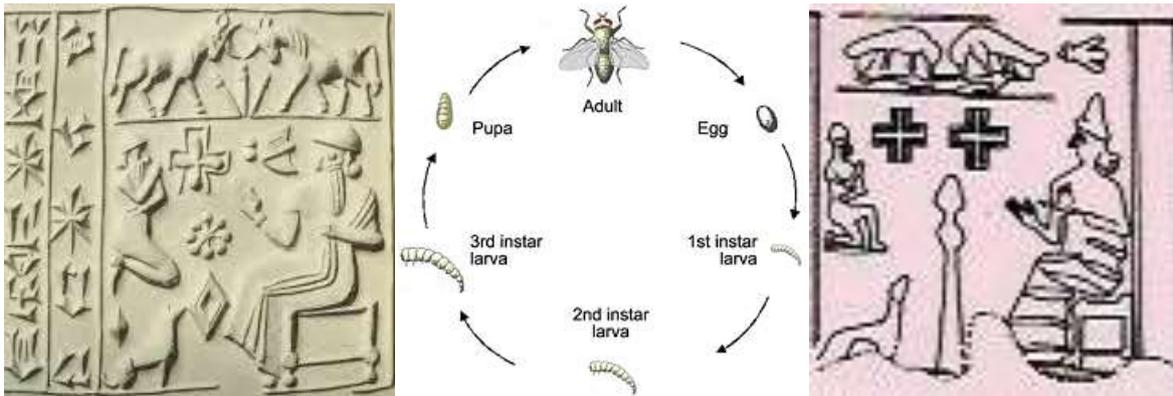


III.9- 59 (Top left) Vapheio ring - CMS I-219; (lower left) Hagia Triada sealing CMS II,6-4; (right) the Isopata ring, CMS II,3-51

flanked by a chrysalis - being stages in the life cycle of the butterfly – again suggesting transposition stages to higher levels of being. On the far side of the main presiding female are what may be representations of a tiny bee/beehive and a wormy-looking mayfly/dragonfly – all to be related to the Spring season along with the flowering lily plants in the spaces between the wailing and dancing maidens watched by the All-Seeing Eye of Eternity. The latter is yet another small detail that refers back to Egyptian precedents that intersperse ritual scenes with the all-seeing Eye of Horus or the Ankh of Hathor/Venus (where Syrians often put the Ankh on their seals, the Mycenaeans preferred the Isis Knot).

KASSITE –V- MYCENAEAN INSECT SYMBOLISM

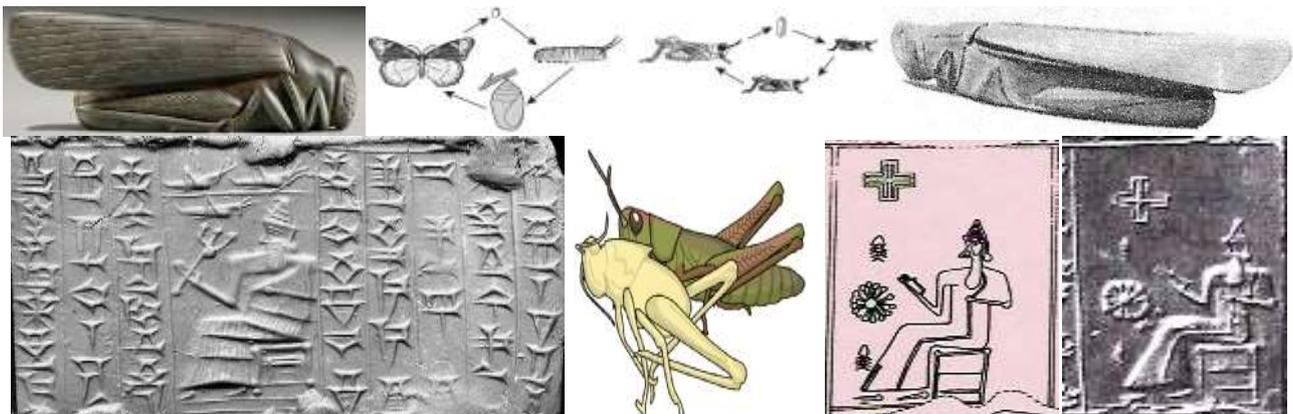
Interestingly, the Kassites (contemporaries of the Mycenaeans) also used insects on their seals, most notably flies and grasshoppers – both of whose life cycles spell out a similar message to the Mycenaeans' use of butterfly stages. The symbolic meaning of the fly (see III.9- 2) has already been explored in relation both to the virtue of courage and ideas connected with the Underworld journey (the life cycle of the fly goes through maggot phases associated with putrefying flesh or faeces which the female fly seeks out to lay her eggs in). On the seal above left showing a Kassite God with a fly in front of him (note also the Sirius dog), I suggest he is being propitiated in his role as Underworld Baal-Mars-Nergal (Lord of the Flies). I suggest also that the cross represents (as usual) the Sun; the 8-petalled rosette may at first seem to refer to Venus and the *oktaëteris* - other seals show 12 petals (next illustration) which may refer instead to the months of the year, if not year cycles, while the lozenge we will attempt to interpret shortly.



III.9- 60 (Left) Seal in the Metropolitan Museum, NY showing a seated God with fly propitiated by a kneeling worshipper (c.f. ForAtt-23 for the kneeling mode), on the other side of a vertical line-up of cross, rosette and lozenge; (centre) basic fly life cycle; (right) another Kassite seal using the fly symbol – Hermitage 6516

Next to it we have placed a diagram of the basic life-cycle of the fly to remind us how, on breaking free of its hardened pupa and flying out of putrefaction, it might appear to have overcome death (in corroboration, next to it we place another seal showing the fly set against two crows tearing an animal on its back to pieces). These days crime scene experts determine how long a body has been dead by the development stage of any maggots in it.

However, it is the parallels between butterfly and grasshopper life cycles that I think are the most telling for our understanding of Kassite –v- Mycenaean seals using insect symbolism. We noted above how caterpillars, chrysalids and butterflies appear in the Mycenaean *pastorales* on gold seal rings – whereas on Kassite seals the grasshopper/



III.9- 61: (Top left) 18-17C Babylonian stone weight in the form of a grasshopper recently advertised for sale at Phoenix Ancient Art, NY & Geneva; (centre) Life cycles of the butterfly and grasshopper compared; (top right) wooden cosmetic box with swivelling wings Cairo Museum JE56931 (c.f. also a clay one in Cairo, JE27048); (lower left) Kassite seal with God and trident with three grasshoppers above; (lower centre) grasshopper sloughing off its carapace; (lower right) drawing and photo of Kassite seal with Shamash, 12-petalled rosette and two small possible grasshopper sloughs - BM89128

cricket seems to take its place as the more locally profuse and common insect – though probably with a similar seasonal or transformational meaning in mind. In the case of the cricket, it does not go through a chrysalis or pupa stage but is born as a miniature complete insect from an egg deposited in a tube in the earth by the adult that overwinters and hatches in the Spring. The only way it can grow is to continually slough off its carapace when its softer body becomes too big for it (as above centre) – a process baby spiders and snakes also follow - and its increased presence through chirping or crop infestation are very much a signal of Summer - they die in Winter when it gets too cold. The grasshopper may thus simply stand for the Summer season – but also, just like the fly, possibly

also for ideas of transmutation and immortality¹⁴⁰ in Kassite terms (though its origins may go back to Egypt, as seen in the decoration of the dagger of Ahmose illustrated under **BaLu-28**, which has three crickets engraved at its tip – and note also the wooden cricket box found by chance in the sand at Saqqara - now in the Cairo Museum, illustrated above). Van Buren (*ibid.*) refers to one seal in the British Museum (above lower right) with two small ‘bugs’ on top of and underneath a rosette that could be just-hatched crickets - or even their sloughed-off skins which she interprets as fish skeletons. In China, crickets have traditionally been kept as pets in tiny cages with changes in chirping said to reflect the waxing and waning Moon – so its image could either be a land alternative to Cancer the Crab (also with hard, outer carapace) ruled by the Moon - or even simply represents the Moon in place of the usual Crescent.

To conclude, we are reminded of a Kassite seal studied in **Catalogue B: the Uruk Stance** (re-illustrated below) which juxtaposes the Uruk Stance lion-prey group against an upright grasshopper and dog placed either side of a palm tree. I now take the Dog to refer to Sirius rising in the Summer season at the start of the New Year, and the cricket as a Summer solstice marker - if not also alluding to the Moon. So far the lozenge has defeated interpretation, but I venture to suggest it may be shorthand for the female genitals (just as the penis stands for the word *lu/man* in Sumerian



III.9- 62: (Left) Painting delineating external view of concentric zones of female genitalia opened out; (centre) lion-prey attack (our Uruksta-34), with two lozenges as its BIVISUAL, and dog and cricket either side of a palm – Louvre A620; (right) late Kassite drawing of a Forward Attack on a clay slab with lion’s shoulder hair whorl emphasized, from Babylon – after Koldewey¹⁴¹ fig. 159

cuneiform)¹⁴². When you think of it, the Kassites rarely represented female goddesses anthropomorphically (only a handful of seals show somewhat crude versions of the naked Ishtar) – and indeed the occurrence of the lion-prey group on pure Kassite seals - also Her symbol – is unusual (there are fewer than 10). But just as the cross on Kassite seals must surely refer to the Sun-God Shamash so, I believe, we can now read our **Urusta-34** seal as a New Year announcement, with the lozenges standing for the naked Venus, the dog for Sirius and the grasshopper for either the Spring Equinox or Summer Solstice, and the palm tree itself representing the cycle of the Year.

Having noted significant affinities between Mycenaean and Kassite seal iconography in using insect symbolism - possibly not coincidental – (and not forgetting the precedents set by Egypt in the use of the bee¹⁴³ or scarab which are probably the source inspiration) we can now proceed with further proof of Mycenaean commitment to Sirius and the *Duat* stars by tracking down their appearance in the *Iliad*.

SIRIUS AND THE KEY DUAT CONSTELLATIONS

Our DIVERSION on Dogs in Central Asian and Mycenaean life got us involved in discussing the *Duat* constellation group - including Orion - that on the gold rings points to the visualisation- and enactment of a Mycenaean version of

¹⁴⁰ In *The Metamorphoses* of Antoninus Liberalis he mentions ‘some Athenian children of good family wore a gold *tettix*/cicada in the hair to remind them they were autochthons’ [i.e. original inhabitants – which might indeed take their genealogy back to Mycenaean times!]

¹⁴¹ R Koldewey *Das Wieder Erstehende Babylon* Leipzig 1913

¹⁴² In fact, this interpretation was confirmed when I later read Parker op.cit 1975, apud. A Moortgat *ZA XLVIII* 1942, 59 and W Andrae *Die Jüngereren Ischtar-Temple in Assur* Leipzig 1935 regarding lozenge amulets found in the Ishtar Temple (the latter’s pl.46 a-c)

¹⁴³ We show the life-cycle of the bee, which - apart from on Minoan seals and the Aegina treasure - features in the *Nisu bīti* title of all Pharaohs.

the Baal-Ishtar/Tammuz-Inanna/Isis-Osiris myth. In the light of only quite recent discoveries and discussions it is thus opportune while still in this DIVERSION to bring in the overall Mycenaean viewpoint on the *Duat* as a whole along with Sirius, in preparation for the build-up to final conclusions by the end of this catalogue on the mythopoeia of Mycenaean astronomy. We have at least now noted the significance of Orion and the Dog/Dogs as centerpiece of the *Duat* stars on some Minoan/Mycenaean artefacts. Next - for the time being leaving aside the Gemini Twins and Milky Way as part of that sky zone - we should spend a little time considering Taurus the Bull and the Greek and Egyptian nomenclature for Ursa Major/Minor which often brings in the Bull in terms of one or two of its legs as the Bears.

We can pave the way by looking at Sirius descriptions in the *Iliad* that then take us to two further *Iliad* sky descriptions in which the Bears also feature during a brief period when all the *Duat* stars appear in the sky over a battle fought under an eclipse, near the end of the Trojan War – this is followed shortly after by the story of their appearance on Achilles' Shield as memorial to Patroclus.

SIRIUS IN THE ILIAD

Homer uses the image of Sirius in *The Iliad* three times as a simile for the glorious appearance of warriors Diomedes, Hector and Achilles in their glittering armour (here I use Fagles' translation):

(DIOMEDES, V 1-6) Then Pallas Athena granted Tydeus' son Diomedes strength and daring – so the fighter would shine forth and tower over the Argives and win himself great glory.

She set the man ablaze, his shield and helmet flaming with tireless fire like the star that flames at harvest, bathed in the Ocean, rising up to outshine all other stars.

(HECTOR XI 69-71) Hector bore his round shield in the forefront, blazing out like the Dog Star through the clouds, all withering fire, then plunging back in the cloud-rack massed and dark.

(ACHILLES XXII 31-38) And old King Priam was first to see him coming, surging over the plain, blazing like the star that rears at harvest, flaming up in its brilliance; Far outshining the countless stars in the night sky, that star they call Orion's Dog – brightest of all but a fatal sign emblazoned on the heavens, it brings such killing fever down on wretched men – so the bronze flared on his chest as on he raced.

The latter description leads to a further aspect of Sirius not studied yet – which we should now quickly look at.

OMINOUS ASPECTS OF SIRIUS: FROM TROY TO LATE EXAMPLES FROM PARTHIA AND ROME

The passage on Achilles brings in the darker aspect of Sirius not considered so far – indeed, it is often referred to in the later sources more as a star of bad omen and grim disaster than this one mention in the *Iliad* might suggest. Whilst Achilles may look like Sirius rising, little does Priam realise at that moment that it is an omen of his son Hector's future destruction at the hands of this resplendent warrior, now intent on seeking vengeance for the death of his friend Patroclus brought about by Hector – with double indemnity for his looting of the armour Achilles had loaned to



Patroclus. Built into that more ominous overtone of the Sirius power (the words 'fatal' and 'killing fever' set the mood) is the idea of Nemesis/Retribution, in Hellenistic times personified as a Goddess holding the 8-spoked wheel of the *Octaëteris*, fittingly worshipped as a hidden aspect of Athena-Allāt in Late Period Syrian iconography¹⁴⁴. In the Roman period in the Negev area Nemesis was particularly taken to heart - as in the famous Erez Nemesis (210-11 AD)¹⁴⁵ illustrated above, the Wheel of Fate appropriately anchored by the paw of the Griffin of Precession and Intercalation. Here the dark side of Sirius is clearly dwelt upon, tying in with the Zoroastrian view of Solar Zodiacal Precession (which can be subdivided into Sothic Cycle Units of 1460 years, explained at the end of this section) at the end of which the wheel comes full circle to its starting point to call in its dues and mete out reward or revenge. Familiar is the story of the avenging dogs of Artemis who hunt down stag-headed Actaeon, son of Aristaeus of Kea, for daring to look at the Goddess naked – but let us consider some pieces of Parthian sculpture to learn more of Sirius *néfaste* – pieces that themselves tragically met destruction at the hands of Da'esh during their attack on the Mosul Museum in 2015.

NERGAL, DOG GOD OF PARTHIA

From a period when Zoroastrian-type Central Asian beliefs of the 'Planet-worshippers' (later called Sabaeans) filtered through to Seleucid and Parthian Syria, the malevolence of the three-headed guardian dog¹⁴⁶ of the Underworld (Time Past, Present and Future) is conveyed in the relief below from the Nergal temple at Hatra, former Parthian capital near Mosul in Iraq. It brings out the terrible aspect of Sirius both through the anthropomorphic form of Nergal, God of pestilence and sudden death¹⁴⁷, and the three-headed dog at his feet. On a broken statue of Hercules-Nergal in the same temple the God is addressed in an inscription as *Nergal Kalb*¹⁴⁸ (Dog Nergal) and several specialists point out how, certainly on Commagene monuments, Hercules-Nergal, according with his Martial character, was approached as the equivalent of the Iranian God of War and Victory, Verethragna, so that the relief embodies a blend of the frightful stellar *and* planetary energies that can mirror each other – even if Dirven¹⁴⁹ underlines how 'in the Iranian world dogs are intimately connected with the Underworld and as such have an emphatically positive connotation'. I mention in passing here the recent publication by Friedland¹⁵⁰ on the shattered sculpture fragments from the Sanctuary of Pan at Caesarea Philippi which include several broken parts of Hercules sculptures on which no accompanying animal (dog or lion) is mentioned as surviving: it seems that Hercules with Dog was a solely Parthian equivalence and that Panias - despite adopting the Gilgamesh/Hercules zodiacal journey in tune with the rest of the Hellenistic world - would have avoided the Zoroastrian overtone as too exotic, even if known about.

Inasmuch as the dire aspects of Sirius on the stellar level tie in with the planetary characteristics of Mars/Pluto, it appears Nergal was approached as Star God when with his dog - *and* as Planet – though at times his astral nature is transferred to Orion. Thus in a comment at the end of Al-Salihi's paper on Nergal, Segal¹⁵¹ directs him to his own findings on corresponding panthaeia of the present Urfa region, Edessa and Harran in particular, where Hercules-Nergal from historians' accounts could be visualised in milder form as 'Lord Mar(i) of his Dogs', taken by Segal to be Orion the point being that, rightly propitiated, the benign aspect of Sirius-Orion also *protects against* fever and death.

¹⁴⁴ In colloquial terms the wheel expresses the idea of 'What goes around comes around' – in other words that payback for misdeeds ultimately catches up with the perpetrator. In Biblical terms the idea is 'What ye sow, so shall ye reap' and in Vedantic terms it is the idea of *karma* being an unavoidable bill for payment.

¹⁴⁵ Exhibit 120 in the Metropolitan Museum of Art exhibition, *Treasures of the Holy Land: Ancient Art from the Israel Museum* New York 1986

¹⁴⁶ The three-headed dog was taken on by the Romans as Cerberus in the same role

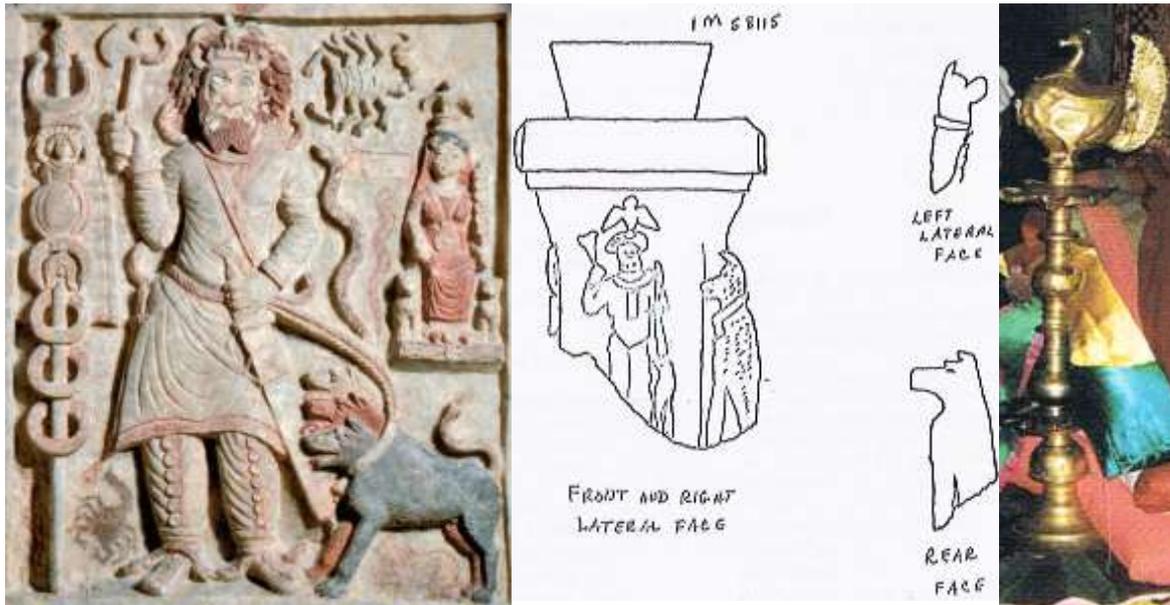
¹⁴⁷ This version of the God seems to be a blend of Mars and Pluto/Hades (note the scorpions) – Mandaean texts associated the two, with no allusion to Sirius.

¹⁴⁸ W Al-Salihi 'Hercules-Nergal at Hatra I' *Iraq XXXIII* 1971 113-15 and Hercules-Nergal at Hatra II' *Iraq XXXV* 1973 65-68

¹⁴⁹ L Dirven 'A Goddess with Dogs from Hatra' in A Peruzzetto et al. (eds) *Animals, Gods and Men from East to West* Oxford 2013 147-59

¹⁵⁰ E A Friedland *The Roman Marble Sculptures from the Sanctuary of Pan at Casarea Philippi/Panias* Boston 2012

¹⁵¹ J B Segal 'Syriac Monuments in the Vilayet of Urfa' *Anatolian Studies III* 1953 97-119



III.9- 63 (Left) Relief from Hatra showing Nergal with three-headed dog and enthroned consort Allāt/Sirius surrounded by scorpions, snakes and a standard threaded with symbols for the 7 planets - Mosul Museum (said to have been destroyed by Daesh); (centre) fragmentary incense altar relief of Nergal with the SMY Sky Eagle as crest on his head, flanked by two dogs- from Hatra Shrine 10, Iraq Museum IM 58115 – Downey¹⁵²; (right) the Yezidi Peacock Angel standard (sanjak¹⁵³) – the Sky Peacock, Head of the Seven Angels, is placed as crest at the top like the Nergal planet standard

In the background of the Nergal relief above left is a miniature Allāt seated on a two-dog throne – and two dogs (one fully grown, the other a puppy) also feature on a free-standing statue of Allāt (illustrated below) - also originally from Hatra. It is the subject of Dirven's paper in which throughout she shows how often Nergal and Allāt are worshipped together, at times interchanging attributes. This free-standing statue of Allāt is the only seated Goddess iconostasis from Hatra showing her flanked by dogs rather than lions (as is Nergal on the incense altar above centre) – where, it appears, the Sirius characteristics of the male God are here exactly shared with the Goddess (we have already noted how the same exchange sometimes occurred between Gula and her consort, Ninurta). A second panel (below right) was sent at the same time as the Allāt statue to the Istanbul Museum collection and is read by Dirven as a representation of Barmaren/Lord Mari of/[and] his Dogs (i.e. Orion – note the sword and staff, as on the constellation), on this relief separated by the same Seven Planets standard¹⁵⁴ as on the painted Nergal relief from a large Central



III.9- 64 Headless seated statue of Allāt of Mosul marble from Hatra showing details (left) of a large dog (?Canis Major) at her right hand and (right) a tiny puppy on the ground at her left (?Canis Minor) 100-140AD, Dirven *ibid.* figs 4/3/2; (right) Possible relief of Mar(i)/Orion and Dog with standard of the Seven Planets (semeion), Dirven fig.5 – both in the Istanbul Archaeological Museum

¹⁵² S B Downey 'A New Relief of Nergal from Hatra' *Sumer XXVI* 1970 227-8

¹⁵³ At one time still regularly paraded throughout Syria, Palestine, Turkey, Russia, and India – see E S Drower *Peacock Angel 1941* London 1941, p.99

¹⁵⁴ S Downey 'A Preliminary Corpus of Standards from Hatra' *Sumer XXVI* 1970 195-226 (see also M A Shams 'Notes of the Standards of the Arab Hatra' *Sumer XXXVI* 1980 174-7)

Asian mastiff on a plinth in the same ritual pose as noted on the Babylonian/Kassite seals in *III.9-44*. If this a correct identification it is obvious to equate the Dog/*Kalb* with Sirius/*Canis Major*, the whole relief turning out to be a summary representation of the *Duat* group in sculptural terms of Orion, Sirius - and the Seven Planets corresponding to the Seven Stars of the Sibitti/*Ursa Major*!

SIRIUS AND THE WINDS

Bearing in mind Rome's founding animal (officially going back to Rome's foundation in 737BC) was the female Wolf who suckled Romulus and Remus – an animal already separately revered in Celtic and Central Asian societies - their enthusiasm for Sirius the Dog-Star would not have needed much of a jump: certainly there was great enthusiasm for the adoption of its Egyptian manifestation as the Goddess Isis, even if it was the Romans who put her on a dog (*III.9-39* above). For a wider view on the baleful aspects of Sirius in the folklore of the Classical world, which dwelt at some length on the fevers and windy conditions associated with the appearance of that star, in the light of our analysis of the role of the Winds in Ninurta's battle against Anzu earlier (*III.9-200*) it is worth stopping to consider the link between Sirius and the Winds of the Aegean region, particularly as raised in Laoupi *ibid.*'s paper on the Sirius Cult in the Aegean, unusual both for its chapter and verse references to the Classical writers on astronomy as for the connections made in modern scientific papers. Due to their occupation of both Parthia and Egypt as provinces of the Empire, it would not have been difficult for the Romans, given one Sothic Period was ending and a new one starting (the first since the Mycenaean times) to lock into much useful information already taken for granted in Persia or Egypt's long Sirius tradition. Blended with navigational knowledge inherited from the Mediterranean's earlier history, it is from the Hellenistic and Roman records that we gain a vivid picture of Sirius as often associated with the strong, Etesian winds blowing in the Aegean during July-August - caused by the interaction of high pressure over Thrace and low pressure over Anatolia – in Egyptian terms characterized the flapping wings of Isis/*Sopdet* in kite form (*c.f. III.9-40*) urging the rising Nile waters on through every channel of the Delta. These winds are often described as hot, but confusingly sometimes as 'cooling' (probably referring to evening time).

We should not forget that in Mesopotamia the God of Air and Atmosphere – Enlil - was also God of Winds (his first-born son being the Moon-God) and the importance of different regional winds is hinted at here and there in Bronze Age texts – a Priestess of the Winds (*hiera anemon*) is often mentioned in the Knossos offering lists as receiving honey, and in the *Odyssey* (*X* 1-76) Aeolus, King of the Winds, puts adverse winds in a leather bag which he hands to Odysseus to ensure his unimpeded journey home¹⁵⁵. It is mostly in the later texts that Sirius during high summer is associated with an uncertain climatic scenario of changes in wind patterns, warring wind directions, water currents and pestilence¹⁵⁶. Interestingly, for the run-up to the Mycenaean Sothic Period this is explained by modern climatologists by the fact that 'around 2200 BC in South Asia, the Indian monsoons that provide 80% of the Nile flow was deflected' (Shaowu Wang¹⁵⁷ et al.). Overall there is a statistically significant correlation between fluctuations in the Indian monsoons and meridional Mediterranean air circulation¹⁵⁸, 'enhancing the Etesian winds', summed up by Laoupi in her conclusions that describe that interconnection as between *the intensity of the monsoons in the Indian Ocean, the rainfall in Central Africa, the Sahel boundary and the annual flooding of the Nile ... [and] the summer winds in the*

¹⁵⁵ A Laoupi et al. 'Odysseus' Journey in the archaeoenvironments of the Western Mediterranean' in S A Paipetis (ed.) *Science and Technology in Homeric Epics* Berlin 2008

¹⁵⁶ N Barquet et al. 'Smallpox: the triumph over the most terrible of the ministers of death' *Annual of International Medicine* CXXVII 635-42

¹⁵⁷ Correlation and anti-correlation of the East Asian summer and winter monsoons during the last 21,000 years June 2016 www.iap.ac.cn/html/qikan/aas/

¹⁵⁸ P Lionello et al. 'Mediterranean Wave Climate Variability and its links with NAO and Indian Monsoons' *Climate Dynamics* XXV,6 611-623

Eastern Mediterranean¹⁵⁹ reversely detected in prehistoric and historic Greek tradition. Quite a mouthful, but we get the general idea of how vast (in Chaos Theory terms) these interconnections are.

To paraphrase - drawing on specialist papers (some of which I have cited in the footnotes below) - Laoupi conjures up a picture of the impact of Indian monsoon rainfall inside the Zanzibar Triangle on the Ethiopian highlands where the waters of the Nile first accumulate – which had far-reaching knock-on effects that led to the air currents accompanying the Inundation even affecting the East Mediterranean sub-climate. When Sirius was close to the end of one cycle and approaching the start of a new one, its rising at sunrise in July in Leo - though popularly associated in Egypt with the Inundation and thus also with moisture and water generally - was in the Mediterranean basin more blamed for the pestilential winds it was seen to cause as the star rose in the sky during the intolerable heat.

To close the circle, first we pointed out Ninurta's intermittent identification with Sirius in his battle with the winds of Anzu – even though in some periods his consort, Bau/Gula, is most often identified with that Star by the dog sitting under her throne (*III.9- 42*) – or indeed it sits apart on a plinth in its own right. From *ForAtt-22* we also noted the first appearance of the winged Snake Lady with wind-blown hair, and how on another Babylonian tablet she is accompanied by a second windswept figure bending sideways whom I dubbed 'the Wind Gymnast' (*III. 9-182*). These figures appear again on seals such as *III.9-163*: or *III.9-164* cleverly conveying ideas of the power of winds coming from different directions. We will come back to them later, since we must consider a further dimension of Sirius 'damage' that is possibly a directly relevant factor contributing to the demise of the Mycenaean and Mitanni kingdoms.

SIRIUS, THE SPREAD OF INFECTIONS - AND SOCIETY BREAKDOWN

Stemming from our descriptions so far of Nergal and the intolerable *khamsīn* winds known as the 'canicular winds'¹⁶⁰, earning for those restless days of Summer in Roman times the epithet 'Dog Days', the final baleful aspect ascribed to the darker side of Sirius is the disease and fevers spread by the winds blowing when Sirius is paramount – scorpions and snakes proliferating in the heat, and associated with these ills. Sirius and the matter of the spread of disease and epidemic under its influence may be astronomically coincidental, but certainly this is another factor to bear in mind when trying to explain the successive collapse of empires¹⁶¹ leading to the Sea People migrations. Laoupi looks into accounts of the spread of different kinds of infection in the East Mediterranean in the 2M, originally introduced in her earlier paper¹⁶² by the idea raised in the *Iliad* (*I, 9-11*) that the plague that hit the Achaeans at the very start of the Trojan War was taken as a sign of Apollo's wrath. In her overview of Sirius in the Aegean (note the closeness of date to 1320) she states that

epidemic diseases seemed to play a crucial role in the collapse of the Hittite empire and the problems of Pharaonic Egypt. The first known smallpox epidemic was recorded in 1350BC. During the Egyptian/Hittite war Egyptian prisoners spread the disease to their enemies. Even the Hittite king Suppiluliumas I and his heir fell victim to the virus in 1340BC. Later on, the pharaoh Ramesses V died of smallpox¹⁶³ in 1157 at the age of 35'.

¹⁵⁹ F Reicich et al. 'Teleconnections between Indian Monsoons and Sahel Rainfall and the Mediterranean' *Intnl J. of Climatology XXIII* 2003 173-86 – and D A Metaxas 'The interannual variability of the Etesians frequency as a response of Atmospheric circulation anomalies' *Technical Report 109, University of Ionnina, Greece*

¹⁶⁰ J Xanthakis 'Probable Periodical Variations in the Frequency of the Etesian winds' *In Memoriam Demetrios Eginitis* Athens 1975 305-17 – and B Ziv et al. 'The factors governing the summer régime of the Eastern Mediterranean' *International Journal of Climatology XXIV* 2004 1859-71

¹⁶¹ For an overview see Peiser, B J et al. (eds) *Natural Catastrophes during Bronze Age Civilisations [BAR International Series 728]* Oxford 1998

¹⁶² A Laoupi 'The Divine Fire of Creation: Homeric Hephaistos as a Comet/Meteor God' *Science and Technology in Homeric Epics* Olympia 2006 27-30

¹⁶³ Specialists have identified small-pox scars on several mummies of the period

I mentioned in the METALS DIVERSION that the changeover from bronze (a tin and copper economy) to iron¹⁶⁴ implements (the ores obtainable from quite different sources) leading also to changes in warfare¹⁶⁵ must have been another core reason for the overall crumbling of relations between the large empires¹⁶⁶, since markets – and economics – were affected. The spread of infections, interfaced by a huge third factor - climate change in the form of drought – triggered agitated population movement across the vast region described in the Laoupi quotation above (there are also records of epidemics spreading to India at this time¹⁶⁷) – and in divinatory terms these doom-laden aspects of drastic change were often laid at Sirius' door. Quite apart from all these factors were the calendrical adjustments being attempted by the institutionalized kingdoms leading to dislocation of many local customs or rituals.

Expanding our Duat itemization we move on now to the Sirius-v-Polar alignment that involves consideration of the Taurian head stars and leg stars – all that survived by this time of an original prehistoric visualisation of the sky as a massive bullhide stretched across its sphere.

HOMER'S BEAR - AND TAURUS THE BULL

Since in the detail on the Mycenaean krater in **III.9- 46** the man with two dogs on a lead is set against an enormous - we might say ritually decorated - bull, I believe the man with his pets portrays Orion with his Two Dogs in the vicinity of Taurus – the most important area of the sky in the season between the Winter Solstice and the Spring Equinox (fully discussed in **Chapter 19**). The bull covered in flowers also suggests Earth itself covered with sprouting plants at springtime when the Sun rises in Taurus. Bulls are the most common motif on Minoan and Mycenaean seals, but only



III.9- 65 Amygdaloid seal from the Rutsi tholos tomb (CMS I-283), the dots over the bull's back suggesting not only the main outline of Taurus (the Hyades) but, alternatively, possibly using the blobs on the back leg and front haunch of the bull - and even the testicle and penis beneath - as pointers to the constellations of the Thigh AND Foreleg of the Bull (i.e. both Bears)

in the rare case of the amygdaloid seal above (made of glass-covered wood plated in gold) do the dots over and onto the bull's back seem deliberately evocative of the V-outline of the Taurus stars – even if at first glance it simply shows a bull bleeding drops of blood from a spear thrust at its shoulder (always the penetration spot in later Mithraic taumachies and, as we will understand later, when the Foreleg is taken on its own, an allusion to Ursa Minor). As the Vernal Point moved into Aries to initiate a new era lasting some 2,200 years, for kingdoms in the Second Millennium celebrating the New Year at the Vernal Equinox, the Sun rising in Taurus at dawn a few weeks before actual New Year's Day would still have held strong traditional significance from long-held custom, amounting to a reminder, for those in the know, of the state of the sky when urban measurement of Time had originally been initiated some 2,200 years previously. The question of whether the Mitanni and, indeed, the Mycenaean, were aware of the shift in Vernal Point and its astronomical consequences – even if still adhering to earlier astronomical traditions - is crucial, since it directly bears on how they ran their calendars. Answers to this question can often be deduced from

¹⁶⁴ For an extreme view see, for instance, A de Grazia *The Iron Age of Mars: Speculations on a Quantavolution and Catastrophe in the Greater Mediterranean Region of the First Millennium BC* Princeton 2005

¹⁶⁵ R Drews *The end of the Bronze Age: changes in warfare and the catastrophe c.1200 BC* Princeton 1992

¹⁶⁶ B J Peiser et al. *Natural Catastrophes during Bronze Age Civilizations [BAR International Series 728]* Oxford 1998

¹⁶⁷ R N Iyengar 'Profile of a Natural Disaster in Ancient Sanskrit Literature' *Indian Journal of History of Science XXXIX* 11-49

their seal iconography, and we will need to view the new constellations gaining prominence during the mid-2M stage of the Age of Aries, following the DIVERSION ON HORSES AND CHARIOTS.

George Banos¹⁶⁸ recently drew attention to a Minoan vase (below left) decorated with an off-white bull with red spots on its hide that appeared to him to intentionally represent the stars of Taurus - especially since the creature is surrounded by lush plants suggestive of Springtime (as on the Mycenaean krater). Unusually, the vase was found with the remains of a human sacrifice (a young man) at the shrine at Anemosphilia on a northern hill of Mt Juktas (which in **Catalogue D** we showed was a key sighting reference for the Palace of Knossos calendar), and the vase is similar in shape to that painted on the Hagia Triada sarcophagus used for collecting the blood of a sacrificed animal. But compared to the pretty good match to the V-outline on the Rutsi seal (c.f. possibly the same constellation over Orion) on an Etruscan mirror back, above centre), really the pattern of dots on the vase does not at all correspond to the outline of the Taurus, whether 'right way' as painted on the vase, or in mirror image.



III.9- 66: (Left) Middle Minoan vase c.1700 cited by Banos – photo Y and E Sakellarakis; (centre) Etruscan mirror-back showing Orion, Sirius, Lepus, and crescent moon possibly inside the outline of Taurus¹⁶⁹; (right) inter-meridianal corridor between Ursa Minor/Cynosura'DogTail'and Canis Major/Sirius across the Milky Way

At a stretch, though, the larger dots making up the main zig-zag on Banos' Minoan vase *could* be laid over the outline of Ursa Major, which lead us to consider a constellation assigned so many different names in its history that it must be our next task to unravel them, since it has a direct bearing, not only on Homer's sky descriptions (coming up shortly), but also on tracing Mycenaean star-lore connections with both Egypt and the Near East.

TEXTUAL AND VISUAL AMBIGUITIES IN ANCIENT NAMES AND IDENTITIES FOR THE BEARS

Although Ursa Major was called the Wain/Wagon by Homer, he also used for it the word *Arktos*, which at the time probably did not signify 'Bear', as such. There are historical phases in the coverage of this word, and from reading P Blomberg¹⁷⁰ we understand the Ursa Major Seven-Star outline did not, strictly speaking, have the connotation in the Aegean area of 'Bear' alone until the end of the Archaic period when the word *Arktos* started to be used, by association, in the more limited, animal sense - as by Aratos in his compendium of early astronomical knowledge

¹⁶⁸ G Banos 'A Taurus Map on a Minoan Vase?' *Mediterranean Archaeology and Archaeometry (Special Issue) VI* 2006 27-32

¹⁶⁹ Roger Lambrecht *Corpus Speculorum Etruscorum (Royal Museum of Brussels)* – Cat.no.27 (analysed by me in a paper given at the Oriental Institute, Oxford and reproduced on my website at: http://www.layish.co.uk/astronomical_iconography_of_5_icons.pdf

¹⁷⁰ P Blomberg 'How did the Constellation of the Bear Receive its Name?' in Pásztor, E (ed.) *Archaeoastronomy in Archaeology and Ethnography* Kecskemét, Hungary 2007 (BAR Series 1647) 129-132 – a useful summary of his earlier papers on the subject, cited in the bibliography to this paper.

gleaned from other sources¹⁷¹. It was really only definitively named 'Bear' by Roman astronomers taking over the observational baton from Greece. From the order of key stars given in the introduction to Aratos' *Phaenomena*, the nomenclature is likely to have been copied, not just from descriptions of starscapes given in Homer's works (which interchange 'Wain' with *Arktos*), but its order of presentation also very much echoes the Babylonian *Mul Apin* sequence (as pointed out in **Chapter 19**). It is also likely Mycenaean astronomers of the Homeric period somewhere along the line knew of the Akkadian word *erequ/wagon* and associated it with *their* word for North, *Arktos* (which at the same time was etymologically a homonym for 'Bear').

In Homeric texts only one Wagon/Bear (Ursa Major) is referred to – though by Aratos' time he specifically mentions that while the Greeks commonly used Ursa Major as navigation guide, the Phoenicians sailed by Ursa Minor since it provided much greater accuracy¹⁷² in finding true North - to which the separate name of *Cynosura* was assigned. This word translates as *Dog Tail* - the puzzle being whether all seven stars were somehow seen as the tail of Sirius way below it - as on the seal below showing a dog seated over a Seven--Star outline (the tail is too furry to be leonine).



III.9- 67: Middle Minoan ring sealing on a nodule from Mikro Vouni, Samothrace – CMSVSIB-321

But the star map strip in the previous illustration (right) shows a corridor between two meridians that directly align Sirius with *Cynosura* at the Polar Centre, helping us understand the name, given the end of Ursa Minor's tail is almost exactly at the Polar Centre and Sirius the Dog such a bright marker at the other end of the axis. Indeed, could the dog with tightly curled tail on the seal and dog amulet in **III.9- 43** (and even all the way back to the Protohistoric examples) actually be intended to refer to Ursa Minor, with the dog itself referring to Sirius? Whilst pointing out that 'the [Odyssey] lines show that the Wain was an equally ancient name for the constellation', Newell thinks that since Ursa Major originally helped find the right direction to sail in, the later addition of *Cynosura* for more precise location of North could quite naturally have led to its epithet within the Greek World as 'Little Bear' (meaning 'Little/Precise North') - noting also that the stars circling between the two were likened to a serpent (Draco is not mentioned in the earliest Greek sources - but Aratos makes much of it – see later quote).

Overall Blomberg *ibid.* shows that in many contexts the word *Arktos* was simply used to mean 'North' or 'the Northern sky', or even the Circumpolar Region as a whole, and that over the centuries this use of the word was (perhaps mistakenly) transferred to that region's main Seven-Star signpost and called Wagon or 'Bear' – hence the ridiculous fact that the squarish body of the bear began to be depicted with the long tail they do not have, true even of the pair on the Halai skyphos we are either calling Dogs or Bears (c.f. **III.9- 50**)!

EURASIAN 'PLOUGH' –V- NEAR EASTERN 'APIN' NOMENCLATURE

As we shortly see in our study of Achilles' Shield, in the *Iliad* Homer calls Ursa Major 'The Wain'/Wagon, a name we know was to reach England by mediaeval times as 'Charles's Wain' (in Scandinavia similarly known as *Karlwagnen*) yet probably derived far earlier as much from fellow Indo-Europeans along with its alternative, 'Plough', since it appears the idea of this agricultural implement in several regions started off as a wheeled adaptation of the cart

¹⁷¹ For its text translated into English, see D Kidd *Aratos' Phaenomena* Cambridge 1997

¹⁷² It is more accurate for telling the time too – see C Vincent et al 'Night-time and Easter Time: The Rotations of the Sun, Moon and Little Bear in Renaissance Time Reckoning' *Metropolitan Museum of Art Bulletin NS XXVII,8* April 1969 372-84

(indeed there are Indo-European vocabularies, as in French, which coined words for the plough as if an adaptation of the *chariot* - as in the French *charrue*/plough-share). In fact, the terminology for either nouns or verbs connected with the plough and its separate parts are not only legion, but highly variable, with the earliest names we know of going back not just to the vanguard of early farming in the Neolithic Near East, but also to its takeup, in separate vocabulary streams, by both the Indo-Europeans and Indo-Iranians (for instance, the root *ar/to* plough can be traced all through the Indo-European languages (as in the English *arable*) but is completely absent from Indo-Iranian vocabularies. On the other hand, as Puhvel¹⁷³ says, 'If the plough with seeder existed in India in Vedic times (the late 2M BC), the most likely source for its adoption was Northern Mesopotamia where Indo-Aryans controlled the Hurrian-Akkadian Mitanni kingdom during the middle of the 2M'. Perhaps the most interesting words in this connection are the Avestan *aēšā* for plough, and the Sanskrit *īṣā* for pole (of the plough, by association a double reference to the Polar axis). Puhvel points out that in Akkadian the root *ereš* referred to ploughing the land - as against the also attested Hurrian *ḫereš* - thus a likely word actually used by the Mitanni. Its root is seen in use in the name of the Sumerian Goddess *Eresh-ki-gal*, Underworld persona of Inanna, so that her name etymologically comes out as 'Great Plough[woman] of the Earth' - see also the link made by Langdon between Inanna and Sirius referred earlier in connection with Gula.

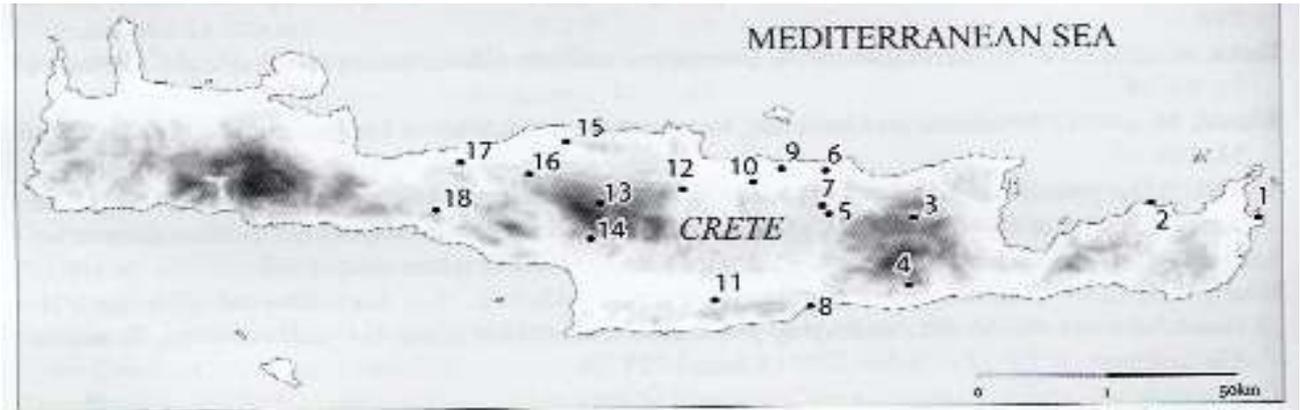
These are some of the main points made in Puhvel's dense paper on plough etymology, from which for our particular enquiry we can extract a handful of further signposts of significance for Ursa Major's nomenclature, though we must bear in mind that the vocabularies he discusses do not necessarily refer to asterisms alone. Old High German, especially, used words with the base, *plog* for plough, fitting well the general outline of Ursa Major as a long pole attached to square plough-share, inclusive sometimes of the small, supernumerary stars for the seeder pod - thus we also have Old High German *waganso*/Old Prussian *wagnis*, meaning 'ploughshare' (not wagon!) - whereas further north we have Lithuanian *arklas*, meaning plough! This gives but a taste of how very different words for the same tool, or action, could elide with different aspects of the central meaning in different languages.

APIN AND BOÖTES

Perhaps most significant in terms of precedence of image, Puhvel says quite clearly that, whatever the word for it was in the Hittite language, in their records the word for plough was expressed on tablets by the cuneiform sign for *Apin*, the Mesopotamian word for plough - one reason why in **Chapter 19** I have argued for *Mul Apin* in the Mesopotamian star lists to be identified with The Plough/Ursa Major - rather than *Margidda*/Cart which I see as an early name for *Auriga*. It is possible the Plough concept reached England via Aryan/agricultural diffusion routes in Mycenaean times, or even before. We have already discussed the depiction of the ordinary plough on a handful of Mesopotamian seals in **Chapter 19** - assuming it to represent *Mul Apin*, and assuming the ploughman behind it to be Boötes¹⁷⁴ (in contrast, the two ploughmen on the silver cup from Central Asia in **III. 9-176** probably simply evoke a straightforward rural setting for the celebrations above without necessarily being astronomical in reference - yet on the other hand, being a ritual cup with two ploughmen it might well refer to an Autumn harvest celebration beneath the Two Bears!). Å *propos*, Blomberg tells us 'Arcturus alone was circumpolar about 2000BC', pointing out that Boötes' nickname of *Arktophylas* not only means 'Bear-watcher' but, alternatively, 'North/Circumpolar-watcher' in general since the word *Arktikos* was the Greek word for 'Arctic Circle', *under* which in Homer's time Boötes was positioned, excepting the bright star Arcturus on its very edge (this is why Blomberg opts for single standing clay male figurines with bowed legs

¹⁷³ J Puhvel 'The Indo-European and Indo-Aryan Plough: A Linguistic Study of Technological Diffusion' *Technology and Culture* V,2 1964 176-190

¹⁷⁴ See P.E. Blomberg 'Did Boötes Drive a Wagon with Oxen on the Minoan Star Map?' in *SEAC 2002* Tartu 2005



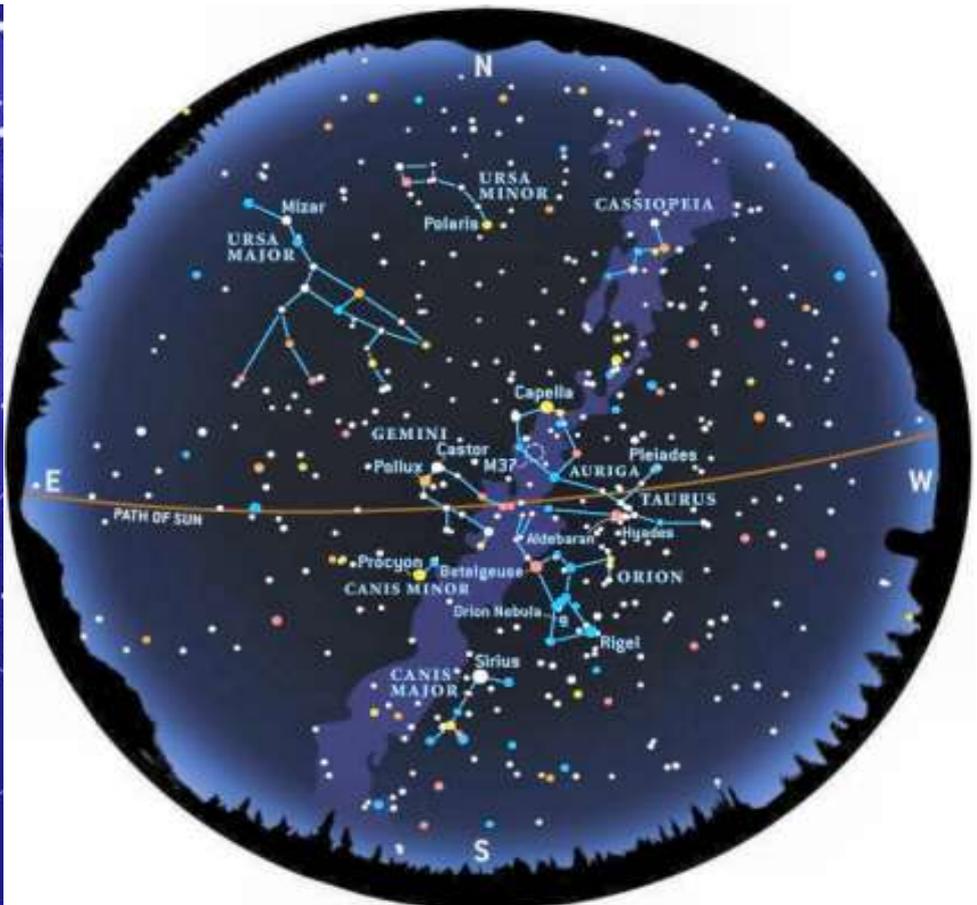
Map 8. Locations on Crete referred to in the text. © BSA. 1. Petsophas; 2. Phaneromeni Trachilov; 3. Psychro Cave; 4. Kato Syme Viannou; 5. Lilianno; 6. Skoteino Cave; 7. Sklaverochori; 8. Esoutsouros Cave; 9. Koutsoura hill; 10. Juktas; 11. Kophinas; 12. Knissouas Gournos; 13. Idean Cave; 14. Kamires Cave; 15. Melidoni; 16. Mavrou Koriphi; 17. Vrysinas; 18. Atsipades.

III.9- 68: Crete's non-urban sanctuaries (most have clay figurines) – Haysom *ibid.*

from Petsophas as imitating the outline of Boötes). To place the Petsophas figurines in wider context, Haysom¹⁷⁵ did a stock-take of all non-urban sanctuaries on Crete recently (see map above), which includes a non-interpretive muster of the clay figurine repertoire at each and a useful bibliography of the archaeological reports for each sanctuary.

FLUIDITY OF THE WORD 'ARKTOS'

Taking into account Blomberg *ibid.*'s findings, let us track more closely now how Ursa Major could have come to be identified with The Bear. He thinks it occurred when the Greek word for 'North' was translated into Latin as *Ursa* and



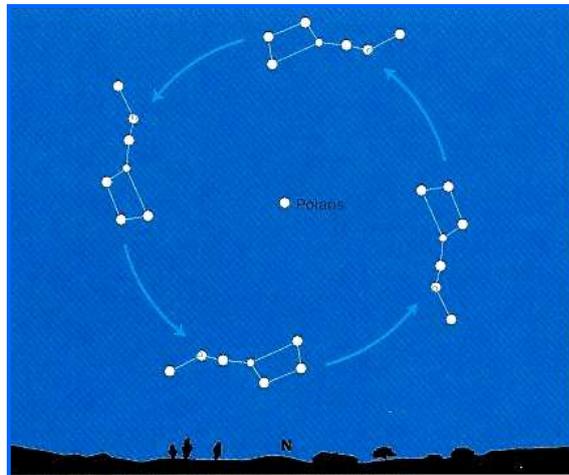
III.9- 69: (Left) Detail of the Ursa Major-Orion corridor between Gemini and Auriga; (right) overview of the entire sky showing that corridor in relation to other Duat stars such as Sirius and Taurus running at right-angles to the Milky Way

¹⁷⁵ M Haysom 'Recent research into Minoan extra-urban sanctuaries' in *Archaeology in Greece 2014-2015 [BSA Archaeological Report 61]* Cambridge 2015 94-103

adopted only with its animal meaning, agreeing with Newell¹⁷⁶ in seeing how easily the word *Arktos* (meaning North) could have transferred solely to the idea of 'Bear' even if the same word was used for both in Greek. Newell refers first to the story of how in **Odyssey V** 271-77 Odysseus follows Kalyпсо's instructions when leaving her island, by 'gazing on the Pleiades and the tardily setting Boötes, and *Arktos* also named the Wain, who yonder revolves and watches Orion – and alone bathes not in the Ocean' (below we provide variations on close-up and full-view versions of the alignment running from Ursa Major's rectangle past that of Gemini and head-on down to Orion, the very configuration described twice in **The Iliad**, too - as we will see). But Newell also points out that a good reason for the changeover to mean 'Bear' is connected to the myth of the Goddess Artemis who changed her nymph, Callisto, into a Bear as punishment for becoming pregnant with Arkas, eponymous hero of the Arkadians – a reason which surely takes us to the pre-Roman period, and tying in with the dramatis personae surrounding Aristaios (**III.9- 41**). Certainly when we eventually in **Chapter 20** discuss Richer's presumed Archaic Greek land zodiac more comprehensively (for a preview see Richer's Map III at **III. 9-207**) on which the sanctuary of Artemis at Brauron in Arkadia appears to have been placed at the heart of the territory designated to represent the Circumpolar Region geographically. We are back to the retention of the meaning of *Arktos* as 'North/Circumpolar Region', especially from the evidence we have that the young girl trainee priestesses (the 'little bears') enacted a 'Bear dance' at the Brauron temple north of Perati.

ARKTOS AS HELICE

Importantly, Blomberg further notes that *Arktos* is primarily associated with the idea of revolving – and that it is the entire Circumpolar Region that revolves over Orion and Taurus/the Pleiades as it looks down on them, never sinking below the horizon. Blomberg points out the ancient Indian word, *arkati*, meaning 'to be radiant', also refers (according



III.9- 70: Ursa Major's position at midnight on any one night gives the time of year and sidereal time for that day, independent of the Sun, since its position turns by almost a degree every day, taking a year to make a complete circuit

to Huld¹⁷⁷) to 'the Proto-Indo-European root *H₁tko-s [which can be identified as] the zero-grade Hret/roll,turn' (in turn related to the Sanskrit *ratha*/chariot and Latin *rota*/wheel). Homer, too, in the **Odyssey** (in fact the oldest Greek text giving names for constellations) uses the word *strefo* to describe *Arktos*, which again conveys the idea of 'rotating on its axis'. Huld concludes that the adoption of this vocabulary on the basis of "the circumpolar motion of the Ursae is far more appropriate than alternative explanations that focus on the [appearance of the] mammal alone" – leading Blomberg to reckon that 'the Proto-Indo-European background for the Greek word for Bear, *Aktos*, seems more to have its origin in the meaning, 'roll' or 'turn' than in the swaying gait also ascribed to bears, explaining the later Roman

¹⁷⁶ W W Newell 'the Bear in Hellenic Astral Mythology' *Journal of American Folklore* XIII, 49 1900 147-149

¹⁷⁷ M E Huld 'PIE "bear" *Ursus Arktos*, *Ursa Major* and *Ursa Minor*' in K Jones-Bley et al. (eds) *Proceedings of the Tenth Annual UCLA Indo-European Conference [Journal of Indo-European Studies Monograph 32]* Washington DC 1999 117-130

Manilius' choice of name also for Ursa Major as *Helice*. Huld also points out that of course bears in nature hibernate, reappearing from their hides in spring, so the idea of going round and round also refers to 'coming back', thus also symbolic of resurrection, and again associated with the eschatology of Sirius and the *Duat*.

In Roman times the Seven Stars of Ursa Major were called the *Dei Septem Triones*, or The Seven Threshing Oxen, imagined as moving round and round as if pulling a threshing board over grain, bringing Ursa Major back to its original association with the Sky Bull – its northern placing still alluded to in the English word *Septentrional*, meaning 'Northern'. In fact, Blomberg refers to one Scholiast commentating on Homer who writes of Boötes as in the vicinity of 'the bears - who look like cattle fleeing in panic from their herdsman'. In Egypt in one astro-theological text, the Seven Stars of Meskhetiu are called 'The Seven Sacred Cows', and in the tomb of Ramesses' II's chief wife, Nefertari, they are shown on a wall-painting following their master, the Sky Bull (**Chapter 19, III.19-188**). Thus, given the whole sky was originally thought of as a Bull-hide stretched across the sky, associations had always been made between the the Sky Bull with head erupting at Taurus – and the Dipper stars somehow as his legs.

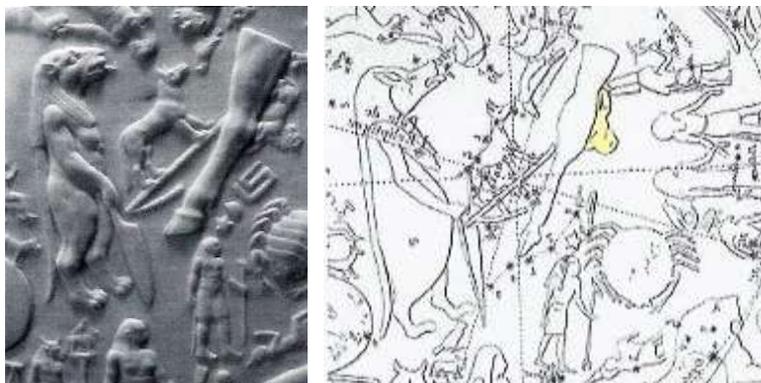
URSA MAJOR IN THE EGYPTIAN TRADITION AS BULL FORELEG

Ambiguity of a different kind concerns the representation of Ursa Major as a bull leg joint on an early silver tube seal (below top) found in a burial on the small island of Mochlos off the north coast of Crete (excavated by Seager¹⁷⁸) and



III.9- 71: Levantine tube seal of silver, Mochlos Tomb 1 c. 2200 (from the same tomb as the dog lid III.9- 47) – Seager fig.36/Aruz fig.1

rated by Joan Aruz¹⁷⁹ as Syrian). It shows a procession of upright therioanthropes (one fully human) ending in the 'Foreleg' OR 'Thigh of the Bull' – which by Egyptian convention would be one or other Bear¹⁸⁰ (possibly the legs were meant to be differentiated as Minor and Major). The rendition on the Mochlos seal can be contrasted with a late example of the Bull *Foreleg* on the Ptolemaic Denderah Zodiac (lower row of pictures below). On it, the figure of Taweret, linked to the Foreleg via Peg and Plough with small Fox/Jackal on top said to be Ursa Minor - instead of the 18D form of Draco/*Sobek* down her back has a continuous sleek mane of long hair. The older type with crocodile (as in III.9- 54) served as prototype for the 'Minoan Genius', but on the Minoan Genius seals of the Mycenaean Vapheio Hoard the crocodile component (an animal not known to Crete) was translated into a tail-coat resembling a beetle carapace or cicada insect wings - taking us full circle to the Kassite and Mycenaean insect imagery discussed earlier.



III.9-70: Ursa Major as 'Foreleg of the Bull' on the Ptolemaic Denderah Zodiac (photo of plaster cast and drawing) –behind it

¹⁷⁸ R Seager *Explorations in the Island of Mochlos* 22, 111

¹⁷⁹ J Aruz 'Mitteilungen: The Silver Cylinder Seal from Mochlos' *Kadmos XXIII* 1984 186-8

¹⁸⁰ Aruz reminds us of sealings from Ur (Legrain *UEIII* pl.14, 239 and pl.21, 393) depicting bovine leg precedents also dating to the Sumerian ED period.

Taweret/Cepheus holds peg and plough with fox on top (interpreted by some as Ursa Minor/Cynosura - c.f. III.9- 66 right)

On the Mochlos seal I read the figure after the Bull-Leg as Lepus/the Hare, a small star group under Orion's feet sometimes substituted for Sirius (given in III.9-73). In the crude Etruscan design recorded by Gerhard¹⁸¹) (III.9- 66) Sirius and Lepus are engraved together next to the figure of Orion and the V-outline of the Taurus stars, scrambled to fit into the circle of the mirror back. On the seal, I suggest therio-anthropes for Taurus and Leo follow, led by Orion: the seal is not only an example of Levantine mediation in promoting the Egyptian rendition of Ursa Major, but it also focuses, if somewhat differently, on more or less the same cast of *Duat* constellations we have seen feature together or singly on Mycenaean artefacts and in Homeric texts. In a way the counterpart to the Mochlos seal is to be seen as early as the Middle Kingdom in the introductory decan columns painted on the underside of Egyptian coffin lids that were provided as maps for the deceased (example illustrated below). They begin with the hieroglyph for the Sky, the Goddess Nut holding it up in her arms, followed by the Foreleg of the Bull/Ursa Major. Then come Horus/Sopdu's parents: Sirius/Isis-Sopdet led by the hand by Osiris (identified absolutely without doubt identified with Orion because of the three stars of Orion's Belt often shown next to him, as in III.9- 45). The ruling triumvirate of the *Duat* serves to introduce the lists of stars catalogued in detailed sequence thereafter in their daily risings and settings¹⁸².



III.9- 72: Section of Middle Kingdom coffin lid (in colour and black and white) from Chapter 19, showing (left to right) the Sky goddess Nut, the Bull Leg – and in the next column Orion/Osiris and Sirius/Isis holding hands – from R A Parker 1974 (c.f. the Senenmut ceiling counterparts, III. 9-44); (right) drawn detail Ursa Major as the Bull Leg in Egyptian terms showing its Seven Stars, also sometimes known as the Seven Sacred Kine¹⁸³

MYCENAEAN AND MINOAN VERSIONS OF THE BULL-LEG

We have to wonder which word was used for the Ursa Major outline by the people burying the warrior in the Dendra Chamber Tomb 2 (III.9- 53): was it thought of as Wagon, Plough, Bear – or its Egyptian name of Meskhetiu/Bull-Leg? Given other Egyptian associations amongst the Vapheio grave goods, including a symbolic pair of bronze scales (as for the weighing of souls in the Egyptian tradition, III.9- 80) or the two seals with the Minoan Genius (last two seals in the SEAL STUDY 5 table), it could well have been the latter name they knew it by!

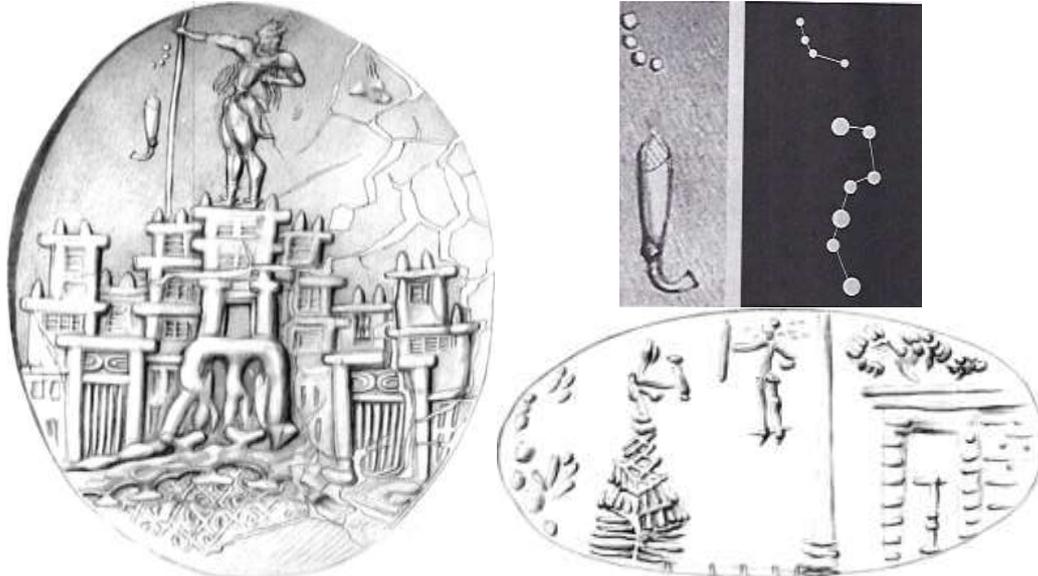
Probably it is Ursa Major looking down on Orion again, on the famous sealing from Khania known as 'The Master Impression' (below) where an athletic male figure again stands between sighting horns at the top of a palace behind mountain peak and river, flanked on one side by what looks like the Bull Leg/Meskhetiu/ Ursa Major (see Kyriakidis' diagram below, top right) and on the other by a Capricornian goat head no doubt referring to the solstitial colour (c.f. III. 9-53). He holds a sighting rod in place of Orion's more familiar bow (III.9- 48) and again possesses the same slim,

¹⁸¹ Eduard Gerhard *Etruskische Spiegel*. III, ccxliiiA, 3/*Paralipomena* 207** (lxxxiiiig) – described in IV p.22 as 'ein pränestischer Spiegel des Herrn de Meester, welcher zuerst mit Brunn's text in den *Monumenti dell'Istituto* VI, 24,5/*Annali* XXX p.388 erschien'

¹⁸² For the whole coffin lid underside decoration, see M Clagett *Ancient Egyptian Science II: Calendars, Clocks and Astronomy* Philadelphia 1995, pl.4!

¹⁸³ Ramadan El Sayed 'Les sept vaches célestes, leur taureau et les quatre gouvernails' *MDAIK XXXVI* 1980 357-90

athletic physique and tight waist-belt we have shown to be the universal Mitanni/Minoan hallmark of the hero. The arc of dots over the Bull-Leg, near Boötes, is thought to be Corona Borealis, dedicated to Ariadne by King Minos.



III.9- 73: Minoan ring seal design from a house in Khania, known as 'The master impression -- CMS VS1A-142: the original seal design would have been engraved the other way round – and if meant to show Orion, the staff replaces his bow, as (below right) on another ring sealing in the Ashmolean Museum – CMS VI-281 (c.f. III.9- 57); (upper right) Kyriakidis fig. 2

THE BEAR AND DUAT STARS AS OMEN, MEMORIAL AND RESTITUTION

We have already mentioned how in different contexts Sirius had connections not only with Underworld soul travel, but also with ideas of cosmic retribution and have above indicated some of the ways in which Sirius, Orion and The Bears in particular were clearly significant in Mycenaean cosmology, often dove-tailing in astral terms with the Lion-Prey group in announcing the New Year as the symbolic crossing line to the start of Afterlife Renewal. We are informed enough now to consider two instances occurring quite near each other – in **Books XVII** and **XVIII** of the *Iliad* – when Homer chooses to imply the presence of the *Duat* stars and planets – or even describe them directly - as backdrop

- ✧ first, to the prolonged fight over Patroclus' body, during which an eclipse takes place (the *Iliad* mentions that he died at noon) and
- ✧ second, to Achilles' return to the field of battle to avenge his friend's death, armed with a new shield decorated at its centre, with the *Duat* stars, possibly as a deliberate memorial to the ominous sky phase during which Patroclus was killed.

In both cases, from the sequence of preliminary material already laid down at the start of this DIVERSION, we now well understand how the *Duat* starry background can be interpreted in the first case as both an ominous yet suitably poetic reflection of the event (a momentous death during an eclipse) - and in the second as both a way of memorialising that death and also a conjuration of the machinery of Nemesis/Helice to indicate the death will not be forgotten until restitution is made – and this of course happens soon afterwards with the killing of Hector by Achilles.

The *Iliad* by means of a divinatory event had early on stated the Trojan War would up to ten years¹⁸⁴, meaning the account of the War in the story only covers its final year. The portent bears full quotation, as described by Odysseus:

It happened in Aulis (not, after all, so long ago), when the Achaean fleet was gathering there with its load of trouble for Priam and the Trojans. We were sacrificing to the gods on their holy altars round a spring under a fine plane tree, at the foot of which the sparkling stream gushed out - when a momentous thing occurred. A

¹⁸⁴ Fortunately it is not our remit to attempt to square the respective dates they arrived at with the Greeks' own convention of dating events in terms of 'so many years since the Trojan War' pointed out by Henriksson.

snake with blood-red markings on his back, a fearsome animal whom Zeus himself must have driven from his lair, darted out from below an altar and made straight for the tree. There was a brood of young sparrows on the highest branch, poor little creatures nestling under the leaves – eight birds in all, or nine counting the mother of the hatch. All of them, cheeping piteously and with their mother fluttering round and wailing for her little ones, were eaten by the snake. He got the mother too: he coiled himself up and seized her by the wing as she came screaming by. But when he had devoured them all, mother and young, the god who had caused him to come out transformed him – he was turned into stone by the Son of Cronos of the Crooked Ways. And we stood gaping at the miracle. What could be meant by the intrusion on our holy rites of this portentous beast? Calchas interpreted the omen then and there: “Why are you dumbfounded”, he said, “O Achaeans of the flowing locks? It was for us that Zeus the Thinker stages this prophetic scene. We have waited for it long, and we shall have to wait for the sequel; but the memory of this day will not die. There were eight young sparrows, making nine with their mother, and all of these, mother and hatch, were eaten by the snake. Nine, then, is the number of years that we shall have to fight at Troy, and in the tenth its broad streets will be ours”. (E.V. Rieu translation, II 300-340 approx.)

THE TROJAN WAR BATTLE OVER PATROCLUS' BODY DURING AN ECLIPSE

There are several stages in the battle over Patroclus' body after it had been abandoned by the Trojan warrior, Hector. Thinking the man he had killed was Achilles, he had stripped the body of the armour Patroclus had borrowed from his beloved mentor. Once aware he was dead, the Mycenaean army led by Menelaus was adamant to a man that they would not allow the body to be captured by the Trojans: various side-stories are woven into the gruelling encounters that ground on all day as both armies engaged in fierce vortices of fighting all across the plain below Troy. Then on the afternoon of 6 June 1218, culminating (by Papamarinopoulos *et al.*¹⁸⁵'s calculation) at 15.45 pm, a 75% partial eclipse was experienced over that part of the battlefield where Patroclus lay, placing the warriors there in darkness unable to see clearly what they were doing with Sun and Moon coming and going out of view - yet others beyond the penumbra zone still had a cloudless, bright sky over them, and a clear view of each other. The eclipse event is posited on the following description in the *Iliad: XVII*, 423-36 (Fagles translation) – summed up by Papamarinopoulos as describing 'with exceptional clarity a partial solar eclipse', noting in particular how tellingly different zones of the battlefield experienced differing phases of darkness or illumination are described:

*So on they fought like a swirl of living fire – you could not say if the sun and moon still stood secure,
So dense the battle haze that engulfed the brave who stood their ground around Patroclus' body.
But the other Trojans and Argive men-at-arms fought on at their ease beneath a clear blue sky –Sharp
brilliance of sunlight glittering round them, not a cloud in sight to shadow the earth and mountains. Men
fighting at a distance worked with frequent breaks, dodging painful arrows that showered side to side, but
men who held the centre suffered agonies, due to the haze and carnage –Ruthless bronze hacking their
lines to pieces, there where the bravest fought.*

After the eclipse scene the Sun is later described as 'shining again', and the time sunset finally comes is then mentioned – two further indications that the passage in step-by-step fashion is talking of a passing state of affairs in daytime. Although this description was used by both Papamarinopoulos *et al.* - and Henriksson¹⁸⁶ two years before -

¹⁸⁵ S Papamarinopoulos *et al.* 'A New Astronomical Dating of the Trojan War's End' *Mediterranean Archaeology and Archaeometry XIV,1* 2014 93-102

¹⁸⁶ G Henriksson 'The Trojan War Dated by Two Solar Eclipses' in *Mediterranean Archaeology and Archaeometry XII,1* 2012 63-76 (he had for different reasons calculated the partial eclipse as the one taking place in the summer of 1318, but Papamarinopoulos *et al.* brought in fine-tuned adjustments using

to attempt to date the last year of the Trojan War, I am focusing simply on the significance of the state of the sky at the time of the culmination of the eclipse as a further divinatory message. For this date, it means the rare - and brief - day-time manifestation of the *Duat* stars over the dead body of Patroclus was an omen - like Zeus' snake - as if a sudden showing of the usually invisible Gods looking down and noting what was happening, and a divinatory indication of their assent to the score being ultimately settled through the agency of Achilles. Henriksson took this interpretation, saying, 'The memory of this unique situation may have been considered as a proof of the intervention of the Gods in the battle and may have been the inspiration for the central motif of the new shield that Hephaistos made for Achilles'.

In Papamarinopoulos' paper, his fig. 1 reproduced on the next page (unfortunately of poor resolution and not amenable to further enhancement) with special software maps the state of the sky for that latitude during the eclipse (it originally showed Orion upside down with Ursa Minor and Draco under him and Ursa Major just dipping below the horizon). For clarity's sake, to set it against a present-day star map I have rotated it through 180° so both maps face North. What we see, in a diagonal line running across the centre of the sky, are the Bears 'looking down' on Orion through the gap between Gemini and Auriga across the *Duat* zone as delineated both in *III.9-6* and even more clearly in *III. 9-67* - an alignment returned to in many different ways throughout this DIVERSION. As emphasised earlier, normally those *Duat* stars would not have been visible in full daylight round Summer Solstice time, and Homer splices the afternoon eclipse description into this stage of the story, as it turns out, perhaps deliberately to allude to the start of Patroclus' soul journey at this baleful moment, not only during an eclipse, but an eclipse taking place against a backdrop of the canonical stars usually only seen at night around the Winter Solstice, centring on Orion the warrior. The very disappearance of Ursa Major, just slipping below the horizon at that hour, suggests a level of detachment and lack of concern by the Gods at Patroclus' fate - indeed, at the start of the loss of validity of a key Age of Taurus fiducial line. Homer leaves the implications of the sudden presence of the *Duat* sky at the eclipse hour unspoken - Papamarinopoulos and Henriksson only worked out its implicit presence in our own time - but Aratos' careful repetition of the Homeric star descriptions in the Archaic Period indicates Homer must have been aware of what the starry background would be at Summer Solstice time - because it would have been the exact opposite of the Winter Solstice sky. The event is a telling match to the Indian epic also involving a mighty battle - that of the Mahābhārata - again featuring a solar eclipse at a turning point in events, that (on the basis of the Hisse-Borala inscription) took place some time between 1280 and 1414. Scholars have tried to date the eclipse for the Central Asian area just north of India¹⁸⁷, the most likely being the June 24 1311BC (again round the Summer Solstice) in the former Tocharian area of present-day China - only 9 years away from the Sothic Period Renewal Year of 1320.

It is worth mentioning at this point that current thinking amongst archaeologists is that badly repaired Troy VI (with fragments of Mycenaean pottery) appears to have been the result of damage by an earthquake that weakened the defences (giving a slant on the possibility that the God Poseidon was the 'Trojan Horse' who some have linked to the actual form of the Trojan Horse¹⁸⁸), making the ultimate conquest of Troy VII possible (remains of arrow points and Mycenaean pottery sherds were found at this level)¹⁸⁹. Throughout the *Iliad* Homer allows us into the conversations of the Gods - mainly Zeus, Hera, Apollo and Athena - as they bargain between themselves as to who will be allowed to win and which side must lose for a time, but in the light of our earlier mention of Earth-Shaker Poseidon at Motya we

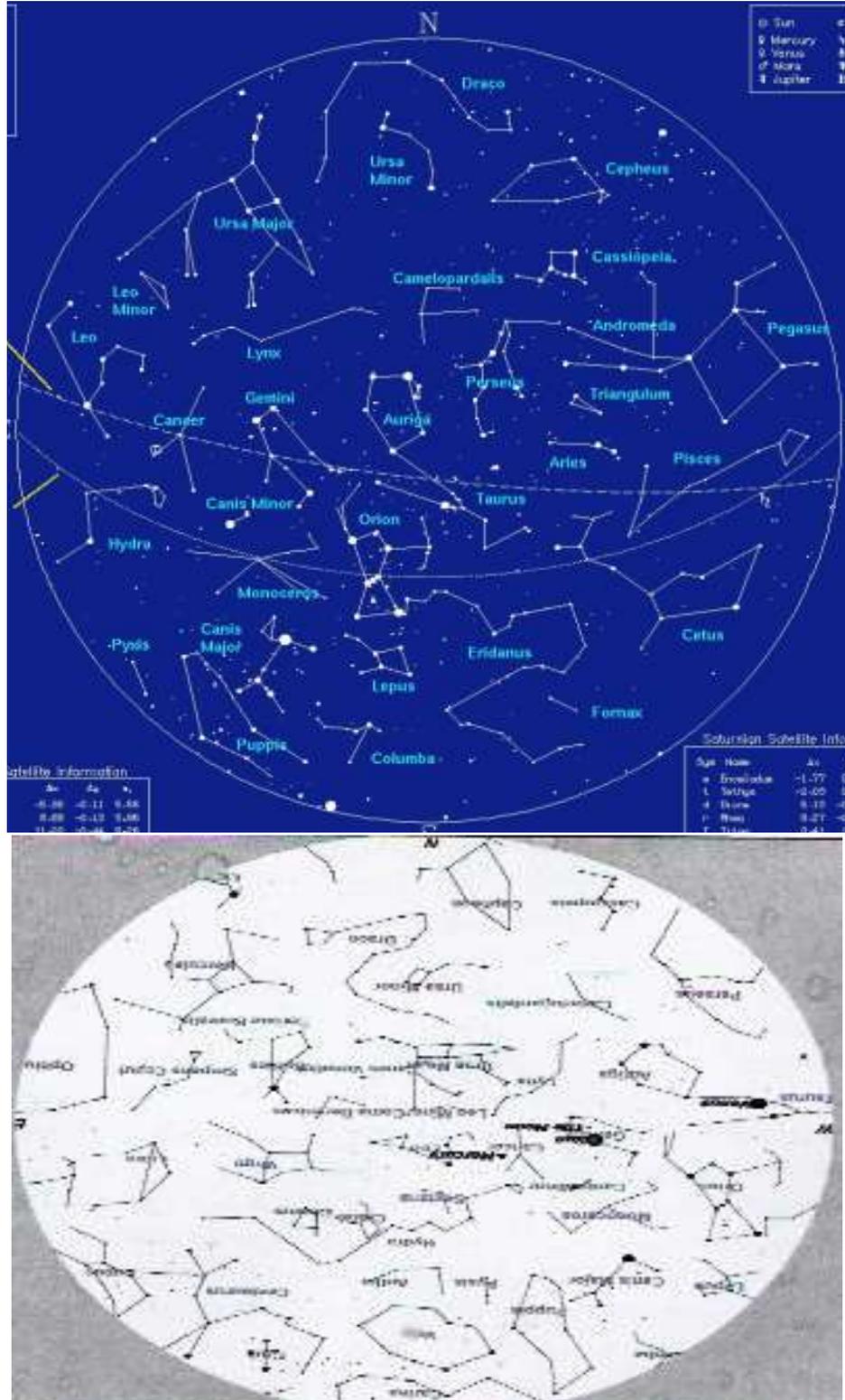
NASA data including corrected Eclipse Tables going all the way back to the 5M BC and up-to-date ancient sky reconstruction software that in the end make their date more plausible

¹⁸⁷ This is the date quoted by B G Siddarth *The Celestial Key to the Vedas* Rochester Vermont 1999, p.11: two books fully covering the lengthy calculations involved are by E Vedavyas *Astronomical Dating of the Mahabharata War* Delhi 1986 and A N Chandra *The Date of the Kurukshetra War* Calcutta 1978.

¹⁸⁸ A Nur and E H Cline 'Poseidon's Horses: Plate tectonics and earthquake storms in the Late Bronze Age Aegean and Eastern Mediterranean' *JAS XXVII* 43

¹⁸⁹ See relevant papers in M Korfmann (ed. and contributor) *Troija, Traum und Wirklichkeit* Baden-Württemberg 2001

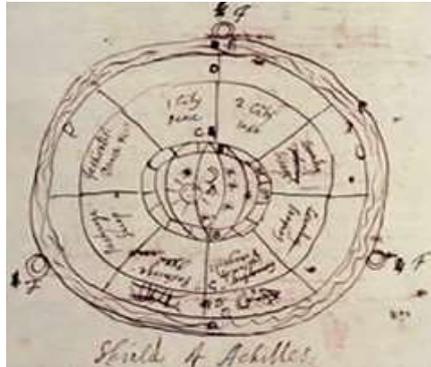
must not forget the intervention, too, of the maritime Horse-God, 'Poseidon of the Sable Locks' – prime Sea-God of the Achaeans. What the timing of the Level VI earthquake was in relation to the Level VII eclipse has not so far been



III.9- 74 (Top) Standard N Hemisphere star-map for midnight at the WINTER SOLSTICE showing the Ursa Major/Minor vertical alignment to Orion and the Duat stars; (bottom) position of the same stars temporarily visible in the afternoon during eclipse of 6 June 1218, two weeks short of SUMMER SOLSTICE (rotated to show both maps with North at the top (only Ursa Minor and Draco show) - Papamarinopoulos fig.1. The position of Sun and Moon in eclipse in Gemini, Venus in the Pleiades and Mercury in Cancer are also marked. Three days later Venus rose at dawn in the East (mentioned by Homer (XXIII 226-8), validating the 1218 date. Korfmann's date span for Troy Levels VI/VIIa is 1200-1180, a closer dovetail than to Henriksson's favoured 11 (24 corrected) June 1312 date, with eclipse in Cancer -though the sky that afternoon would also have displayed the same constellations – see Henriksson fig. 2

worked out, but those collecting together the many cataclysmic events of 2M Crete, Greece, Anatolia and Asia have come up with several clues and suggestions that I am not competent to judge, some probably too extreme to need to be brought into the picture of the Trojan War in any case. Papamarinopoulos himself offers further ideas on other eclipses - as well as comets – in a further intriguing paper¹⁹⁰ which I must leave to readers to weigh up for themselves.

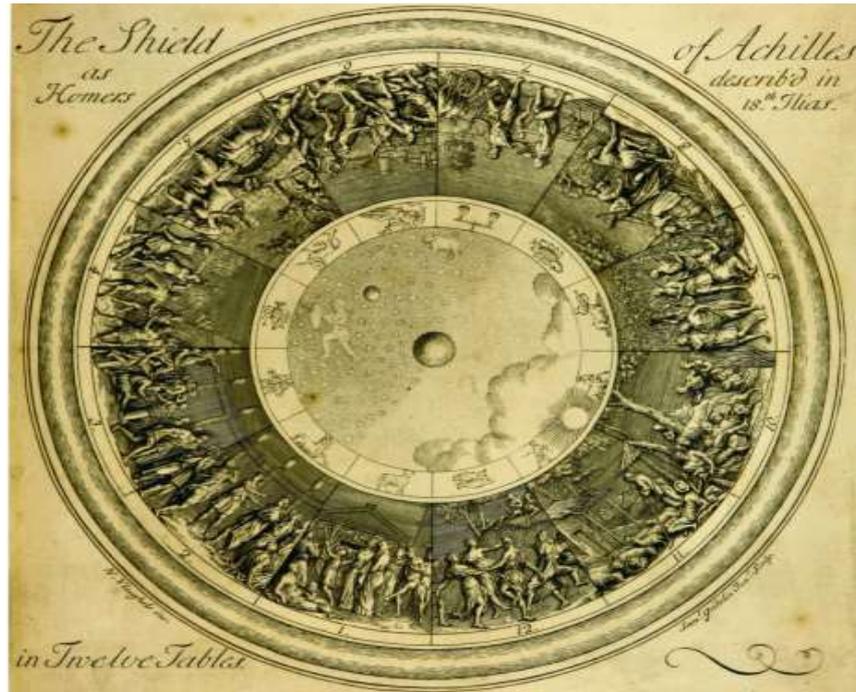
ACHILLES' SHIELD



III.9- 75: Alexander Pope's sketch for the Shield of Achilles in his hand-written translation of the Iliad held by the British Library (BL Add.MS 4808 ff.81v-82 courtesy The British Library Board)

Our familiarity by now with the different breeds of dog associated with Sirius-Orion - its mention sometimes with Taurus/Hyades/Pleiades, in Homer nearly always with Ursa Major mentioned high above crowning the *Duat* - now enables us to recognize a further reiteration of the same sky scene, overtly spelled out this time in the next book of the *Iliad* - following the rescue of Patroclus' body and its washing by Achilles in preparation for his funeral. Patroclus had gone into battle wearing Achilles' armour (his noble friend had long refused to fight due to his quarrel with Agamemnon) but it had all been stripped off his body by Hector. On hearing that his friend was dead, Achilles was finally motivated to forget his sulks and enter the fray, and his mother Thetis rushes to Hephaistos to ask him to make Achilles a new suit of armour (was it something like the almost complete suit found in the Dendra Tholos?). It was to include a new shield elaborately decorated with all kinds of scenes - starting from Cosmos at the centre to events in human daily life in the surrounding bands (Alexander Pope made a rough sketch giving its overall layout, above). Here

¹⁹⁰ S P Papamarinopoulos 'A Comet during the Trojan War?' in S A Paipetis (ed.) *Science and Technology in Homeric Epics* Berlin 2008 341-56



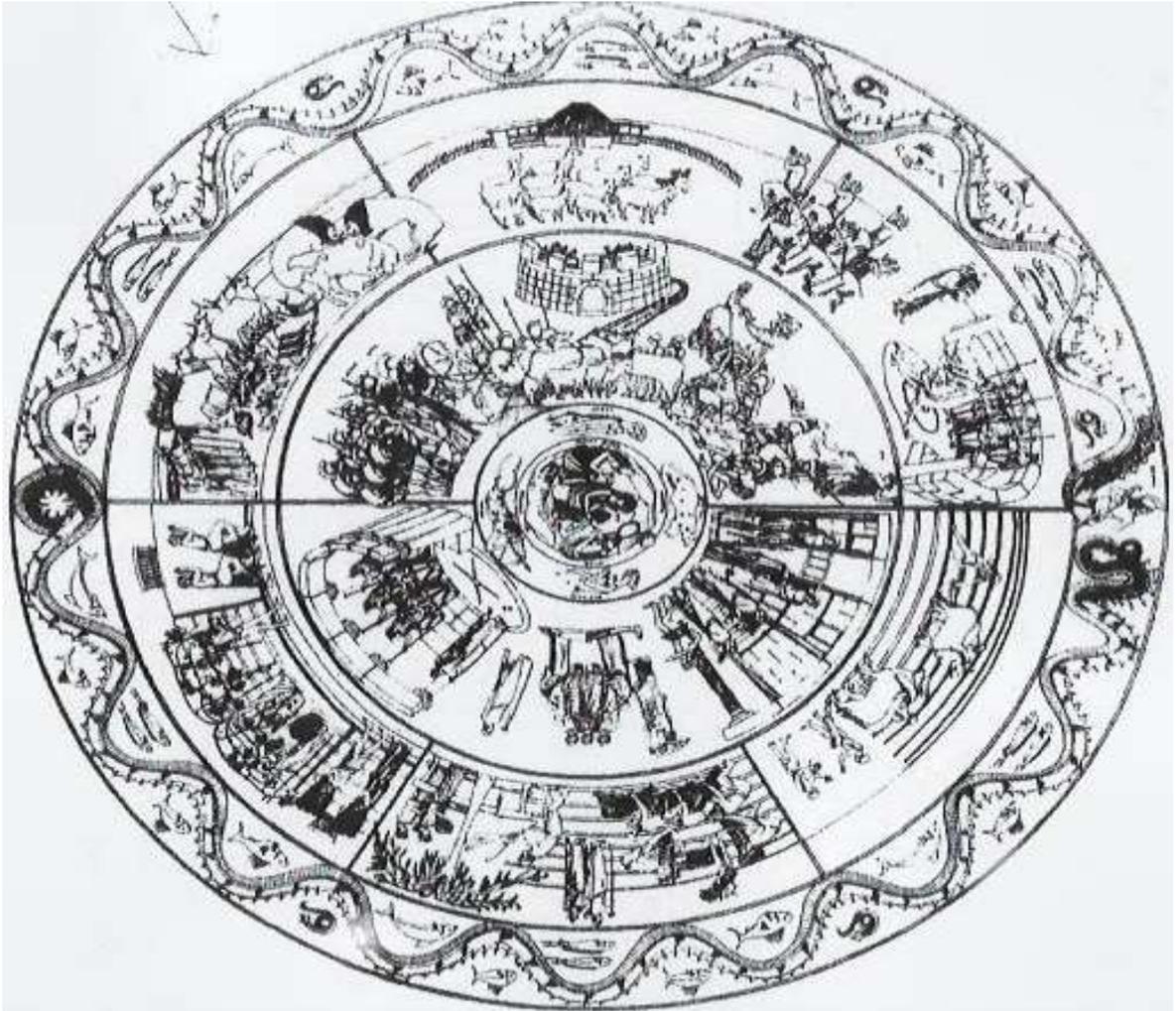
III.9- 76 Finished engraving of the Shield of Achilles for Pope's translation of Homer's *Iliad*, with Orion and Arktos appearing at the centre in the Night half of the sky from Taurus to Libra and including Moon and Sun (a finished mirror-image of his original sketch)

is how its fashioning by Hephaistos is described (in E V Rieu's translation):

[Hephaistos] cast imperishable bronze on the fire, and some tin and precious gold and silver. Then he put a great anvil on the stand and gripped a strong hammer in one hand and a pair of tongs in the other. He began by making a large and powerful shield adorned all over, finished with a bright triple rim of gleaming metal and fitted with a silver baldric. The shield consisted of five layers, and he decorated the face of it with a number of designs, executed with consummate skill and representing, first of all, Earth, Sky and Sea, the indefatigable Sun, and Moon at the Full and all the Constellations with which the heaven are crowned, the Pleiades/the Hyades [Taurus' face and jaw]; the great Orion and the Bear, nicknamed the Wain, the only constellation which never bathes in Ocean Stream but always wheels round in the same place and looks across at Orion the Hunter with wary eye. (Iliad XVIII 480-90)

A detailed account of all the scenes Hephaistos places on the outer bands of the shield, giving a picture of urban and rural society's activities through the year, goes on for another 200 or so lines – certainly worth a read, but not our focus of attention here. The general distribution of these outer scenes is shown in the astonishingly detailed finished engraving for Pope's translation of the *Iliad* (above) which can be used along with a recent, in some ways more clearly drawn reconstruction (for the outer rings at least) by Kalligeropoulos *et al.*¹⁹¹ (following illustration) in which one

¹⁹¹ D Kalligeropoulos and S Vasileiadou 'Interpreting the Representations on the Shield of Achilles' in S A Paipetis (ed.) *Science and Technology in Homeric Epics* Berlin 2008 443-50



III.9- 77 Modern rendition of Achilles' Shield as analysed in Kalligeropoulos et al. *ibid.* –their fig.2 (note the Bilateral Attack, arrowed)

detail described by Homer of lions attacking bulls from a local herd of cattle is represented as a *Bilateral Attack* (arrowed), perhaps inspired by Classical pedimental prototypes but intended purely as a naturalistic scene (more along the lines of its representation in sector 10 of Pope's engraving above). But our main interest here is the sky scene at the centre, I think more clearly rendered in Pope's version above than the more recent rendition.

So much detail is devoted to the Shield by Homer that he has only a handful of lines left for the helmet and suit of armour themselves – indeed, one might imagine the design for the shield as almost as appropriate for a typical Levantine bronze bowl of the period – many examples of which we have already had cause to analyse in instances where they depict the Cosmos in various idioms – such as the Kinik Bowl under **ForAtt-30/III.9- 152**), or more notably the Faroughi Bowl – whose zodiac I fully analysed in a paper¹⁹² given at a conference in Oxford. We know these bronze bowls were prized as exotic Levantine products by the Achaeans (many are said to be Phoenician but some, like the Faroughi Bowl, actually go back to the Second Millennium). Here we can quote from *Iliad XXIII* when at the funeral games initiated by the chariot race, the winners of some sporting events are given such a bowl as their prize:

The Son of Peleus went on at once to offer prizes for the foot-race. The first was a mixing-bowl of chased silver, holding six pints. It was the loveliest thing in the world, a masterpiece of Sidonian craftsmanship which had been shipped across the misty seas by Phoenician traders and presented to King Thoas when they put in at his port.

SHIELDS, BOWLS AND DISCS: THE SKY CIRCLE AND CRAFTSMAN GOD, HEPHAISTOS

¹⁹² See this link on my website http://www.layish.co.uk/astronomical_iconography_of_5_icons.pdf and go to the Faroughi Bowl, last of the five items discussed

When making shields, bowls or planispheres, metalsmiths of the Levant and Aegean worked in the name of Kothar/Hephaistos (*III. 9-78*). We have analysed this God's presence extensively on the narratives of the François Vase in our *Art History* discussion of **ForAtt-47**, and recounted his central role in the fashioning of Achilles' Shield as given in the *Iliad*. His story will require yet further scrutiny in our next diversion on THE GODS due to the strong Mitanni-Mycenaean overlap in his identity.

There may be some connection between cosmic bowls, shields and the Nebra Planisphere, the latter described in **Chapter 19 - Ills 19-128/131** - as a European Bronze Age 'planisphere', found with swords dated to c.1600BC (both re-illustrated below). Like the central image on the Shield of Achilles, the Nebra disc gives prominence to the Sun and Moon against a starry background, possibly with the Pleiades placed between the two of them, though the cluster of seven stars could be the flower of Venus (c.f. its appearance on Mitanni seals – indeed, on the Perati seal itself (**ForAtt-25/III.9- 88**) - making it the European equivalent to the triad of Sun, Moon and Venus so frequently given primacy on Syro-Mesopotamian seals or kudurrus (*III.9-176*) (the boat-shape beneath taking the place of the serpent on the kudurru, standing for the Ecliptic). The cluster of dots on it may even refer to the Sibitti the Seven Planets and/



III.9- 78 *The Nebra Planisphere and the two swords found with it – and (right) Henriksson's interpretation – his fig.3*

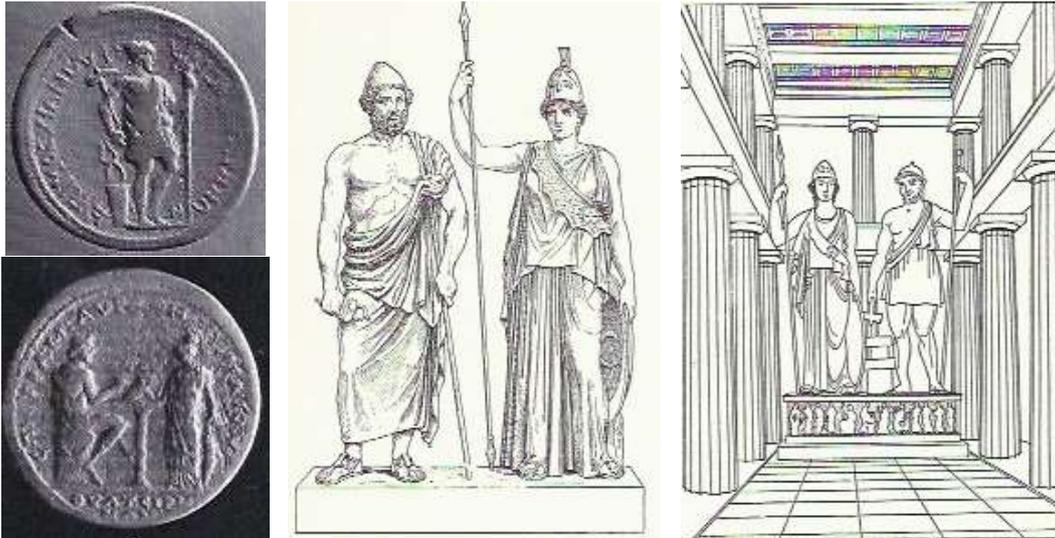
or the 7-Star of Ursa Major). It would have been sewn on its owner's clothing as a breastplate, proclaiming his status as astronomer-king, the rank we suggest for Vapheio Warrior too. Crowhurst¹⁹³ has suggested the 39 holes functioned as parapegma for various interplanetary calculations - a theme we come back to shortly – taking into consideration Henriksson's¹⁹⁴ quite plausible argument (compared to similar images on Swedish rock art) that the disc shows the solar eclipse over Nebra on 16 April 1505 BC, set against Gemini-Taurus and other planets (above right).

Interestingly, Hephaistos' version of the sky on Achilles' shield concentrates on the fiducial meridian for the Age of Taurus, since the stars mentioned are Orion with Taurus and Ursa Major – rather than Orion with Auriga, Perseus, Pegasus¹⁹⁵ and Aries – though in fact that corridor between Ursa Major and Orion still holds but with a slight shift of angle towards the constellations for the Age of Aries already beginning to feature on Mitanni seals (**ForAtt-22**) - centuries before they become prominent in Greek art on the pediment sculptures of the Archaic Age.

¹⁹³ H Crowhurst *The Nebra Sky Disc: Cycles in the Cosmos* Plouharnel 2012

¹⁹⁴ G Henriksson 'Total Solar Eclipses close to the Pleiades on the Nebra Disk and Swedish Rock-Carvings' in M A Rappenglück et al. (eds) *Astronomy and Power: How Worlds are Structured [Proceedings of the SEAC 2010 Conference]* Oxford 2016 125-130

¹⁹⁵ The constellation Pegasus is mentioned in a quotation by Laoupi from Hong Fan Zhuan (1C BC) which states that 'The Ancient Zhuanxu calendar began at dawn in the beginning of Spring [c.2000] when 'the Sun, New Moon and all Five Planets gathered in the constellation Yingshi (Pegasus)'.



III.9- 79: (Left) Typical representation of Hephaistos with worker's cap on Anatolian coins (a) with tongs and hammer and (b) opposite Athena, with tongs and walking staff for his lameness, from Magnesia; (centre and right) variant reconstructions of the cult statues of Hephaistos with Athena in the Hephaistaeon, Athens (centre) by Sauer and (right) by Travlos - from Brommer¹⁹⁶ pls.38/1,3; 37/3,2; and figs 34 & 37 respectively (more on them under the GODS DIVERSION)

Indeed, Hephaistos and Achilles could be regarded as the prototypes for the image given to the stars of Perseus and the Gorgon - of a figure holding up his Shield over the Gorgon's Head. Perseus beheads her by looking at her reflection in it - the shield and Gorgon head then pass to Athena as permanent accoutrements (the above illustration is supplemented by more examples later). Laoupi links Hephaistos to the Perseid shower in the same sky zone (see our discussion in our next DIVERSION on the GODS). Although we are not quite ready to focus on the constellations starting to enter the iconography at the start of the Second Millennium until the DIVERSION ON HORSES AND CHARIOTS following after it, if they crop up on the way we will stop at them briefly to highlight their presence.

For the time being, through this DIVERSION on the Mycenaeans and their Dogs that has concentrated on Sirius, Orion, Taurus and The Bears from different angles, I trust we have accounted for and proved the importance of Sirius and the *Duat* in the Mycenaean mind. But can we go further and tie in the astronomical behaviours established in the above DIVERSION into much larger cycles of time - and if we can, is it possible to know whether and how the Mitanni and Mycenaeans were aware of them?

SUMMARY: FORATT-26 (VAPHEIO), DIVERSION 8 AND THE 2M AEGEAN SOTHIC PERIOD

Our enquiry into the cultural importance of dogs for the Mycenaeans has led us down several avenues - mainly astronomical - important to thrash out while the relevant artefacts were before us as they cropped up naturally. Throughout the Dog DIVERSION we continually referred back to the Vapheio tholos burial with dog remains and the warrior's *Forward Attack* ring (**ForAtt-26**) - and all the other seals with him (the subject of our SEAL GROUP STUDY 5), including the two dog seals in his necklace. From the recurrence of the *Duat* star group and *Arktos* in the *Iliad* or on artefacts, we have by this stage established enough *points de repère* to back up Blomberg and Henriksson's assertion¹⁹⁷ that the Archaic and Classical Greeks inherited their earliest star maps from Minoan/Mycenaean beginnings. While only one Bear, *Ursa Major*, is mentioned on Achilles' Shield, other than also bringing in *Draco* (a longer, simpler star group replacing the Egyptian combination *Tawaret/Cepheus* with *Crocodile/Draco* down her back) - it is the *Two Bears* that are chosen by Aratos¹⁹⁸ to initiate his description of the heavens in his book on stars written some centuries later. As a key bridge leading to the Archaic Greek astronomy background we deal with in **Catalogue F: The**

¹⁹⁶ F Brommer *ibid.*

¹⁹⁷ G Henriksson & M Blomberg 'New Arguments for the Minoan Origin of the Stellar Positions in Aratos' PHAINOMENA' in C Esteban & J A Belmonte (eds) *Astronomy and Cultural Diversity(Proceedings of the International Conference Oxford VI and SEAC 99* Laguna, Granada 2000 303-310

¹⁹⁸ As translated by D Kidd *Aratos' PHAENOMENA* Cambridge 1997

Bilateral Attack, we take the opportunity - as a Coda to our study of the implications of **ForAtt-26** - to quickly assess the content of his treatise so as to further understand the crucial importance of the start of a new Sothic Period for the Mycenaeans.

ARATOS

Aratos assembled and combined several sources, which included the earliest star descriptions in Homer's **Odyssey** and **Iliad**. He is known to have spent time in Syria – whilst the quotation below *confirms in his own words his debt to Crete*. After a short prologue in praise of Zeus as Progenitor of the Heavens, these are his opening lines:

The numerous stars, scattered in different directions, sweep all alike across the sky every day continuously for ever. The axis, however, does not move even slightly from its place, but stays for ever fixed, holds the earth in the centre evenly balanced, and rotates the sky itself. Two poles terminate it at the two ends, but one is not visible, while the opposite one in the north is high above the horizon. On either side of it, two Bears wheel in unison, and so they are called the Wagons. They keep their heads for ever pointing to each other's loins, and for ever they move with shoulders leading, aligned towards the shoulders but in opposite directions. If the tale is true, these Bears ascended to the sky from Crete by the will of great Zeus because when he was a child then in fragrant Lyctus near Mount Ida they deposited him in a cave and tended him for the year, while the Curetes of Dicte kept Cronos deceived. Now one of the Bears men call Cynosura by name, the other Helice. Helice is the one by which Greek men at sea judge the course to steer their ships, while the Phoenicians cross the sea relying on the other. Now the one is clear and easy to identify, Helice being visible in all its grandeur as soon as night begins; the other is slight, yet a better guide to sailors, for it revolves entirely in a smaller circle: so by it the Sidonians sail the straightest course.

Between the two Bears, in the likeness of a river, winds a great wonder, the Dragon, writhing around and about at enormous length; on either side of its coil the Bears move, keeping clear of the dark-blue ocean. It reaches over one of them with the tip of its tail, and intercepts the other with its coil. The tip of its tail ends level with the head of the Bear Helice, and Cynosura keeps her head within its coil. The coil winds past her very head, goes as far as her foot, then turns back again and runs upwards. In the Dragon's head there is not just a single star shining by itself, but two on the temples and two on the eyes, while one below them occupies the jaw-point of the awesome monster. Its head is slanted and looks altogether as if it is inclined towards the tip of Helice's tail: the mouth and the right temple are in a very straight line with the tip of the tail. The head of the Dragon passes through the point where the end of settings and the start of risings blend with each other.

[PHAENOMENA II.45-62]

Having begun in the Circumpolar Region thus, Aratos then very much adopts the approach of a beginners' guide to star-orientation by methodically moving round the sky indicating how different constellations can be sought out through their alignment to different stars in the Bears. Interestingly, he begins at *Hercules, Corona* and *Ophiuchus* (perhaps worth bearing in mind for the Palmyrene and Snake Man sculptures considered in this catalogue) and *ends* with Taurus, Sirius and Orion, indicating they now mark the *end* of the Year, and not its beginning:

Aslant from the truncated figure of the Bull lies Orion himself. Anyone whose glance misses him when he is positioned high up on a clear night may be sure he can never sight anything better to identify when he gazes up at the sky! Such is also his guardian Dog, seen standing on its two legs below the soaring back of Orion, variegated, not bright overall, but dark in the region of the belly as it moves round; but the tip of its jaw is inset with a formidable star that blazes most intensely: and so men call it the Scorcher [Seirios]. When Sirius rises with the Sun, trees can no longer outwit it by feebly putting forth leaves, for with its keen shafts it easily pierces their ranks - and strengthens some but destroys all the growth of others.

[PHAENOMENA II.322-36]

Aratus again goes round the sky methodically in its upper and lower circuits, identifying the constellations that inhabit the two Tropics bands (what the Sumerians would call the Ways of Enlil and Ea) as also the placing of the Signs themselves along the Ecliptic (the Way of Anu). After that, on the **Mul Apin** pattern he ranges round the sky yet once more, enumerating which pairs of stars set when their opposite number rises (and *vice versa*), ending with observations on activities of the seasons through the year that reveal which Zodiac Sign the Sun must be in (in just the same way as done visually on the mythological Mycenaean gold seal rings discussed above). For the naked-eye observer, whether amateur like a shepherd, or professional like an astronomer-priest, Aratos provides a non-technical, succinctly comprehensive treatise on star geography, still usable today.

SUSPECTED ASTRONOMER ROLE OF THE VAPHEIO WARRIOR FROM HIS GRAVE GOODS

Knowing little about the three occupants of the looted Perati tholos – even though it also contained dog remains - we leap-frogged the Perati seal to take the Vapheio Seal first as our touchstone to link in with the above DIVERSION. Having looked at the seals in some detail in SEAL STUDY 5, we must take stock to consider how it has deepened our interpretation of the Vapheio warrior's role. It is a significant pointer to his activity and beliefs that the two Dog seals (re-illustrated in **III.9- 33**) appear to have been the centrepiece of the amethyst and rock crystal necklace round his neck, possibly separated by the *Forward Attack* bezel ring, our chief entry under **ForAtt-26**. Bringing together the same imagery as the *Master of Dogs* over the *Griffin Forward Attack*¹⁹⁹ on the last seal of **ForAtt-2**, seems to be a deliberate reference to the intercalation corridor ending in the Two Dogs at the line between Old Year and New that only a court sponsoring calendrical regulation would concern itself with. Monitoring of the calendar by measuring fluctuating planetary cycles against the stable, fixed background of the stars - like the various hands on an unchanging clock-face – added up to being the hallmark of stable government.

Recently Banou and Hitchcock²⁰⁰ made a social assessment of 'The Lord of Vapheio' in the light of his grave goods and geographical placing - into which my interpretation seems to fit as added enhancement. They read him as an early Mycenaean chief still closely linked to Knossos culturally (the Griffin warrior had not yet been discovered when they were writing), in their words offering 'a most vivid and at the same time nuanced picture of the process which must have taken place in Mycenaean Greece... leading from chiefdoms to kingship'. To me their most significant observation is that the tomb dromos is orientated towards the Mt Tayegetos peak (from which they draw no astronomical significance). They also observe that the tomb was surrounded by observation points on the Menelaion ridge, the settlement of Palaeopyrgi, and the hills of Vouno Panayias and Ayios Vassileios – so close that they were all visible to each other, forming a network and implying some kind of coordination.

THE SOTHIC PERIOD, AND MEASURING SOLAR PRECESSION THROUGH INTERLOCKING SIRIUS-VENUS AND LUNAR-MERCURY GRAND CYCLES

Banou and Hitchcock do not dwell in any depth on the Vapheio grave goods, but taking into account that buried with him in the cist grave were the two famous Vapheio cups, one in each hand – along with further vessels of gold, silver, alabaster and ordinary ceramic, it is not difficult to read him in Burns' terms as the archetypal example of a wealthy Mycenaean chieftain with an extended network of contacts at his disposal and access to sources for different metals and semi-precious stones, within the Near East and beyond (the latter suggested by the sheer number of seals and rings he wore) – all adding up to a man who had certainly gained conspicuous wealth and prestige in material terms. Other metal items, such as the sword, two inlaid bronze daggers (one fragmentary) and seven knives, a copper disc to be polished as a mirror (the Griffin Warrior had one too) and other bronze items including a pair of scales²⁰¹ with lead weights (illustrated below) indicate good contact with metalworking

¹⁹⁹ Compare in SEAL STUDY 4 featuring the Thebes Hoard (**III. 8-42**/Porada's Seal 6) a similar griffin **Rear Attack** (often associated with the Rhodian School).

²⁰⁰ E Banou and L Hitchcock 'The "Lord of Vapheio": the Social Identity of the Dead and its implications for Laconia in the Late Helladic II-III A Period' in H Cavanagh et al. (eds) **Honouring the Dead in the Peloponnese: Proceedings of the conference held at Sparta 23-25 April 2009** CSPS Sheffield 2009 1-24

²⁰¹ Though Tombs I and III at Kokkalia contained similar assemblages of weapons and jewellery, Kramer-Hajos (*ibid.* p.42) reports Tomb I had *three* sets of scales, for the purely practical use of weighing small quantities - such as metal, in pre-coinage times.

sources – whether in Cyprus, Anatolia, or Central Asia onwards (the iron ring in particular points to sources in Iran or India). In other words, his grave goods are material proof of his status as ‘Lord of the World’ in terms of possessions, if not in political fact.



III.9- 80:(Left) Bronze scales from the Vapheio Tomb (compare, right, with scales and weights from Harappa)

But we think these are simply surface clues on which often it is the iconography decorating them that points to an underlying meta-network within which he was primarily operating. The indications are sufficient to suggest that the ‘Lord of Vapheio’ was a representative of Mycenaean involvement in state astronomy, not so much as a warrior, more as astronomer-king in the full sense of the Mycenaean term *Wanax*. As just mentioned, the geographical setting of his tomb has orientational significance, and is linked to other observational *points de repère*, much as can be said for the siting of the burial in which the Nebra Sky Disc was found, on a hill with significant alignments to other hills and valleys in several directions. We have to ask whether all the seals gathered round his wrists had formerly been used in an administrative context, possibly identity seals, given back to their master at death as a substitute for their owners’ own immolation with him – or even simply marking the completion of a particular project undertaken by him and his administration that ceased on his death.

Going through the seals tabled under SEAL STUDY 5, some show priestesses with goat sacrifices, one an agrimi alone (Capricorn/Tammuz) and, most important of all, one priestly figure with the griffin²⁰² of intercalation (**CMSI-223**) and another holding the sacrificial fenestrated axe (**CMSI-225**) – these surely must have belonged to top level personnel connected with cult and calendar. Added to this, although the bronze scales in the tomb were interpreted by Burns as a cult object in Egyptian terms for the weighing of the soul, such an item has never been found in Egyptian burials - but given our discussion of the introduction of the Aries-Libra colure at this time and North Syrian references to the Scales of Shamash the Sun, God of Justice, briefly depicted on cylinder seals (discussed at length in **Catalogue C**), this is a startling inclusion that could well have a deliberate zodiacal meaning, despite the fact that at first other stars higher up in the sky were used as more visible as markers for this axis – explored in our conclusions about the floating head in connection with Perseus on the Perati seal (**ForAtt-25**) following shortly. If, from his geographical position in relation to the four other Laconian sites, he does embody the transition from chief to king, it indicates (in Banou and Hitchcock’s words) the changeover to ‘a formalized institution, with more or less strictly organised structures of government operated by specialized personnel in a hierarchical order’ - in Wright’s words setting the chiefdom ‘on the road to the formation of a state’ – which would have to involve a calendrical infrastructure.

Most telling of all - if the Vapheio Warrior was indeed a prototype astronomer-king - is the intentional arrangement of the three seals/sealings placed as the centrepiece of the amethyst-rock crystal necklace round his neck consisting of two dogs and the *Forward Attack* ring (**ForAtt-26**) already discussed in much detail. We have suggested why two dogs were more important than one – and can understand why the *Forward Attack* on the ring strung between them amounts to a statement about the positioning of Canis Major and Canis Minor at the New Year Festival - which leaves the warrior himself in the role of Orion

²⁰² Note from SEAL STUDY 3 in **Catalogue D** concerning the Rutsi hoard that the principal body (surrounded by daggers and swords) was also probably associated with as many as 10 seals, also around the wrist region, depicting similar themes to the Vapheio hoard, including several griffins (see **Ills 8-34-37**). One damaged seal (not shown - CMSV1A-no. 345) has the same long-robed priestly figure.

signifying administrative mastery over the State Calendar. The planetary meaning of the lion-prey/Sun-Moon group, juxtaposed with the stellar meaning of The Two Dogs thus points to the Vapheio tomb occupant being more concerned with the calendar than a mere warrior would, whose equivalent in Indo-European terms we might think of as a *Brahmin-kṣatriya* or priest-king. There are roughly contemporary confirmatory parallels to be drawn with the owner of the Nebra Planisphere (*III.9-78*) – already provisionally analysed in **Chapter 19 (Ils 19-128/131)**, but whose significance we can now plumb to a much greater depth.

This is an interpretation recently backed up by Blomberg and Henriksson²⁰³ in their discussion of the passage in the *Odyssey* (*XIX*, 178-80) in which Odysseus describes himself to Penelope as ‘*the grandson of Minos Enneoros of Knossos who talked with the Great Zeus*’. (I can leave it to the reader to follow up Blomberg and Henriksson’s references to other well-known evidence called upon regarding the sacred role of the Mycenaean *wanax* that they give as backup from the mostly non-astronomical angle, already well-known.) This tradition, involving knowledge of the *Oktaëteris* and a ‘reset’ of the calendar at the start of every Ninth Year, is looked at in fuller context in **Chapter 20**. Suffice it to say here that knowledge of the almost exact reconciliation of Sun/Moon/Venus cycles every eight years (which becomes more and more precise the more multiples of eight are involved - see the following paragraphs - would, the authors say, have required ‘a long tradition of systematic observations’ started by the Minoans and ‘conveyed via the Mycenaean’. But as well as making their own particular discoveries partly from mountain observatories and partly through long experience of navigation throughout the Aegean and Mediterranean, we should surely take into account how time taken to build that tradition was probably appreciably shortened by somehow buying into the bodies of knowledge already painstakingly recorded over many generations by the older civilisations of the Levant and Egypt, from whom at certain points the Mycenaean must have been able by consent to acquire up-to-date information on planetary and stellar behavior – their use of the *Forward Attack* is a marker for such a level of interchange, because it shows knowledge of the starting point for measurement – within the *Duat* zone.

IMPORTANCE OF THE MYCENAEAN SOTHIC PERIOD OF 1320 FOR THE GREEK CALENDAR

What is critical to follow up here, while the last DIVERSION is still in our minds, is how Sirius - and the establishment of a new Sothic Period start - should have been so vital in helping, not simply to stabilise the accuracy of day-to-day *oktaëteris* calculations, but actually to confirm the position with regard to the Sun’s precession backwards through the zodiac, given this would have now been a live issue following the slippage of the Vernal Point out of the Taurus constellation altogether. Over the early decades of the 2M there would have been a dawning realization of the need to insert a new 0° meridian starting at the Aries stars close to the Ecliptic (with Libra, symbol of the newly calibrated Shamash, imagined at the other end of the axis on the opposite side of the sky, to be inserted between Scorpio and Virgo – in other words the expansion of the 10-sector zodiac into a 12-sector one). This is why the matter of pinning down the Sun’s Precession came to the forefront – and we will give below a rough idea of how knowledge of the Sothic Period would have helped in pinning it down. Solar Precession is the slippage of the Sun backwards through the Zodiac Signs²⁰⁴ taking between 2,200-2,600 years per Sign (calculations vary, but we are dealing with the overall rule-of-thumb sums.

Clearly it helps to be able to track the progress of the Sun’s Precession by cutting up a many generations-long monitoring process into manageable, shorter stages. In a period still one thousand years away from the Antikythera Mechanism (*III. 9-85*) which could work it out by clockwork, in the Second Millennium on the basis of the long-established and stable 8-year unit of Sun-Moon-Venus coordination, for the grander scale by counting them together from the records it was possible to arrive at the computation of entire Sothic Periods because they interweave dovetail with Venus Synodic cycles very closely. Measurement of

²⁰³ M Blomberg and G Henriksson ‘*Minos Enneoros: Archaeoastronomical light on the priestly role of the king in Crete*’ in P Hellström et al. (eds) *Religion and Power in the Ancient Greek World* Uppsala 1996 27-39

²⁰⁴ We are not saying the official twelve-Sign Zodiac was in use yet, but the key constellations already had been over many centuries and millennia

Lunar, Mercury and Mars grand cycles can then also be fitted in as intermediate checks in the long counting process. We will describe below step by step – in the broadest terms - how this works. Indeed, as part of the picture the Nebra Planisphere emerges as relevant to the evidence we are bringing together (from just two astronomer-priest graves) of detectable astronomical observation activity undertaken in Europe between 1700BC (Nebra) and 1450BC (Vapheio) – very probably in relation to contemporary work in megalithic Brittany and Britain as well (see the quotation from Diodorus Siculus given above).

THE VENUS-SIRIUS INTERCONNECTION

The reason Sirius and Venus should be so closely associated is fully discussed in my paper on the ending of the Mexican predictive calendar with a Transit of Venus in 2012, as recorded in the Dresden Codex²⁰⁵ – which I need not reiterate here.

Sirius itself follows a precessional cycle, rising successively earlier each year, and taking 1460/1461 years (known as the Sothic Period) to come back to its original position, appreciably shorter than the Sun's stay in any one Sign, let alone across the entire zodiac. For those unaware of the basic Venus and Sirius numbers, they provide the foundations for building up to two key cumulative year round numbers that are the crux of the matter for Mycenaean astronomy, the first being that:

ONE SOTHIC PERIOD OF 1460/1 YEARS IS NEARLY EQUAL TO 6 GRAND SYNODIC PERIODS OF VENUS = ROUGHLY 1500 YEARS

- o Venus' own precessional cycle (or full revolution around the zodiac back to its precise starting point) takes 243 years, meaning that:

SIX VENUS PRECESSIONAL CYCLES OF 243 YEARS/SAY 250 YEARS = 1500 YEARS BY RULE OF THUMB, THUS EQUIVALENT TO ONE SOTHIC CYCLE OF 1460 YEARS²⁰⁶.

- o Astronomers tracking Venus movements across the sky measured in terms of its return in any one year to conjunct with a benchmark fixed star - Sirius being the obvious choice - would notice a slippage from the original starting point of only 0.94° in every 8-year synodic period, such that for every generation the constancy of Venus returns would be felt as all but fixed. The starting point for the calculation of Venus' Synodic Period was probably originally taken either from the ancient Egyptian benchmark of her rising with Sirius at dawn in Leo in July, or rising with it at night at the Winter Solstice at Mesopotamian New Year. Certainly in Egypt we have already noted Isis was identified with both Hathor/Venus and Sirius, just as in the Mesopotamian tradition Inanna/Ishtar can represent both Venus and Sirius (Langdon's quotation). Both are close also in scintillating brightness, doubly earning the title, 'Queen of Heaven'.

The precise numbers adding up to **1460** years -v- 1500 minus 41 = **1459** brings the dovetailing to match within a year, but the round number of 1500 as the keynote figure fixes the relationship in the mind nicely before taking the next giant step in our calculation of the Sun's Precession. Again, it shows the Venus and Isis/Sirius measures are so smoothly interlocked that we see why they were ascribed to one and the same Goddess.

SIRIUS PRECESSION -v- SOLAR PRECESSION

Very close to 2000BC (technically 2004) at the Spring Equinox the Sun no longer rose against Taurus, but moved backwards into Aries – and knowing one and a half Sothic Periods are roughly equal to the time it takes for the Sun's Precession through one Zodiac Sign, it means the new Sothic Period beginning in 1320 started roughly one-fifth of the way into the Age of Aries (astronomers in the next era - notably the Magoi – also knew well in advance when the start of the Age of Pisces would be).

My view is that the Diyala cylinder seals showing the Sun as a Boat (*III. 9-194* - reproduced again below left) – a subject rarely repeated in Sumerian imagery²⁰⁷ – due to the constellations also present - could well illustrate not simply the Sun's daily round

²⁰⁵ <http://www.layish.co.uk/Venuscycles.pdf> For the original Mayan document see E Forstermann *Commentary on the Maya Manuscript in the Royal Public Library of Dresden* 1906

²⁰⁶ Herbert Chatley in his review of I E S Edwards' *The Pyramids of Egypt*, *JEA XXXIV* 1948 126-8

²⁰⁷ However, several new sealings showing the sky boat (*Rova ibid.* nos 5/9/10/55 appear on the recently discovered sealings from Tell Beydar (e.g. *III. 9-122*

(corresponding to Ra's boat journey in Egypt) but His much longer and infinitesimally gradual Precessional journey back through all 12 main sky divisions, taking 26,500 years (but we must not ignore Heimpel's valuable quote²⁰⁸). On the seal below left the Sun-God is accompanied by the most accurate marker constellations of Scorpio, Leo and the Plough (the boat itself is Taurus-horned). A handful of Minoan-Mycenaean mythological seals show versions of this boat (such as the one on the gold seal ring from Mochlos shown in *Catalogue D, III.8-154*, repeated below right), an island whose astronomical associations in terms of the Foreleg of the Bull we already referred to on the silver tube seal (III.9- 71) and in *Catalogue D (III.8-9)*. The steatite dog-lid from Mochlos (III.9- 47) could allude to Sirius (similar versions of it were also found at Zakros and Ayia Triadha).



III.9- 81: (Left) ED Diyala seal (SCSCat 499) with a celestial scene: the group showing Sky Eagle clutching beasts over Plough and Leo complements a second half with Scorpio accompanying the Sun-God in his long sky journey; (right) seal design from Mochlos showing priestess, shrine, baetyloi and other apparatus familiar on the mythological gold rings, on animal-headed sky boat

Branigan's²⁰⁹ view of Mochlos as 'a gateway community' run by an élite filtering cultural trends and importing gold and semi-precious stones (III. 9-122 right), perhaps bringing their own seals²¹⁰ from either the Levant or Egypt, makes sense here. In fact he points out that the wealth of the grave goods of the Mochlos cemetery taken together (especially in terms of the amount of gold and semi-precious stones, crafted on the island) rank it as wealthy as the Platanos tombs further along Crete's north coast (whose Old Babylonian seal we noted in *Catalogue D, III.8-8*). Certainly the key tombs at Mochlos (I-III and IV-V) were constructed of stone, 'with slabs of green or purple schist or grey limestone set as orthostats at the base of the wall facades', while tomb IV-VI 'is fronted by a paved court and a small altar-like structure'. There is therefore an underlying mystery about who the owners of the exotic seals and tombs from both places were, since they were probably not local Minoans. The point is, was it this kind of immigrant who brought in long-established oriental astronomical know-how to Crete and Mycenae – allied to the practice of using small islands with wide sea horizons as observatories, to be usefully blended with European traditions using mountain peaks and valleys?

We are now in a position to move on to the next steps in calculation that make it possible to measure the Sun's Precession.

INTERPLANETARY CROSS-CHECKING

Clearly the long-established ancient near eastern observatory-temples would over millennia have arrived at the greatest possible precision permitted by naked-eye observation to determine the vaster precessional turning points which occur so rarely - and it is the intermediate large and small cycles of the other planets that would have provided intermediate checks on inter-generational calculation and record-keeping to consolidate the mapping of intermediate stages building up to those turning points – very much the kind of established information accumulated over centuries that would have given the Mycenaeans a jump start. The faster, shorter cycles of Moon and Mercury would, as it were, act as second-hands to the slower hour hands of the outer planets such as Mars, Jupiter and Saturn against the backcloth of the constant sky-settings provided by the Sirius/Venus interface just explained above.

²⁰⁸ Heimpel on Sin/the Moon in Sumerian as 'the king, the pure gondola that drifts in the sky' in *Dumu-E₂-Dub-Ba-A* p.250 (full reference in later footnote)

²⁰⁹ K Branigan 'Mochlos – An Early Aegean 'Gateway Community'? in R Laffineur et al. (eds) *Thalassa: L'Egée Préhistorique et La Mer (Aegeum 7)* Liège 1991 97-105

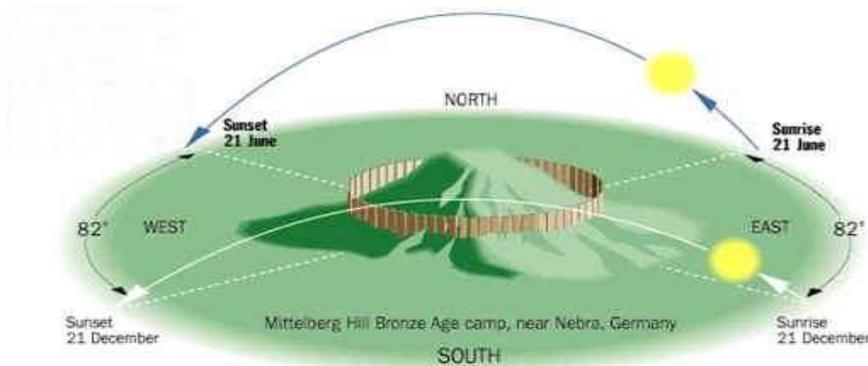
²¹⁰ Apart from the silver tube seal found by Seager, in recent re-excavations another near-eastern seal has been unearthed – J Soles *The Prepalatial Cemeteries at Mochlos and Gournia and the house tombs of Bronze Age Crete* Princeton 1992 – see also III.8-9, *Catalogue D*

MOON AND MERCURY SYNODIC CYCLES CROSS-REFERRED TO LONGER VENUS OR SIRIUS CYCLES

- Taking the cycle of the Moon as 29.2 days adds up to 1460 days over the 50 weeks of the Lunar Year, 1460/1461 being the number of days in a four-year cycle, including the Leap Year day. This total is the same as 5 x 292 Venus half-synodic periods = 1460 days. Thus tracking the Moon's behaviour over long periods helps to break down the vast precessional cycles into 'bite-size' pieces that, with the meticulous recording of the calibre maintained at Babylon, would over the generations have added up to the ability to gauge which stage the much longer precessional cycle had reached.
- The exactitude of a triple conjunction of Sun/Moon/Venus (to the day and hour) is increased over longer periods when the Metonic (just over 18 Solar years) and Saros cycles (just under 19 years) of the Moon are taken into account: a 47-year period allows a closer dovetailing of Venus/Moon/Sun arriving back together against the same star to less than a day.
- This 47-year period ties in almost exactly with Mercury's great return cycle of 46 years once every generation (a single Mercury synodic period is 116 days, such that 5 x 116 = 580 days, only 4 days short of the Venus synodic period length).
- The Moon's Saros period of 19 years (the repeat cycle for eclipses) fits into the Sirius cycle of 1460 years 71 times, a way of measuring small intermediate steps in the Sun's Precession through the Zodiac in 1° intervals. 71/72 years happens also to be the number of years it takes Saturn to come back to its original starting point in the Zodiac.

THE NEBRA SKY DISC, THE SOSTITIAL ARC AND THE MULTIPLE 39

Do we have any idea at all that such interplanetary cross-checking would have been within the capability of the Mycenaean as well? All we can say – in the light of Crowhurst *ibid.*'s recent interpretation of the Nebra 'planisphere' (*III.9- 78* above) - is that it was within the scope of the Nebra Sky Disc owner - living some 250 years before the Lord of Vapheio – to use it in this way. It was found on a body also flanked by bronze swords, axes, a chisel, 2 armlets and 2 rings. Recent analyses show the copper in the bronze is locally German, but the tin component – as also the gold for the decoration – came from Cornwall²¹¹. It is not a



III.9- 82: Diagrammatic view of the hill on which the Nebra disc was found, with alignments for the solstitial extremes.

strictly a planisphere because it is not a sky map, though several of the 32 dots on it run in straight lines, suggesting mnemonic alignments of some kind. Underneath the crescent moon and sun disc is a semi-circular section often called 'the Sun-Ship' (c.f. the seals in *III. 9-80*). The cluster of seven stars *may* be the Pleiades (Crowhurst makes much of it) but, as just mentioned, there are other possibilities. On the 'western' and 'eastern' edges of the disc, and added later, are two gold arcs framing the sun and moon shapes symmetrically that appear to mark the extent of the solstitial arcs (shown diagrammatically in the illustration repeated from **Chapter 19**, above). The warrior/astronomer-king with the disc on his chest was buried at the top of Mittelberg Hill, which had a panoramic view with alignments towards key mountains in the Harz area such as Brocken and Wurmberg - and the Kalte Bode valley, much as the Vapheio astronomer-king's tomb connected to four other observational points around it.

The 39 holes punched all the way round we come back to shortly, but first let us look at a parallel site to milk more clues.

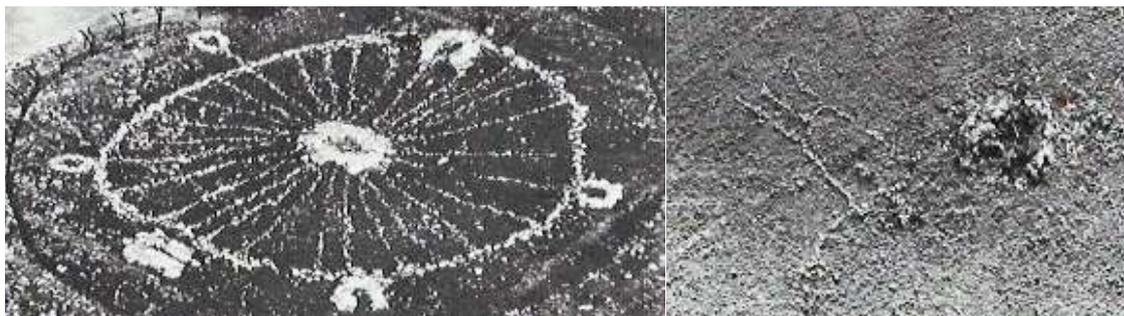
²¹¹ The well-known passage from Diodoros Siculus describing relations between Greeks and Britons is quoted in full (in Crowhurst 's translation) in DIVERSION 8.

PARALLELS WITH THE BIGHORN MEDICINE WHEEL

The Bears also feature in Native American/Canadian archaeoastronomy for tribes such as the Crow, Sioux and Cheyenne, and it is worth quoting Eddy²¹²'s study – carried out in a decade when the discipline of archaeoastronomy was in its infancy – because it shows from an example tested on a particular site that speculation on how the Minoans, Mycenaean and Mitanni might have approached observation (in their case using mountain peaks, specially angled walls²¹³ or expanses of flat, reflective water) is not at all fanciful and really very simple – relevant here since the Sun River Wheel in Montana (the simpler prototype behind the Bighorn Medicine Wheel, featuring the same six cairns in the same alignments) is carbon-dated back to c.2000BC, so that we are comparing across closely similar latitudes and chronology (and true also for Stonehenge).

Eddy visited the Bighorn Medicine Wheel in Wyoming (about 100 miles east of Yellowstone Park) at the Summer Solstice (the time when the Red Indian Sun Dance is performed), situated 10,000 feet up at the edge of a precipice on the summit of one of the Bighorn mountains, only accessible for a few weeks every summer). It is laid out in a simple variation on the European stone circles (photo below left) with a diameter of 90 feet and 28 spokes marked out by lines of white pebbles. Eddy wanted to find out whether the positioning of the semicircular cairns made of large white stones were significant, and we quote his account in full:

Several years ago ... in late June, just before the solstice, we tried to go to the medicine wheel to watch the sunrise. We failed, for the road was blocked several miles below Medicine Mountain by heavy snow that had fallen the night before. If this was typical of Junes in the past, it seemed unlikely that any Indian would have used the wheel to mark the summer solstice. However, snow comes and goes rapidly in the mountains, and the very next day, on June 20, we



III.9- 83: (Left) The Bighorn Medicine Wheel – Eddy fig. 3; (right) Alberta Plains Indian figure of man and dog – Eddy fig. 1

were able to reach the site. We found the wheel free of snow ... The whisking action of mountaintop winds may have been a reason why the wheel was built there, and in any case the cairns would have poked through any moderate layer of snow. Our effort to find associations between the sun and the medicine wheel proved to be successful; for standing at the rather distinctive cairn that lies outside the ring, and sighting from its center through the center of the hub-like cairn, as best I could fix those points, I found that I was looking at the distinctive point on the horizon where the sun rises on the morning of the summer solstice – the point where the sun rises farthest north of east in the course of a year. This was confirmed by transit measurements and by observation of the sunrise in subsequent years. I also found that when I stood at a second cairn and sighted across the central hub, I saw the point where the sun sets on the same day. Thus, if the builders of the wheel wanted to mark this distinctive day of the year, they had built in a second way to do so: if the dawn were cloudy they could use the sunset. For on the day of the summer solstice the sun sets farthest north of west.

I think it unlikely that the solar alignments involving three cairns of the Bighorn medicine wheel were accidental. However, they leave a number of other cairns to be explained. Were they also astronomical markers? One must be

²¹² J A Eddy 'Medicine Wheels and Plains Indian Astronomy' in K Brecher et al.(eds) *Astronomy of the Ancients* Cambridge Mass & London 1979 1-24

²¹³ M Blomberg and G Henriksson 'Evidence for Minoan Astronomical Observations from the Peak Sanctuaries on Petsophas and Traostalos' *Opuscula Atheniensia XXI:6* 1996 99-114 (see their fig. 1 for their diagram of the specially angled series of walls at Petsosphas - used for observational purposes).

very careful in trying to establish this, for there are many objects in the sky. Given, therefore, a small number of cairns but a great number of stars and planets, not to mention the varying positions of the moon and sun, one is fairly likely to come up with something. I first made calculations to see if the sunrise at winter solstice was marked. It was not, which is not surprising because the site is accessible only in late spring and early summer. I also checked for markings of the moon's wanderings. They, too, were absent. I then began to look for markings of the stars.

... I found that one of the brightest stars in the sky rises roughly in line with two of the non-solar cairns of the Bighorn wheel. It is Aldebaran, the brightest star in the constellation Taurus. And from one of the cairns used to observe Aldebaran, two other cairns line up with two other very bright stars. One is Rigel, the brightest star in Orion. The other is Sirius, the brightest star in the sky. Now all these stars are situated in the area of the sky in which the sun spends midsummer. It follows that all of them will rise near dawn at the time of the summer solstice; and accordingly it seems reasonable that they might have been noted or used by people who were watching for a summer dawn on top of Medicine Mountain. Moreover, the heliacal rising of one of them, Aldebaran, turns out to be exactly right to mark the summer solstice at the time the wheel was built – determined by archaeologists to be 200 to 400 years ago. It is the only star in the sky that could have served this purpose.



III.9- 84: Central field of the Duat, here bringing in Auriga and Perseus above – of the bright stars mentioned, only Arcturus and Scorpio are off-field.

How would the sky have looked if you had stood at the top of Medicine Mountain before dawn on the day of summer solstice several centuries ago? About an hour before dawn, Aldebaran would rise. The pre-dawn sky would already be blue, and all the dim stars would be gone. Indeed, the coming sun would be brightening the sky so rapidly that on this particular day Aldebaran would flash out like a beacon near the horizon, lasting only a matter of minutes before disappearing in the redawn glare. That phenomenon would make this day a distinctive one, for on the previous day Aldebaran would not have been seen at all (the sun's light would have masked it) and on the day after it would have persisted far longer. In short, watching for Aldebaran's flash at dawn would have given a precise indication of the solstice, accurate to within a day or two.

And after that? Each morning after the summer solstice Aldebaran would climb farther into the sky before the light of dawn would extinguish it. At dawn 28 days after solstice the bright star Rigel would appear, as Aldebaran had done,

but above a second line of cairns. It is interesting that there are 28 spokes in the medicine wheel, but one cannot know whether this connection is fortuitous.

Rigel, like Aldebaran before it, would flash briefly juust above the horizon on the first day of its appearance, and on subsequent days would rise higher into the sky before extinction by the light of the morning sun. Twenty-eight days after Rigel's first appearance, Sirius would rise above the third of the cairn alignments that I was able to find. Sirius, too, would flash briefly on the first day of its appearance.

The overall idea, then, is as follows: Aldebaran's brief flashing in the sky – that is, its heliacal rising – would warn you that the day of summer solstice had arrived. An hour later, the location of the sunrise itself would confirm this. So would the sunset that night. One month later, Rigel would appear in the morning sky; and one month after that, Sirius. These latter events may simply have marked off the time during which the mountain could be occupied. The rising of Sirius would have been a good sign to leave Medicine Mountain because winter was coming.

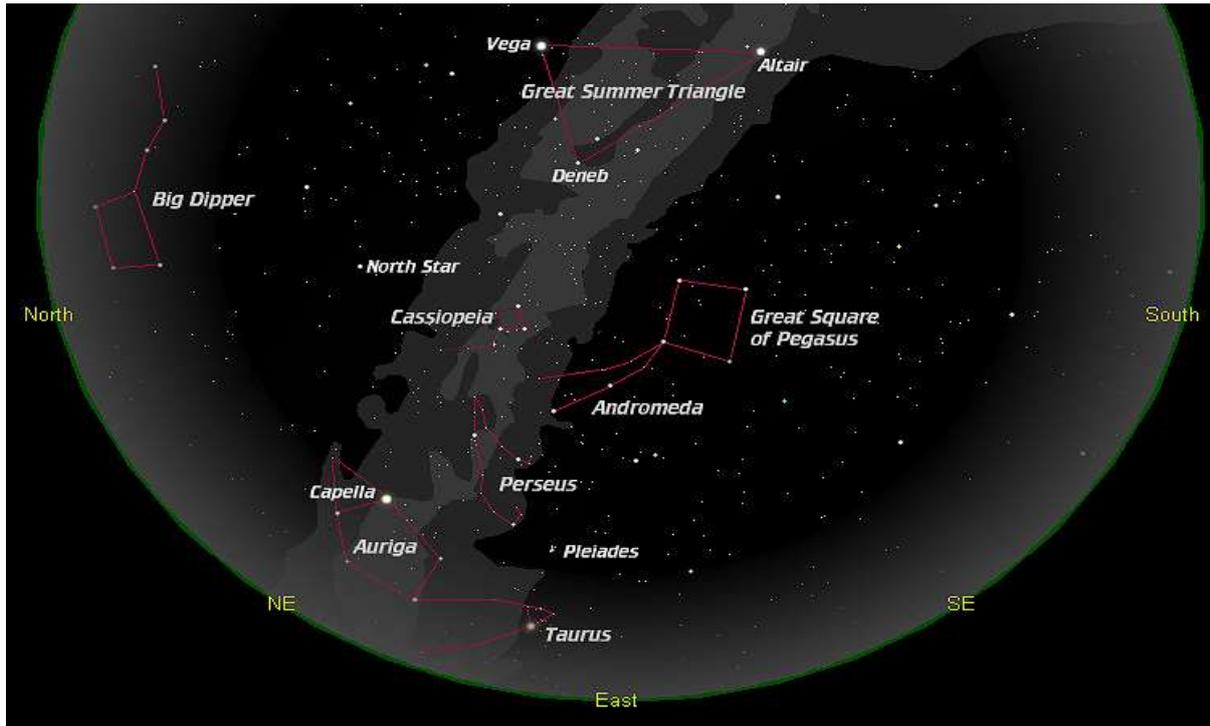
It is not surprising to learn that the three star alignments Eddy pinpointed were also prominent in our discussion of the *Duat*. Looking back to the Nebra Disc, and at the several groups of 3 or 4 dots that seem to form straight lines, their purpose - in relation to the positioning of the solstitial arcs on either side –seems to be the same: it would need experimentation from Nebra itself to check this out. Eddy photographed single sighting cairns at other sites, some emphasized by surrounding animal outlines – out of which a handful shows the outline of a man with outstretched arms (photo above right), often with a dog nearby – clearly a pointer to the viewing function of that particular cairn.

THE BRIGHTEST STARS IN THE SKY

Obviously the brightest stars in the sky provide the clearest guides to orientation (see next star map) and Brecher *ibid.* (in the same collection of papers as Eddy's) in his discussion of Sirius groups this brightest of all stars along with five others as being the ones described in the ancient texts - not only bright, but tinged red:

ALDEBARAN, BETELGEUSE in Orion (rather than Rigel), **ANTARES** in Scorpio, **ARCTURUS, POLLUX** in Gemini – and **SIRIUS**.

Clearly it is not without reason that the area with this concentration of brightest stars should have been locked onto as the central focus of the calendar and the afterlife journey – with only Antares at 180° exactly opposite on the other side of the sky, possibly a reason why it features so often on seals and reliefs (*III.9- 63*) as counterweight to the *Duat*. With the 2M Near Eastern Vernal Point shift into Aries, one more very bright star came back into prominence high above the *Duat* cluster – Capella in Auriga – which lorded it over even the Perseid showers of Perseus' sword and the four strong stars of the Head of the Medusa which we consider in detail shortly in relation to the Perati Seal (*ForAtt-25*). These are the stars that by the beginning of the First Millennium were being strung together for mnemonic reasons into a new mythology. After considering connections between Hephaistos and the constellation of Perseus, and the head of the Medusa with Pallas Athena and the Octaëteris, there



III.9- 85: View of the stars above Taurus and Aries (the latter not labelled on this map) – gaining new prominence in the Age of Aries. Note the inclusion of the trio of parnatellonta above them in turn that skirt the Circumpolar Region and form the present-day ‘Summer Triangle’: Vega in Lyra, Deneb in Cygnus and Altair in Aquila - accounting for emphasis on further new images in star iconography of Lyre, Swan and Eagle

is a great deal to say about Capella and the choice of the Chariot/Auriga as the prime northerly parnatellon for Aries in the new Age of Aries, but this needs to wait until we have dealt with our DIVERSION ON HORSES AND CHARIOTS.

Having looked at the orientations towards bright stars that may be represented by the Nebra disc lines there is one more issue.

INTERPLANETARY CROSS-CHECKING, THE 39 NEBRA HOLES AND THE 1320 SOTHIC PERIOD

Can we go so far as to say that the eclipse that took place in the Trojan War - at just the time the canonical Duat layout became briefly evident even during daytime – also constituted an overwhelmingly powerful omen of the dawn of the 1320 Sothic Era? Though the most plausible dating for the eclipse calculated by Papamarinopoulos is 1218, Henriksson’s date of 1312, when we ‘do the math’ is only one octaëteris on from the start of the new Sothic Period in 1320, temptingly plausible and poetically appealing. We have to wonder whether Homer himself was aware of this Sothic turning point – and whether his repeated choice



III.9- 86: The Nebra disc before restoration, predating the Antikythera Mechanism (right) by over 1000 years – Athens Museum

of the same star description (in both *Iliad* and *Odyssey*) celebrating that momentous benchmark means the conflict with the Trojans amounted to a calendar battle with the Hittite-controlled world, won in the end by the Greeks because they were open to change and the international cooperation needed to coordinate up-to-date measurements of the skies into a tighter, more interconnected astronomical methodology of checks and balances provided by studying different planetary cycles against Solar Precession itself. By the time of Archimedes such an exercise had been systematised into the interlocking gears of the Antikythera Mechanism (above - to be discussed in **Chapter 20**). Our biggest clue as to whether this approach could already have started to operate comes from Crowhurst *ibid.*, who ingeniously suggests the 39 holes round the circumference of the Nebra Disc could well have functioned as a multi-purpose parapegma, or 'proto-Antikythera Mechanism'²¹⁴ if pegs used as counters were moved from hole to hole, given that:

- ◆ Mars' grand synodic cycle is 779,9643 days, whereby every 780 days (**20 x 39**) Mars returns to the same position in relation to the Sun (I am not going to confuse this outline by the intermediate calculations he gives, showing 'an astounding connection between the Nebra sky disc and the ancient Mayan calendar');
- ◆ Venus' synodic cycle is just under 584 days, and 585 days is **15 x 39** – enabling prediction of Venus-Mars conjunctions;
- ◆ Mercury's synodic cycle is just under 116 days (**3 x 39** is 117 days - perhaps accounting for his title, *Trismegistus*);
- ◆ **39 weeks of 7 days = 273 days**, which 'corresponds to 10 lunar rotations, corresponding to the 9 months of gestation – 273 being 'the most important whole number which links the Sun and the Moon';
- ◆ Finally, many stars or planets have a 'disappearance phase' of 40 days (or **39 + 1** day) when they are last seen at night and then forty days later for the first time at dawn.

The Nebra Sky Disc could have been used to log all these aspects of interplanetary coordination that in turn could be used to build up an accurate picture of what stage both Sothic precession *and* Solar precession would have reached - as long as the starting points from which they were measured had been divulged by older civilisations (including Neolithic Brittany/Britain).

Due to the contemporaneity of the Vapheio astronomical clues with the slightly earlier Nebra chieftain's grave and the coincidence of possible sources for the former's necklace stones from roughly the same area in Germany we do not think it far-fetched to suggest the two were linked to similar activity, especially since recent analysis by the Museum of Prehistory in Halle holding the Nebra Disc has shown the copper for the bronze of the disc as local, but that the tin *and* gold came from Cornwall.



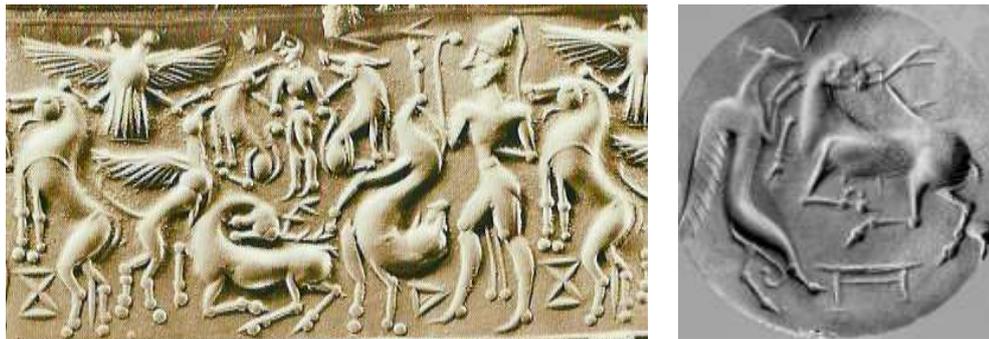
III.9- 87 Photo of the actual Duat zone centred on Sirius-Orion (his belt, bow and arrow all clearly seen), surrounded by Gemini and Auriga in the Milky Way and looking up towards Perseus, the Pleiades and Taurus – taken by Robert Bauval

²¹⁴ (Functioning much like the 56 Aubrey Holes at Stonehenge.)

THE PHOENIX/GRIFFIN AS SYMBOL OF THE SOTHIC PERIOD

There is no reason why Mycenaean priest-kings and their officials should not have been aware of these computational factors and be drawn in to contribute in some way towards collecting data to amplify the activities of temple observatories in other kingdoms – especially Mitanni-controlled Syria. The fact that in the two instances described in the *Iliad* the keynote heavenly bodies mentioned are precisely those emphasised in Egyptian eschatological astronomy is evidence in itself that at the highest level the astronomer-warriors of the Mycenaean world, directly or via the Levant, were in synchronisation with their opposite numbers at the Pharaonic court (the Egyptian myth concerning the rebirth of the Phoenix as symbolising both the renewal of the Sothic Period *and/or* of the Sun's Precessional journey, occurring at the crossover zone of the Duat star corridor, is well enough known not to need repeating).

Though we gain no inkling from the sparse texts whether the Mitanni knew about the Sothic Period, we do have one line of thought worth entertaining seriously, to do with the nature of the griffin. It is known on seals from Susa/Elam even in the Fourth Millennium – but then disappears. In the 2M it reappears with lion body, wings and peacock head on Mitanni seals, and also on Minoan and Mycenaean seals (one from Thebes, *III.8-42*). The peacock is an Indian bird and we have no doubt this updated version of the hybrid is another BIVISUAL reintroduced under Central Asian influence²¹⁵ (discussed more fully later). Repeated below are the Griffin *Forward Attacks* on the Erlenmeyer seal and one of the Mycenaean seals²¹⁶ using the same variation from Rhodes (*CMS IX-D020*). We can claim these particularly refer - not to the Start of the New Year - but to the Start of the New



Sothic Period, and because this creature embodies to the Phoenix – or Sothic Period – along with the plain lion version it became a symbol of rulership (see the wall-painting fragment below from Mycenae showing a griffin held by a warrior with boar's tusk helmet). Considering the increased interaction between kingdoms of the time well into the second half of the Second



Millennium, the Mycenaean surely couldn't *not* have been drawn in to the new stellar priorities now emerging as marking what later came to be called the Age of Aries – clues to which also emerge through the links we next describe between the developing Perseus myth of the time and the *Iliad* account of Achilles Shield that dovetails with actual the astronomical realities

²¹⁵ My hunch was confirmed on reading B Brentjes' paper for the Dushanbe Conference of 1977 on 'The Mittanians and the Peacock'. Other papers from the conference are cited and the main (rather long) publication reference given in the end section of this Catalogue.
²¹⁶ One aspect of this and related seals Joan Aruz does not get to analyse – as in her 'Intercultural Styles, Animal Combats, and the Art of Exchange' in W Müller (ed.) *Die Bedeutung der Minoischen und Mykenischen Glyptik [CMS Beiheft 8]* Mainz-am-Rhein c.2010 73-82, fig.10

represented by Athena and Hephaistos. We can get closer to explaining these issues by moving on now to a full iconographical analysis of **ForAtt-25** with its rather different astronomical implications that in turn will require one more DIVERSION!

FORATT-25: THE HEAD OF THE MEDUSA (AL-GOL) - A CLUE IN THE PERATI SEAL TO THE NEW SKY ORDER

The only tholos tomb at the Perati site stands out as the most important burial partly because, despite looting, enough valuable objects (including the seal of **ForAtt-25**) remained to suggest the original wealth and status of its owners. Referring back to the DIVERSION on Mycenaean access to metal ores, given early appearance of iron heralds the beginning of the end of the Bronze Age, the iron knife found amongst remaining grave goods is telling in hinting at one entry point for Greece for its initial take-up, most likely coming from Central Asia or the Indus relayed via the Mitanni long before the Iron Age proper began with home production. Homer (*Iliad XXIII*) specifically mentions a number of animals sacrificed at Patroclus' funeral using an iron knife - and prizes at the funeral games afterwards included 'a lump of pig-iron' and "violet-coloured iron in the form of ten double-headed and ten single-headed axes'. The iron dagger found in Tutankhamun's tomb – probably also a Mitanni gift - takes us back to at least 1380, if not before (note in **Catalogue D** the number of items amongst his grave goods we cited that feature the Griffin - for just the right date!).

THE BURIAL AT PERATI: PARALLELS WITH THE ILIAD'S DESCRIPTION OF PATROCLUS' FUNERAL

Of relevance to the last DIVERSION, as mentioned earlier the actual 'burial' in the tholos consisted of the burnt bones of a full dog skeleton along with three cremated humans – the juxtaposition is therefore of cultural significance²¹⁷. Interestingly, with the coast of Asia Minor within sailing distance this is the only dog with warrior burial that exactly accords with the account in the *Iliad* of Patroclus' cremation with his warrior possessions (an Anatolian custom²¹⁸) and two favourite dogs out of the nine he owned. After laying his own long lock on the body of his friend as already described, Achilles then vows to cut off all his hair as a gesture of mourning and in the procession taking Patroclus' body to the oak-log pyre he was carried by his own men, who had



III.9- 88: The Perati seal (ForAtt-25) – here, our emphasis is on the vertical stack of Star, Venus Flower and floating head

covered his body with the locks of hair they had cut off and cast upon it. The flames of the pyre start to subside at dawn as the Morning Star [Venus or Sirius] rises and the assembled warriors douse the final glowing cinders with wine poured from their wine cups (another item accompanying most top warrior burials). Homer writes that the remaining bones are put in a pithos to be taken home to Greece (interestingly, Neimeier (*ibid.*) reports on a pithos burial with bones from the corresponding level at Miletus). If Sirius rising is being referred to, we have already looked at the relevant star map of the *Duat* constellations and discussed Sirius as marker for the soul journey Patroclus is about to take; and if it is Venus being referred to, apart from its computational synergies with Sirius, we also remember that in Mesopotamian custom Ishtar rising in the morning is a bearded

²¹⁷ Hamilakis *ibid.*

²¹⁸ Mylonas²¹⁸ arrived at the conclusion that cremation was the favoured option for Greeks abroad only – and that in the homeland burial was always the choice – until the Sub-Mycenaean period when cremation came into fashion even on the mainland.

warrior goddess (with implications for our discussion of Athena and the Gorgon, shortly). We mentioned in our DOGS DIVERSION how contemporary sources refer to marked changes in wind direction and intensity during the period of the rising of Sirius (Laoupi *ibid.*) which bears reiteration here not just because of their impact on sea navigation (bearing in mind Perati was an international port just like Mochlos and Platanos) but also the fact that Sirius could actually be represented on the Perati seal as six-pointed star.

The Sun had entered the new Sign of Aries at the start of the 2M, and a new Sothic Period began near its end, in 1320. The full implications of the new Age of Aries would only really begin to register some 200 years into the millennium – from around 1800BC, whilst anticipatory observation of the planets and stars in preparation for the new Sothic Period could have begun from around 1500BC. This time round, on Seal A1 from Perati Tomb 1 (reillustrated above with a different photo, still less clear than ideal) we are looking out for any astronomical clues in the subject-matter not noticed before. As just suggested for the seals found at Mochlos and Platanos, the fact this is a foreign seal found on the Euboean Greek mainland - Mitanni in style with pictorial innovations updating traditional astronomical iconography - is again surely proof of some kind of interaction between the Mycenaean and Mitanni worlds. Why should the owner of the seal not have been a near-eastern coloniser coming to Perati - in the same way Motya was visited by other Levantines (and Mycenaean) – not only to provide ‘technology transfer’ in demonstrating the more accurate Vernal Point, but possibly even to request local cross-checking of planetary movement?

ASTRONOMICAL ANALYSIS

In the DIVERSION on the MITANNI STYLE we hinted at the idea that the ‘heraldic unit’ consisting of the Baal-type helmeted bull-men holding up the winged disc emphasises more strongly than usual the bilateral positioning of the constellations of the Greater and Lesser Bears either side of the Axis of the World marking the Polar Centre at the top. Such a symmetrical arrangement was already common in Sumerian art, though used in less rigid terms (as in the examples under **ForAtt-4**). As a case of a culture newly establishing itself, the Mitanni artists on the cylinder seals spelled out in full the seasonal implications of the traditional lion-prey – or man-lion - groups juxtaposed with such heraldic units, leaving no room for doubt that – as in the case of the Perati Seal - with the lion-prey group announcing the New Year season between Winter Solstice and Spring Equinox, the heraldic unit adds to it the over-arching setting of the sky’s space, its polar anchors and solar colures of Annual Time. The four man-lion groups on the Shaushtatar seal - or of the four lion-prey attacks on the Membij seal (both **III.9-65**) have a similar purpose - where instead of one group there are four - each explicitly representing a Year Quarter. On the Perati seal the heraldic block is set alongside a winged figure, standing Egyptian fashion with front-view torso and side-view legs and face, bridging the confronted lion and bull. He holds up the two conquered Anzu demons as if indicating control gained, not simply over the Winds they might represent, but also over the dangerous intercalation gap (an implication of the lion-bull *symplegma* discussed under **L** in the **Catalogue B Iconography Section**) caused by the shortfall between Solar and Lunar Years, made increasingly demonic (because chaotic) due to the shifting Vernal Point. The seal implies the bridging of the intercalary gap now nudged forward to a lock-on with the new Vernal Point in Aries, itself secured by a chain of observational foci that have to move on from the former Ursa Major –v- Orion line – and alluded to, I believe, by the vertical stack of symbols in front of the figure holding the Anzu demons on the *Forward Attack*, consisting of:

- ★ a six-pointed star which could represent any star, or Sirius in particular (note a recent photo of Sirius below which refracts as six-pointed) – if so, it signals interest in Sirius (if not the Sothic Perod as such);
- ★ the eight-petalled flower of Venus (Her perennial harmonic cycle and synodic computational role unchanged) – and
- ★ the Gorgon’s head/*AI-Gol* in *Perseus*, signal of the adoption of one of two new stellar signposts marking the Age of Aries Vernal Point (the stars against which the Sun rises at the Sprinx Equinox) – this is the new factor we are looking out for, and to which we must devote considerable attention in the coming paragraphs.

From the second half of the Second Millennium a disembodied head appears on Mitanni seals (including Nuzi seals) – as well as on several Syrian seals of less markedly Mitanni character, denoting a shared perspective. It appears the front-facing, floating head was originally a Central Asian feature, bound up with the ‘fixing’ of a conjunction event such as the New Year start (we encountered it on the verso of the last seal under **ForAtt-22** linking the two lions of Yesterday and Tomorrow, matched in **III. 9-33** with the Mycenaean use of one lion head on two bodies on seals). Why the head of the Medusa was associated with the constellation of Perseus (the early 19C engraving below illustrates most of the components of the constellation, though here lacking the shield above it) not only requires a re-reading of the myth, but also some detective work into why the head should be framed by snakes, and why it should then end up on the aegis worn by Athena. One thing is certain, the Gorgon head, though much higher in the sky, acquired the same baleful associations as Sirius (perhaps because the brightest star in the Head of the Medusa - Al-Gol²¹⁹ itself - is also a self-occluding binary. It thus loses brightness when its twin is occulted, making it seem as if it is winking, increasing the sensation that it is both looking – and seeing). For fully developed representations of the Medusa



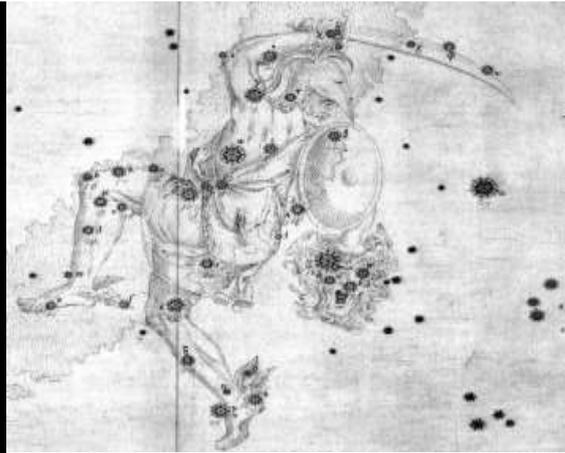
III.9- 89: (Left) typical Medusa head, this one on the aegis of Athena on the Temple of Apollo, Eretria; ; (right) hand-coloured engraving of Perseus holding the Head of Medusa from *URANIA'S MIRROR* c1820

Head we must jump forward to the First Millennium, from the Greek Archaic Period onwards (a typical example illustrated above top), a period by which it was a widespread motif in Greek art - but there is no doubt its origins can be traced to Mitanno-Mycenaean roots, deducible from its initial, downplayed appearance as a floating head on their seals – and also from myth.

Lettvin²²⁰ in a remarkably astute paper on the Gorgon (in the same collection of contributions as Eddy and Brecher) takes his reader through the salient points of the myth of Perseus, Son of Zeus as Golden Shower - and Danaë. To duck a prophecy foretelling his death by his grandson, Danaë's father, King Acrisius of Argos, sets mother and child adrift in a boat, whence they are washed up on the Attic island of Serifos (the next island but one south of Kea). They gain asylum in the Temple of Athena where he is educated by the priests. To be free to make advances on Perseus' mother, the local king Polydectes has a vested interest in getting rid of him so when Perseus is unable to bring a horse for his birthday present, gladly agrees to the youth going off to get the head of the Medusa for him with its famed power to change all it looks at into stone. At night Perseus visits the temple of Pallas Athena to seek the Gods' blessing – and receives several gifts to aid him in his venture: 'Hades gives him a helmet of invisibility... Hermes the famous winged sandals and also a sword made of diamonds [here I suspect Hermes is spliced with the role of Hephaistos, and that it was actually the latter God's gift – we understand why shortly]; Pallas Athena gives him her shield, polished to mirror brightness [hence the link between Athena and Hephaistos **III.9- 79**]. He also receives a magic wallet, or *kibisis*, which can completely engulf whatever is put in it, however large, and yet not itself increase in size'.

²¹⁹ Note the etymology of J C Greenfield's title, 'Nergol dḥšpṭ' *Acta Iranica XII* 135-43 (on Nergal as executioner, torturer and guard of the Underworld which thus somehow links Al-Gol to Nergal (whose more unpleasant aspects were brought out on the Hatra relief – **III.9-61** above).

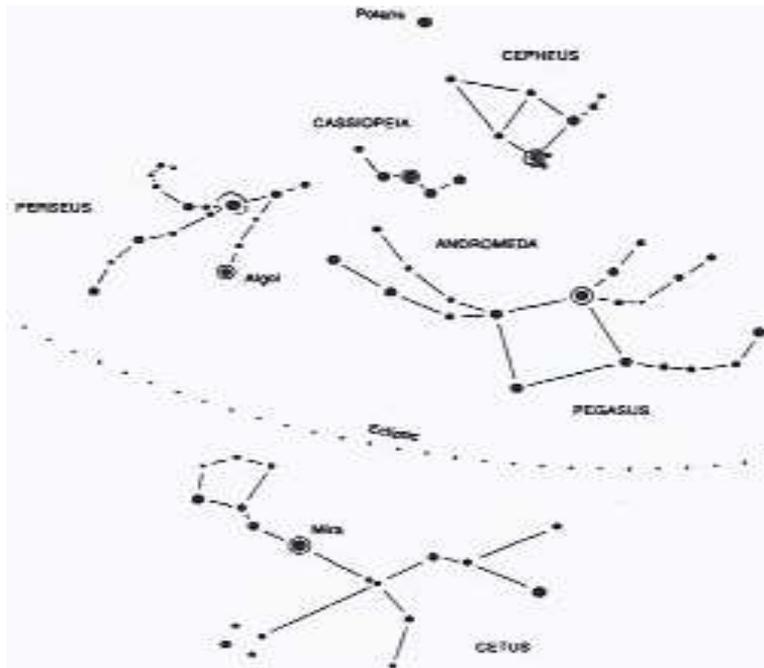
²²⁰ J Y Lettvin 'The Gorgon's Eye' in K Brecher et al.(eds) *Astronomy of the Ancients* Cambridge Mass & London 1979 133-151



III.9- 90: (Left) The main stars of Perseus with four of its brightest stars after Mirfak making up the head of the Gorgon, here separately named with Al-Gol as 'Gorgon 2,3 & 4'; (top right) engraving of the Perseus constellation emphasizing his turning away from the Gorgon's stare, his shield imagined as blocking/reflecting the stars in the Head of the Medusa - as engraved for Johannes Bayer's URANOMETRIA of 1603); (lower right) photo of Sirius – Brecher fig. 3 – compare with the 6-pointed star on the Perati seal

THE STARS MAKING UP PERSEUS AND THE GORGON

Above left the four stars making up the head of the Gorgon are separately named as Al-Gol, and Gorgonea 2/3/4 – indeed, four stars are clearly marked in all renditions of Perseus in the later star maps, Al-Gol being by far the strongest. There is no doubt that, aside from bright Mirfak in Perseus itself, these four stars together are the main focus of the constellation. Wilk²²¹ in one of his chapters studies these stars and the surrounding constellations that play a role in the Perseus myth (a story with several distinct phases to it, with several successive important variations). He comes up with the intriguing observation that, apart from Andromeda, each one contains a variable star whose fluctuations are visible to the naked eye (see his fig. 7.1 below, slightly enhanced since some of the circled dots smudged into solid ones in the original). He looks in detail at how the stars as



III.9- 91: Outlines of the Perseus myth star group (Aries itself is thus not shown): Perseus, Gorgon, Cepheus (a.k.a. Taweret), Cassiopeia, Pegasus and Cetus each possess a variable star (the circled dots) which appear to blink over shorter or longer phases

²²¹ S R Wilk *Medusa: Solving the Mystery of the Gorgon* Oxford 2000

mythological characters are brought into stages of the story in different guises, making the overall point that 'there are thirteen naked-eye variable stars in the sky visible from the latitude of Greece: Six of them appear in constellations associated with the myth of Perseus... Other naked-eye variable stars are in constellations too far away to be considered part of the pack – Eta Aquilae, Chi Cygni, and Betelgeuse in Orion are just too distant [actually the first two of these are in the three small, bright constellations making up the Summer Triangle pointed out earlier, a distinctive trio skirting the Circumpolar Region as paranatellonta to the Perseus Constellations – see III.9- 85]. Lambda Tauri is close enough, but its variation is only half a magnitude... and this may have kept it out of the club.' Overall, from the mythology Wilk comes to the conclusion that perverse events 'fit in well with the idea that the variable star was somehow malevolent, perhaps associated with the evil eye'. The Sirius A/B cycle takes 50/51 years so does not strictly count since there is no obvious blink effect, though when Sirius B is in front of Sirius A its radiance is radically dimmed. We have more to say about the 'blink' of the Head of the Medusa itself shortly, with its cycle of only 69 hours.

THE GORGON IMAGE AND ATHENA'S AEGIS AND HELMET

Strictly speaking, Medusa is one of three Gorgons, the only one who is mortal (perhaps dubbed so because Al-Gol fades where the others are constant). The early 17C engraving above right is accurate in showing Perseus with his shield, and body turned away from the Gorgon head he holds aloft. He approaches her by looking at her reflection in his shield (which may describe an actual observational method - whether the reflection is in water or on metal, though brightness is bedimmed in the process).

From telling detail in the original sources, the Medusa is described as

- ★ being able to change from black to white - and then back to black again, in a moment;
- ★ displaying what look like living snakes for hair;
- ★ her gaze turns living beings into stone;
- ★ added to the frontal gaze is the lion-like protruding tongue and fangs in order to look terrifying;
- ★ her cheeks are round and pronounced.



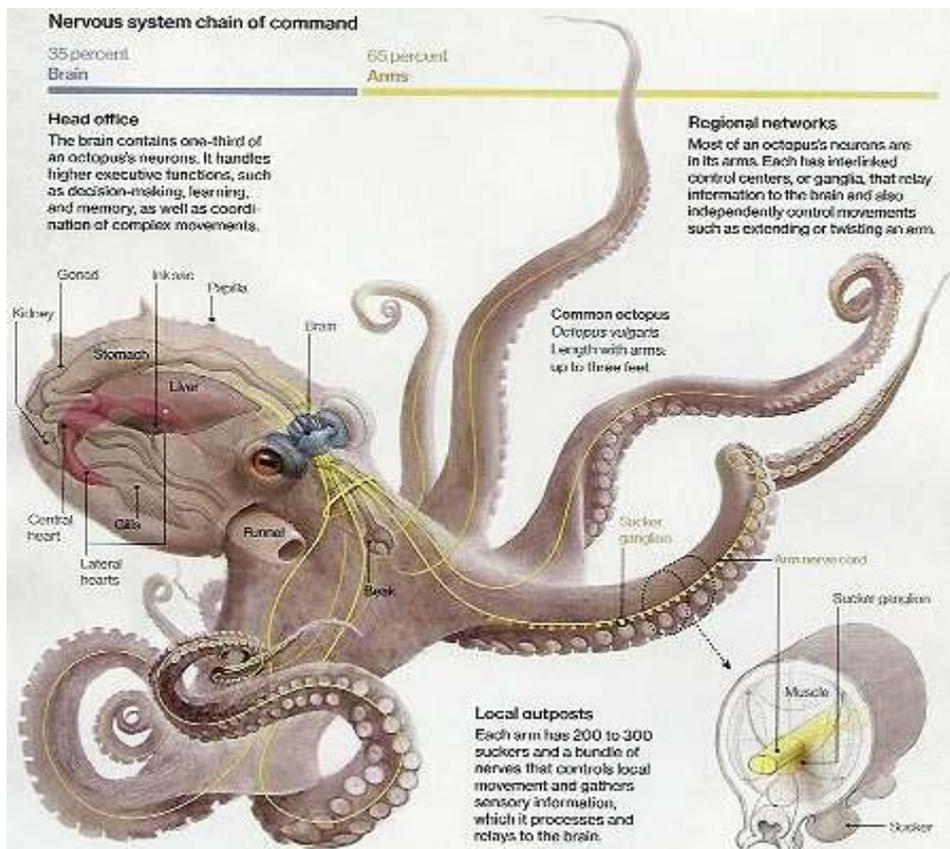
III.9- 92: (Left) Damaged Athena with aegis and Gorgon head from Ephesus; (top centre) Athena wearing aegis with painted fish scales– from the east pediment of the Old Parthenon, Akropolis Museum, Athens; (top right) Athena's aegis on a Black Figure vase; (lower centre and right) some views of the octopus show it to be an appropriate creature to symbolise the Octaëteris – note also the eyes which are as evolved as the human eye is, jelly-filled, with iris, retina and eyelids that on sliding open have a conscious stare.

The first two qualities are without doubt octopus descriptions (octopi change colour in fight or flight situations either to display aggression or gain camouflage, and the tentacles are like snakes). Lettvin makes the case - see his figs 2 & 3 - for why the

Gorgon's head should be linked to Athena and the octopus, though he does not draw the conclusion that it must in many contexts have been the obvious symbol for the *Octaëteris* in an Aegean setting - the perfect counterpart to the Mesopotamian spider for describing the 8-year interplay of the Venus-Earth Synodic cycle and the Zodiac's primitive 8-fold division. Altogether there are sufficient clues from which to confidently reassess her aegis as actually a flayed octopus mantle, and its snakey fringe as originally octopus tentacles – its first description in the *Iliad* calls it *her splendid cloak, the unfading, everlasting aegis, from which a hundred golden tassels flutter, all beautifully made, each worth a hundred head of cattle* (II, 447-8 - Rieu). In fact, Athena had her own, quite independent, free-standing snake (borrowed from Zeus), as shown in the famous chryselephantine statue in the Parthenon, now lost (for a Roman copy, see III.9- 166, where it comes into our overview of the Snake Lady).



III.9- 93: Coins of Corinth especially emphasise the octopus funnel or siphon (labelled in the next illustration) and main head-cum-stomach pouch of the octopus as forming Athena's helmet – note on the left the association of Athena with Pegasus on the verso Lettvin goes on to quite plausibly suggest the shape of Athena's helmet must be based on the octopus body, minus tentacles, with even the siphon (used for water jet propulsion - marked emerging under one eye in III.9- 94) playing its part as the nasal ridge protector (see especially the coin from Corinth above right). Even the eye openings on the helmet are positioned where the octopus eyes would be (octopus eyes are built like the human eye and their blinking plays a part in fights between them). The only hard part in the entire octopus is its ferocious beak, lying at the confluence of head and tentacles on the underside.



III.9- 94: Diagram of the common octopus, showing how guts and head are in one piece, its complex brain and nervous system setting it in the top range of clever creatures close to humans (note the siphon under the right eye) - from the National Geographic Magazine, November 2016

These characteristics Lettvin connects to the accounts of the three Gorgon sisters sharing one tooth and one eye between them (which Perseus steals) being focal points of the radiating tentacles like the central cairn on the Medicine Wheel.

The blinking effect of Al-Gol, referred to against **III.9- 900**, is caused by the circling of Al-Gol A/B/C rotating round each other with B in particular blotting out A for about 9½ hours every 3 days, causing Al-Gol A to dim considerably (almost as if dead) - such that the stare when it reilluminates for the other 60 hours can be associated with a similar riveting process observed of the octopus whose stare/blink causes small crabs to pretend to be dead so they are not noticed.



III.9- 95: Typical Medusa head on a Black Figure vase; (centre) effects of decomposition on a dead face after 48 hours – Wilk figs 10.1/2; (right) detail of Bes figure from a relief at Dendereh (note the same curls fringing the face as a beard)

Altogether Medusa's depiction on artefacts follows the descriptions given in the written sources just listed above: the protruding tongue, the frontal gaze with staring eyes with the power to hypnotise²²² and freeze (indeed kill) anything approaching it – plus the round cheeks which all add up to an apotropaic face engendering fear and matching the fateful nature of the stars themselves. Wilk in his thorough exploration of the Medusa compares the function of the standard scary face as used in Greek art (above left) with the figure of Bes in Egyptian art (above right). The round cheeks are clearly based on the exposed human bottom made into a horrid face, still bared today by football hooligans as the ultimate gesture of disrespect, but in folklore a last resort in keeping the devil at bay. In its overall 'look of death', Wilk makes a good point (above centre) by showing how a dead face after 48 hours' decomposition is bloated just like the Gorgon face, with swollen cheeks, protruding tongue and staring eyes.

RECALIBRATION OF ATHENA'S OCTAËTERIS

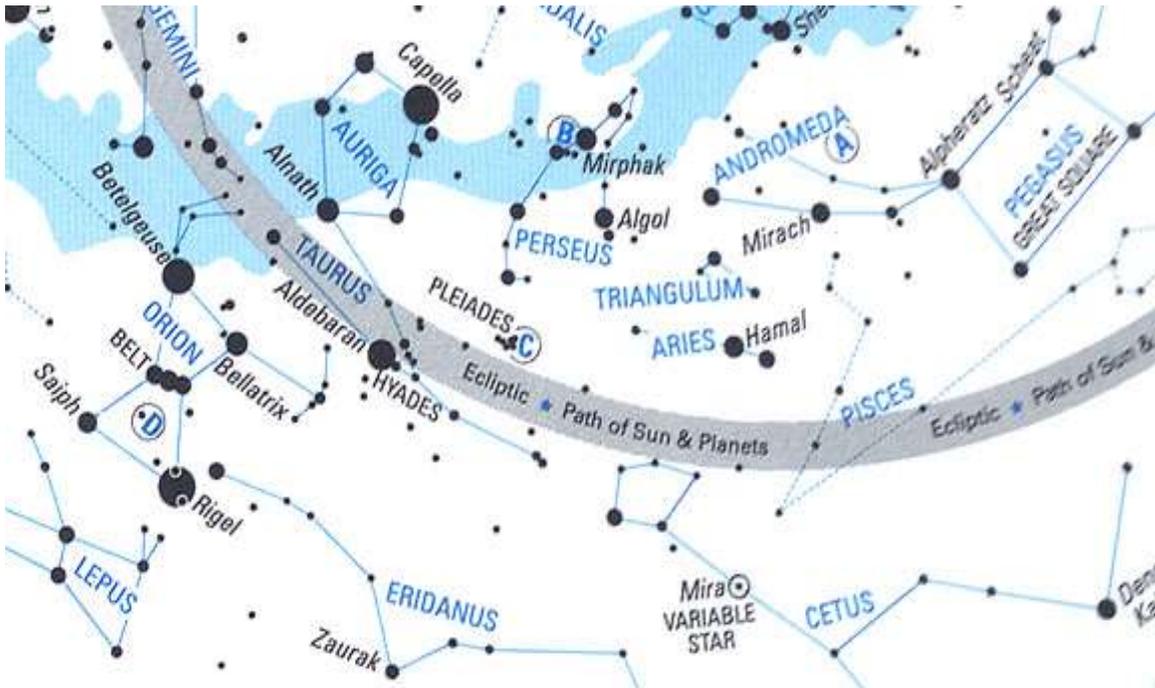
The Sun had at first only imperceptibly moved into Aries at the Spring Equinox at the start of the Second Millennium, and it probably took most of the millennium to realise a new pair of Signs (Aries-Libra) needed to be officially inserted. By the middle of the millennium all kingdoms running state calendars must have been brought up short by disjunctions between the events of nature and the stars they were usually correlated to, to see they had to 'take a grip' on new sky conditions now the Vernal Point was lining up with a meridian between Auriga and Perseus down to Hamal, brightest star of Aries, almost on the Ecliptic below. For a long time from force of habit the line-up between Perseus and the Pleiades would still have been resorted to, more obvious than Andromeda's arc over Hamal/Aries – indeed, a Zoroastrian-based tradition showing Perseus kneeling on the Bull and spearing its foreleg continued as a cult late on into Roman Mithraism²²³. Just as with the Horus figure on the Egyptian star ceilings who spears exactly the anchor point on *Mesketiu*, so the theme of the hero with the spear who arrests chaos by killing it with a precise thrust at the critical *point de repère* is a constant in all versions of the Perseus myth – since the issue was to secure accuracy. The 3-day blink of Al-Gol may even have been used in fine-detail timing: it remarkably perpetuates the perennial tradition of the death and resurrection cycle as a 3-day process in the mythopoeia of both Inanna and Christ.

So how is it that Athena was especially associated with the Medusa, wearing her flared mantle as Her aegis and the rest of her body as her helmet? Perseus was trained in a temple to Athena, we are told, on an island within the orbit of Attica, Her domain,

²²² According to Lettvin, other creatures credited with a fascinating stare in the ancient world include the snake, owl, basilisk, salamander – and the locust/grasshopper! All, he argues, are feminine, with movable eyes - and malignant if not fully associated with death.

²²³ This aspect of Perseus is traced in an early conference paper: http://www.layish.co.uk/astromical_iconography_of_5_icons.pdf

but there is no actual mention in the myth of his handing over the Medusa head to Athena. The answer is that, although Athena may sometimes be read as the Goddess for the Sign Virgo (ruled by Hephaistos) there is no mention anywhere that Athena is a planet. She is pre-eminently the Goddess of the Octaëteris and thus detached from the Planetary Gods in the same way as Apollo/Apaliunas became the new God of the 12-fold Zodiac (through each Sign of which Hercules - avator of both Gilgamesh and Perseus - pursues his labours). The myth tells us She gifts her shield to Perseus, and already from the Achilles Shield story we know a shield is used to map out the fiducial lines of the sky. In fact, very early on we noted that the name of Pallas Athena was originally Luwian from the time of the Pelasgian substratum: Atana potnia (*hattannas a/ishassaras*); Pallas (*palahsas*); with Apollo (*Aplu/Apaliunas*) from the Hurrian or Hittite. Again, we have a whiff of a Trojan War skirting the issues of a calendar war.



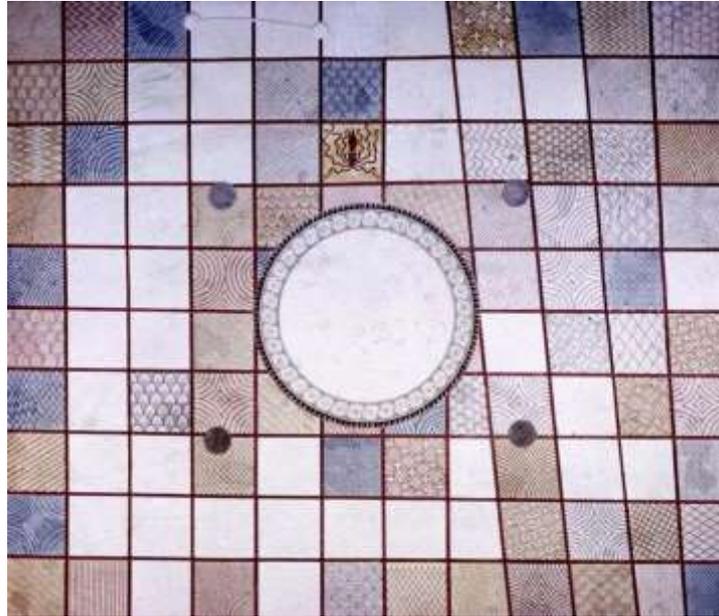
III.9- 96: View of the paranatellonta to Aries in relation to Orion and Taurus – Auriga, Perseus, Andromeda and Pegasus

Why are we told Mercury gives Perseus his winged sandals and a diamond sword? Since the radiation point of the Perseid showers is at the wrist of Perseus the diamond sword, Lettvin thinks, refers to the Perseid showers which are associated by Laoupi with Hephaistos (see next DIVERSION) - so possibly more a gift from Hephaistos than Hermes. As Lettvin puts it: 'The shower of Perseids in late July and early August occurs as if issuing from the wrist of Perseus the constellation, and I can imagine no more apt metaphor for that fan of falling stars than a sword of diamonds cleaving across the sky'. Then also we have the idea that Perseus' helmet gives him invisibility (a helmet again - this one a present from Hades). Does this refer to the comparative faintness of Perseus, or to the appearance and disappearance of Al-Gol's eye, or to the colour and shape-changing qualities of the octopus shared between Athena and the Medusa? We should not forget, either, the *kibisis*, the ever expandable or retractable bag into which Perseus places the Gorgon head - which Lettvin suggests could also be the octopus head used as a bag, which then becomes Athena's helmet - as if the new astronomical arrangement attained under Athena's aegis neutralises Al-Gol's dark side. We liken the *kibisis* to the Hittite bag containing all good things for the kingdom (see III. 9-170 and III. 9-171) - in later myth becoming the Cornucopia.

THE OCTOPUS IN THE THRONE ROOM

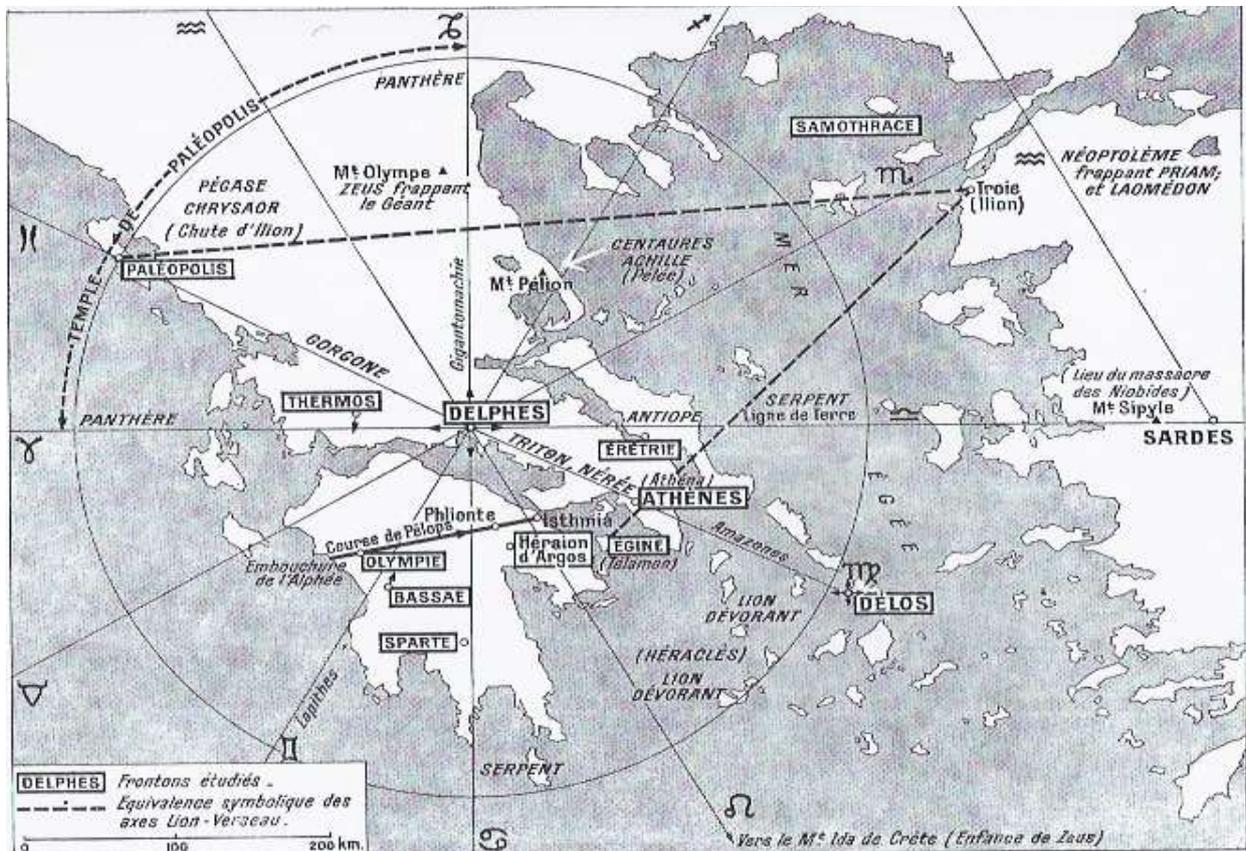
One image in particular in the Palace at Pylos seems to be more than mere oceanic decoration for a port city. As Schofield (*ibid.*) describes it: 'The floor of the hall was decorated with squares of abstract pattern and, directly in front of the throne, with a large octopus'. (Note that its corners are aligned to the Cardinal Points - a Mesopotamian tradition).

I suggest the octopus symbolized the land-sea zodiac the Mycenaeans were starting to establish across the Aegean Islands, anchored on either side by sites on the Greek and Anatolian mainlands (note how in Richer's Map VII below - drawn up to throw light on the subject matter of the pediment sculptures - he labels the Gorgon on the Pisces end of the Virgo-Pisces orientation and twice writes 'lion devorant' in the Leo-Virgo sector. According to Jean Richer²²⁴ the new calendar was finally sorted out by



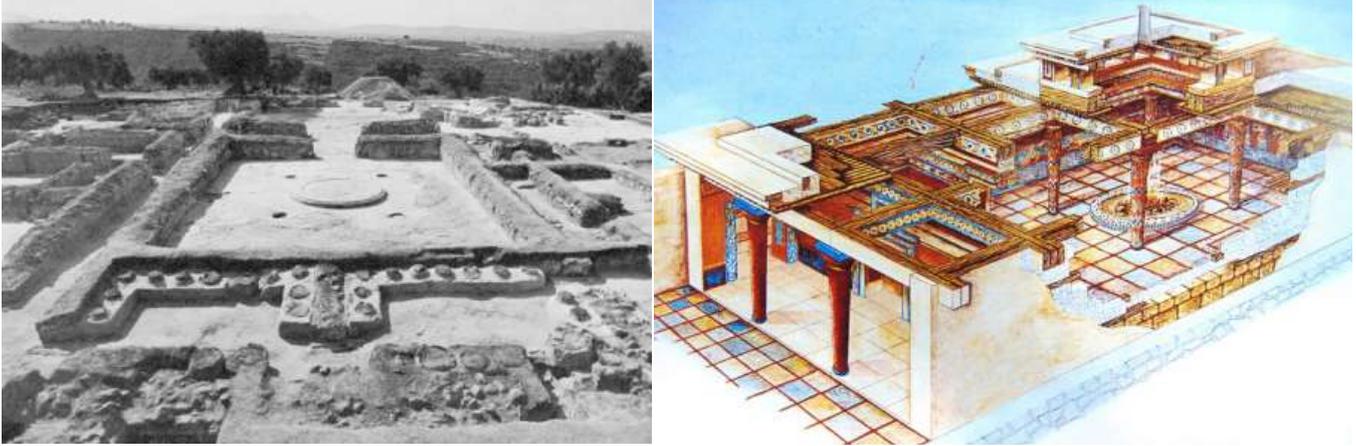
III.9- 97: Octopus decoration on Throne Room floor at Pylos

the changeover from the 8-fold to a full 12-fold zodiac arrangement from the 8C BC on, disseminated by the concerted colonization and temple-building programmes of the Archaic Greeks around the Mediterranean basin – the final touches added



²²⁴ Jean Richer *Géographie Sacrée du Monde Grec* Paris 1983

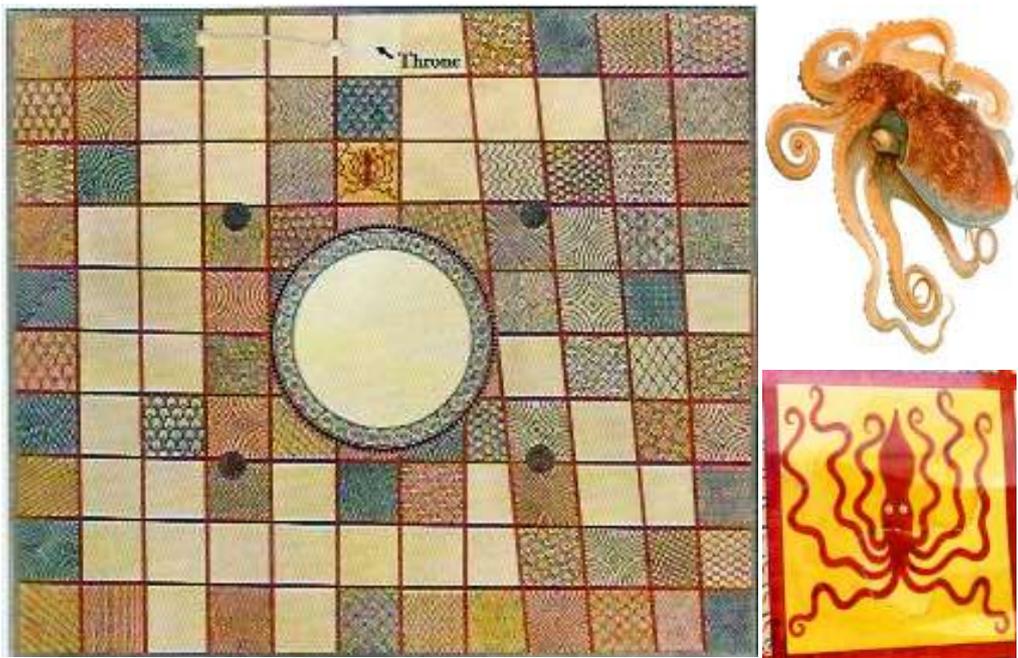
in later monuments and sculptures of the Classical and Hellenistic periods. In this Catalogue from the *Chronological Focus* material alone we have only been able to pinpoint some clues pointing to Mycenaean attempts to master such calendrical changes, which prepared the ground for the 8C consolidation, and one such indicator appears to be the octopus on the floor of the Pylos throne room.



III.9- 98 (Left) The foundations of the Palace of Nestor at Pylos today; (right) architectural reconstruction

OCTOPUS FLOORS IN MYCENAEAN PALACES

Following the Goddess-sponsored retuning of the sky by the beheading of Al-Gol, reflected in the shield of Perseus borrowed from Athena, the head appropriately ends up on Athena's aegis as a fixing brooch commemorating this drastic adjustment²²⁵. The clues we have pursued connecting Her to the Octopus as the perfect Aegean symbol for the Venus-Sun-Moon Octaëteris with updated Vernal Point seems to explain why at Nestor's Palace at Pylos on the richly decorated floor²²⁶ of the throne room the single painted octopus between throne and hearth could not be a more fitting symbol to celebrate, in an understated way, Mycenaean participation in the meticulous and gradual preparatory work of calendar readjustment.



III.9- 99 (Left) Reconstruction of the Pylos throne room decorated floor (area 6 on Blegen's plan, next illustration), with the octopus panel immediately in front of the throne – as marked in Blegen *ibid.* fig.7; (right top) octopus in the same position as on the floor painting (the siphon protrudes above the eye); (lower right) closeup of octopus floor panel (as restored)

²²⁵ In this connection see M Oppermann *Vom Medusabild zur Athenengeburt: Bildprogramme griechischer Tempelgiebel archaischer und klassischer Zeit* Leipzig 1990

²²⁶ C Blegen *A Guide to the Palace of Nestor* (updated) Princeton 2001

Hirsch²²⁷ points out the placings of octopi floor panels also in the passage-way (49) to a tiny room (50) at the front of the main Pylos palace complex, leading off the smaller throne room Blegen called 'The Queen's Throne Room' (area 46 below). The fact



III.9- 100: Floor plan of the Pylos Palace central complex, the smaller 'Queen's Throne Room' at area 46 and passages 48/49 leading to room 50 at the S-E corner of the front façade, along from the tower complex (55/56/57) at one side of entry area 1, much like the tower at the south gate into Troy

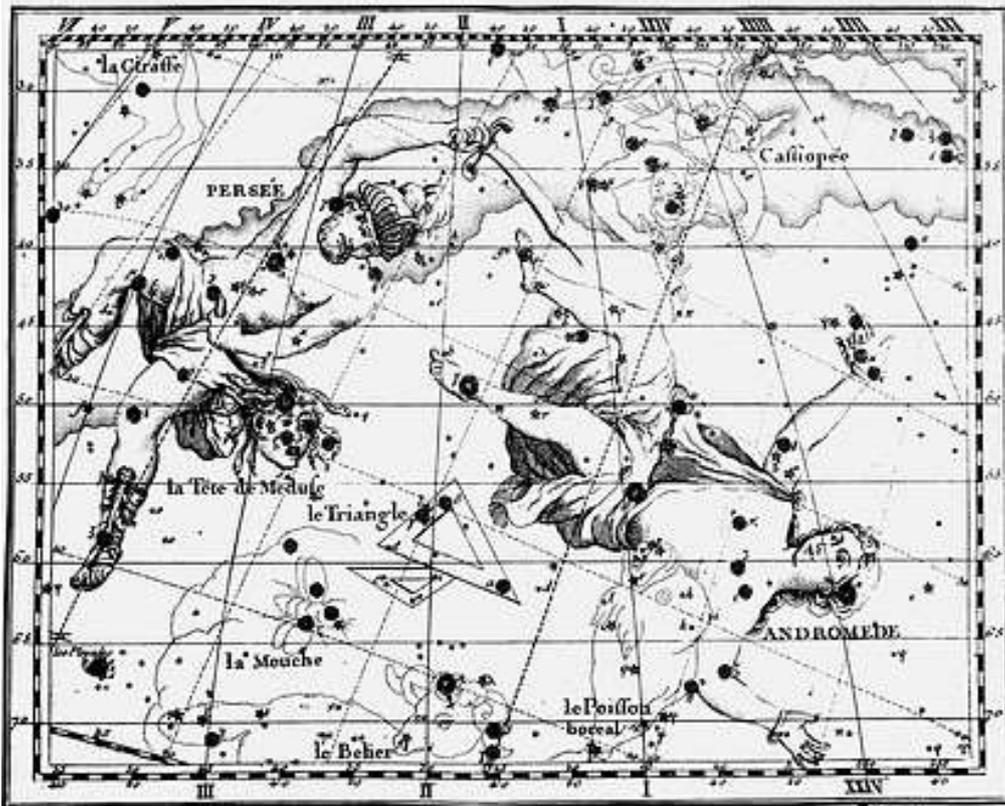
that this room, along with the tiny room at the corner (50), was also provided with frescoes²²⁸ in the same vein as those in the main Throne Room suggests they were rooms of high importance, perhaps something to do with astronomical observation (c.f. the unexplained small rooms in the Knossos South House plan (III. 9-150) – maybe in association with the tower complex further along flanking the entrance-way enfilade towards the king's throne room (6). However, on the similarly patterned grid floors of the Tiryns throne room, octopi and dolphins feature together more frequently and placed less strategically, so we jump to this interpretation for the Pylos throne rooms with caution. The Minoans before had decorated their floors more modestly at palace sites such as Knossos, Phaestos or Zakro, and only one fragmentary octopus is known of on a floor at Hagia Triadha. Inland, Area 53 at Mycenae had floor patterns laid out in a chequered grid too, but no sign remains of any octopus motif there.

²²⁷ E S Hirsch *Painted Decoration on the Floors of Bronze Age Structures on Crete and the Greek Mainland* Göteborg 1977

²²⁸ M L Lang *The Palace of Nestor at Pylos in Western Messenia II: The Frescoes* Princeton 1969 discusses the piecing together of all the Pylos frescoes

GRADUAL INTRODUCTION OF NEW ICONOGRAPHY: LATER STAGES OF THE PERSEUS MYTH

With all its extensions and add-ons, the core Perseus myth proceeded to added adventures involving the killing of a monster, sometimes by using the Medusa head held up towards it – the best-known being the rescue of Andromeda from Cetus the Sea



III.9- 101: Engraving of Perseus, Medusa and Andromeda over Aries –J J Fortin ATLAS COELESTIS de Flamsteed Paris 1775

Monster, and the eventual killing of his grandfather as prophesied, all then living happily ever after. All these constellations bound together in the myth serve to justify their role in framing the sole two stars of Aries (see star map above), whose closeness to the Ecliptic is probably the only reason it qualifies as a Sign to register the Vernal Point (the Sign of Pisces next to it – in Mesopotamia known as the Swallows – is bereft of any bright star at all and also needed to rely on other stars to give it tenure). Thus in practical terms the Ram's fiducial role is very much relegated to the background by the Perseus, Andromeda, Pegasus and Cetus parantellonta, so much easier to spot in the sky, and around which several stages and versions of the myth were built, probably in successive periods (Mira, the central star in Cetus, sea monster in the Andromeda story, is one of the demonic variable stars - with a cycle of 11 months (III.9- 91).

Since the Perati seal is purely Mitanni in nature, and thinking back to the Vedic names given for some of their Gods in the Hittite-Mitanni treaty that nonetheless spelled the end of their rule by their absorption into the Hittite world, this is the best point at which to insert a comparatively short DIVERSION comparing the Mycenaean/Greek Gods that we know so well with their Mitanni or Levantine counterparts (remembering that we are dealing with planets and stars as divinities, whatever their name).

DIVERSION 9 ARYAN GODS: MITANNI AND MYCENAEAN -v- LEVANTINE

Possibly featuring the head of Al-Gol, the seal from Perati is a useful touchstone for looking into many issues, so while it is still in mind this is a good moment to try to pinpoint the nature of the Mycenaean and Mitanni Gods to see if there are any obvious overlaps proving interchange of another kind – at least as far as the principal Gods featuring in the myths that have cropped up in this catalogue so far are concerned. Are there parallels, too, between the Mitanni

and Babylonian Gods and those worshipped by the Mycenaeans? Since there are only so many planets and anchor stars – which remain the same, whatever their names - there are bound to be correspondences between the principal Gods of any pantheon. From the Linear B tablets using an archaic form of Greek - an Indo-European language akin to that of the Mitanni - the key Gods can more or less be pieced together as adumbrating the Classical Greek pantheon²²⁹, yet amongst them we find one or two that originally had foreign (Mitanni/Hittite) origins - Hephaistos and Apollo²³⁰ being two obvious examples. It is therefore another sphere where we can deduce very real cross-cultural sharing between the Indo-European Mycenaeans and their Mitanni cousins. Clearly, we cannot treat the subject exhaustively, but we will pick out themes that ultimately have a bearing on the *Forward Attack* motif often appearing alongside different combinations of Gods and Goddesses.

As Burns (*ibid.* p.115) puts it, 'The Pantheon of Gods, as a named group, is found in a number of Knossian texts which record dedications to, among other specific Gods, the *pasiteoi*/pantheon of *all* deities (Ventris & Chadwick 1973 303-12)'. And as Schofield (*ibid.* p.160) summarises, 'If we search the tablets for early forms of the names of the twelve Olympian deities of Classical Greece [i.e.]:

ZEUS HERA POSEIDON ATHENA APOLLO ARTEMIS HERMES DEMETER HEPHAISTOS APHRODITE ARES and DIONYSOS, we find that many are recognisable' (even if their Mycenaean names often took decades to unravel). Processions of these Gods were later depicted on certain large Greek Vases (and even later on the Parthenon frieze), and in the summary we end with a quick look at two closely similar processions on the François Krater and Sophilos Dinos.

With the Mycenaean 'accent donné à l'imagerie guerrière'²³¹, although Zeus, Poseidon and Athena are described as turned to constantly in myth and legend (from our eclipse analysis earlier, I see the Trojan War as occurring in our *Chronological Focus* period), one could say the parallel role model God for heroic deeds from other traditions would be a mixture of Zeus, Poseidon and Ares – adding up to the weapon-wielding and Soma-drinking Indra for the Mitanni; Ninurta for the Sumerians or Neo-Assyrians and Baal- Teššub for the Syro-Hittite world – so it is no surprise to find 'smiting God' figures in the Mycenae Cult Centre. Though Mycenae is inland, most sites of the Mycenaean world (especially all round Euboea) looked outwards to interaction by sea with other countries so up to the time Athena wrests control over Athens from Poseidon we bear in mind 'the coastscape approach' advocated by Tartaron²³².

AVAILABLE MYCENAEAN OR MITANNI EVIDENCE

From the Mycenaean and/or Mitanni evidence alone, the difficulty is trying to piece together disconnects between

- ★ named Gods given offerings, as listed in the Linear B tablets (mostly from Pylos) or named in treaties;
- ★ cult centres and the artefacts in them purporting to reflect religious belief (as at the Cult Centre at Mycenae) or Palaikastro, or
- ★ figures in cultic scenes - as depicted on seals, wall paintings or Mycenaean gold mythological seal rings - not explained by the textual sources.

To help us make deductions, a wider perspective on Indo-European belief systems can help. After a short description of the Cult Centre at Mycenae and consideration of Mycenaean cult statues against Levanto-Mitanni standards, we consider the treaty signed in the name of a handful of Mitanni Gods, and arrive at a summary table correlating Mycenaean, Mitanni and relevant 'foreign' panthea.

²²⁹ Jon van Leuven 'The Religion of the Shaft Grave Folk' *Aegaeum* 3 1989 191-201

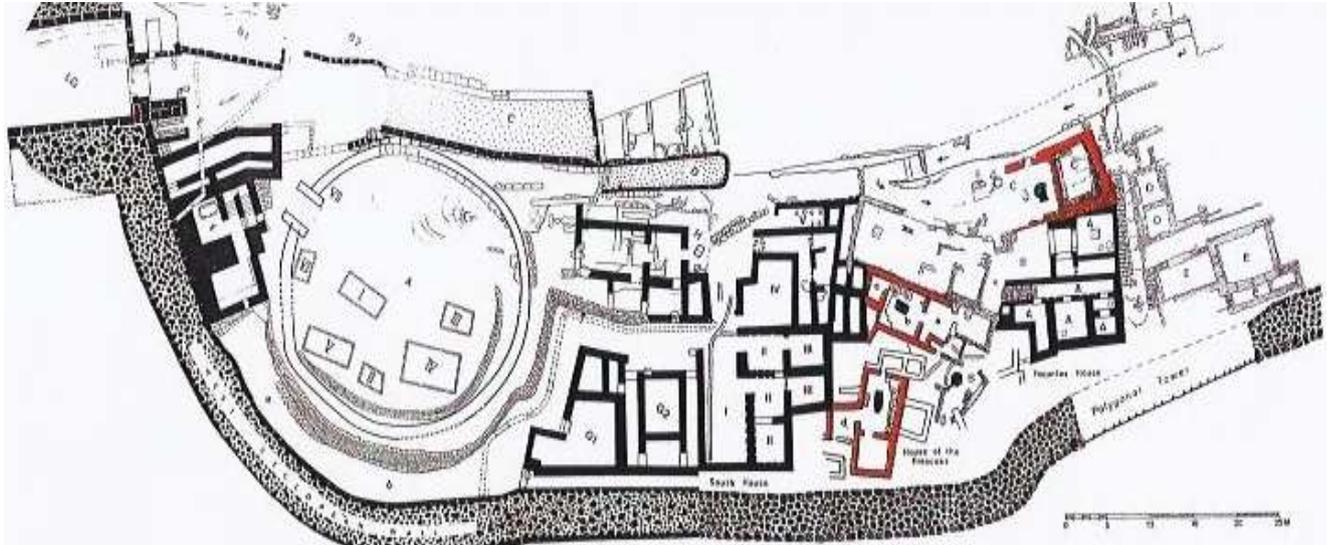
²³⁰ Under the Archaic Temple of Apollo Abai at Kalapodi 'successive strata have revealed an uninterrupted sequence going back to Mycenaean times' (Kramer-Hajos *ibid.*, referring to Niemeier *AR LIII* 2006-7 41

²³¹ Robert Laffineur 'Mobilier Funéraire et Hiérarchie Sociale aux Cercles des Tombes de Mycènes' *Aegaeum* 3 1989 227-238

²³² T Tartaron *Maritime Networks in the Mycenaean World* Cambridge 2013

THE CULT CENTRE AT MYCENAE

Contiguous to the circle of Shaft Graves behind the Lion Gate, the layout of the buildings of the Cult Area at Mycenae (see plan below) runs higgledy-piggledy along the mountain slope, quite the opposite to the geometrically planned



III.9- 102: Plan (slightly squashed to fit this page) of the cult precinct at the SW of the citadel of Mycenae with the main rooms of the Cult Centre picked out in red (for details of their layout see III.9- 104): the complex is thought to have deliberately been laid out in the 13C to be adjacent to the 17C Shaft Grave circle to form a ritual complex incorporating the worship of the ancestors - after Iakovides²³³ plans 6/7)

Palace-Temple of Knossos or Temple-Palace of Gonur. They had no separate temple structures, but mixed in cult rooms next to craft workshops, running up to the palace quarters without clear-cut external distinction between zones.

ROOM WITH THE FRESCOES AND ROOM WITH THE IVORIES

Compared to the elegant ritual art of the Minoans it can be a shock to see that although their traditions were kept up by the Mycenaean on seals and wall paintings – in the Cult areas²³⁴ marked on the plan above (see the more detailed plan III. 9-103) - overall any remaining traces of quality cult statues using semi-precious materials appear, initially at least, to have been brought in from abroad and made by foreigners.

In a paper separate from her contribution to Taylour’s full account of the Cult Centre Nanno Marinatos²³⁵ is the most factual in her interpretation of two wall paintings in what amounts to a Mycenaean chapel, known as the Room of the Frescoes. The three drawings below taken from her paper show (left) what actually remained of the paintings; (centre) just how speculative the restorations are (though they rely on further loose paint fragments later tracked down by Mark Cameron in the Nauplion Museum) and (right) how much of the winged griffin – which could just as much have been a lion - is interpolated on the basis only of surviving paw and tail tips - perhaps with the precedent in mind of another painted fragment from Mycenae showing a warrior wearing boar’s tusk helmet with griffin on his shoulder (illustrated just before the start of our discussion on **ForAtt-25**). She writes, ‘An iconographical parallel for a female seated on the back of a griffin exists on a seal from Mycenae, **CMS I-167**²³⁶’ - and she also mentions the Vapheio seal depicting a priestly figure with griffin (**CMS I-223** under our **III.9-107**). Yet despite initially associating the griffin with deities, she concludes in the end that the woman with the griffin on the Cult Centre wall is a priestess and that the two ladies on

²³³ S E Iakovidis *Late Helladic Citadels on Mainland Greece* Leiden1983

²³⁴ Lyvia Morgan ‘The Cult Centre at Mycenae and the duality of Life and Death’ in Lyvia Morgan (ed.) *Aegean Wall Painting: A Tribute to Mark Cameron (BSA Studies 13)* London 2005

²³⁵ N Marinatos ‘The Fresco from Room 31 at Mycenae: Problems of Method and Interpretation’ in E B French et al (eds) *Problems in Greek Prehistory: Papers presented at the Centenary Conference of the British School of Archaeology at Athens, Manchester April 1986* Bedminster, Bristol 1988 245-51

²³⁶ A similar example - on a mythological gold ring from Archanes - is our final picture at the end of the Cult Centre analysis.



the upper level over the altar must be goddesses because they are higher up (in fact, the only woman of the three to qualify as a priestess might be the one facing left with exposed breast and wearing the typical Minoan flounced skirt).

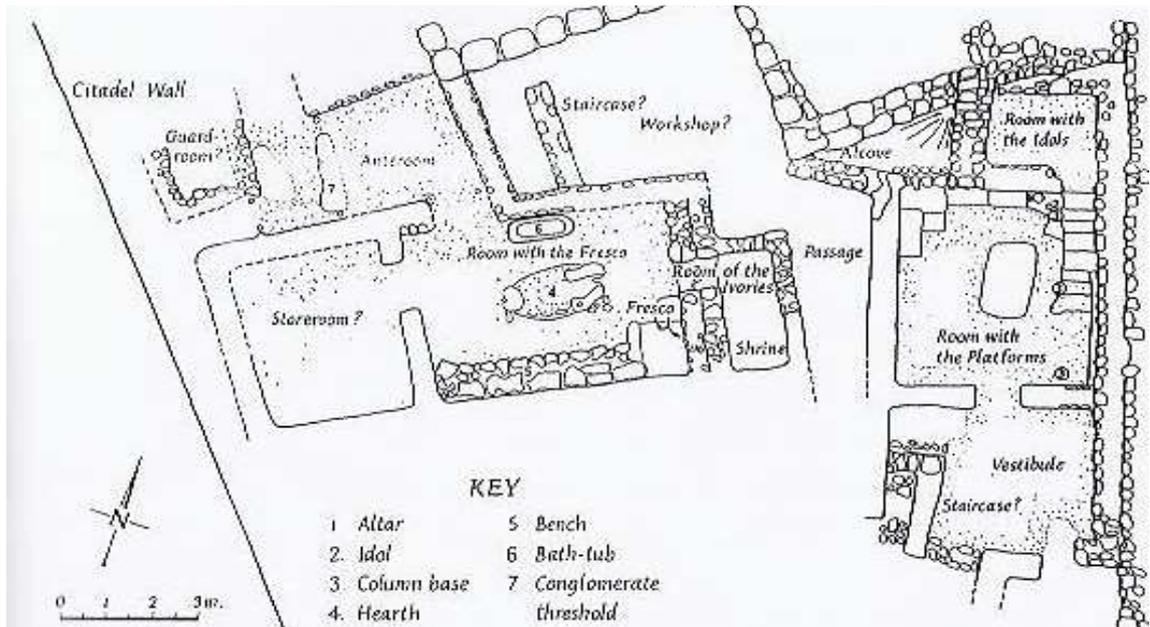
Morgan *ibid.* ably spells out stage by stage the alterations and adaptations made over the years to the chapel's layout and building for cult reasons - such as the doorway later blocked out above the woman with running griffin leading to the Room with the Ivories, painted underneath later. So despite Marinatos' idea that the upper painting shows goddesses and the lower painting a priestess, all three, even, could be goddesses, each holding their distinguishing attribute – or one or all may indeed be priestesses ritually dressed as goddesses - all permutations are equally plausible. If we look at the colour illustration below left from the Internet, we see the actual painted remains in the Room with the Frescoes as opposed to the restored version, inset - while repeated right is an enlargement of the restored wall design. The painting higher up over the altar would originally have been parallel to the door, and shows



III.9- 103: A goddess with griffin and empty door frame above at the top corner runs into a further painting of two priestesses holding cult sword and staff or spear with small male heroes floating between them (the griffin, two female and one male figure all very highly restored)

the two goddesses or priestesses holding a cult sword and staff with small male heroes floating in the air between them, as on Mycenaean mythological seal rings, here – since one is dark and one is light, perhaps referring to the Life and Death process of the Underworld Journey. As the plan below shows, the room also had a hearth and a bath-tub.

Other than one or two smaller items, on the three-stepped altar under their feet were probably originally placed an ivory prowling lion and a ?multi-media male statue of which only the bare head, thought to have come from Syria, survives (which God he might have represented we have no idea, since we have no body). Of the best quality, the two



III.9- 104: Plan of Room of the Frescoes with Room of the Ivories running off it - and adjacent (originally directly accessible) the so-called Temple consisting of vestibule into the Room of the Platforms and Room of the Idols with raised platform accessed by a stair- from Tylour²³⁷ fig.1

ivory pieces were found in the infill on the floor at the time of excavation and initially featured in our DIVERSION on Mycenaean ivories (III. 9-156). The lion could have well have been associated with a female statuette (c.f. III.9-105), while the only parallel we have for the possible appearance of the male figure is the quite recently discovered 18" high 'Palaikastro Kouros'²³⁸ (III. 9-47), its upper torso now held in place by the acrylic support over the gap of the missing waist - with fragments from the legs (found later) positioned in mosaic fashion on the plastic matrix in the museum setting. In a paper on the upper part of the figure (before the lower part had been fully disinterred) an expert on human anatomy, J H Musgrave²³⁹, described appreciatively how closely the sculptor had observed tendons in tension in the foot (below lower centre), veins pressured into standing proud and the subtle torsion and swelling of muscles on the



III.9- 105: (Left and centre) Close-ups of The Palaikastro Kouros left hand, bent arm and foot fragment showing the naturalistic definition of muscle, vein and tendon, only slightly deviating from actuality as pointed out by Musgrave (for the whole figure see III.9- 48); (right) a reminder that ivory statuary goes all the way back to the Natufian period in the Levant – the male figure is from Beth Shean, the female unprovenanced, 11M BC²⁴⁰

²³⁷ Lord William Tylour *Well built Mycenae : the Helleno-British excavations within the citadel at Mycenae 1959-1969 – fascicules 1981-2013* Warminster & Oxford

²³⁸ J MacGillivray et al. *The Palaikastro Kouros: a Minoan chryselephantine statuette and its Aegean Bronze Age Context* BSA Studies 6 London 2000

²³⁹ J H Musgrave 'The Anatomy of a Minoan Masterpiece' in J Lesley Fitton (ed.) *Ivory in Greece and the Eastern Mediterranean from the Bronze Age to the Hellenistic Period* London 1992 17-21

²⁴⁰ Exhibits 13 & 14, Metropolitan Museum of Art exhibition catalogue, *Treasures of the Holy Land: Ancient Art from the Israel Museum* New York 1986

raised left arm and hand (above left and top centre) which probably held a staff like the Orion figure in the Master Impression (*III. 9-72*). For a 16C piece it is extraordinarily prophetic of the anatomical realism blended with idealism that was to take centre stage later in Classical Greek sculpture – and since it was found at Palaikastro, thought to be Dikte, Zeus' Cretan birthplace Musgrave deemed the figure 'the earliest known cult statue of Zeus Kouros'. If we think of the long ancient near-eastern tradition in bone or ivory figurines, in setting it against the Natufian figures above right (dating back to 10,500-8,500 BC) the fresh preoccupation with accurate and life-like anatomy is all the more apparent.

More ivories were stored in the tiny Room with the Ivories next door (the plan above shows how the frescoes and altar just described were originally placed on the wall just outside its entrance). There was a small altar in there as well, with a terra cotta figurine on it and a necklace of blue beads before it, set there as an offering (c.f. *III.9-143*). Again, we do not know which deity the terra cotta figurine stood for, but the offering of a necklace indicates she was female.



III.9- 106: 2M Syrian seal with two youths of Mitanni/Minoan-type physique approaching an enthroned priestess or goddess on lion throne holding up a sword – backed by rearing griffin on an ibex – Vienna Museum (Hiller²⁴¹, fig. 11)

Though the paintings in the Room of the Frescoes are fragmentary, most describe the female with griffin as holding 'bunches of wheat'²⁴² – meaning she could represent Demeter holding wheat - or indeed Athana/Athena as Virgo holding Spica. The figures of the two robed ladies holding spear and staff seem like high priestess and assistant playing the part of goddesses, treading on their altar and perhaps the focus of worship in that room. The sword has ritual significance similar to that on the 2M seal from Vienna above (we compared this throne group in *Catalogue D* to the wall painting at Xeste, both featuring upreared griffin behind the enthroned female where - again - there is ambiguity between her role as a priestess or as Goddess, but the lion under the throne on the seal strongly suggests the latter). We are reminded of Syrian/Assyrian rituals concerning the Sword of Baal quoted in *Catalogue C* that seem relevant here, and there is ample evidence for a Mycenaean 'sword ethos' that entailed owning many swords and carving images of swords or daggers on megaliths such as Stonehenge – a custom followed in the Balearics, Portugal and Spain (*III.9-149*) too – the Sword God of Yazilikaya (*III. 9-96*) belongs to the same cultural context. Kramer-Hajos²⁴³ has new and interesting comments to make on the ethos of the Mycenaean sword that are relevant here. It is quite possible Mycenaean warriors consciously saw themselves either as the embodiment of Baal - or even of Orion.

THE TEMPLE: ROOM WITH THE PLATFORMS AND ROOM WITH THE IDOLS

The terra cotta cult figures in the so-called 'Temple' (shown below) are a shock, seen against the lithe figures of Minoan or Mycenaean painting or early Mitanni seals, revealing what looks like a provincial level of Mycenaean visualization and execution when unaided by outside norms or visiting craftsmen (this type of clay figure is known only from this Cult Centre). Thus in the Room with the Platforms the largest out of just over 20 restorable figures (around 2 feet high) seem to have initially been modelled as hollow pots, then adapted into a human torso in the final stage.

²⁴¹ Stefan Hiller 'Palast und Tempel im Alten Orient und im minoischen Krete' in Hägg and Marinatos (eds) *The Function of the Minoan Palaces* Stockholm 1987 57-64

²⁴² The 'wheat ears' are very differently interpreted by Brendan Burke in 'Looking for Sea-Silk in the Bronze Age Aegean', *Aegaeum* 33 2012, 171-178, who identifies them as the purple dye mollusc *Pinna nobilis*, found on several Minoan sites in the archaeological record. He plausibly identifies its shells with silk-like threads sprouting from them as being the two items held up by the lady with the griffin in the Mycenaean Cult Centre wall-painting (his pl. XXXVIIa/c) - referred to in our section on colours and dyes in relation to the Thera Xeste paintings discussed in *Catalogue D* (*III. 8-107*).

²⁴³ M Kramer-Hajos *Mycenaean Greece and the Aegean World* Cambridge 2016 pp 33-39



III.9- 107: (Top row) examples of the larger cult figures (average height 2') found in the Room with the Platforms, and one of the 17 coiled snakes found in the raised Room of the Idols (c.f. beneath it a 2M silver mirror container decorated with a pride of lions and coiled snake lid from Bactria (private collection)²⁴⁴. Similar matching can be done between small worshipper figures (bottom row left/centre – tau, phi and psi types) and (right) 5-4M Susa clay statuettes- Koch²⁴⁵ fig.13

Moore²⁴⁶ classified the figures into three types: those brandishing an axe (usually the axe was missing); those with arms down and hands held up (above top centre left/right), and those with arms and elbows held akimbo horizontally (above top left). Moore believed bead offerings were laid over the arms of the middle type, suggesting they represented a female deity offered to (but I think it is the latter type that would more securely take beads suspended on them, and the middle type seems intended to indicate the hands at the breast area). Nonetheless, in the end Moore concluded these clay figures were not meant to represent deities, but worshippers. The Room with the Idols running on from that space had scores of small psi and tau worshipper statuettes with raised arms in adoration (a fourth type of figure not counted as such by Moore – see bottom row above left) - along with seventeen coiled snakes of clay (as above right top). Although there is still some confusion about whether the quaint clay statues in the Room of the Platforms are Gods and Goddesses or not, it is surely the phi and pi statuettes that are already well accepted as fulfilling the role of worshippers.

Taking the more orthodox perspective, Schofield in her summary of the Cult Centre finds comes to these conclusions:

- that the Mycenaeans at this hub site worshipped a multiplicity of gods;
- that female goddesses and their representatives - the priestesses - preponderated, with particular evidence for the predecessors of Athena (warrior goddess), Demeter (the grain holder) and Aphrodite (as Astarte);
- that the male element of the religion prized the male youthful figure²⁴⁷;
- that some of the large cult terra cotta figures were bald and thus probably meant to be male;
- that one figure still held the remains of a hammer axe in his hand (?equivalent to Zeus/Baal?);
- that the small pinch figures stood in for human worshippers, much as Egyptian shabtis.

²⁴⁴ S Salvatori 'Early Bactrian Objects in Private Collections' in Ligabue et al. *ibid.* fig.87 – photo credit Galerie Nefer, Zurich

²⁴⁵ H Koch *Frauen und Schlangen: Die geheimnisvolle Kultur der Elamer in alt-Iran Mainz 2007*

²⁴⁶ A Moore 'The Large Monochrome Terracotta Figures from Mycenae: the Problem of Interpretation' in E B French et al (eds) *Problems in Greek Prehistory: Papers presented at the Centenary Conference of the British School of Archaeology at Athens, Manchester April 1986* Bedminster, Bristol 1988 219-225 + pls

²⁴⁷ Again, Kramer-Hajos *ibid.* pp44-45 has interesting comments to make on this theme, choosing more seals than I have elsewhere to underline her point.

Clearly one class of terra cotta figures (*III.9- 107* top centre) is based on the Levantine figure of Astarte/Ishtar holding her breasts, and the smiting figure (the most intact example is shown below) on the Syrian-type smiting male god (one still had a hammer-axe in the raised arm) – and all the smiting figure type are bald, again an indication of maleness.



We can surely claim that the standard Levantine couple of Baal-Ishtar was represented several times over in the Cult Centre, but what names were actually used to address them, in what language, we can only guess.



Apart from clues extracted from the Cult Centre material, all through we have turned to seals and sealings for information on the Mycenaean Pantheon: did they knowingly use the *Forward Attack* as referring to Ishtar/Venus – or was it used solely as a status indicator (which is Kramer-Hajos' view – see her tables 4.3/4.4) - or did it also point to the wearer's status as master of astronomical calculation and the Calendar? We can only add up the clues.

MYCENAEAN CULT STATUES COMPARED WITH EXAMPLES FROM CENTRAL ASIA

From what we have just said, our disappointment in the portrayal of Gods and Goddesses in the Room of the Platforms *could* be because they are meant to represent ordinary worshippers but to me it looks more like lack of skill in a very early stage of adopting an anthropomorphic view of their Pantheon. From the ivory pieces left on the altar in the Room of the Frescoes, there are signs one or two cult statues on the altar were made of prestige materials, even if other parts involving semi-precious stones or precious metals that might have been involved are now missing. Considering the long history of multi-media statuary in Mesopotamia – and its adoption in Mari or Ebla using stones of the kind coming in from the BMAC (see *III. 9-146*), it is probable the Mitanni during the 2M inspired the aesthetic

further west. We have an intriguing description of a cult statue culled from the cuneiform texts by Beckman²⁴⁸, probably referring to Pirinkir, a Hurrian version of Ishtar associated with her nature as 'Lady of the Night'²⁴⁹:

The smiths fashion the deity from gold... Stuck on her back like beads are discs of gold, lapis, carnelian, "Babylon-stone", chalcedony (?), dušû-stone and marble, as well as life-symbols and stars of silver and gold (KUB 29.4 I 6, 8-11/CTH481)

In fact, as Beckman points out, 'CTH 481, 482 and 718 are each concerned with the night sky and its stellar bodies, several of which are conceived as forms of the Mesopotamian/Elamite Ishtar'.

NAMES GIVEN BY THE MINOANS/MYCENAEANS TO THEIR GODS

Whatever their names, if we keep in mind the underlying planetary or stellar reality of these Gods — as originally laid out in the two versions of our *Table of Gods* given in **Catalogues C** and **D** (even if the borderlines differentiating between them shift or subdivide over time) it is on the whole easy to cross-match their names in different cultures because they represent the broadly unchanging sky powers and qualities. A third working of this table (**III. 9-109**) thus inserts the handful of key Mitanni and Mycenaean Gods discussed in this catalogue against their approximate equivalents. These cross-matches are the 'calibrations between West and East' that had to be dealt with by the cultures involved when integrating into new societies, either to get a sense of direct iconographical equivalences to honour local Gods or even, as in the case of the Mitanni, by using BIVISUALS where the same Deity is indicated twice with respective attributes juxtaposed. We can now proceed to see what is known on the Mitanni side.

KEY GODS OF THE MITANNI PANTHEON

The Hurrians and Mitanni had a full pantheon of rough equivalents to the Babylonian Gods and Goddesses (mainly using Hurrian) - on the female side the example of the Snake Lady and of Pirinkir above are examples. But in Konow's view the male quaternary mentioned in Shattiwaza's contract with the Hittites at a time when the Mitanni Empire was drawing to its close are peculiarly Indo-Vedic in etymology and are given pride of place in the next version of the *Table of Gods* in which we try to at least give rough equivalents. We analyse them in relation to crossovers we can see between Mycenaean, Mesopotamian, Kassite or Levantine Gods, but leaving aside the Hittite Pantheon.

Under the *Art History* section discussion on **ForAtt-24**, our chart of key events in the history of the Mitanni Empire (**III. 9-45**) tabled a known incident following Tushratta's death - a treaty made between the conquering Hittite king Suppuliuma and Mitanni King Tushratta's son, Shattiwaza/Mattivasa, who was at the same time given Suppuliuma's daughter in marriage to seal the peace. At the end, the treaty cites local and state Hittite, Babylonian and Mittani Gods as the Powers they will swear the treaty by (the Mitanni Gods are emphasised in small capitals):

[sworn in the presence of] the Storm-god, Lord of Heaven and Earth, the Moon-god and the Sun-god, the Moon-god of Harran, Heaven and Earth, the Storm-god, Lord of the Kurinnu of Kahat, the Deity of Herds of Kurta, the Storm-god, Lord of Uhušuman, Ea-šarri, Lord of Wisdom, Anu, Antu, Enlil, Ninlil, THE MITRA-GODS, THE VARUNA-GODS, INDRA, THE NĀSATYA-GODS, Lord of Waššukanni, the Storm-god, Lord of the Temple Platform (?) of Irrite, Partahi of Šuta, Nabarbi, Šuruhi, Ištar, Evening Star, Šala, Belet-ekalli, Damkina, Išhara, the mountains and rivers, the deities of heaven and the deities of earth. (A Rev 35-53).

In interpreting the significance of the Mitanni Gods named in the contract, Sten Konow²⁵⁰ early on had interesting explanations for their choice which make sense (I have added further observations to his, which I suspect, like mine,

²⁴⁸ G Beckman 'Babyloniaca Hethitica: The "babillili-ritual" from Boğazköy (CTH 718)' in K Aslihan Yener et al. (eds) *Recent Developments in Hittite Archaeology and History: Papers in Memory of Hans G Güterbock* Winona Lake 2002 35-41

²⁴⁹ See also A Ünal 'The nature and Iconographical Traits of the Goddess of Darkness' in M Mellink et al (eds) *Aspects of Art and Iconography – Anatolia and its Neighbors: Studies in Honor of Nimet Özgüç* Ankara 1993 639-44

are gleaned from that perennial classic, MacDonnell's *Vedic Reader*²⁵¹). I am changing his order, thus starting with the Nāsatyas and ending with Indra - who needs the most attention and leads us on to consider Kothar/Hephaistos.

- ★ The **NĀSATYAS** are better known as the twin horsemen, drinkers of golden honey - the **AŠVINS**²⁵² (named Nāsatya/True and Dasra/Wondrous respectively, in the **Vedas** designated in the dual as *Nāsatyau*²⁵³) – are the forerunners of the Dioscuri/Gemini for the Mycenaeans – probably to be thought of originally as twin horses (c.f. *ašva* = horse and *ašvin*, Horse God). In human form their three-wheeled chariot is drawn by winged steeds – usually birds or horses - traversing heaven and earth in one day: *Vartis*, their revolving course (c.f. *vortex*) is applied only to them, more fully entitled 'the golden vortex'/*hiranyavartis*. This pair may at first seem an unusual inclusion, but taking all the hymns together, apart from being the divine helpers who rescue those in distress or heal the sick, Konow writes:

they are the two husbands of Sūryā, the Sun's daughter, and there is no part of the Ašvin legend which is more frequently alluded to in the Rgveda. It is a well-known fact that Sūryā came to be considered as the typical bride... in the ancient marriage-rites. In late hymns the two Ašvins then develop into the typical groomsmen who are invoked to conduct the bride home in their chariot... [and finally] in a late hymn ... they are invoked to take the bride home to the bridegroom.

Their inclusion in the Hittite-Mittani contract, Konow believes, must be an intentional allusion to the marriage between Shattivaza and the Hittite Princess Royal.

- ★ **MITRA** was the God popularly known as protector of contracts and agreement between friends, but the deeper clue to Mitra's nature is in the name – the Measurer – pointing to his main role as regulator of the Sun's movements²⁵⁴ – hence presiding over constancy, reliability and order. The heritage of Mitra survived into Classical times, of course, especially in the former territory of the Mitanni around Tarsus, in the by then Parthian form of Mithraism promulgated amongst the soldiers of the Roman army.
- ★ **VARUṆA** in the **Rgveda** is usually mentioned using one word in the dual case as the twin of Mitra since his role in upholding cosmic law - *Rta* - is also to maintain Order, uphold oaths and dispel falsehood or wrongdoing. Hence the pair can simply be represented as a Sun-Moon or day-night duo (in the hymns, after heaven and earth they are the pair most often mentioned). We should perhaps regard the Mitanni winged standard supported by guardian pairs as having the same metaphysical bipolar weight, representing the *Sanātana Dharma* (the Eternal Law). Varuṇa in particular is regulator of all heavenly movements and known as *dṛtavrata* ('whose laws are immovably established'), whom the Gods themselves obey, the winds being his breath²⁵⁵. In the Avesta *Varuṇa* becomes *Ahura*. MacDonnell notes the similarity of etymology between *Varuṇa* and the Greek *Ouranos*.
- ★ **INDRA** is more or less the equivalent of the Syro-Hittite Storm God under any of his names, such as Teššub or Baal – almost matching 3M Ninurta as the all-encompassing sky warrior-god of weather and royal power (over a quarter of the hymns in the **Rgveda** are addressed to Indra - much as Baal is the principal figure on Syro-Mitanni seals).

INDRA AS DRAGON-KILLER

In Vedic mythology Indra's key act, like Ninurta's, is to overcome the monster serpent or dragon – here of drought - to release the universal waters from the heart of the mountain which keep everything alive – hence his epithet *Vṛtrahan*

²⁵⁰ Sten Konow *The Aryan Gods of the Mitani People* Oslo 1921

²⁵¹ Arthur A MacDonnell *A Vedic Reader for Students* Oxford 1917 and constantly in print thereafter

²⁵² Exactly the counterparts to the Dioskouroi of Greek mythology

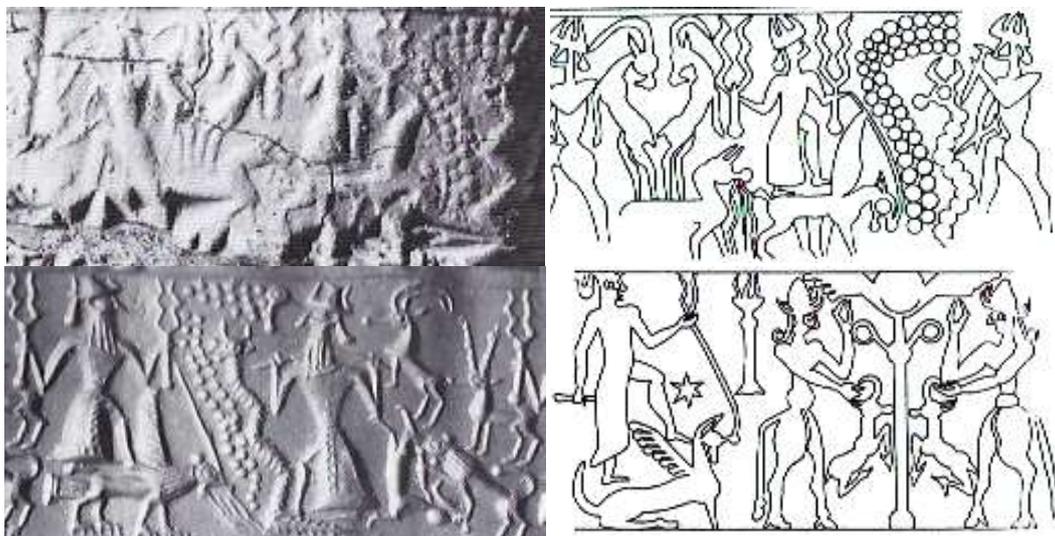
²⁵³ Konow says the Hittite treaty gives Mitra, Varuṇa and then the Nasatyau (dual ending) in the plural because there is no dual case in Hittite or Babylonian. In fact, in the **Rgveda** Mitra and Varuṇa are usually mentioned as a twinned pair using the dual case (Mitra-Varuṇau) in the same way as the Ašvins/Nāsatyau.

²⁵⁴ Especially at the Winter Solstice point from which the Year is measured, the Mitra/Mithra celebrations being on that day.

²⁵⁵ These winds are probably represented as winged figures in the Itḫi-Teššup seal (*III. 9-164*)

(Avestan *Verethragna*). Lambert (*ibid.*) confirms that the Sumerian/Akkadian word *muš* for Great Serpent/Dragon is literally to be translated as 'Cosmic River' – borne out by the next seal illustration (see also Malatya orthostat A8 after *III.9-19*). The Hurrian version of the story appears to be depicted on two unusual seals from Nuzi illustrating, in Stein's opinion, the Hittite/Hurrian Hedammu myth. On the first (top row below) Teššub/Indra kills the monster, Hedammu, in the form of a bull-headed, wriggling serpent that hides in a cloud of water droplets (or even hailstones) flowing down in front of Teššub as he stands on his weather dragon holding up two lightning forks (in certain contexts, Lambert points out, these forks are likened to a tree, with whose growth Teššub /Baal can also be associated, going all the way back to seals like **ForAtt-12**). Significantly, with the main theme of this Catalogue in mind, on a variant of the seal in the private collection of P Rosen inspected by Edith Porada (bottom row below left), a *Forward Attack* on a collapsing stag is included in the scene. The bull-headed snake might stand for the Milky Way (as on *kudurrus*), ending at Taurus.

On both seals the Storm God holds two lightning forks, and on both paired goats feature (c.f. *III. 9- 156:*) – the latter interpreted by Stein as indirect symbols of his consort, Shaushga/Ishtar who may also be the owner of one of the lightning forks, given the often-mentioned interchangeability of gender and role in the Underworld journey between the two. The figure poignarding the monster - whether helper or another God - has not been plausibly identified yet, but adding fuel to the theory about the Vedic origins of the Mitanni, Porada traces the iconography of the bull-headed snake on both these seals (Hedammu himself) to seals or sealings from Falaika and the Persian Gulf (*III.9-108* centre) in the orbit of Mohenjo Daro in India - one or two of which she reckons must have reached Mitanni territory²⁵⁶. Indra's story is thus the Aryan predecessor of the Marduk and Tiamat mythology adopted by the Kassites around the same period at Babylon (the 47th name of Marduk was Adad²⁵⁷), mythopoeically close in nature to the *Rgvedic* hymns in which Indra is described as stretching out Heaven and Earth like a [bull-]hide, keeping the two halves apart in the same way that chariot-wheels are separated by the axle (perhaps applicable to **ForAtt-22**). In like manner, Kassite



III.9- 108: Top row the Hedammu myth seal impression (Porada Nuzi-Cat-738) drawn by Stein (ibid. 1988 fig.11) - c.f. Louvre AO21625 and Malatya orthostat A8; (bottom row left) variation in the P Rosen Collection - Porada Festschrift 2014²⁵⁸ (with Forward Attack on stag) and (right) Stein NuziCat-404 with Storm God and Kusarikki holding goats flanking the winged standard upholding the Cosmic Order (c.f. supporters on ForAtt-25)

²⁵⁶ See B Buchanan 'A Dated "Persian Gulf" Seals and its Implications' in *Studies in Honor of Benno Landsberger on his 75th Birthday* Chicago 1965 204-9. Note in particular his observation that one such seal is attested from Lothal in the Gulf of Cambay – the most easterly placing of a Persian Gulf seal, the link pointing - as he puts it - 'to some ethnic element in Syria (merchants or colonists?)'.

²⁵⁷ For Assyria on this theme, see S M Maul 'Der Sieg über die Mächte des Bösen: Götterkampf, Triumphrituale und Torarchitektur in Assyrien' in E Zenger (ed.) *Ritual und Poesie: Formen und Orte Religiöser Dichtung im Alten Orient (Herders Biblische Studien Vol. 36)* 2005 Freiburg etc. 47-71 – c.f. *III.9-7*

²⁵⁸ E Porada 'A Cylinder with a Storm God and Problems' in D J W Meijer (ed.) *Natural Phenomena* 1992, reproduced in E Bleibtrau et al (eds) *Edith Porada zum 100e Geburtstag* Fribourg 2014 365-74 and photo on p.625

Marduk (below right) cleaves Tiamat into upper and lower halves to create Heaven and Earth. By whatever corresponding name Indra/Teššub was known by the Mycenaeans (Zeus-Ball would have been top of the list – see the bald cult clay figures above and *Gods Table* below), this Mitanni god would have particularly appealed to their warrior culture. Even in the Vedas Indra is described as of huge human form with tawny-coloured (*han*) hair and beard, a heavy eater and deep drinker of the Soma (brought to him by an eagle) - a valorous god of battle riding into war on a two-horse chariot. Later, for the Zoroastrians of the Avesta, on the other hand, Indra was no more than the demonic adversary of the *Spenta Armaiti*/Benign Spirits – an indication that the Indra mentioned as a Mitanni God in the Hittite treaty must be the Indo-Vedic version rather than the Iranian – pushing the Vedic Period further back in time than usually calculated, to a time before the tribal splits between Iranian and Indian homelands.



III.9-108: (Left) the God Aššur on a ritual cylinder seal harnessing the Tiamat Chaos dragon – Maul *ibid.* fig.9; (Centre) 2M Seal/sealing from Falaika quoted by Porada (*ibid.*, her fig. 6) – photograph courtesy P Kjaerum – c.f.Orion on star maps III.9- 6 and compare the horned snakes with the similarly depicted snakes on the goblet from Azerbaijan (III. 9-134); (right) Marduk on a large lapis lazuli cylinder harnessing the Tiamat Chaos dragon as his steed –Maul *ibid.* fig. 10 (compare the geometric patterns in the circles with the Hatran planet standards in III. 9-61/III. 9-62)

THE CANON OF ANCIENT NEAR EASTERN ART

CATALOGUES OF EVIDENCE

E: THE FORWARD ATTACK ICONOGRAPHY

PLANETARY EQUIVALENTS: ARYAN AND MYCENAEAN -V- MITANNO-LEVANTINE OR VEDIC GODS

GOD PLANET/ SYMBOLIC ANIMAL OR HUMAN		GOD PLANET/ SYMBOLIC ANIMAL OR HUMAN		GOD PLANET/ SYMBOLIC ANIMAL OR HUMAN		GOD PLANET/ ANIMAL OR HUMAN	
ANU  SKY ☁️ FATHER OF THE GODS Ouranos → Dyaus ASHSHUR/AHURA MAZDA / → Varuna	ABU ♂ GOAT Kronos/ Saturn OLD MAN WITH A BEARD (GRAND-FATHER)	ENLIL AIR/ ATMOS- PHERE → Mitra Shadrafa -	NINURTA WEATHER ♂ BULL Zeus/Jupiter MATURE MAN IN HIS PRIME → Indra	NINHURSAG COW WITH CALF EARTH MOUNTAIN - CAVE WOMB OF VENUS	KI EARTH Gaia/Demeter ⊕ PLANT LIFE SOMA/HAOMA/ BARSOM	ENKI/EA WATERS WISDOM BEARDED MAN WITH STREAMS Poseidon ♄ HORSE NAPHTHA-NEPTUNE	
KASSITE EQUIVALENT	SHOURIASH = → Sūrya	BOURIASH	MARUTTASH	ANAHITA			
LEVANTINE → EQUIVALENT	EL BULL	BAAL HADAD SON OF DAGAN	RAGING BULL/WILD STORM	ALLAT = ← IŠTAR HUSBANDS ↓	ANAT ATHENA VIRGO ♍ Athena	DAGAN/ YAM FISH, STREAMS OF WATER	
↓ SON ↓ SON ↓ SON TVASṬR ♂ Hephaistos-Vulcan KOTHAR SAOSHYANT KOSMOKRATOR CHRIST ↑			↑ MARS ♂ Ares		↓ SON ↓		
NANNAR FULL MOON  SIN CRESCENT	RULER OF  TAURUS BULL	↑ ← STATUE OF MARDUK HAS 50 NAMES, THE IGIGI WEEKS ← MARDUK USURPS BAAL/ NINURTA ♂	← MARDUK USURPS BAAL/ NINURTA ♂	ENUMA ANU ELISH WRITTEN MARDUK ITS HERO ← MARDUK/ AMURRU, SON OF EA, HEIR TO BAAL FIRST OF THE IGIGI = KASHSHOU/ Ouranos			
SON OF NANNAR ↓ UTU/SHAMASH FIRE, LIGHT → Akni = Agni (Hittite)	SUN/ LION 	↑ ♂ BULL-CALF OF UTU [MARUTUK] ²⁵⁹ NERGAL/MARS GILGAMESH/HERCULES/MELQART DEATH ♀ (PLUTO) → YAMA	→ DAUGHTER OF NANNAR INANNA/ IŠTAR ♀ LIFE LIONESS	NUDE OR WARRIORESS VENUS DAUGHTER OF NANNAR SISTER OF UTU Aphrodite	SON ↓ ♀ NABU/MERCURY ENTWINED SNAKES MONKEY, SHOE SCRIBAL BUREAUCRACY Hermes → Nasatyau= Ashvīnau Dioscuri-Gemini = KUSARIKKU		
Son of UTU ↓ NERGAL → Verethagna/ ARES/MARS ♂	Dionysos = MOT →						

III.9- 109: Original Table of Gods with Mycenaean/Greek equivalents added in bold yellow and Indo-European Gods (notably those in the Mitanni-Hittite treaty) in pink bold. Some Seleucid, Vedic and Zoroastrian Gods are also included if mentioned in this Catalogue

²⁵⁹ W Lambert (ibid.) 1964, 3-13

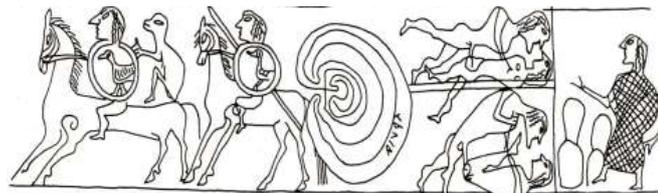
Later - as in the Greek myth whereby Zeus kills Ouranos – Indra is superseded by Viṣṇu and Śiva, though still used by them as the instrument for removing sin and evil. Since Orion was also visualised as a warrior with bow and arrow, spear and sword it appears the figures of Baal and of Orion - like Indra - were understood as planetary and sidereal embodiments of the same all-powerful God, ruler of the whole Pantheon.

In considering Indra we cannot avoid bringing in for discussion a key Mitanni God *not* mentioned in the Hittite Treaty who was especially important to Mitanni and Mycenaean alike.

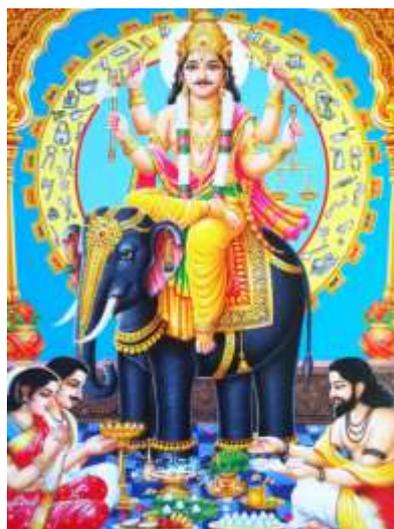
INDRA'S WEAPON-MAKER, TVAṢṬṚ

Just as Hephaistos makes Achilles' armour and shield, so Indra's weapons, most notably the golden thunderbolt but also bow and arrow - and hook - are made for him by *Tvaṣṭṛ*, who is described as Indra's Father and the equivalent of Kothar in the Levant, or Hephaistos for the Greeks. Do we also take *Tvaṣṭṛ* as somehow connected to the Avestan *Tishtrya*/Sirius, as Hephaistos is (obliquely) to the Sirius/eclipse events in the *Iliad*? We saw from our DIVERSION on Sirius and the Dogs in the *Iliad* and Zoroastrian scripture that the Dogs are associated with Orion – yet in Sumer it was Ninurta/Jupiter who was sometimes personified as BAN/the Bow/Sirius. In other words the choice of image used by Indo-Europeans for the figures of the two star groups of Orion and his Dogs were often counterchanged.

Sarah Morris²⁶⁰ underlined the difficulty of pinning down just how the Levantine Craft God Kothar metamorphosed into the Cretan Daedalos (better known as Hephaistos of *Iliad* fame): it surely must be something to do with the Minoan and Mycenaean worlds engaging more closely with the Mitanni-ruled Near East. Daedalus was famed for building the



Minotaur's Labyrinth which calls to mind the decoration on the Tragiatella Oinoche (its narrative register shown again above) that uncannily brings together images of the Sacred Marriage (Helen and Paris), departure for the Trojan War and even the labyrinth (labelled TROIA in reverse writing inside). Note also the monkey/foetus behind the warrior on his horse – in Vedic thinking *Tvaṣṭṛ* is responsible for the formation of the foetus as well as of armour.



III.9- 110: Two current Hindu images of Viṣvakarma – seen as both young or old to convey the idea of first-born Creator of the Universe. On the left he is associated with Ganesha, elephant God of knowledge (almost equatable to Hermes); and on the right, more traditionally, with the swan of Saraswati, Goddess of learning and music (almost equatable to Athena)

²⁶⁰ Sarah P Morris 'Daedalos and Kothar: the Future of their Relationship' *Aegaeum* 18 1998 281-89

The fact that this Vedic God is still worshipped in India today, not now called by his Vedic name *Tvaṣṭṛ* but as *Viśvakarma* (Maker of All Things), is a survival of that cultural tendency of the Indo-European Mitanni to nominate a separate God for metalwork and all crafts – a God prominent *only* in Mitanni Syria and early Greece (admittedly also in Egypt). Above are two popular images of the Hindu God as worshipped today, holding spanners, tools and implements connected with building, craft, writing and trade (e.g. the scales). Specifically in the *Rgveda* *Tvaṣṭṛ* is addressed as the God who forms the embryo in the womb, and generally as the ‘Maker’ God (a parallel to Jesus the Carpenter, or Ptah of Memphis who creates the Universe formed of the Nine Gods (the Ennead) by his words).

Like the architect-God Ptah in the Step Pyramid era, ultimately *Tvaṣṭṛ* is Creator of the Universe too, so that once his task is done it is no surprise that in myth his Son, Indra, takes over to keep the created Universe running. Indeed, on the basis of our DIVERSIONS on Mycenaean procurement of metals, semi-precious stones, glass and ivory, I suggest the ‘Maker God’ was in the course of trade adopted in Greece via Mitanni Syria hand-in-glove with the import of those raw materials and exotic crafted items from India and Central Asia as part of a commonly-shared Aryan culture. By the Bronze Age – certainly all through the 2M in Syria – I see the crouching monkey appearing on Syrian seals as indeed representing Kothar, God of Craftsmen (rather than Nabu/Hermes/Thoth), often appearing next to Baal and Ishtar in audience scenes honouring Gods or Rulers (c.f. *Ratt-20*), maybe due to the same crouching position of the Indian or Iranian metal- or stone-workers as they hammer patiently, day after day, on intractable materials (*III. 9-136*). Indeed, in *Catalogue D* we discussed the origins of blue monkeys brought into the Levant and Aegean from India or East Africa as pets (*III.9- 35*), where we began to distinguish between the Kothar monkey and the Thoth/Hermes baboon.

With these Kothar/*Tvaṣṭṛ* characteristics in mind, we now look closer at the Mycenaean side of the picture.

GREEK ADOPTION OF A MITANNI GOD: HEPHAISTOS MASTER OF THE METALWORK WORLD

In New Age astrology Hephaistos/Vulcan is today associated with a planet only newly detected through perturbations *inside* Mercury’s orbit by modern scientific instruments - so close to the Sun that it is misshapen by its blaze (accounting in myth for his reputed lameness and need for a crutch, possibly the Greek equivalent of the crouching craftsman of Asia). The role of Hephaistos that so strongly emerges during the 2M at the heart of the Homeric tradition demands scrutiny, given that already in myth as craftsman God (wearing the workman’s conical cap) he is sponsored by Athena as the supreme master of metalworking²⁶¹ – down to whose all-embracing cultural impact (see our DIVERSION on metals) it appears he earned his place on Parnassos, even though an outsider like Dionysos from India.

HEPHAISTOS AS COMET

Laoupi²⁶², with her predilection for the disaster perspective - allied to that of Papamarinopoulos *ibid.* (whose views on the eclipse of the Trojan War in DIVERSION 8 are so valuable) - usefully gathered together mentions of Hephaistos from the original sources, eliciting interesting angles on his fundamental significance within the *Iliad* from the point of view of likely meteoric or cometary impact on the entire Troad area, including Lemnos whence Hephaistos was said to have originated. There is no doubt that Troy Level IIG had an average thickness of more than 1m ‘consisting mainly of ash, charred matter and burned debris’, reaching as high as 6m in some places and, she says, there was also ‘the mysterious melted copper and lead which covered a large area, according to Schliemann’. This evidence, along with the burnt red earths of Kea, Lemnos, Cappadocia and Sinope, is understood as a hydrothermally altered geology that occurred in what we might call ‘the radiation zone’ – and if not pointing to past volcanic activity could well indicate

²⁶¹ F Brommer *Hephaistos: der Schmiedegott in der antiken Kunst* Mainz 1978

²⁶² A Laoupi ‘The Divine Fires of Creation: Homeric Hephaistos as a Comet/Meteor God’ in S A Paipetis (ed.) *Science and Technology in Homeric Epics* Berlin 2008 325-40

meteoric or cometary burning over this wide territory at some period. But how far do we equate such phenomena with the aetiological nature of Hephaistos, the craftsman?

The conversation between the geologists and archaeologists does not necessarily dovetail, so we should look at further events in his myth. Certainly when Hera asks Hephaistos to rescue Achilles from drowning in the Xanthus river (as he rescued his sons from the Hydaspes river) the description in *Iliad XXI*, 390 onwards (Fagle's numbering) of how Hephaistos scorches the plain and dries up the river is suitably comet-like in its drastic fieriness. But it does not mean we can realistically place a comet phenomenon over Troy that might explain the origin of Hephaistos, since a real comet would have destroyed the area more permanently, and in the story Hephaistos withdraws his flames so the countryside can return to its former state.

THE HEPHAISTOS PHENOMENON: MAKER OF ALL THINGS GREAT AND SMALL

Given his presence in the *Iliad* is almost as pervasive as that of Apollo, Zeus and Hera, similar to Athena's origins Hephaistos' genesis was unusual in that he was born parthenogenetically from Hera (*Iliad XVIII*, 136) without the procreative participation of Zeus (his assignment in current astrology as the Ruler of Virgo-Athena is thus appropriate given She, too, was born parthenogenetically from Zeus' head). Born deformed, he is hurled headlong out of Olympus, rejected by disgusted Hera, landing in the sea round Lemnos and first spending *nine years* under water in the company of the sea-nymphs, then coming up on land. He has parity with the Etruscan smith God, Techulka, also described as of the same Lemnian origin and his emergence (outside the offerings lists of the Palace centres) shows him to be a newcomer God - like Kothar in the Levant - arising to fit the Second Millennium phenomenon of a metalwork universe in particular, and secondarily of craftwork of all kinds. Associated with him are the Kabeiroi, his 'little helpers' at the forge who live in the mineral mountain depths – described as many, but often also simply as his twin sons who 'fought beside Dionysus in his war against the Indians'. During this war (according to Nonnos) 'Hephaistos intervened to carry his sons to safety when the Indian River Hydaspes tried to drown them (note the significant mention of this river again, referred to already in connection with Aristaios in the Sirius DIVERSION). In our analysis of the François Vase iconography, further stories connected to Hephaistos emerge, worth looking at again.

On Lemnos the Kabeirian Mysteries were celebrated every year for nine days (note the resonance with the idea of Minos Enneaoros) – and their rites (said to contain Hittite elements) were also followed at Samothrace and Thebes. The Lemnian Labyrinth was almost as famous as the Cretan one associated with Bull and the Moon (Minotaur), and was said to embody a 'plan' giving the intervals between the planetary cycles²⁶³. This deepens the interpretation of the Tragliatella Oinoche maze, given Lemnos is only a few miles across the sea from Troy. All this information bears a view of Hephaistos – starting at Lemnos and establishing his full reputation at Troy – as marking out the stepping-off arena for the introduction of Anatolian cosmological *and* metalworking knowledge into the Mycenaean world, arriving like a meteorite or comet as if out of nowhere – not belonging to their own past tradition and therefore needing to be 'bolted on' to the mainline Olympian Pantheon of the Gods. By the time he appears on the Parthenon frieze, sanitised, only the faint suggestion of a crutch under his armpit points to the disability caused by volcanic fires at the anvil as he takes his full place in the Assembly of the Gods alongside Athena (in other myths described as her failed husband).

There is no doubt Laoupi has a point that, in many ways, 'Hephaistos activity', which is fiery, often became associated with disasters, especially as associated with earthquakes and eruptions, but there is a counter-role as well, concerned

²⁶³ On the matter of changes in resonance intervals between planets at one time causing the break-up of a planet to create the Kuiper Belt (which still exercises astro-physicists today), see D Lazzaro et al. *Solar System Formation and Evolution: Astronomical Society of the Pacific Conference Series* 149 1998. An age-old tradition survives of labyrinths being associated with the idea of 'Troy Town', still surviving in English folklore today in village turf mazes.

with picking up fragments and harmoniously fitting them back together again, including restoring planetary cycles back into consonance (see the footnote below). It is no accident that he created Pandora whose powers were fine as long as they were kept inside her Box but disastrous when released. Like Aristaeus (associated with Apollo and Sirius on coins), who also emerges during the Pelasgian substratum at the time of Kadmos of Thebes, Hephaistos fashions for Kadmos' wife Harmonia (daughter of Mars and Venus) a necklace which included serpents and eagles in it, 'designed to curse her and all her descendants', described by Nonnos as 'consisting of many colours.... breathing still of the furnace' (see our DIVERSION on semi-precious stones – to whose far-flung sponsorship we should associate Hephaistos too, since so many of the stones came from the same mines as the metal ores mixed in with them).

Due to the central place Perseus' shield plays in overcoming the Gorgon, and because *Perseus* and *Al-Gol* were constellations given new prominence in the Age of Aries 'portfolio' (to be considered fully, with surprising connections, in our discussion of the next entry), I can accept Laoupi's assertion that 'if the Homeric *Iliad* is deciphered from the standpoint of archaeoastronomy, Hephaistos is also related to the meteor swarm of the Perseids²⁶⁴'. But to see him as a God whose original existence *literally* was a meteorite or a comet event ending in the sea at Lemnos is to miss the subtler reality of the fiery nature of his working methods *and* his volcanic nature as an inner planet. Though proved by modern science only recently, the ancients were aware of planets we think are only newly discovered by modern science – as is the case with both Pan and Pluto/Hades). In any case, the vast extent of Vulcan's sphere of influence (only surpassed by the Sun) and the explosive means used to separate metal from ore is still less important than his key mode of operation as artificer, not only of metal artefacts, but, in fact, of all womb-like building processes that end in the birth of a complete creature – comparable to the macro and micro-roles of *Tvaṣṭr*, his Vedic equivalent, given above. This means, Laoupi suggests (on the basis of the last few lines of *Iliad I* below) that Hephaistos is responsible for the ordering of the Cosmos itself, divided up into the Olympian domains (or Signs) of the Gods – thus tying in with the cosmic view at the centre of Achilles' Shield of the Zodiac divisions and their markers: Sun, Moon, Orion and Bear:

At last, when the sun's fiery light had set, each Immortal went to rest in his own house, the splendid high halls Hephaistos the famous crippled Smith built for each with all his craft and cunning. (Fagles)

Creation at the divine level is matched in the description of the palace Kothar builds for Baal at the start of the Ugaritic version of the *Baal Epic* (which we went through in detail in *Catalogue D*).

SUMMARY: FORATT-47 AND PROCESSIONS OF THE GODS IN THE NEW SKY ORDER

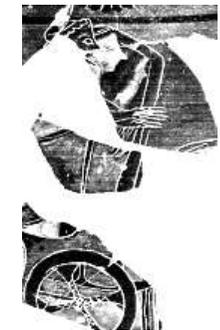
For an overview of key equivalences we gave in *III. 9-109* - planet by planet - the key Greek Gods of the Pantheon as it emerges in the Mycenaean world of the *Iliad*, are placed alongside the roughly equivalent Mitanni, Vedic and Levantine Gods. This Olympian company of Gods - akin to the similar divine assembly posited in Ugaritic mythology on Mount Saphon - is celebrated in processions on two magnificent Greek pots analysed for different reasons in the *Art History* and *Iconography Sections* - the Sophilos Dinos and the François Vase. In our art historical analysis of the François Vase (*ForAtt-47*) newcomer Hephaistos/Kothar is the unifying figure linking the narrative registers precisely because he is the God of the potters and painters of these vases – as well as of the New Order of the Cosmos.

Seen on the close-up photos of the fragments of the Sophilos Dinos vase below (unfortunately I could not find an a line-drawing showing the whole procession), each God, Goddess and host of related minor deities is labelled, and similarly so in even fuller detail on the François Vase. The two processions are all but the same – with one exception pointed out by Hedreen *ibid.*. Just

²⁶⁴ The meteorites forming the Perseid shower radiate from the constellation of Perseus and are said to be the debris of a comet visible from Earth between July 17 and August 24 every year, these days usually peaking around 12 August with as many as 150 meteorites visible per second. Interestingly, the dates can coincide with the rise of Sirius!



Procession of the Greek Pantheon on the François Vase, beginning top left at the END of the procession and ending with the reception at its front, bottom right: Dionysos is half way along looking out with the amphora perched on his shoulder



Photographic details of the procession of the Pantheon on the Sophilos Dinos showing the comprehensive labelling of Gods and Goddesses in chariots interspersed with groups of minor deities – (centre) the welcoming party greeting the front of the procession arriving for the wedding; (right) detail of fragments from a 'Sophilos Dinos school' vase from Izmir (Turkey)²⁶⁵ showing a similar marriage procession, here with the profiles of Paris and Helen standing in their chariot - duly captioned

²⁶⁵ Illustrated in Güven Bakır *Sophilos: Ein Beitrag zu seinem Stil* Mainz-am-Rhein 1981, vase A 21 pl.45 – no. 3332 in the Izmir Archaeological Museum

behind the front group of Gods approaching the welcome party at the temple building where Peleus and Thetis are to be married appears a figure facing outwards, looking out at us and making much of the huge pot over his shoulder: This is Indian Dionysos, God of drink and drinking pots, alluding to the François Vase itself – and bringing attention to the artists who made it. Dionysos appears at this point on the Sophilos Dinos too, but not facing outwards so dramatically, or brandishing an amphora. And again at the very end of both processions – on his mule – comes Hephaistos, last but not least. The grand procession starts and ends at the house of the newly wedded couple, Peleus greeting the guests and Thetis glimpsed briefly inside the columned building on the François Vase as painted by Kleitias - invisible on the Sophilos version. The wedding between Thetis and Peleus was fateful, since the birth of their son, Achilles, led to a sequence of events culminating in the Trojan War.

In Ann Birchall's short paper describing the accession of the Sophilos Dinos into the British Museum in 1972²⁶⁶ she usefully goes through the names of all the deities making their way on it towards Peleus, who are

led by Iris in winged boots and carrying her herald's wand; behind her come Hestia and Demeter together; then Chariklo (wife of the centaur Cheiron) and Leto; Dionysos comes alone; alone too follows Hebe in richly ornamented robe; then the centaur Cheiron, a hunter returned from the chase, with a bough in his hand and several quarry slung from a branch over his left shoulder; behind him Themis, closely followed by three Nymphs; then comes a chariot driven by Zeus and Hera and accompanied by Poseidon and Amphitrite; Ares and Aphrodite ride in a third chariot which five Muses accompany, the central one drawn frontally and playing the syrinx; a fourth chariot, with three more Muses as escort, brings Apollo with his lyre and Hermes; the last chariot, accompanied probably by (three) Moirai, brings Athene and Artemis with her bow; behind comes Okeanos the river-god with his bull's horn but here also represented as 'old man of the sea' with monster coils, fish and snake; then, together, come Tethys grandmother of Thetis, and Eileithya the goddess of childbirth (her presence making a subtle allusion to the offspring of the marriage, Achilles); last of all comes Hephaistos, the smithgod, with his mule, the animal slightly overlapping the columns of the side of the house across from Peleus – for the procession has now encircled the entire vase.

We end with the observation that all the key Gods and Goddesses drive chariots – leading us to the next section.

FORATT-27/28: LATER PERSEID MYTH, AURIGA AND THE ARIES-LIBRA AXIS

It is new combinations in iconography featuring initially on Mitanni seals that signal to us how the encroaching astronomical priorities of the time were slowly being spelled out, acknowledged and integrated into the new order. Yet alongside these, the significance of the *Forward Attack* (or any other lion-prey stylistic group) remained unchanged due to its particular nature, since it still denoted the New Year point at the Intercalation line along the 0° Meridian. The lion-prey group was even monumentalised at Knossos and Mycenae (the second two entries of **ForAtt-27**) and continued to feature from time to time on the Common Style Nuzi seals (**ForAtt-28**) and even connected to the Hedammu myth on one seal (**III.9-107** bottom left). Though there is nothing in these pieces (other than the griffin head of **ForAtt-27**) that adds more to the discussion of the Perati seal, on which we made much of the floating head from Central Asia (possibly Al-Gol, as on the final seal of **ForAtt-22** and featuring on other Nuzi or Syrian seals in this Catalogue), we can at least use the issues raised to ask further questions, even if unanswerable:

- Who was responsible for introducing the new mythology and star iconography?
- Was it one individual at one temple centre, or several?
- Did story-tellers and astronomers cooperate with the image-makers – working with models passed down from a tradition going back to Inner Asia - and
- How were instructions for their formulation by craftsmen passed down the line?

²⁶⁶ A Birchall 'A New Acquisition: An Early Attic Bowl with Stand, Signed by Sophilos' *British Museum Quarterly* XXXVI 1971-2 London 107-10 pls xxxiv-xxxvii

- As the new Age gradually refined a new visual language for the new benchmarks, did the fixing of the corrected Vernal Point meridian also contribute towards preparatory work for the imminent renewal of the Sothic Period in 1320?
- Was there a dawning realisation, due to the Sun's slippage, of the need to insert a new pair of Signs (the Aries –v- Libra axis) that ultimately led to the formal creation of a 12-Sign zodiac and thus the canonisation of the Olympic pantheon of Twelve Gods just looked into in the DIVERSION above?

We can at least move forward in answering the last question. Since (as pointed out in the *Art History Section*) the Archaic Period these days is taken (e.g. by Osborn *ibid.*) as beginning with the fall of the Mycenaeans and ending after the Persian Wars (1200-479 BC), it makes it easier to trace continuity from the proto-Gorgon head on the Perati seal to its depiction on the earliest Greek temples²⁶⁷ on which the full story of Perseus and the Gorgon (and her children Pegasus and Chrysaor, *said to have been fathered by Horse-God Poseidon*) takes centre stage over the following centuries.

PERSEUS MYTH VARIANTS WITH HORSES AND CHARIOTS

As we bear in mind the last sentence, and then look again at the star maps of the Aries zone in *III.9-89/III. 9-90* and *III. 9-95*, note Wilks' observation: 'There seems to have been a concerted effort to bring horses into the myths that can be associated with the constellations in this part of the sky'. This must reflect the Mitanni horse and chariot culture introduced into the Levant.

On arriving at a later version of the Perseus myth, Perseus is now called Bellerophon²⁶⁸, now riding Pegasus to kill the Chimaera, surely the Greek version of the Tiamat dragon of Intercalation Chaos, surely an early attempt to refer to Aries with a caprid head growing out of the back of a lion with snake tail representing the Ecliptic. However, since it is not strictly a ram head, the goat head could more accurately refer to the Summer/Winter-Cancer/Capricorn solstitial colure running through the *nanny-goat star Capella in Auriga* (noted above as one of the brightest stars) in many ways more usable for observation than Hamal in Aries, since so high in the sky. Just as Al-Salihi's interpretation of the relief below right as Verethragna²⁶⁹ is more likely - because of the goat - to stand for El/Saturn/Capricorn (he points his dagger at it), so on the terra cotta below left and centre Bellerophon, astride Pegasus over the Chimaera, similarly aims at the goat-head with his dagger. The variation on the Perseus story is that, still under the sponsorship of Athena, Bellerophon (originally from Corinth) after some early adventures is similarly sent off by King Iobates to hunt the Chimaera, on the same assumption that the youth will never come back. In *Iliad VI* Glaucus,



III.9-111: (Left) Terra cotta of Bellerophon on unwinged Pegasus over the Chimaera – BM 1842.0728.1135; (centre) the same (original) composition, with Perseus (looking away) holding the Medusa head above her winged, decapitated body below – Schefold fig.128, Pergamon Museum TC8382; (right) Parthian rendition of El/Capricorn as winged male holding a dagger pointing at the goat grandson of Bellerophon, an ally in the Lycian contingent, exchanges his bronze armour for Diomedes' gold set, in the process recounting aspects of his ancestor Bellerophon's story that describes him ending his days in Lycia.

²⁶⁷ For a current overview of the sculptures in relation to Greece, see U Steininger *Die archaische und frühklassische Grossplastik Unteritaliens und ihr Verhältnis zum Mutterland* Münster 1996

²⁶⁸ K Schefold *Die Urkönige, Perseus, Bellerophon, Herakles und Theseus in der klassischen und hellenistischen Kunst* Munich 1988 gives interesting background to the reasoning behind the choice of such heroes in Greek culture, but not a hint of possible astronomical overtones - or undertones.

²⁶⁹ W Al-Salihi 'Hatira: Aspects of Hatran Religion' *Sumer XXVI* 1970 187-198, fig.6

AURIGA, PERSEUS AND THE GORGON IN MAGNA GRAECIA

In all versions of Perseus-Bellerophon myth, horses are generally mentioned in terms of gifts or rewards – but more concretely we not only have the account of the birth of winged Pegasus twinned with the Golden Sword-bearer (Chrysaor) as springing from Medusa’s bloody neck from within a storm cloud at the moment of her decapitation by Perseus (a rare illustration of that moment is seen on a red-figure vase - a drawn version of the detail shown below centre), but at the same time on many pieces (as we shall illustrate below) we notice a strong emphasis on the constellation Auriga the Chariot (in Mesopotamia known as The Field/*Dilgan*) alongside to Perseus – now visualised as pulled by four horses, for the Four Seasons. Two metopes from Temple C at Selinunte are thought separately to feature the separate chariots driven by Apollo (the Sun) and Artemis (the Moon) next to a metope showing Perseus, the Gorgon and her two children (below), not just to suggest the Sun and Moon’s journey across the sky, but because it is against this star group meridian aligning the new Vernal Point that the reconciliation of solar and lunar years has to take place.

All this imagery later became commonplace on red and black-figure pottery, and it is surprising the standard work on Perseus in Greek Art²⁷⁰ does not include these earlier metope examples from the previous period (this is true, also, of the exhaustive study on Hephaistos iconography²⁷¹) whose mythology was already fully-blown in the *Iliad*, so dating back so much earlier).



III.9- 112: (Left) Terra cotta from Gela, Sicily, of the Gorgon clutching the new-born Pegasus and Chrysaor in her arms; (centre) depiction on a red-figure amphora in Munich of the Medusa before and after decapitation, Pegasus and Chrysaor rising from her neck; (right) Chrysaor as depicted next to the Gorgon on the Pediment of the Temple of Artemis at Corfu

The first monumental appearance of the Gorgon in the Archaic Period proper is to be seen on the pediment of the Temple of Artemis at Korkyra/Corfu (below top). It is pretty certain Pegasus was at her right hand, though all that remains is the head and torso of Chrysaor at her left-hand side (detail in **III.9- 112** right). (The remains of other small figures in the narrowest angles of



III.9- 113: (Top) The Gorgon pediment from the Doric Temple of Artemis at Corfu²⁷² – now in the local museum; (below) one reconstruction from fragments of similar earliest temple pediments on the Athens Acropolis (see ForAtt-48 discussion)

²⁷⁰ K Schauenburg, *Perseus in der Kunst des Altertums* Bonn 1960

²⁷¹ F Brommer *ibid.*

²⁷² The standard publication recording the pediment sculptures in clear drawings is G Rodenwaldt *Korkyra: Archaische Bauten und Bildwerke II* Berlin 1939

the pediment showing battles between Gods and Giants need not concern us here.) The reasons for the incorporation of the Gorgon onto aegis by Pallas Athena²⁷³ when she became presiding divinity of Athens after the battle with Poseidon was won is a central thread in the weave of iconographical questions raised in **Catalogue F**. When we take up the story there of the Pre-Parthenon Athenian pediments featuring lion-prey groups - retained until the Persian Wars were over - we can look into the first phases of the story of Athena's domination over the city with the earliest pediment remains (one possibility drawn out above, lower image) pointing to the initial adoption of the same overall sculptural programme as in Magna Graecia.

PERSEUS, AL-GOL AND AURIGA IN MAGNA GRAECIA

It is on Mediterranean islands (notably Sicily) and in South Italy that the majority of the earliest Archaic temples (associated with the colonizing diaspora of the 8C) were built, and Magna Graecia²⁷⁴ led the way in the outstanding inventiveness of its sculptural representations of the Perseus myth compared to contemporary pieces made on the Greek mainland. This may be an unfair judgement, given the fragmentary, less representative remains of the latter due to its deliberate Persian destruction. Østby contends Sicily appears to have had a tradition of emphasis on metopes rather than pediments going right back to Selinunte's earliest disparate metopes (reused in later structures) from a conjectured 'Temple Y' dating back to the 7C, which already laid down the trend of not necessarily trying to interlink the narrative of any one metope with those of its neighbours (its Temple C simply had a Gorgon head at the centre of its main pediment – as also Gela²⁷⁵). Choice of myth is always revealing²⁷⁶, since the local Gods of Selinus were Zeus and Heracles (an avatar of Perseus) – and 'both appear in stories specifically connecting them with Crete', says Østby. Since Minos was the offspring of the union between Europa and Zeus (see **III.9-138** right), as Østby puts it, 'Minos was a figure of some interest in this part of Sicily since there was a local tradition locating his tomb in the frontier area between Selinus and her neighbor Akragas, which had an element of Cretan settlers...'.²⁷⁷

Remembering the earlier astronomical history of Motya, the orientation of its Kothon towards Auriga (with Perseus alongside), as well as the dedication of its sacred pool to Baal 'Addir /Poseidon (Nigro *ibid.*), it is no surprise to find renditions of the myth on the massive Doric temples of Sicily as particularly successful in encapsulating the essence of the story (Østby²⁷⁷ describes how



III.9- 114: (Left and centre) Two metopes from Temple C at Selinunte, Sicily, c.525 – embodying the stellar myths of the Archaic Age; (right) close-up of the Gorgon at the centre of the pediment of the Artemis Temple at Korcyra showing her entwined snakes belt
 it was common for the earliest temple buildings in Sicily (and South Italy – see van Buren *ibid.*) to simply feature the Gorgon's head in the pediment - of clay, painted or carved –the early temple at Himera being another case in point. **III.9- 112** above shows a terra-cotta from Gela (now in the local museum) of lion-fanged Medusa clutching the new-born Pegasus and Chrysaor

²⁷³ M Oppermann *Vom Medusabild zur Athenageburt* Leipzig 1990

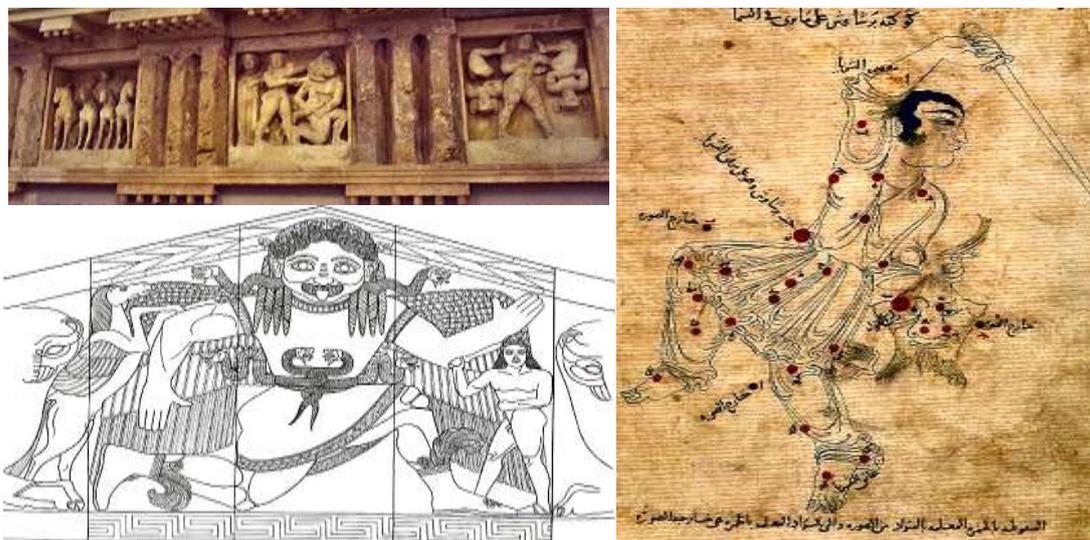
²⁷⁴ J Bérard *La Colonisation Grecque de l'Italie Meridionale et de la Sicile dans l'Antiquité: l'Histoire et la Légende* Paris 1957

²⁷⁵ See E Douglas van Buren *Archaic Fictile Revetments In Sicily And Magna Graecia* New York 1923 fig.78

²⁷⁶ See C Calame *Mythe et Histoire dans l'Antiquité Grecque: La Création Symbolique d'une Colonie* Paris 2011 –concerning the colony of Cyrenaica; or Heide Froning *Marmor-Schmuckreliefs mit griechischen Mythen im 1. Jh. v. Chr: Untersuchungen zu Chronologie und Funktion* Mainz 1981

²⁷⁷ E Østby 'The Relief Metopes from Selinus: Programs and Messages' in P Schulz et al. (eds) *Structure, Image, Ornament: Architectural Sculpture in the Greek World* Oxford and Philadelphia 2009 154-73

in each arm, while the metope from the Selinunte Temple (above left) manages to bring together the moment Perseus cuts off the head of the Gorgon, already with Pegasus in her arms, with Athena looking on quite unsurprised. What is more, two more metopes²⁷⁸ on that temple (one of them above centre) illustrate quadrigas, not part of the Perseus myth as such but, thinking of Auriga's brightest star, Capella the she-goat, increasingly important for the new alignments that were edging out the Ursa Major-Orion line - and a less contrived image than the Chimaera to express the new meridian. We mention in our next DIVERSION an early metope from the presumed Temple Y showing a more tentative rendition of a divine quadriga (*III. 9-138* left) understood as



III.9- 115: (To pleft) Positioning of three of the metopes over the intercolumniations of the Selinunte Temple C front as exhibited today in the Palermo Archaeological Museum. The right metope is of Hercules and the Kerkopes (the hero also a favourite on the Selinunte Temples; (below left) presumed restoration of Korkyra pediment centre that presumes Pegasus would have been included on the Gorgon's right side - Rodenwaldt *ibid.* fig.4; (right) Arab rendition of Perseus and decapitated Ra's al-Ghoul²⁷⁹, 10C AD

featuring Amphitrite and Poseidon (putative father, we remember, of Pegasus and Chrysaor) who often adopted the horse form. (The story of the final conflict between Poseidon and Athena fits in better with our discussion of *Catalogue F* iconography.)

Thus, along with the decapitated monster head, the inspiration behind the representation of *Dilgan/Iku's* rectangle of stars by a modern war vehicle (going back to the earliest evidence of its appearance under *ForAtt-22*) points to the Mitanni as progenitors of the idea, coming in already with the adoption of the chariot by the Mycenaeans on the Shaft Grave stelai, and seen on seals depicting chariots from Knossos, the Dendra Hoard – and places like Ugarit (see the next DIVERSION)²⁸⁰. Considering that at this point in time we see both the chariot, Auriga (notionally pulled by four horses), as well as Pegasus the winged horse²⁸¹ (two quintessential Mitanni motifs combined), they can surely only have come to the forefront at a time when horsey culture was foremost in the minds of those embracing the myth, and in one section in the DIVERSION below it will be important to trace the roots of horse and chariot development back to its origins in Central Asia if we are to fully understand its genesis.

This is a good moment to consider why the introduction of horse iconography into near-eastern and Aegean art only makes sense from the mid-2M and why, on balance, we should identify the Mitanni as the key agent behind this osmosis. Nonetheless, since solid information on the Mitanni is indirect, we also have to indirectly use Central Asian, Mycenaean, Levantine and Egyptian textual and artefactual evidence by inference in the next DIVERSION.

²⁷⁸ For the full sculptural programme see C Marconi *Temple Decoration and Cultural Identity in the Archaic Greek World: The Metopes of Selinus* Cambridge & New York 2007

²⁷⁹ From the original manuscript of *Book of the Constellations and Fixed Stars* by the Persian astronomer Abdel-Rahman As-Sufi c.964AD in the Bodleian Library, illustrated in *Universe: Exploring the Astronomical World* (compiled 2017 by Paul Murdin, Senior Research Fellow at the Institute of Astronomy, Cambridge). Although assembled by a Persian, the stars are given their Arabic names – Ra's al-Ghoul meaning 'Head of the Demon' – her shown as male and bearded

²⁸⁰ Kramer-Hajos *ibid.* tables Minoan and Mycenaean chariot seals under her fig. 4.2

²⁸¹ Perseus also wears Hermes' winged sandals – in some cases transferred to the Medusa (as in the Korkyra pediment, above).

DIVERSION 10 - THE AGE OF ARIES: HORSE, CHARIOT AND STEPPE

In Bronze Age records assessed for their animal references by Voultziadou et al.²⁸², mentions of horses (748) are far more frequent than cattle (340), dogs (183), goats (170), owls (112) or honeybees (107). Although the idea of being buried with your horse(s) started in Central Asia, the only actual horse burial inside Greece so far recorded from Mycenaean times (despite all our *Iliad* references shortly) was in an LHIII tholos just north of Marathon-Vrana, which had two horses placed in the dromos, a positioning often repeated later in the horse and chariot burials of Salamis (**ForAtt-43** - see also **III.9-124**). Those occurring in the Levant are often the direct signature of Mitanni presence (in contrast to the Amorite donkey sacrifice) and by the end of the 2M the *ašvamedha* (horse sacrifice) had become a core Vedic ritual in India reaching as far as South Arabia (see **III. 9-140**) - with the camel sometimes also involved as Underworld steed. In fact, we will conclude this DIVERSION by considering the known significance of the *ašvamedha* - usually performed once in a king's lifetime – as supported by the Indian texts.

In this DIVERSION we are more interested in tracking beginnings, so must leave it to the reader to follow up on the vast archaeological record that exists beyond our *Chronological Focus* period, best covered by Feldman and Sauvage²⁸³.

HORSE-RIDING: THE CENTRAL ASIAN IMPACT ON MESOPOTAMIA AND THE ILIAD EVIDENCE

Bearing in mind the history of horse-taming is a long saga that began on flat steppe-lands over many centuries, horseback riding clearly developed on its own before chariots. Indeed Renfrew *ibid.* suggests horse remains from Çatal Hüyük were simply another food resource. Anthony²⁸⁴ quotes the authorities as dating the earliest evidence from Dereivka in the Ukraine to c.4000BC. The Central Asian specialist, Victor Masson, was the first to show early seal images featuring horse riding or horse and chariot images from the Caspian hinterland that indicate how in the immediate region of Margiana c. 2300-1700 (germane to the Mitanni-Mycenaean connection) people were moving on from the carts²⁸⁵ they had first used (they are still often retained by nomads in Turkmenistan today). Providing quick, independent mobility, horseback riding was slow to penetrate into the Diyala (the north-eastern entry point of the Mitanni into Mesopotamia), taken up only by certain groups (as described for the Tell Brak horses later) and their



III.9- 116: (Left) horse and rider with foal on a cylinder seal from Gonurdepe; (right) cylinder seal scene of horse and chariot from Hissar IIIB – from Masson²⁸⁶ fig. 1a/b

potential appears only to have really caught on at the royal court in the Ur III period after the first signs of Akkadian interest (seal below left) had then developed into a stronger trend of Central Asian influence with the appointment of a master of the horses (his seal shown below right) – a cultural takeover picked up on by us already from the rich agates used in the necklace of the priestess Tiamatbashti, dedicated also by Shu Shin.

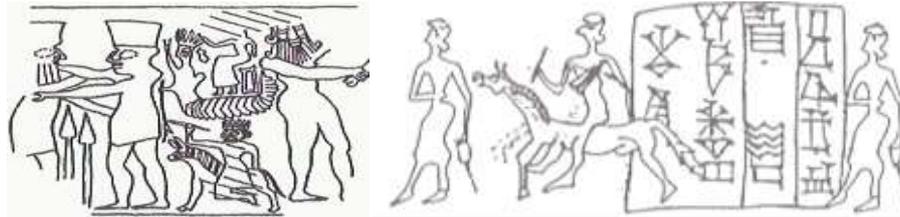
²⁸² E Voultziadou and A Tatolas 'The Fauna of Greece and Adjacent Areas in the Age of Homer' in S A Paipetis (ed.) *Science and Technology in Homeric Epics* Berlin 2008 303-15

²⁸³ M. Feldman & C Sauvage 'Objects of Prestige? Chariots in the Late Bronze Age East Mediterranean and Near East', *Egypt and the Levant* **Ägypten und Levante XX** Vienna 2010 67-183

²⁸⁴ D W Anthony 'The Earliest Horseback Riders and Indo-European Origins: New Evidence from the Steppes' in B Hänsel et al. (eds) *Die Indogermanen und das Pferd* Budapest 1994 185-195

²⁸⁵ Pierre Amiet 'Les Chars d'Ugarit' in *Von Uruk nach Tuttul: eine Festschrift für Eva Strommenger* Munich and Vienna 1992, 23-27 & 3 plates

²⁸⁶ V Masson 'Cultures of the Steppe Bronze Age and Urban Civilizations in the South of Central Asia' in K Jones-Bley et al (eds) *Complex Societies of Central Eurasia from the 3rd to the 1st Millennium BC* Washington DC 2002



III.9- 117: Two cylinder seals (quoted by Anthony²⁸⁷, fig.16.3) showing horse-riding on (left) an Akkadian seal from Kish and (right) an Ur III seal impression of Abbakalla, master of horses for King Shu-Sin

When eventually horses were married up to the light chariot (whose development out of the ox-drawn heavy cart also had a long genesis) the advantage of greater speed on the battlefield was immediately grasped and this time the combination spread rapidly in the flat, coastal areas of the Near East (at the north-western infiltration point of the Mitanni) where this time the terrain was suitable for their proliferation. It is therefore no surprise to read, throughout the *Iliad*, that the Trojans were named 'horse-taming Trojans' in 'Trojland where the horses graze' – or that Hypernor and Hector in particular earn the title 'horse-taming' several times. In fact the very last line of the *Iliad* runs, '*Such were the funeral rites of Hector, tamer of horses - indeed once described as having the stance of a stallion himself.*'

HORSES AND MEN IN THE ILIAD

We know the Achaeans became as skilled in their chariots as in their boats. Hector finally meets his deserved death at the hands of Achilles, whose education (like that of Hercules and Jason later) was undertaken by Cheiron, the Centaur²⁸⁸ – half-man, half-horse – which points to a deep cultural grounding in horse-man culture. Why Centaurs should constantly appear in battles with the Gods in Greek myth and art is a matter we cannot go into here, but one fact we should dwell on: Cheiron (to be identified more with Sagittarius than Centaurus – see III.9-174) is in myth credited with inventing the constellations. What does come over from various incidents in the *Iliad* is that it already takes for granted a backdrop of several generations on the Mycenaean side of quality horse breeding – and horse stealing – not just amongst 'the horse-racing Cadmeians' or the 'horse-loving Danaans', but pre-eminently between top groups amongst the Mycenaeans themselves. We know, for instance, that Achilles' horses were handed down from a gift originally made by Poseidon of pedigree horses to Peleus (the God Hades, too, is called 'Hades of the fabled horse') - and even Mycenaeans such as Menestheus of Athens, Diomedes or Orestes, like the Trojans, have earned the epithet, 'tamer of horses'. As we see from the examples below the nobility saw themselves as indivisible from their horses, such that the Centaur could be taken as the prototype of the man-horse Mitanni cultural norm.

The wealth in horses of some of the Mycenaeans is exemplified, first, by Pandarus – when at one point in **Book V**, left horse and chariotless, he says, '[and] all the time I have eleven splendid chariots at home, fresh from the wainwright's hands,... and a couple of horses standing by each, munching white barley and rye'. In a conversation about Aeneas' horses, Diomedes tells Sthenelus:

Concentrate on the horses of Aeneas. Seize them and drive them out of the Trojan lines into our own. For I tell you, they are bred from the same stock as those that all-seeing Zeus gave Tros in return for his boy Ganymedes; and they were the best horses in the world. Later, Prince Anchises stole the breed by putting mares to them without Laomedon's consent. The mares foaled in his stables, and of the six horses that he got from them he kept four for himself and reared them at the manger, but gave these two to Aeneas for use in battle. If we could capture them we should cover ourselves with glory. (E V Rieu translation)

²⁸⁷ D W Anthony *The Horse, the Wheel, and Language: How Bronze-Age Riders from the Eurasian Steppes Shaped the Modern World* Princeton 2010

²⁸⁸ B Schiffler *Die Typologie des Kentauren in der antiken Kunst vom 10. bis zum Ende des 4. Jhs. v. Chr.* Frankfurt 1976

(Tlepolemus, son of Heracles, explains to Sarpedon, leader of the Lycians that his father 'would never have sacked holy Ilium but for the stupidity of one man, the haughty Laomedon who repaid his services with insults and refused to let him have the mares he had come so far to get'.)

To return to Achilles' very special horses, in **Book XVII** Apollo (in disguise) says to Hector, 'Hector, why have you set your heart on catching the horses of Achilles, which are so hard to master and difficult to drive – at any rate for a mere man or anyone but Peleus' son, whose Mother is a goddess?' While the battle over Patroclus' body rages during and after the eclipse, Achilles does not yet know his beloved charioteer has been killed – but his horses do:

Far from the conflict, the horses of Achilles had been weeping ever since they learned that their charioteer had been brought down in the dust by the murderous Hector. Automedon, Diores' stalwart son, did all he could with them: he lashed them repeatedly with his whistling whip; he coaxed them and he cursed them freely, but the pair refused either to go back to the ships and the broad Hellespont or into the battle after the Achaeans. Firm as a gravestone planted on the barrow of a dead man or woman, they stood motionless in front of their beautiful chariot with their heads bowed to the earth. Hot tears ran from their eyes to the ground as they mourned for their lost driver, and their luxuriant manes were soiled as they came tumbling down from the yoke-pad on either side of the yoke. The Son of Cronos [Zeus] when he saw their grief was sorry for them. He shook his head and said to himself, 'Poor beasts! Why did we give you, who are ageless and immortal, to King Peleus, who is doomed to die? Did we mean you to share the sorrows of unhappy men? For of all creatures that breathe and creep about on Mother Earth there is none so miserable as man. One thing I will not have: Prince Hector shall not drive you and your splendid chariot...' With that, Zeus breathed fresh power into the horses. They shook the dust from their manes and galloped off with their fast chariot to join the Trojans and Achaeans.

Automedon keeps driving them but finds them uncontrollable, so Alcmidon tells him to stop pushing so hard, and Automedon replies, 'Alcmidon, ... there was nobody like you at taming and managing these immortal horses except Patroclus, while he lived; and he had learned the master-touch from Heaven'. Then at Patroclus' funeral Achilles not only sacrifices two dogs - but also the two horses.²⁸⁹

This final incident on the empathy between man and horse fully reveals the depth of passion man and horse had for each other, experienced as of a divine nature. This makes the various projections of horse figures onto star groups of the Second Millennium sky understandable, and why that process must have been inspired at the height of horse and chariot development when they were felt as the key new enhancement in aristocratic men's lives. In response to the first questions at the start of this DIVERSION - what was the chain of image formulation through warrior-king, astronomer and artist, and how was implementation achieved - we will probably never know. We can only deduce.

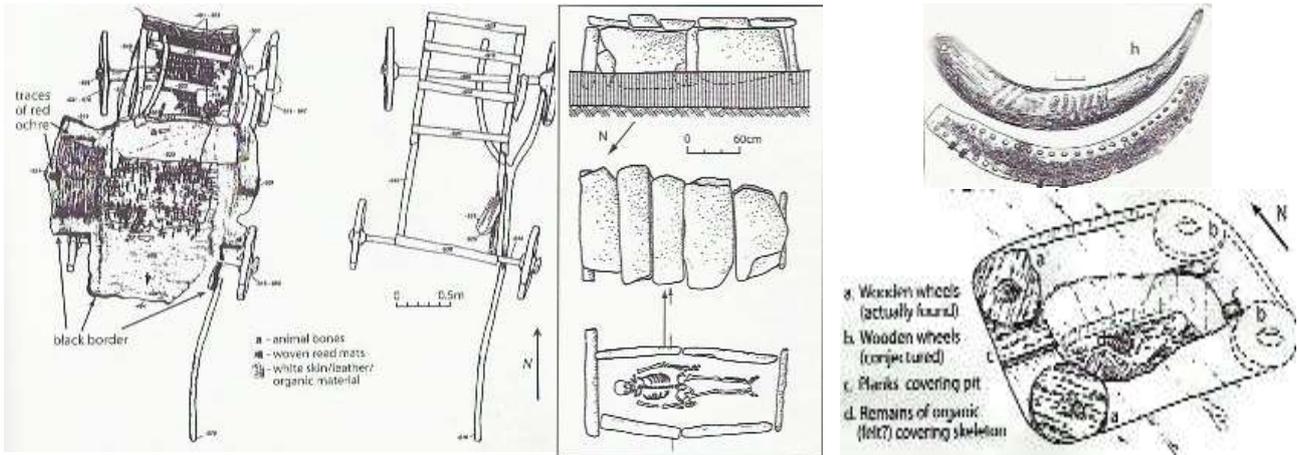
To gain some idea of the very earliest beginnings underlying the Mitanni nomad horse-and-chariot culture, we look now at the archaeological record.

HORSES AND CHARIOTS: ROOTS IN THE CENTRAL ASIAN ARCHAEOLOGICAL RECORD

WAGON BURIALS

Archaeological proof for a new mobility of heightened pace during the 3M lies in the wagon burials within the Kurgan tumuli area associated with the Yamnaya Horizon, of which we show the plans for two of the most telling examples below. Certain details

²⁸⁹ For added insights see Ralph Gallucci 'Studies in Homeric Epic Tradition' in K Jones-Bley et al (eds) *Proceedings of the Tenth Annual UCLA Indo-European Conference, Los Angeles 1998* (published Washington 1999) 165-182



III.9-118: (Left) Top and under-structure of wagon from the Ostanni kurgan (Anthony fig.4.5); (centre) typical cist grave of the Early Yamnaya Horizon c.3300-2800 (grave 7, Marievka Kurgan 14 —Anthony fig.12.4); (right top) boar's tusk ornaments from a 4M Petro-Svistunovo burial (Anthony fig.11.10 – c.f. also III. 9-92); (right below) wagon burial from Plachidol (Bulgaria), directly associated with the Yamnaya migration c.3000 (Anthony fig. 14.6)

are often mirrored in Mycenaean burials – in this instance, the body laid into a stone-lined cist as in the case of the Vapheio warrior - and use of boar's tusk ornaments. The wagon burial above left from the Kuban river area, southern Russia radio-carbon dates to c.3300-2900 and was placed under a kurgan mound, whilst the wagon burial below right bottom (Anthony fig. 14.6) gives an idea of how the body would be placed in relation to the wagon. If dismantled, in the absence of the wagon's ready-made structure, the cist grave under many of the kurgans provided a hollow for the body to prevent it being crushed as the mound was built over it.

Archaeologically, increased mobility and expansion can be deduced from two further phenomena: the disappearance of long-term settlements east of the Don river on the one hand, and on the other 'the brief, episodic use, abandonment



III.9-119: Chariot burial with two horses, Sintashta necropolis - Masson fig. 4

and, much later ... re-use of many Yamnaya kurgans - as well as the first appearance of kurgan cemeteries in the deep steppe on the dry plains between rivers' (Anthony) confirming the Yamnaya peoples were on the move, spending most of their dwelling time in the wagons, burying their élite dead wherever they happened to find themselves. Note that so far most vehicles showing up in the burials are wagons – Masson's²⁹⁰ picture (above) of a Sintashta chariot burial marks the stage that came into play after a long prelude of wagon burials²⁹¹.

We cannot follow all the ramifications of this widespread nomadic fanning out: suffice it to say that around 2200-2000BC 'a migration stream flowed from the late Yamnaya-Poltavka cultures... eastward around the southern Urals north of the Caspian Sea, creating the Sintashta culture which almost certainly represented the ancestral Indo-Iranian-

²⁹⁰ V M Masson 'La dialectique des traditions et des innovations dans le développement culturel de la Bactriane' in *L'Archéologie de la Bactriane Ancienne: Actes du Colloque franc-soviétique à Dushanbe 1982* Paris 1985 11-37 and 5 plates of figs.

²⁹¹ For further specialist coverage of the horse and wagon topic, see T V Gamkrelidze 'PIE "horse" and "cart" in the light of the hypothesis of Asiatic homeland of the Indo-Europeans: Indo-European-Caucasian Aspects' and R Plath 'Pferd und Wagen im Mykenischen und bei Homer' both in B Hänsel et al. (eds) *Die Indogermanen und das Pferd* Budapest 1994

speaking community' as it turned and moved southward. From all the clues found at Gonur and Togolok (some already referred to above in terms of dogs and semi-precious stone necklaces - with others yet to come), this is the



III.9-120: Northern Steppe sites c.2100-1800, in Anthony's words 'probably the archaeological manifestation of the Indo-Iranian language-group' – his fig. 15.9. The site of Sintashta is to the right, under Kammenyi Ambar –labelled as an entire zone in III.9-44

reason why Sarianidi classed the people building and living at these two sites (later fortified when war conditions arose) as 'Protozoroastrians' –in fact it was only after several decades excavating in Margiana that two spectacular wagon burials were found at Gonur itself (next illustration)

We leapfrog over many ramifications and further splits - such as the separation of the Repin or Afanasievo cultures, or of the pre-Tocharian offshoot from classic Proto-Indo-Europeans – and home in on the overview that emerges from a benchmark of 'the rapid diffusion of the early Yamnaya horizon [c. 3300] across the Pontic-Caspian steppes... which sowed the seeds of regional differentiation' (Anthony). Thereafter between 3100-3000 'a large migration stream erupted from within the western Yamnaya region and flowed up the Danube valley and into the Carpathian Basin during the Early Bronze Age. Literally thousands of kurgans can be assigned to this event, which could reasonably have incubated the ancestral dialects for several western Indo-European language branches [see our III. 9-40/43], including Pre-Italic and Pre-Celtic [and, we may add, the Luwian and proto-Greek of the Mycenaean kind]'. Finally, c. 2800-2600BC 'late Yamnaya people came face to face with people who made Corded Ware tumulus cemeteries in the east Carpathian foothills, an historic meeting through which dialects ancestral to the northern Indo-European languages (Germanic, Slavic, Baltic) began to spread'. But how to match language to the hard facts of archaeological artefact? We will explore further what is meant by 'Aryan archaeology' in due course beyond this DIVERSION.



III.9-121: (Left) The wagon burial in Gonur Grave 3200; (right) the second wagon burial in Grave 3225

As a clear benchmark for the limit reached for the farthest extent of the movement of horse culture to East Central Asia and up to India by around 1700, a useful line was drawn by Jarrige (op.cit. 1987) when describing the zebu bull figurines and seals found at Sibri (III.9-31), who noted that ‘... contrairement, à Pirak (just east of Sibri) à partir du 2^e quart du 2^e millénaire on ne remarque pas de représentations du chevaux ou de chameaux’ – and that this was true also of Sibri and Mehrgarh nearby. In other words, the presumed migration ‘d’un culture que l’on pourrait associer à d’éventuels destructeurs de la civilisation de l’Indus’ (possibly the Indic branch of the Mitanni when finally ejected by the Hittites and Assyrians) had not so far penetrated that far east at this point - in contrast to what was starting to happen further west, in the southern Caspian Sea area and Margiana southwards into Syro-Mesopotamia.

For our critical period under the microscope - when linkage with the Near East by Mitanni in their own movement southwards starts to come into the picture – we keep coming back to the rise of Gonur and Togolok (estimated to have flourished 2300-1700 in Sarianidi’s calculation) when ‘around 2200-2000 a migration stream flowed from the late Yamnaya/Poltavka cultures of the Middle Volga-Ural region eastward around the southern Urals, creating the Sintashta culture [map III. 9-120 ... by which time] late Proto-Indo-European ...was [already] so diversified ... that it probably no longer existed...[and]... linkage with the steppe archaeological evidence is compelling’ (Anthony passim).

If we go back to the 3M standard of Ur we better understand the background context for the Sumerian carts with solid wooden wheels used as war carts drawn by mules or onagers, reminding us that even in Mitanni Ebla traditionally the king and queen on high days were still paraded in the old clumsy carts drawn by oxen²⁹².



III.9-122: Standard of Ur detail showing two-horse (possibly four-horse) carts with solid wood wheels, driver and postillion – to be compared (centre) with an Anatolian seal of the early 2M still using the same design and method of propulsion – the four horses clearly displayed one above the other (c.f. also one of several sealings (right) from Tell Beydar) west of Tell Brak – – Rova²⁹³ seal 55)

It was the combination of the chariot with two spoked wheels drawn usually by two horses - developed concurrently from the end of the 3M on the Eurasian Steppes by tribes ancestral to the Mitanni - that was to replace these clumsy conveyances in the Near East and Aegean for a variety of reasons - and the dating of artefacts representing them helps provide an idea of the watershed period for the technological changeover. We do not need to give as full a history of the horse and chariot as summarised by Feldman & Sauvage *ibid.* or as followed up in minute detail for different regions by expert researchers - on all of whose work we have gratefully drawn to give an idea of the kinds of drillings into the past that are possible. We will simply focus on key elements that evoke prime considerations from the perspective of our Mitanni-Mycenaean preoccupation.

Even before the Mitanni had entered Mesopotamia, Sumerians had begun horse-dealing in the northern borders, and there are several references to horses in 3M Sumerian texts.. With talk earlier of the horse acrobats and bull-leaping,

²⁹² Biga op.cit p.44

²⁹³ E Rova ‘A New Group of Seal Impressions from Tell Beydar’ in R Matthews et al. (eds) *Proceedings of the 7th International Congress on the Archaeology of the Ancient Near East [CAANE] Vol.3* Wiesbaden 2012 151-166 (her bibliography is a useful summary of Tell Beydar publications). For a full account of the full Tell Beydar corpus see G Jans et al. *Seals and Sealings from Tell Beydar/Nabada Seasons 1995-2001*

we mentioned Biga's paper (*op.cit.*) citing Ebla texts mentioning the kingdom of Nagar /Tell Brak as the main horse-trading centre in the late 3M/early 2M for BAR.AN (horses) – and that it was also the only source of the men known as *HUB.(KI)*, who 'were acrobats and probably used the [horses] for their exercises, participating in many ceremonies and rituals performed at the court of Ebla' (see our ENTERTAINMENT DIVERSION). Two acrobats are described as depicted on Achilles' shield, leaping to the sound of the lyre, and in *Iliad XV* Hector is said to move 'like a trick-rider with a team of four picked horses²⁹⁴... [as] he keeps jumping on and off his several mounts as they fly along' (in *Iliad XVI* he is briefly allowed by Apollo to wear Achilles' horse-tail crested helmet, stolen off the body of Patroclus). Also said to be from Nagar (just inside the orbit of the kind of Central Asian connections just sketched in above – indeed sometimes thought to have been an early Mitanni capital) came vets - who knew how to care for the horses' health – as well as horse trainers, all in exchange, it appears, for Ebla's textiles. One Ebla text lists the vast numbers of animals sent as dowry for Princess Keshdud, bride to the heir to the throne of Kish, mostly consisting of hundreds of cattle – but also including 159 horses, all BAR.AN apart from one IGI.NITA – with no mention, yet, of chariots.

Compared to the multitudinous spread of horses and chariots westwards - from Sauvage's map at *III. 9-125*, as far as 2M archaeological sites in Babylonia itself are concerned, those revealing connections with horse *and* chariot are sparse: Haft Tepe held a stela mentioning a chariot of the God Inshushinak, and at Nippur and Kar Tukulti-Ninurta pieces of horse tackle left behind bear the names of Kassite kings. Otherwise the chariot was not to take off in this part of the world until the Neo-Assyrian and Achaemenid periods, perhaps due to more difficult terrain.

By the first quarter of the 2M the Diyala area was now not the only region well-known for its horse markets, and Haas *ibid.* gives a detailed description of how horse procurement, breeding and management flourished under the local Luwian/Indo-Germanic Kuššar dynasty ruling the Kültepe citadel in the Assyrian Colonies period – mentioning also considerable activity in the Karkemish-Kayseri-Mersin area of NW Syria as an active horse procurement and exchange zone. This makes sense, given we know the Mitanni infiltrated into northern Syria and SW Anatolia from the Indo-Germanic Steppes on the west side of the Caspian Sea too, preceded by Hurrians²⁹⁵. Haas cites several local goddesses the Kuššar cultivated (all more or less the equivalent of Ištar), to their mind represented either as seated on iron thrones or standing on horses (only *Pirinkir* was associated with a 'big lion'). We can certainly equate the Kuššar images to the mention on Linear B tablet *PY An 1281.1* of a Mistress of the Horses (*Potnia iqeja*) though in a badly damaged document known as tablet FU711²⁹⁶, dogs and a bull are mentioned in association with her also. But on the basis of Levi's paper²⁹⁷ which illustrated supposed images of a Mycenaean Goddess on a horse, his case (based on his figs 4a/b) is too tentative since her steeds' upcurled tails betray them as lionesses.

THE EARLIEST CHARIOT BURIALS IN CENTRAL ASIA

The up-to-date account of the introduction of the horse and wheel to the Near East by Anthony (*ibid.*) underlines how these innovations were part and parcel of the infiltration of Aryan peoples southward into the Near East during the 2M, not only speaking one form or another of the Indo-European language family but, consequent on local adaptation, with their own already differentiated cults, customs and iconography that, crucially for our overarching concept of the **CANEA**, reached critical mass in bringing in important alternatives to Age of Taurus iconography. Christine Kinneally,

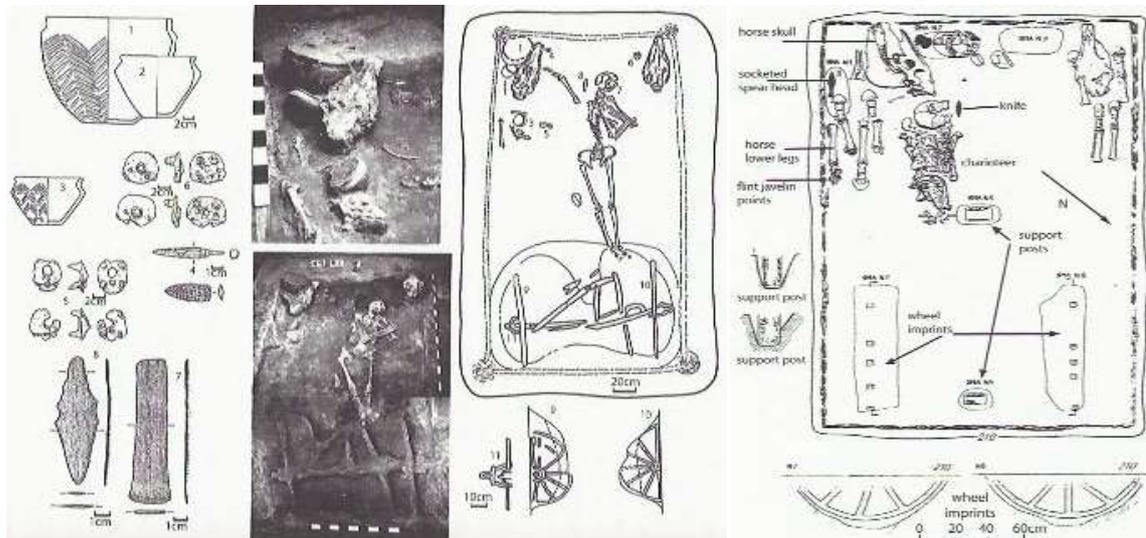
²⁹⁴ Manilius the Roman in his *Astronomica* says the astrological influence of Auriga on a person makes them not simply an effective winner of chariot races, but 'as a trick rider he will be able to settle himself now on one, now on a second horse, and plant his feet firmly upon them, flying from horse to horse he will perform tricks on the backs of animals ... he will possess virtuosity in all connected with such pursuits' - adding that Bellerophon was born under Auriga!

²⁹⁵ For more detail see also V Ivanov 'Horse Symbols and the Name of the Horse in Hurrian' in Buccellati G et al. (eds) *Urkes and the Hurrians* Malibu 1998

²⁹⁶ L Godart and Y Tzedakis 'The Bull in the Minoan-Mycenaean World' in *The Bull in the Mediterranean World: Myths & Cults* Barcelona & Athens 2003

²⁹⁷ D Levi 'La Dea Micenea a Cavallo' in G Mylonas (ed.) *Studies Presented to David Moore Robinson* Saint Louis 1951 108-25. See also O Panagl 'Hippologica mycenaea' in H M Ölberg et al. (eds) *Sprachwissenschaftliche Forschungen: Festschrift Johann Knobloch* Innsbruck 1985 283-292

New York Times reviewer of Anthony's book, well expressed how his marshalling of the evidence 'shows how their innovative use of the ox wagon, horseback riding and the warrior's chariot turned the Eurasian steppes into a thriving transcontinental corridor of communications, commerce and cultural exchange. This was a two-way process benefiting the Mitanni/BMAC and North Syrian communities equally - as is clear from the seals evidence. The wagon had initially been instrumental in the progress of their successful migrations, preceding the chariot by some centuries but its



III.9- 123: (Left) Typical Sintashta chariot burial c.2000BC with pottery, pierced antler cheek pieces, bronze axe blade and dagger – Anthony fig. 15.13; (right) Sintashta burial with disarticulated horse and disassembled chariot - Anthony fig. 15.3

solid-wood four-wheeled mode of conveyance (mostly drawn by oxen) was perfectly suited only for times of peace and a slow pace of life. The spoked, highly manoeuvrable two-wheeled chariot, however, quickly developed as an instrument of war – a key reason for its successful spread into the Levant, Egypt and Greece, where war thrived.

The first chariot burials of powerful individuals took place in the original heartlands of Eurasia/Central Asia (apparently with no visual connection made as yet with Gods such as Tarhuntas or Baal). Without going into the full history as supplied by Anthony, we show above two typical chariot burials cited by him to show the kind of precedent lying behind their later adoption in the Near East and Aegean. Indeed chariot burials for men or women eventually spread



III.9-124: (Left) Reconstruction of the Wetwang reed and wooden chariot c.800-400BC (staffed by two men or women), briefly exhibited in the British Museum (Cunliffe *ibid.* gives other examples); (right) the latest Yorkshire discovery, Daily Mail 31 March 2017, with two horses and chariot wheel visible

as far as Britain (restricted to East Yorkshire where up to eleven such burials have been found, by now using metal spoked wheels). As in Central Asia, the wheels were taken off and laid to one side, with the body laid on the chassis of the chariot. See above right a very recently discovered chariot burial reported in the press, also in Yorkshire.

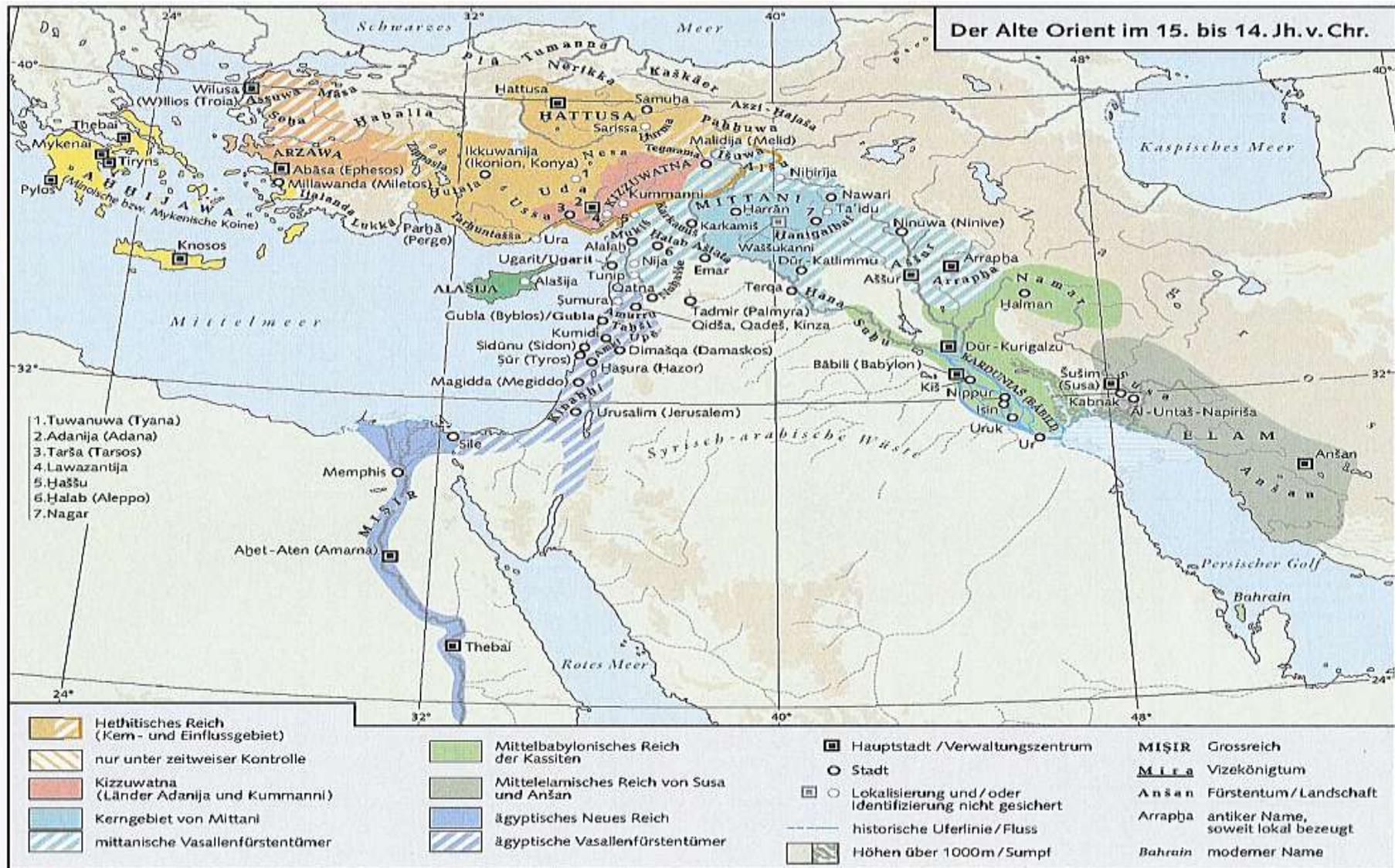
THE MITANNI AS SOURCE OF HORSE EXPERTISE

Apart from the Hittite-Mitanni treaty mentioning R̥gvedic Gods - which we come to in our DIVERSION on the GODS - and the clear use of Indo-European names by Mitanni kings (even if in one or two instances they were simply throne-



III.9- 125: Horse and chariot sites referred to in Feldman and Sauvage²⁹⁸ (fig 1) – this is sufficient for gaining an overall picture of the clear-cut flat coastal distribution pattern compared to sparse inland uptake during the 2M. This data could be imagined as superimposed onto the political map on the next page

²⁹⁸ M. Feldman & C Sauvage 'Objects of Prestige? Chariots in the Late Bronze Age East Mediterranean and Near East', *Ägypten und Levante XX* Vienna 2010 67-183



Political map of the Ancient Near East 1500-1400BC – frontispiece to B Eder et al eds *Policies of Exchange: Political Systems and Modes of Interaction in the Aegean and the Near East in the 2M BC* 2015

names taken on by men with Hurrian personal names²⁹⁹), the other clear-cut domain of Mitanni activity comes in the horse-breeding and training manuals that, even though in Hurrian, are peppered with Indo-European technical terms, pointing to their Central Asian origins. As Wilhelm puts it, 'A combination of this equestrian skill and the use of the two-wheeled chariot engendered a military expertise which without doubt contributed much to the expansion of the Mittani kingdom. Most reckon the chariot was invented on the Central Asian plains and spread to the Near East: a handful argue for it being the other way round. The fact is that only the aristocracy could afford to run a chariot because it and the horses made for an expensive set of kit to feed and maintain. Only a young, athletic man (*marya*) was able to control them effectively, and the *maryanni* as a group constituted, as it were, the élite knights of Mitanni society. If not born into such a family, a man could be appointed to the *maryanna-na* by royal decree – just as a non-Mitanni citizen could in rare cases be accorded honorary Mitanni-ship'. It appears the Mycenaeans operated on the same basis, and in the same way we know from later texts that by the height of the Greek Archaic period it was taken for granted the nobility, to show they could afford it, ran two-horse chariots not just as serious war equipment but also as for self-display on social occasions. Oettinger³⁰⁰ gives the vital clues for the Anatolian origins for the words *equus* and *kuon*.

The central place horses and chariots took in the culture of Mitanni and Mycenaean alpha males – and commonly held Indo-European origins now explored, we are ready to look further.

CHARIOT REMAINS IN THE ARCHAEOLOGICAL RECORD OF THE LEVANT AND EGYPT

The next illustration (with apologies for the poor standard of reproduction) is on an unprovenanced seal in the Paris



III.9- 126: Photo/drawing of unprovenanced seal with two Mitanni-type men following a chariot pulled by lions – BN479

Bibliothèque Nationale showing a one-man chariot pulled by two lions, followed by two typical kilted Mitanni slim athletes with long hair and wearing uraeai, not only indicating attempts on the part of the Egyptians to train lions to pull ceremonial chariots which lasted even into the reign of Ramesses III – but also their direct and constant dependence on indispensable Mitanni expertise (explained from some evidence given below).

UGARIT

Sauvage *ibid* gives a comprehensive survey of horse and chariot remains at Ugarit in an overview put together from the different archaeological reports made over time by the Louvre excavation team, resulting in a marked-up plan of the city revealing there were few big houses in Ugarit that by the mid-2M that did not concern themselves with horse and/or chariot maintenance, or possess instruction texts on horse upkeep and medicine. (Appropriately, the two Ras Shamra seals showing chariots (one being the example at **ForAtt 26f** complete with upreared *Forward Attack*) belonged to personnel connected with the administration of chariot operations.) This is not surprising, given Ugarit was one of the earliest Levantine cities to be occupied by the Mitanni and answerable to them as vassals – as was true of Alalakh, both of them strategically positioned as bases for the administration of Mitanni power and influence. Overall, the upkeep of horses and chariot equipment was by royal appointment, the horses the possession only of the king or queen at court, or priests in the temple. Chariot fittings in relation to temples were specifically found close to

²⁹⁹ Wilhelm op.cit.

³⁰⁰ N Oettinger 'Pferd und Wagen im Altiranischen und Anatolischen' in B Hänsel et al. (eds) *Die Indogermanen und das Pferd* Budapest 1994

the Dagan temple and on the slope near the Baal temple. From Urtenu's house we have texts mentioning grain rations for 'the Gods' horses³⁰¹ probably used to pull the God's chariot in processions at ceremonies, whereas there is no textual evidence for the use of horses in 'transportation, hunting or war' from Ugarit, writes Sauvage. Ugarit turns out also to have been the major 'clearing house' for the chariot kraters disseminated at court level (discussed below) that became popular all over the Aegean and Levant (the remains of 52 such vases were found at Ugarit).

From the names of the men concerned with horse upkeep at Ugarit Sauvage says, 'it can be deduced that most of them were *mariyannu*', precisely the term attested in texts or deduced from horse or horse equipment remains/Mycenaean chariot vases³⁰² found at sites such as Lachish, Ashkelon, Kadesh, Megiddo, Joppa, Hazor, Gezer, Ekron/Tell el-Ajjul and more (we do not have such mentions in Mycenaean texts mentioning horses, underlining the Mycenaeans' already advanced competence, attributable, I think, to a long commonly shared experience with the Mitanni). Other texts from Ugarit also mention horse procurement transactions as far afield as Mari and the Euphrates to the east, and certainly quite often at Karkemish closer to hand – as also with Cyprus and the Hatti to their west (there is no direct mention of Greece, indicating the Mycenaeans must have had closer, mostly land-based, procurement routes for these creatures, some evidence for which comes through in phrases from the *Iliad* that we come to shortly).

EGYPT

The Hyksos, of course, are well-known for their use of chariots, and the spread of Hurrians in the Levant may mean they are one and the same people: as Wilhelm (op.cit.) says, 'It is perfectly in order to postulate a causal connection between the demographic and political upheavels in the Near East on the one hand and the arrival of the Hyksos in Egypt in about 1650 BC on the other'³⁰³. It is certainly significant that the individuals first described as adopting the chariot in Egypt are the first Pharaohs of the 18D who contended *against* the Hyksos and eventually succeeded in driving them out of Egypt. An early instance is the scarab showing Tuthmoses I in a chariot (Feldman and Sauvage fn. 447) driving the Levantine way with the reins round his waist and bow drawn (c.f. *III. 9-130*). Other 18D and 19D examples brought together by Feldman and Sauvage show that the Egyptian court soon learned to use the chariot for hunting too, and that chariotry soon became a court monopoly, central to military operations. The preponderance of chariot representations of the Pharaoh are from the 18D, including Akhenaten and Tuktankhamun.

Not surprisingly, in Egypt horse burials (rare in Mycenaean Greece and less common in the Levant than donkey burials³⁰⁴) have been found in Avaris – but also as far south as Thebes (outside the tomb of Senenmut, Hatshepsut's vizier) and even in an 18D tomb at Soleb. A turning point for Egypt's serious adoption of the horse combined with chariot shows up in Tuthmoses' recorded horse booty in his Annals of the Battle of Megiddo: 2041 mares, 191 fillies, 6 stallions and some yearlings – along with 924 chariots. Amenhotep II a little later recorded similarly high figures for the horses and chariots he took back to Egypt. Sauvage says the very first Egyptian mention of a chariot occurs on the stele of king Kamose referring to Hyksos chariots, and it was not long before the New Kingdom military chariot headquarters and stables were set up in Memphis – and later Qantir - as bases for forays into the Levant. Egyptians in charge of chariot units had high status, and used the position as a stepping stone to higher office in the Egyptian

³⁰¹ Other texts refer to the horses of Reshef and Astarte, precisely the two deities on horses adopted by 19D Egypt under the Ramessides .

³⁰² Sauvage gives a map plotting Mycenaean chariot krater finds at sites all the way up the Levant: (her fig. 16).

³⁰³ For horse (and camel) burials in South Arabia see A Daems et al. 'Some Reflections on human-animal burials from pre-Islamic south-east Arabia' *Proceedings of the Seminar for Arabian Studies XXXVIII* 2008 137-40 – see *III. 9-140*

³⁰⁴ For an up-to-date picture of animal sacrifice in general in the Levant (including horse/donkey/dog), see L Ristvet *Ritual, Performance and Politics in the Ancient Near East* Cambridge 2015 passim

court, and there is a mention in the Anastasi Papyrus from the time of Ramesses II that the 'maher' in charge of the horses was still a *mariyannu*. Later, at Amarna, chariots were simply used 'for trips and for parades'.

MYCENAE

Firm evidence of the first takeup of the chariot in mainland Greece dates to the carvings on the Mycenaean Shaft Grave stelai, at this early date suggesting Central Asian nomadic influence - direct or via the early Mitanni - as part and parcel of a shared warrior ethic. The Circle A stela below left in particular is judged to show a funeral games rider and chariot, with the standing man marking the finishing line at the end of the race, holding up a sword of the type with one sharp side. Use of this mode of transport in war too is supported by the depiction on a second stela (photo and drawing below centre and left) of a fallen warrior lying under chariot and rider. Yet the inclusion of a *Rear Attack (Ratt-27)* group beneath raises ideas of death and resurrection and the prime role of the stela in commemorating the death of the man represented under the chariot that, due to the single rider, shows he is in a funeral race in his memory.



III.9- 127: Shaft grave stelai from Mycenae showing (left) a funerary games chariot race and (centre and right) a chariot scene with fallen warrior and Rear Attack beneath (c.f. much the same ingredients on the seal from Ras Shamra top row (left) of ForAtt-26f)

Throughout the *Iliad*, chariots are the vehicle of choice of leading warriors³⁰⁵: there is talk of Agamemnon's 'inlaid chariot'³⁰⁶; Nestor's 'charioteers and their horses in front', or the 'splendid chariots' of Antenor. Diomedes the 'dauntless charioteer' (at one point actually joined by Athena as guide) has 'a well-made chariot', his father Tydaeus having himself been a 'great shield-bearing charioteer'. Throughout the war key figures such as Hector and Agamemnon are continually jumping down from – or jumping into - their chariots as changes in battle action dictate. Rashly, Hector promises Dolon the magnificent inlaid chariot and horses of Achilles if he will carry out a spying mission for the Trojans (Dolon also coveted the chariot of Rhesus, 'beautifully finished with gold and silver'). The relationship between the horses (see the description of the horses mourning for Patroclus), the drivers of the chariots and the warriors themselves are realistically portrayed, all closely dependent upon each other. Sometimes drivers are loaned between warriors, or have to move to other chariots due to the death of their own master. Before Patroclus (himself described as 'Master of the Horse') sets off on his last fight (wearing Achilles' splendid armour),

to drive the horses Patroclus chose Automedon, and told him to harness them quickly. He thought more highly of this man than of anyone but Achilles, ... having found that in action he was the most reliable of drivers, keeping always within call. So Automedon yoked for him Achilles' horses, Xanthus and Balius, the wind-swift pair whom Podarge the Storm-Filly had foaled for their sire Western Gale when she was grazing in the meadows beside Ocean Stream - and he put in as outrigger the thoroughbred Pedasus whom Achilles had brought away with him when he captured Eëtion's city. Pedasus was only an ordinary horse but he kept up with the immortal pair. (Iliad XVI 150-55).

³⁰⁵ For full *Iliad* references on chariots overall see R Plath 'Pferd und Wagen im Mykenischen und bei Homer' in B Hänsel et al (eds.) *Die Indogermanen und das Pferd: Akten des Internationalen interdisziplinären Kolloquiums Freie Universität Berlin 1-3 July 1992: Bernfried Schlerath zum 70. Geburtstag Gewidmet* Budapest 1994 103-114. My examples are chosen from my own perusal of the epic.

³⁰⁶ E V Rieu's translations are used throughout this section. Line references when given are approximate, since his translation is laid out in prose – the numbering also often differs by as many as ten lines from the Fagles translation, which does go line by line - but in turn its numbering is not always orthodox!

Feldman and Sauvage say depictions of Mycenaeans in chariots, implying political power, on the mainland and in the Aegean are second only in their proliferation to that in Egyptian art, after the Shaft Grave period no doubt re-inspired by their now closer contacts with the Levant and Egypt. Its manufacture changed from an initial box shape to a less contained design allowing for freer movement. It was, of course, used in war, but also for hunting and at ritual and ceremonial occasions, implying high status for its occupants (sometimes women). (In the Trojan War the chariot was only used to drive up to the battle scene - then the warrior jumped off for hand-to-hand combat. We have wall-paintings with charioteers in battle or procession from Pylos, Tiryns, Knossos, Orchomenos, Ayia Irini and Mycenae.

MENTIONS OF CHARIOTS IN THE LINEAR B TEXTS

Overall in the Mycenaean record there are many instances of the ideogram for Horse and Wagon/Chariot, which deals with this subject on several classes of Linear B tablets from both Knossos and Pylos bearing witness to the existence of highly active chariot workshops run under royal command as a department of war. The administrative documents were categorised in subgroups depending on materials and the stages of their construction down to the smallest spare parts and horse tackle involved – comprehensive evidence that Mycenaean Greece adopted the horse and chariot wholeheartedly and borne out by the distribution pattern assembled on Sauvage’s map above. We could consider this surprising, being so far from the Levant – or not surprising at all if we consider northern Greece geographically as a continuum running up into the Eurasian corridor. Sauvage’s map – as with Salje’s map of Mitanni seal distribution - is another very clear indicator of a fashion ultimately due to the Mitanni - and impacting on Mycenaean Greece in a triangle between the Levant, the Aegean islands south of Anatolia – and Egypt.

THE CHARIOT RACE AT THE FUNERAL GAMES

Can we go so far as to say that, as described in the *Iliad*, the chariot race came first in the games to celebrate a funeral because of the Levantine association with Baal and his journey to the Underworld - upon which the newly incumbent dead was about to embark? Not forgetting the lion-prey group in the **CANEA** can simply symbolise the Goddess, its appearance on the Shaft Grave stele could allude to Her presence in the same way as in **ForAtt-22/III.9** where Baal in his chariot is placed next to a face-bite *Forward Attack* to allude to Ishtar.



III.9- 128: (Left) Ivory³⁰⁷ showing fragmentary two-man chariot from Mycenaean Thebes³⁰⁸; (right) the start of a chariot race on a Mycenaean figured pot from Klavdia, Cyprus, 1350-1300 - British Museum

It was Mylonas (*ibid.*1951) who first contended the chariots shown on the Circle A stelai must represent funeral games since the driver and pointsman at the finishing post are unarmed, reinforced by the fact that in this scenario it means

³⁰⁷ Several notable, more complete, ivory panels from boxes or furniture inlay found at Megiddo depict chariots in use at court or in battle (Loud *ibid.* pls 4 & 32)

³⁰⁸ V Aravantinos *The Archaeological Museum of Thebes – Latsis Foundation* e-Book 2010 p.62

the postillion leaves the chariot rider on his own and instead stands at the finishing line to flag it for the rider. In the case of Mycenaean chariot races in honour of the dead, from texts we have a full account in *Iliad XXIII* of the race at the funeral of Patroclus. Once the earthen mound had been built over the burnt-out pyre of Patroclus the funeral games commenced, and the first event was the chariot race, for which splendid prizes were given. Achilles says:

But I and my splendid pair [of horses] will not compete: they are in mourning for their glorious driver. How kind Patroclus was to them, always washing them down with clean water and then pouring olive oil on their manes! No wonder they stand there and grieve for him. Their manes are trailing on the ground and in their sorrow they refuse to move. (Iliad XXIII, 280-5)

The long description of the funeral games follows, beginning with a chariot race full of interactive incidents between the main protagonists and taking up many more words than the rest of the account of Patroclus' funeral rites – with the prize-giving afterwards not only confirming the Mycenaean taste in metals, other luxury materials and fine craftsmanship from abroad, but also their interest in the prime-bred animals also given as prizes – along with prisoner-of-war women deemed useful for their domestic skills and experience with textiles (many items of clothing worn by the warriors – belts and cloaks in particular – are described as purple, and Athena's richly embroidered dress is referred to at least three times).

THE CHARIOT KRATERS

Yet in contrast to the plethora of texts dealing with chariots, surprisingly few actual chariot remains and/or horse tackle (or even horse burials) have been found at Mycenaean archaeological sites in comparison to the huge amount of such



III.9- 129: (Left) Chariot krater from Tomb 70, Enkomi 1350-1300, thought to be part of a funerary procession; (right) Chariot krater fragment showing a chariot ritual - from Tomb 67, Enkomi, 1400-1350 – both British Museum, photo author

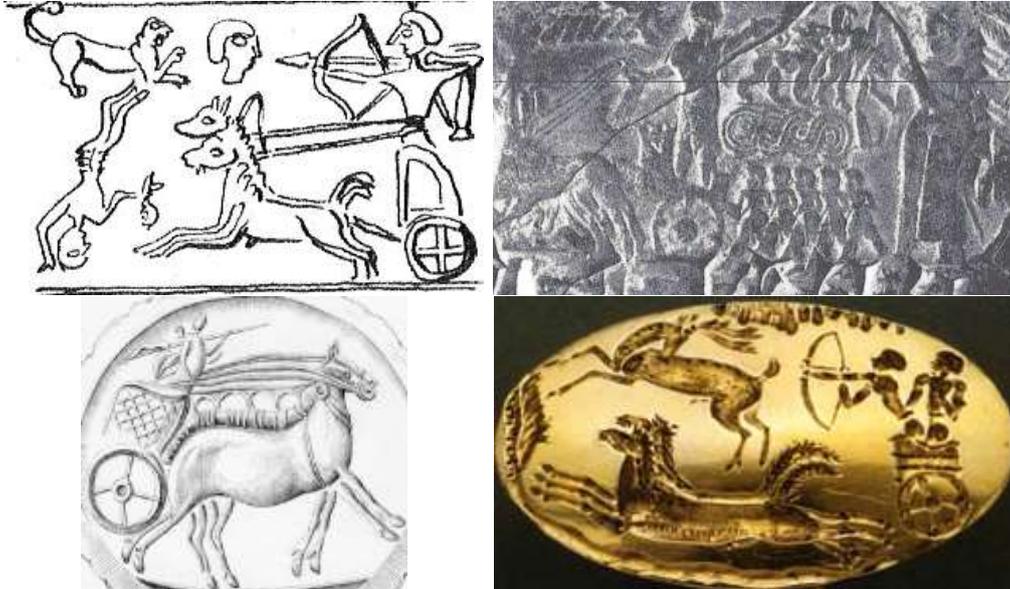
material unearthed in the Levant. The gap in hard physical remains is partly compensated for by the class of Mycenaean figured pottery known as chariot kraters - mostly found in tombs – found all over the Aegean - including Cyprus (see above), but also found at sites all down the Levant, and even at mainland sites such as Athens, Tiryns and Mycenae itself. It was thought at first these pots all emanated from Cyprus, but in fact clay analysis has shown the manufacturing centre to have been on the Greek mainland.

MODES OF CHARIOT-HANDLING

Due to the differences seen by Mylonas between how chariots were used in war and chariot races held at the funeral games, we should look more closely at the OB Syro-Mitanni seal under **ForAtt-22** (below top right) and the better of the two chariot seals in the Vapheio hoard (**CMS I-229/30** – below bottom left) and. These are contrasted with a seal from Ugarit (below top left) showing a chariot scene used by Amiet in a short paper³⁰⁹ to demonstrate two important

³⁰⁹ P Amiet 'Les Chars d'Ugarit' in B Hrouda et al (eds) *Von Uruk nach Tuttul: Festschrift für Eva Strommenger* Munich & Vienna 1992 23-27 and 3 pls

points: first, that when first introduced into the Levant the chariot drawn by two horses was initially a novelty, used only as a status symbol mainly in sports³¹⁰. Second, it started to become an effective instrument of war for the single rider only when a way was found to tie the reins round the waist, leaving the arms free (as on the Ugarit seal) – otherwise he needed a postillion, as in the hunt scene on the Mycenaean gold seal ring (below bottom right) from Mycenae. The



III.9- 130: (Top left) Steatite/chlorite seal from Ugarit showing charioteer with reins round his waist, leaving the arms free for bow and arrow – Amiet *ibid.* Pl.1,1 (compare with another seal from Ras Shamra (ForAtt-26f, top left); (top right) clay sealing probably from Sippar (BM 16815A, our ForAtt-22) showing Baal with spear, and reins in the other hand); (below left) Vapheio chariot seal with the rider in the same position; (below right) Mycenaean seal ring with two chariot riders in stag hunt - Grave Circle A, Grave 4

Sippar and Vapheio seals re-illustrated above show the earliest stage of manoeuvring a chariot, where the rider holds the whip/spear in the left hand and the reins in the right. Sauvage tells us the Hittites preferred to use teams of three men: ‘one driver, one fighter and one man devoted to the defense of the crew’. In Achaemenid times the procedure



III.9- 131: (Left) The Darius chariot seal with the driver guiding two horses while the king draws his bow to kill the up-reared lioness protecting her cub, already pierced with arrows (technically another Forward Attack) - British Museum (BM89132); (right) chariot and horses with reinsman and passenger from the Oxus treasure, also in the British Museum

had been honed to a fine art, where it appears even a royal bowman would stand at the back, behind his driver, rather than in front, as on the well-known Darius seal above left:

CHARIOTS OF THE GODS

EARLY SIGNS ON MITANNI PIECES

If the Mycenaean and Egyptians adopted the chariot with alacrity, there is no doubt the Mitanni were the original masters of chariot warfare and horse upkeep all during the mid 2M, initially introducing them into the Levant when taking part as mercenaries in battles such as Megiddo - where the Egyptians first noticed them. If later the Mitanni

³¹⁰ See Feldman & Sauvage *ibid.*. See also -M A Littauer et al. *Wheeled Vehicles and Ridden Animals in the ancient Near East* Leiden 1979, p.8; P R S Moorey 'The Emergence of the light, horse-drawn chariot in the Near East c.2000-1500 BC' *World Archaeology* 18 1986, 196-215

gave horse and chariot units as diplomatic gifts to the pharaohs - as we know from the Amarna Letters they did – this may be how Mycenaean leaders also got to know about them. But on the earliest images, who was riding them?

If in **ForAtt-22** the appearance of the God Baal as charioteer looks commonplace, we should stop, think and look again - since to show the God as charioteer is in itself an indicator, not only of Mitanni influence but also of Indo-European culture in general in this early changeover of divine 'steed'. Haas³¹¹ cites precedents in image and text for the Kizzuwatna area where the Luwian Weather-God, Tarhuntas, rides standing on a wagon drawn by two horses rather than on the bulls one would have expected on Cappadocian seals. The R̥gvedic Gods are also given such vehicles (Indra is described as riding a chariot drawn by four horses (and Surya's charioteer is disabled Varuna/Aruna). Indeed the Vedic craftsman god Tvaṣṭṛ describes not just a constellation - but the whole sky as it revolves - as being the God's chariot, as the Sun's diurnal round. Akin to this image, Fick *ibid.* cites a similar concept from the Mitanni world itself: 'Šimige, einer der höchsten Götter des Pantheons von Mitanni, kutschiert nämlich seinen von vier Pferden gezogenen Wagen täglich über dem Himmel'. The placing of the Face-Bite *Forward Attack* on the **ForAtt-22** seal between Baal-Jupiter in his chariot and the standing half-clothed Venus indicates the calendrical level at which it should be read, a celebration of the start of the New Year in terms of the movements of the planetary Gods. And it seems its owner, visiting Babylon and using his seal in a legal transaction, was the one of the first to be using it in northern Mesopotamia, bringing in the idea that the Gods rode chariots pulled by horses too.



III.9- 132: Clay relief of charioteer found on Acropolis North, Umm el-Marra –Schwartz *ibid.* fig.1b

As the group most responsible for introducing horse and chariot culture into the Near East, it must have been *maryanni* (the Mitanni aristocracy) who in some way had a hand in the commissioning of such seals with Mitanni content, visualising Baal in terms of their own mode of transport. On Christine Sauvage's map of chariot distribution above, what stands out is how the preponderance of archaeological sites with 2M horse and chariot remains in the Near East form a continuous chain down the Levant and over to Cyprus, Crete and Greece (mainly due to availability of conducive terrain for riding, of course). At the recently excavated Hurro-Mitanni site of Umm el-Marra, two early clay reliefs were found showing charioteers³¹²— the more complete one shown above was found on the North Acropolis, a more damaged one in the Northwest Acropolis trench 1226/3906 with other LBA artefacts. Does this simpler piece already show the God in his chariot, or simply a *marya* in action? It could be either.

Added to other evidence from the Luwian-influenced territories of Anatolia (illustrations below) and northern Syro-Mesopotamia (most notably the Ebla texts referred to earlier), both of them territories experiencing gradual Hurro-

³¹¹ V Haas 'Das Pferd in der Hethitischen religiösen Überlieferung' in B Hänsel et al (eds.) *Die Indogermanen und das Pferd: Akten des Internationalen interdisziplinären Kolloquiums Freie Universität Berlin 1-3 July 1992: Bernfried Schlerath zum 70. Geburtstag Gewidmet* Budapest 1994 77-90. See also A Kammenhuber *Hippologia Hethitica* Wiesbaden 1961

³¹² G M Schwartz 'Reflections on the Mitanni Emergence' in Cancik-Kirschbaum (ed.) *op.cit* 265-74, fig.1



III.9- 133: (Left) Clay model of a chariot (still with solid wheels) from Anatolia and (centre and right) 2M Anatolian cylinder seal designs with two-wheeled chariots intended for war or as Tarhuntas/Baal's vehicle –c.1700-1800, BM (photos author)

Mitanni occupation and open to cultural influences based on the nomadic life of the Steppe cultures further north, we can see how early in Second-Millennium the horse and chariot culture in terms also of *astronomical* nomenclature could have been introduced to both the Aegean and Babylonian worlds. It is therefore no surprise to see the Gods using chariots on artefacts from sites in the southern Caspian Sea region, possibly early prototypes, discussed next.

THE HASANLU AND AZERBAIJAN GOBLETS

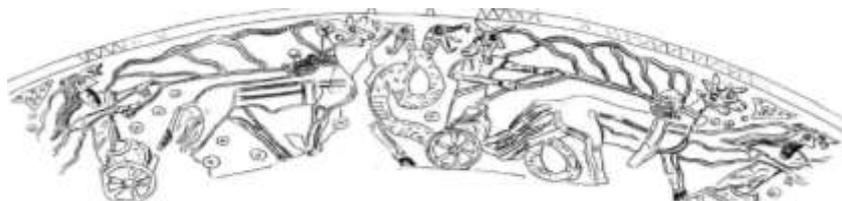
On a metal goblet from Hasanlu (below left), a charioteer is picked out in silver on a bronze background, very similar to a more elaborately worked beaker bought by the Louvre (below right) described by P Amiet³¹³ as found in Azerbaijan, though now the Louvre on-line catalogue gives it as coming from Marlik. However, its overall outline and type of decoration makes it look more likely to have come also from Hasanlu – underlined by the fact that on the Hasanlu gold bowl (III.9-) three Gods in chariots are also depicted in procession.

The state of the 'Azerbaijan vase' when first excavated was poor – although now restored, as seen in the colour photos below right, though to read the iconography clearly it is still helpful to turn to Amiet's drawing (III.9-). As in



III.9- 134: (Left) Two views of a beaker from Hasanlu; (centre and right) vase from Azerbaijan with closeup of divine charioteer (now said to be from Marlik but more likely to be from Hasanlu (restored, said to date 1400-1200) but could be much earlier –Louvre AO21625

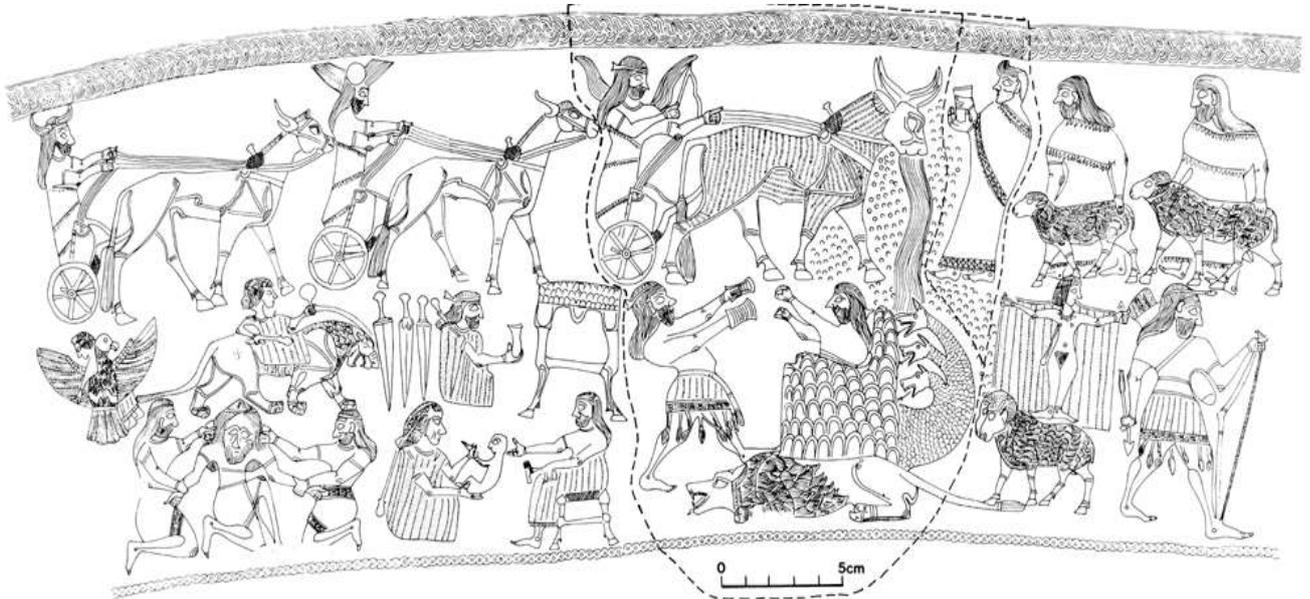
ForAtt-22, two gods individually ride their own chariot, the two separated by a double-headed snake comparable to the ones seen on the Falaika/Bahrain seal (III.9-108) suggesting the same links between the entire Dilmun, Turan and BMAC area as mapped out in the case of metal procurement (DIVERSION 2), showing that predilection for two-headed demons on seals within that *koine* (see under **ForAtt-29**). Amiet read the flowing lines issuing from the two Gods and winding into the reins of the chariot (as in the detail above right) as similar to the flowing waters described in the



III.9- 135: Rollout of design on goblet from Azerbaijan – Amiet *ibid.* fig.2 c.f. Persian Gulf seal III. 9-108 for the snakes

³¹³ P Amiet 'Un Vase Rituel Iranien' *Syria XLII* 235-251 + plates

Hedammu myth seemingly also illustrated on certain Mitanni/Nuzi seals (III.9- 108) – all these items further confirming the placing of this story within the Mitanni sphere with its particular account of the conquest of the monster of flood and drought/Chaos. Single Gods each driving their own chariot on the Hasanlu bowl (below) have, again, been best interpreted as illustrating scenes from the story of Hedammu and Kumarbi.



III.9- 136: Roll-out of the Hasanlu gold bowl iconographic programme showing three Gods in their chariots on the upper register

MYCENAEAN/GREEK GODS AND THEIR CHARIOTS

The idea of the chariot now being the only acceptable high-status vehicle for the Gods is taken for granted throughout the *Iliad*, where Zeus, Hera and Athena, Ares and Poseidon are separately described in their chariots in some detail.

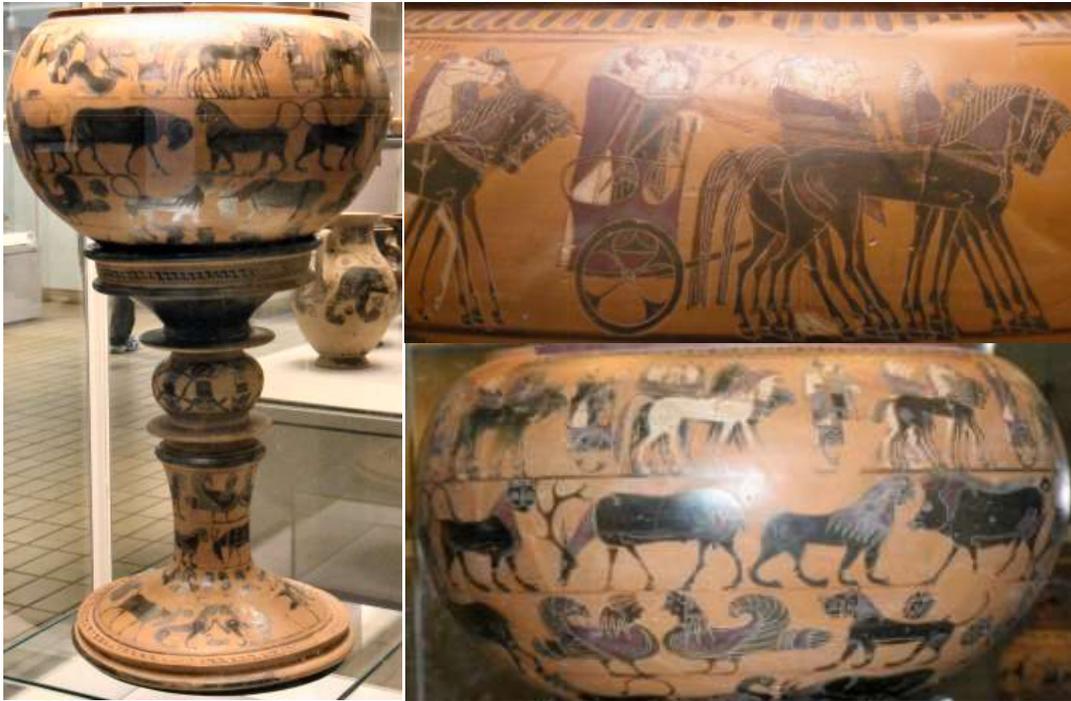
In **Book V**, Hera says to Athena, 'Come, it is time for you and I to throw ourselves into the battle'. Hebe proceeds to get their chariot ready (a marvel of metalwork, already described in our DIVERSION ON METALS). Then Athena

shed her soft embroidered robe which she had made with her own hands, put on a tunic in its place and equipped herself for the lamentable work of war with the arms of Zeus the Cloud-Compeller. She threw round her shoulders the formidable tasseled aegis which is beset at every point with Fear, and carries Strife and Force and the cold nightmare of Pursuit within it, and also bears the ghastly image of a Gorgon's head, the grim and redoubtable emblem of aegis-bearing Zeus [. On her head she put her golden helmet, with its four plates and double crest adorned with fighting men of a hundred towns. Then she stepped into the flaming chariot, gripping the huge long spear with which she breaks the noble warriors' ranks when she, the almighty Father's Child, is roused to anger. Hera lost no time. She flicked the [two] horses with her whip, and the Gates of Heaven thundered open for them. (E V Rieu translation V,732-50 approx]

Note here that Athena's armour - as well as the Aegis placed over her shoulders with the Gorgon's head on it - are in fact borrowed from her father, Zeus the Sky. For later references to the three goat stars in Auriga we must bear in mind aegis means 'goat-skin' – taken by some to be the hide of the nanny-goat Amalthea skinned by Zeus after her death) who suckled Zeus in his childhood along with the two Kids (placed next to her in Auriga). In **Book VIII** (line 40 onwards) Zeus himself harnesses his 'two swift horses' to his chariot,

clothed himself in gold, picked up his splendid golden whip, mounted his chariot and started the horses with a flick. The willing pair flew off on a course midway between the earth and starry sky... There the Father of men and gods pulled up his horses, freed them from the yoke and wrapped them in a dense mist (Il. 40-50).

Not wanting to end up in conflict with her husband (despite supporting the other side) in the end Hera and Athena turn their chariot round and Zeus, likewise, returns to Olympia and dismounts, unyoking his horses, placing his chariot on its stand and covering it with a cloth.



III.9-137: (Left) The Black Figure dinos (wine bowl on stand) decorated and signed by the Sophilos painter, Athens c.580, with procession of the Gods in chariots round the top and animal processors on lower registers; (right top) detail with Hera and Zeus at the head of the procession; (right below) Poseidon and Amphitrite in the next chariot preceded by the Muses and the Graces (note the latent Forward Attacks between lioness/stag and lion/boar beneath) – BM, photos author

Finally, at the start of **Book XIII** Poseidon ‘of the sable locks’

Harnessed to his chariot his two swift horses, who had brazen hooves and flowing golden manes. He clothed himself in gold, picked up his well-made golden whip, mounted his chariot and drove out across the waves. The monsters of the sea did not fail to recognize their King. On every side they issued from their caves and gambolled at his coming. The sea itself made way for him in its delight, so that his bounding horses flew along and the bronze axle of his chariot remained dry below as they carried him towards the Achaean fleet.



III.9-138: (Left) 7C metope from ‘Temple Y’ at Selinus showing (according to Østby) Poseidon and his consort Amphitrite driving their quadriga; (right) Europa (mother of Minos of Crete) kidnapped by the Bull, on another Selinus metope

Surely a clue to the dating of the Trojan War is that throughout the *Iliad* the Gods ride two-horse chariots - on artefacts we have visual precedents on the Caspian metalware dated to c. 1400-1200. It was in the Achaic period that the quadriga (chariot with four horses) then became the norm – its initial use often credited to Erichthoneus, which ties them in with the period the metopes of Sicily were carved (illustrations above).

DIVINE CHARIOTS ON THE ARCHAIC METOPES OF MAGNA GRAECIA

Moving from *Iliad* texts to solid artefacts, we have so far referred to three instances of Gods in their chariots carved on the Sicilian metopes of Selinunte, two of which were juxtaposed to the story of Perseus and the Medusa. Apart from the quadrigae driven, it is thought, by Apollo and Artemis on two Temple C metopes over the centre front intercolumniation (*III.9- -114*), an intriguing, more primitive metope preceded them, showing what has been interpreted as the divine couple Poseidon and Amphitrite together in one chariot, with the two side horses of the quadriga rearing up on either side (above left). The couple, again in their chariot, appears again on the Sophilos dinos described next.

CHARIOTS OF THE GODS ON CLASSICAL GREEK POTTERY

As with the specialist studies of Hephaistos (Brommer *ibid.*) and Perseus³¹⁴ iconography, the survey of the chariot in Greek art by Hafner³¹⁵ does not start with the Archaic metopes - let alone the Anatolian or North Mesopotamian early



III.9- 139: Details of Hephaistos on his mule on Black Figure vases, (a) on the Sophilos dinos behind Oceanus, British Museum 1971.11-1.1 (just visible behind the curve of Oceanus at the left in the colour photo of the dinos above); and (b) on a volute krater, accompanied by Selinus (like Dionysius, a character originating in India, bringer of the grape), to take into account in the naming of the city of Selinus in Sicily, Florence Museum no. 4209 – Brommer *ibid.* pls 16 and 1

appearances of the chariot where beginnings in Mitanni roots ultimately lie. Understandably for the period they were writing, they start with the evidence on Greek pottery, unaware of the hidden depth of the iceberg, concentrating only on the final centuries of visual interpretation. By the time we see Gods and Goddesses in their chariots on Black Figure Greek pottery, surely long after the *Iliad* accounts, when we look at the procession painted on the Black Figure *dinos* by Sophilos (above – for added detail see the end of our DIVERSION on the GODS), all twelve official Gods of Olympus now appear round the rim of the bowl (only Hephaistos, the outsider, does not merit a chariot and is canonically shown riding a donkey or mule sidesaddle (details below), perhaps an indication of Amorite affinities to his opposite number in the Levant, Kothar). Otherwise all the Gods ride in chariots - led by Zeus and Hera - circling round the container, their welcome by Nestor for the Marriage of Peleus and Thetis (parents of Achilles) marking the focal point on the main viewing side of the *dinos*. The two wide animal friezes underneath are almost entirely made up of 'virtual' *Forward Attacks* between lions or panthers with boar, stag, ram, goat or bird, referring to the Seasons.

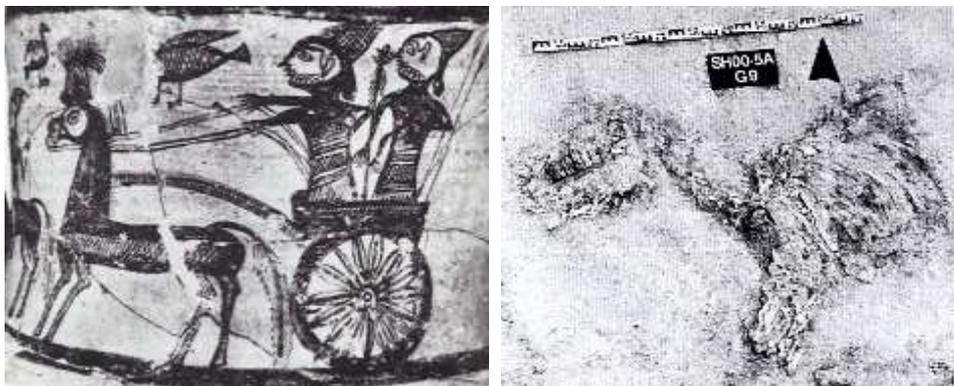
CONCLUSION

Because horse and chariot so much seized the minds and imagination of those in charge during our Chronological Period, is it any surprise that images of horse (Pegasus) and horse and chariot (Auriga) should be projected onto the

³¹⁴ K Schauenberg *ibid.*

³¹⁵ G Hafner *Viergespanne in Vorderansicht: die repräsentative Darstellung der Quadriga in der griechischen und der späteren Kunst* Berlin 1938

new constellations of importance in the Age of Aries? We have tried to give some idea of the scale and depth of the physical introduction of horse – and horse and chariot – into the then ‘Western world’ from Central Asia over a comparatively short period – and then to show how extensively these two themes were incorporated into the art and archaeology of the times at every level.



III.9-140: (Left) Chariot scene on a jug from Khrysochou, Cyprus (similar to the style of the decorated jug in ForAtt-36 – Karageorghis op.cit. fig.8; (right) 1M horse burial from Shakhoura (Bahrein)³¹⁶

As mentioned at the very start of this DIVERSION, the spread of the horse-chariot culture was ultimately fully embraced in India where, again, their scriptures refer to Gods such as *Sūrya*, *Indra* or *Krishna* driving chariots - and in their historical literature horse sacrifices are often described. To gain further insight into the rites as practised in the Near East and Aegean, we will therefore end on what we know this ritual meant for Vedic culture, hoping to be able to hypothesise and extrapolate similar meanings back to the Near Eastern scenario. Leaning on one useful paper summing up the picture succinctly enough for our purposes, ironically we find the author³¹⁷ turns to European (Irish, Roman, Slavic and Scythian) instances in order to throw light on Vedic practices (I have already referred to the links Kuzmina³¹⁸ demonstrates between the horse kit of the Steppe culture and that used by the Mycenaeans).

SIGNIFICANCE OF THE AŚVAMEDHA IN VEDIC INDIA

Zaroff avers the horse sacrifice must have derived from a common Indo-European tradition developed on the Steppes during the Second Millennium, concluding by the end of his paper that the horse alone was in the very early layers of Indo-European culture likely to have been identified with *Varuṇa* – one of the Gods cited in the Mitanni-Hittite contract analysed in our DIVERSION on the GODS – and thus his sacrificial animal. This might explain the words for Sky-Atmosphere-Earth recited in versions of the ritual where the horse is cut into three (head, body and tail), using knives of gold, copper and iron. Later Vedic doctrine - as cited most frequently in the *Śatapatha Brāhmana* – states that *Prajāpati*/Pan, Lord of Creation, claims the *aśvamedha* sacrifice for himself (leaving other animals for the other Gods), since the horse is likened to the Universe as a Great Man (*Puruṣa*) which by physical manifestation sacrifices Himself to become the different levels and parts of Creation. This is its meaning at the highest level, where the noble horse (not a draft animal like the ox) is interchangeable with Man as archetype and symbol of cosmic order (discussed in an astronomical light later) and the king’s own obligation to serve his people. Correct performance of the *aśvamedha* was intended to bring good governance and fruitfulness to the kingdom – and conducted as an act of royal power.

The *aśvamedha* was seen as the kind of sacrifice appropriate for a warrior to make, and one to enact before going into battle (Zaroff states that both in India and still in Rome ‘the sacrificed horse was a stallion that won a chariot-race’.

³¹⁶ A Daems et al. *ibid*.

³¹⁷ Roman Zaroff ‘Aśvamedha – A Vedic Horse Sacrifice’ *Studia Mythologica Slavica VIII* 2005 75-86

³¹⁸ See E E Kuzmina ‘Charioteer-Warriors on their Way from East Europe to India’ in *South Asian Archaeology 1999* (published 2008) 167-179;- also by her ‘Horses, chariots and the Indo-Iranians: an archaeological spark in the historical dark’ in *South Asian Archaeology 1993* (published 1994) 403-12

It was then taken to be a ritual only to be undertaken by a king before taking his throne. Of course, the two were often blended, since there was a convention that wherever the king's horse wandered, that land belonged to him, thus the excuse and token of conquest. As Zaroff put it, "in Indian society, the kings and emperors were expected to expand their domains... expressed in the term *digvijaya*, meaning "conquest in all directions". Falk (*see later fn.*) even puts forward the idea of a connection between the spread of horse-riding and metal/mineral prospecting (DIVERSIONS 2/3).

SUMMARY: DIVERSION 10, FORATT-26/27/28 AND THE FORMALISATION OF THE ARIES-LIBRA AXIS

As we said at the start of our iconographical study of **ForAtt-27/28**, we use the minor artefacts under these two entries as general background for our study of the importance of horse and chariot (and in the next DIVERSION the lion/griffin) in 2M everyday life to help explain the projection of the former onto the sky as the more easily observable than Aries below – the new Vernal Point. At the end of this Summary we will then retrospectively look again at the solar and Sothic implications of **ForAtt-26/27** that need to be considered alongside the new star map configuration since we think the griffin variation on the lion also points to Mitanni influence. What is more, we are told Aries (*III.9- 29*) was initially viewed as a Ewe, due to the lambing season being in Spring, and the choice of animal may be an allusion to wool as the main staple for weaving provided by the steppe-lands to urban centres. This may be why the *kaunakès* was still worn as a skin by the priest[ess]hood in charge of the Calendar.



III.9-141: The Age of Aries sky order, with overarching Auriga, Perseus Andromeda and Pegasus providing orientation lines to Aries

The simplified star map above explains how, despite still turning to Sirius, Orion and Taurus as 'default settings', these constellations could no longer provide an accurate central focus in protecting the calendar because they had all by the start of the 2M slipped an entire Sign west of the correct 0° meridian running down to the Spring Equinox point on the Ecliptic, somewhat inadequately marked by the two stars of Aries. The question is not so much whether it was the Mitanni who introduced their culturally biased images for the up-to-date constellations to the Near East, but how at the same time new observational implementation was passed over at the same time. Immediate adoption by the newcomer Mycenaeans and Kassites in cooperation with the Mitanni would have put them ahead of the game in terms of updated knowledge about the real state of astronomical cycles as against the inevitable response lag from the more inert, established institutions of Syria and Babylonia, even if their methods, based on their own long records, were more than competent to foresee and accept what was happening. It was a matter of what to do about it, and what influential persons were (or were not) present at the top to get a grip on change and implement it.

CONSTELLATION PRIORITIES: STAGES OF VISUALISATION AND FORMAL ADOPTION

Over recent decades there have been contrasting views on the Palaeolithic origins of the constellation images, usefully summed up in a paper by Frank and Bengoa³¹⁹. In order of historical time,

- ★ there is much evidence from Palaeolithic/Neolithic cave paintings and artefacts that the constants retained in our present sky map - such as wild bull, lion, deer, elephant/monster, bear and human hero – were already being projected onto the sky in this very earliest period³²⁰;
- ★ The ‘Uniformist Model’ espoused by Maunder³²¹ and Roy³²² is probably best represented by Ovenden³²³: it argues that ‘the classical constellations were created at a single place and time’ and that ‘the design of the constellations and the position in the sky is the result of the deliberate efforts of a highly inventive team of astronomer-priests’³²⁴. Ovenden himself believed the constellation-makers were Mediterranean sailors centred at Crete, and that ‘they would have chosen an island with a good sea horizon to make their observations’ (he even names the island as Stampalia/Astropalia!). Roy speculated that the Eudoxus star-globe used by Aratus ‘was a relic from the wreck of a Minoan ship that survived the disastrous volcanic eruption on Thera’: we are reminded in Henriksson & Blomberg *ibid.* that timings given for star risings and settings in Aratus, being 2000 years out of date, are proof in themselves of their Second Millennium roots and, indeed, that Aratus relied on an out-of-date star globe rather than observing the sky at first hand himself.
- ★ Aside from the standard, out-of-date scholarly books on the discipline which he quotes, the ‘Gradualist Model’ put forward by Rogers³²⁵ traces key Ecliptic constellations, as well as those in the Ways of Anu and Enlil, as evolving during the 4th-1st millennia BC³²⁶ in both Mesopotamia and the Aegean - with the 12-fold Zodiac as we know it today finally being systematised by the Archaic Greeks. This is in line with Gingerich³²⁷ who sees the classic constellations as ‘a long-evolved mixture including elements from very ancient cultures’.

Each of these perspectives has grains of truth in them. It seems different constellations achieved prominence at different periods in history according to society’s needs (as Frank et al. put it, the choice ‘implies that the population in question had a particular reason(s) for wanting to project their value system onto the sky screen for all to see’). In the story of the gradual genesis of the Perseus star family described at length above, against the above theories my deductions are based on visual as well as textual clues of a comparatively specific nature. From it, one thing that does emerge is that visualization, agreed acceptance and final state implementation is a long process, often taking centuries – the hidden nine-tenths of the iceberg not usually taken into account in the genesis of Attic Greek Astronomy. As Frank et al. put it, ‘Its accuracy might have been tested in some fashion – over a period of some centuries - before it was finally definitively accepted as workable’, and we have to bear in mind there might have been a gap, not only between the practical experience of the navigators and government astronomers, but also between astronomers and the artists creating images of astronomical content through the impetus of a particular court.

At the end of their paper Frank et al. ask, ‘where and when and under what circumstances did the synthesis of the different astral traditions take place? The question assumes that there was a specific location and point in time when the fusion of all

³¹⁹ R M Frank & A Bengoa ‘Hunting the European sky-bears: on the origins of the non-zodiacal constellations’ in C Ruggles (ed.) *Astronomy, Cosmology and Landscape: Proceedings of the SEAC 98 Meeting, Dublin 1998* Bognor Regis 2001 15-50

³²⁰ A Marshack *The Roots of Civilization: The Cognitive Beginners of Man’s First Art, Symbol and Notation* Mt Kisco NY 1991 best sums this up.

³²¹ E W Maunder *The Astronomy of the Bible* London 1908 (and later reprints)

³²² A E Roy ‘The Origins of the Constellations’ *Vistas in Astronomy XXVIII* 171-97

³²³ M W Ovenden ‘The Origin of the Constellations’ *The Philosophical Journal III* 1-18

³²⁴ This could have been true for the 8-fold zodiac at the start of the Age of Taurus, when Aldebaran –v- Antares provided a unique 180° equinoctial benchmark

³²⁵ J H Rogers ‘Origins of the ancient constellations I: The Mesopotamian Traditions’ *JRAS 108,1* 9-28; ‘II: The Mediterranean traditions’ *ibid.* 79-98

³²⁶ 4000-2000BC saw the hey-day for the construction of megalithic observatories. – and a variety of snake constellations easy to apply to any line of stars.

³²⁷ O Gingerich ‘Astronomical Scrapbook: the Origin of the Zodiac’ *Sky and Telescope LXVII* 1984 218-20

these pre-existing astral traditions took place'. They were thinking of the Greek Archaic period but, applying this question to its prologue, the focus in this Catalogue being the second half of the Second Millennium, I venture to suggest it is likely it was the Kassites, because they were based in Babylon. They were of similar origins and culture to the Mitanni (the only ones – as described earlier - to leave behind a few traces of chariot equipment or God-and-chariot statuary in the region) who, on taking over Babylon after 1500 for the next 400-500 years (and not leading the roving life of their Indo-European cousins), were stably in place long enough to bring about the necessary administrative changes to the government calendar by ordering its generations-long 'civil service astronomers' to systematize the tables and feed the so-far delayed night-sky recalibration into the observation régime, ultimately restablising Babylon's unbroken reputation for the smooth running of the calendar at least for as long as the Age of Aries lasted. (By Early Christian times in the new Age of Pisces the role of the king- or priest-astronomer gradually died out, meaning that for the later stages of the monotheistic religions it was an increasing problem to accurately align astronomical phenomena with their liturgical calendar. Ignorance of intercalation started to place the Feasts completely out of synchronisation with the Seasons³²⁸ and we know from the calculations needed for the Jewish Calendar in recent times – or the need to date Easter by the Paschal Moon - that it is not the rabbis or priests these days who check planets against stars!). Ridpath³²⁹ states the Babylonian constellations must have reached Egypt 'via some other civilization', presuming it would have been the Minoans even though, he wrote, 'it must be admitted that there is no direct evidence... to demonstrate any Minoan interest in astronomy'. We now know differently, but he was perhaps unaware of the Amarna correspondence between Kassite kings and the Pharaohs.

Can we track the entry of Auriga into the Perseus star family?

THE ADDITION OF MARGIDDA/AURIGA TO THE PERSEUS STAR FAMILY

Where above we have followed through on the story of Perseus, the Gorgon and Pegasus as a variation on the hero –v-monster preoccupation that started with Ninurta and Anzu in the 3M and took on a new currency for the Kassites in the Marduk and Tiamat myth, the gradual inclusion of the Chariot/Auriga into the Perseus star family, projected onto a constellation already known in Mesopotamia as *Margidda*/the Cart – was mostly due to its useful and unavoidably bright marker star, Capella, the Nanny Goat on the Cancer-Capricorn colure. The declension of its old shape into chariot and/or charioteer for its name makes contemporary cultural sense in the mid-Second Millennium because of ideas to do with the charioteer as winner of the race (tying in with the idea of Aries beneath as First Constellation of the Year) - as well as with the often circular nature of the chariot race. Haas *ibid.*'s interpretation of horse-racing, cart-racing or chariot-racing in Hittite celebrations as in some way imitating the passage of the Sun round the sky usefully provides us with a piece of Indo-European evidence that such an interpretation was in the air at this period. Indeed later, when dealing with Harappan astronomy, we think we have a form of Auriga on Indus seals.

As already mentioned in relation to the goat-head sprouting out of the Chimaera's back in the story of Bellerophon, since the goat-stars in the constellation marked the solstitial colure it appears Auriga was sometimes visualised as a crouching shepherd with goat over his shoulder – and called either the Good Shepherd or Charioteer. The latter concept we look at shortly when exploring the surprising connection between Hephaistos and Auriga – the former title may simply mark the temporary crossover between Orion (named so often in texts as 'Good Shepherd of the Sky') and Auriga, both heralds of Winter.

What we deduce took place in the Age of Aries under Indo-European influence, then, is a *revisualisation* of the Babylonian constellation *Margidda*/the Cart, in its Aegeo-Levantine identity of Auriga, the Chariot(eer), which because it lay along the new 0° meridian for Sunrise at the Spring Equinox could also conveniently be elided with the idea of the Sun's own chariot. The

³²⁸ R T Beckwith *Calendar and Chronology, Jewish and Christian* Boston and Leiden 2001

³²⁹ I Ridpath 'The Origin of our Constellations' *Mercury: The Journal of the Astronomical Society of the Pacific* Nov/Dec 1990 163-71

constellation had originally been depicted in the 3M as the old-fashioned Sumerian war cart, on one seal quite accurately showing Perseus upside down in front of it rather than as a bull-leaper - a later visualization (see *BM* sealing U13969, *III.19- 6* in **Chapter 19**). The new view of the constellation as a chariot/charioteer must correspond to mid-2M Mitanno-Mycenaean culture at the time this group of stars was given higher importance as the new paranatellon for the hard-to-spot Vernal Point shifting out of Taurus, edging into Aries. Although there was an overall recoining of the imagery for all the Perseus family constellations immediately east of the *Duat* zone, we cannot say in what way the Mitanni or the Mycenaeans were instrumental in initiating this new view of the sky in practical terms - or enshrining it in myth – since we can only show the introduction of the imagery via the Babylonians as the steed for Baal in our **ForAtt-22** – but as we have just said, the Kassite administration was probably the key connective tissue. Certainly on the Assyrian tablets *Auriga* (*rkb*) has the connotation of ‘chariot’ rather than ‘charioteer’.

There has often been confusion regarding the difference between *Apin*, *Margidda* and *Iku*/The Field in the original star lists that requires clarification here. From the **Mul Apin** and other star lists the difference between *Apin*/The Plough/Ursa Major and *Margidda*/The Cart, was carefully analysed in **Chapter 19**: suffice it to say here that two passages in Samuel Greengus’ translation of the *Ishchali* year date formulas³³⁰ separately list years of the ‘Golden Plough/*Apin*’ and years of the ‘Golden Cart/*Margidda*’ - one after the other - which quite clearly indicate that *Apin* is *not* a synonym for *Margidda* (which commentators such as Burrows³³¹ have opined), and that if Ursa Major/*Apin* happens to look like a cart or chariot, due to its pairing with Boötes the Ploughman (notionally urging on the oxen pulling it), we should nevertheless stay with *Apin* (the actual word for *plough* in any case) as being Ursa Major. This means *Margidda* very likely refers to what later became *Auriga*, with *Capella* specifically identified as *Dilgan*, ‘Star of Stars’³³². In turn *Iku*/the Field is almost certainly the distinctive Pegasus Square³³³ formed of one star from Andromeda and three in Pegasus the winged horse (see star map below and details in *III.9-84* and *III.9-*) - the deciding factor for this interpretation being the etymological link between *iku* and *equus* pointed out by Ugnad³³⁴ (although he also favoured associating *Dilgan* with *Iku*, we cannot really associate the Square of Pegasus with the ‘Star of Stars’).

BULL-LEAPERS IN THE SKY

Looking at *Auriga*’s position on the close-up detail below I do not think it far-fetched to read Gemini on one side of the Milky Way - and Orion with upside-down Perseus on the other - as a projection, provided by the bull-leaping games, of those changes of



III.9-142: (Left) The Mycenaean figured krater showing man with two dogs (*kunogetai*) next to a decorated bull – Tomb A14 Klavdia, Cyprus, 1300-1200 – British Museum Excavations (*BM Cat. Vases C399/GR.1899.12-29.135*) – fuller details *III.9- 46/ III.9- 48*; (right) map of the *Duat* with male figures Gemini, Orion and Perseus tumbling around Taurus like bull-leapers)

³³⁰ S Greengus *Old Babylonian Tablets from Ishchali and Vicinity* Istanbul 1979 30-31

³³¹ E Burrows ‘The Constellation of the Wagon and Recent Archaeology’ *Analecta Orientalia XII* 1935 34-40

³³² E Plunkett ‘The “Star of stars” and “Dilgan”’ *Proceedings of the Society of Biblical Archaeology XXVIII* 1906 Pt 1:9-13 + foldout drawing and Pt 2 47-53

³³³ J Duchesne-Guillemin ‘Origines Irlandaises et Babylonniennes de la Nomenclature Astrale’ *Comptes Rendue de l’Académie des Inscriptions & Belles-Lettres* Avril-June 1986 Paris 1987 234-250

³³⁴ A Ugnad ‘Babylonische Sternbilder oder der Weg Babylonischer Kultur nach Griechenland’ *ZDMG LXXIII* 1923 81-91

It is the Mitanni character of these subjects (two of them obviously so) that in itself helps to date their entry as calendar markers, taking us back to the question of how these changes were implemented. Always remembering the planets/stars were experienced as as the tangible manifestation of The Gods and The Goddesses of the unchanging Sky, overarching like the wings of an eagle, a perpetual updating process was going on all through the Second Millennium to define their roles more specifically in relation to planet and star behaviour, and is reflected in changes in mythology from as far east as Vedic India to as far west as Mycenaean Greece - with Syria and Anatolia providing the gradations in between - for us signalled by the introduction of the Snake Lady – and the God Hephaistos. The inter-God correlations made in the DIVERSION on the GODS help take us forward in understanding this process. There is no doubt that contrasted mythologies provides the hidden keys to these pioneering attempts to harmonise the sky, put into story form as mnemonics. We have dealt with Perseus and the Gorgon and their avatars – all presided over by Athena. Now it is the turn of Auriga which turns out to have a surprise connection with Hephaistos – again bringing us back to Athena, clear-sky-eyed coordinator of the heavens.

AURIGA IN MYTH

For an understanding of Auriga we are not able to draw on Mitanni myth as such, though we can make links in Vedic myth with *Aruna*, said to be Surya's charioteer, his chariot drawn by horses made for him due to having no thighs. Indra, too, is described as riding in his chariot. We must bear in mind that, with Capella one of the brightest stars in the sky, it did not go unnoticed in the previous age of Taurus, but there is a great deal of confusion in the early papers between the names for Ursa Major and its square 'bowl' and those for Auriga – such that Margidda is taken to refer to Ursa Major the Plough (Apin) by Burrows *ibid.*, when in fact its characteristics apply to Auriga. The same is true of the constellation Dilgan/Iku in the Mesopotamian star lists (discussed in **Chapter 19**) which, again, has been taken to be either to Ursa Major or Auriga. Ugnad *ibid.* from the etymology of the word *Iku* has linked it to Indo-European words connected to the root *equus*, for horse – which at least takes it away from Ursa Major to either associate it with the horses drawing the chariot – but equally opening it out to refer to Pegasus, which with one star from Andromeda forms the distinctive Pegasus Square high in the night sky in the summer months (**III.9- 85**).

AURIGA AND THE GENEALOGY OF THE FIRST ATHENIAN KING, SON OF HEPHAISTOS AND ATHENA

When we jump forward to the codified Classical sources that take for granted the interweaving of Auriga with the Perseus family of stars, they are evidence in themselves of the historical need to put together a myth to account not only for changes of emphasis in sky star groups, but also to provide a mythical genealogy for the refounding of the city of Athens under the new sky order. I have no mastery of the original textual sources for this information, and simply give below relevant keynotes taken from the research of Anne Wright in her on-line link below³³⁵, my source for relevant quotations from Pliny, Manilius or Hyginus). To the Greeks Auriga represented Erichthonius, the malformed son of Hephaistos and Athena, who was credited as the first to devise the four-horse chariot to hide his joined feet, making it possible for him to move around. The myth is well-known of how Hephaistos made unwelcome advances on Athena one day, ejaculating his sperm on her Thigh (a symbolic body part, whether for Hephaistos' lameness, Athena's substitute vagina, or the Thigh of the Bull in the sky). Athena wipes the sperm off her with a wad of wool (-*eri*) and throws in on Gaia/Mother Earth (-*chthonius*) who perforce takes on the role of womb, giving birth to Erichthonious. To Athena's horror he emerges half man, half serpent, but she takes him on as her child, putting him under the care of Kekrops' - the then King of Athens' - three daughters (who disobey her orders not to look inside the willow basket in which she puts him. When they disobey her and open the lid, he slithers off behind the shield of Athena for protection - hence the main cult statues of Athena include a large serpent of similar height to her (more of this when we deal with the iconography of the Snake Lady). Later Roman synthesisers of Greek lore such as Hyginus interestingly credit Erichthonious with being 'the first to bring silver to Athens after its initial discovery by Indus, king of Scythia'.

³³⁵ Anne Wright at <http://www.constellationsofwords.com/Constellations/Auriga.html>

EXPANSION OF THE ZODIAC TO CALIBRATE THE ARIES-LIBRA OPPOSITION WITHIN THE NEW SOTHIC PERIOD

At whichever court it was decided – and whether it happened in stages or all at once - certainly at some point or points during the Second Millennium the operative equinoctial colure running between Aries and Libra was inserted into a previously 8-sign (or in countries like Elam a 10-sign) zodiac. This meant these new paranatellonta were finally embedded in daily procedures along the new operative meridian – in very much a precise reflection of the cultures in charge - since along with Auriga (as also the concept of the Sun-in-the-Sky as driving a four-horse chariot) came the associated star myth of Perseus and the Gorgon - whose disembodied head appears constantly on Mitanni seals, the star *Al-Gol* in Perseus being a bright pointer vertically - along with Capella in Auriga – down to two-star Aries, so much less prominent and further along the Ecliptic from Taurus. Taurus itself remained a strong fiducial beacon in its own right, a reminder of the founding Age of the Animal Zodiac (introducing the Libran scales of the God Shamash in opposition to Aries was the first non-animal symbol for a Zodiac Sign). In fact, the bull-leaping male figures made by the upper stars pointing down to both Aries and Taurus may have helped as a transitional image for the changeover by using Taurus as stepping stone to Aries – and possibly the real purpose of the ritual. Even the depictions of bull-leaping at Avaris may have paved the way for introduction of the new mean time meridian to Egypt.

Still the perennial sky markers - the Sun, Moon and Venus - remain centre stage in this scenario - so we should now reconsider the lion and its Mitanni update, the griffin.

THE LION-PREY/GRIFFIN-PREY ATTACK IN CRETE, GREECE (FORATT-27) AND THE LEVANT

All three items under this entry are tantalizingly fragmentary, but point to substantially large decorative pieces in which the *Forward Attack* was being used – in all likelihood by Mycenaeans absorbing the highest meaning of the group from the Near East. The ivory griffin fragments, found along with other rather revealing treasures outside what has been described as the astronomer-priest’s house, fit in with the Levantine practice of adding ivory cladding to furniture or boxes. That it should be a griffin rather than a lion is not much of a problem, given the griffin seems to have been more precisely associated with intercalation and - as suggested in DIVERSION 8 - the imminent Sothic Period renewal of 1320. The pieces of plaster frieze under the entry are, again, tantalizing in the small morsels they provide of a possible room decoration featuring a lion-prey group in high-relief plaster, thus likely to precede the period when wall-painting superseded the practice, evidently placed in a first-storey room on the east side of the palace likely to catch the rays of the rising sun.



III.9-144: (Left) relieving arch on the Treasury of Atreus, possibly with a similar astronomical function to the tomb at Maes Howe (right); (centre top) photo by Reijs of light coming through the triangular opening and (centre bottom) resulting circle of light on the back wall; (right) setting Winter Solstice sun’s rays passing through entrance passage at Maes Howe

Finally, more controversially, my contention is that the last item in the entry - the two relief fragments in the British Museum from the Treasury of Atreus – are not parts of separate bulls, but the forequarters of a lion in the lighter coloured limestone deliberately contrasted with the bull (only the legs remain) carved in a darker material. It means they could only have been

facing each other across the triangle at the top of the entrance-way to the tholos tomb known as the Treasury of Atreus – here with the connotations we have already noted in the grave goods of other Mycenaean tombs to do with death and resurrection in the face-off between Solar lion and Lunar bull. Such an opposition of bull and lion makes symbolic sense if we bear in mind recent observations made on the likely astronomical purpose of the open relieving triangle over the lintel of the Treasury (see structure of the unclad masonry as it is now, above). From the observations made by Reijs³³⁶ over ten years, in the days either side of the Spring and Autumn Equinoxes the rays of the rising Sun pass through the aperture and strike the wall at the back of the tomb (the two images above centre were taken by Reijs in March 1999) - in much the same way the rays of the *setting* Sun pass through the long tunnel entrance of the cairn chamber tomb at Maes Howe in Orkney (above right) during three weeks either side of the Winter Solstice, hitting the back wall and suffusing the chamber with light (the tholos is around 1000 years later than the Neolithic Orkney tomb in date). The Mickelsons³³⁷ tested Reijs' hypothesis on the other tombs listed by Wace as belonging to a single group of 9 Greek mainland tholoi that appeared to be in a close sequence with each other chronologically and geographically- and found no correlation with significant astronomical alignments other than in the case of the Tomb of Atreus. If the Vapheio tholos (not in Wace's group) was also buried in a tomb significantly orientated (we only have the remains of the ground plan to go by, as below left) has not been tested, we have nonetheless already established that Tomb 2 at



III.9-145: (Left) Remains of the Vapheio tholos with cist grave at centre, compared (right) to Ursa Major on the back wall of Tomb 2 Vapheio (*III. 9-50/51* – the interior wall of the latter repeated above right) was astronomically significant due to the altar and two menhirs in front of Ursa Major in studs on the back (again only illuminated by the Sun's rays at a certain time of year). Here, Persson suggested, ideas of resurrection seem to have been associated with the journey of the soul to join the Imperishable Stars of the Polar Centre, as on Egypt's star ceilings.

Lion imagery, found on the artefacts in most astronomer-priest/priest-king or warrior-king tombs from the Mycenaean world (the Vapheio tholos being an important case in point – see our Seal Study 5 seals under *III.9-107*) is so ubiquitous that, just as in the case of horse and chariot imagery, it is worth taking another quick DIVERSION to explore the particular significance of the Lion for the Mycenaean. I believe their adoption of the hybrid version of the Lion as Central Asian Griffin – probably via the Mittani - is the proof we need of joint awareness of the Sothic Period Renewal of 1320 that needed to be coordinated with the correction of the Vernal Point to Aries in relation to the horse and chariot constellations. Indeed, we could say knowledge of Sirius periodicity was a helpful tool in bringing this about (in DIVERSION 8 on SIRIUS we showed how certain key ratios obtained from observation and collation of interplanetary cycles could help dovetail these two sets of vast, long-term calculations).

³³⁶ Victor Reijs 'Possible alignments at Mycenae, Greece' (viewed November 2013) at <http://www.iol.ie/~geniet/eng/atreus.htm> and 'Treasury of Atreus sunrises of Sept 17/18 2009 at www.youtube.com/watch?v=T-Prwb93Ad0 (1998-2009)

³³⁷ M E & A M Mickelson 'Do Mycenaean Tholos Tombs Encode Astronomical Alignments?' in *MAA XIV*,3 2014 1-14 (they reproduce Reijs' photo above as their fig. 4

DIVERSION 11 MYCENAEANS AND THE LION IN GREECE

From the fragmentary evidence of **ForAtt-27** on the monumental scale we do not have much to go on other than to note that the *Forward Attack* alone could have featured now and again on large-scale decoration in the Mycenaean world, but we can certainly take the Lion Gate at Mycenae - a heraldic unit in the Mitanni tradition – as qualifying on its own in declaring the central significance of the lion as theophany of the Solstices and of the Goddess as Baetyl for the Mycenaeans. However, by taking the cylinder seal evidence of the Vapheio Hoard (keynote of **ForAtt-26**) as a body, we can deduce a great deal by going back to *SEAL GROUP STUDY 5 (III. 9-107)*. Aside from possibly 5 (certainly 4) lion and prey seals, there are also six lion studies and one lioness study - two of the former formalised in more abstract geometric frameworks, but others clearly observed from life. This contrasts with the nine studies of bulls, or cattle in general, again one or two of them showing the authenticity of direct observation. Of interest to the cultural enquiry behind this DIVERSION come two seals showing men in direct encounters with lions – one of a pair of men heaving up a recently killed big cat, and the other (repeated below left) showing a warrior protected by an 8-shield in close combat



III.9-146: (Left) Haematite seal of warrior grappling with a lion from the Vapheio Hoard (CMS I-228); (right) lapis lazuli lentoid from the Knossos South House³³⁸ showing man behind standing lion³³⁹ (CMS II,3-24)

with a lion (carved in the same way as one of the lion studies), the aggression of the scene conveying all the danger of an actual event. There is no doubt its violent mood fits the nature of the Vapheio warrior burial in expressing those Mycenaean *macho* values markedly revealing them as temperamentally different from the Minoans, who in contrast tended to portray themselves walking peaceably with a friendly lion - as on the seals from the Minoan Palace at Knossos³⁴⁰ - or on the lapis lazuli biconvex lentoid (above right) found in the Knossos South House³⁴¹ precinct, suggesting their approach veered towards lion-taming (since lions were not native to Crete they must have been brought in as pets, perhaps as cubs). Where Krzyszkowska in her analysis of the South House seal³⁴² suggests the youth standing or striding along with a lion conjures up a mood where the struggle of the Gilgamesh-type Master of the Beasts is over, for the Mycenaeans the struggle was all - and we have already seen on their well-known sword and dagger blade designs how they would use the lion hunt scenario in combination with a lion-prey group in the near-eastern manner (later, **Herodotus VII** 125-6 was to describe lion hunts in Thrace and Thessaly).

EXCAVATION OF LION BONES AT ARCHAEOLOGICAL SITES OF THE REGION

As late as the **British School of Athens Archaeological Report 2013-14** we have an account from Irene Lemos of a butchered lion humerus found in Lefkandi Region II, described as in 'the ritual zone' (p.28). Lion bones are said to

³³⁸ In P Mountjoy **Knossos : the South House** London: British School of Archaeology at Athens, 2003.

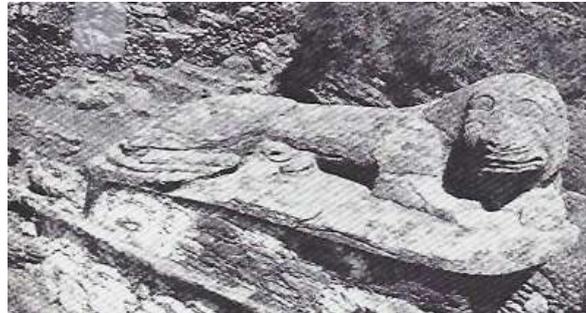
³³⁹ In Mountjoy *ibid.* 2003, fig. 1.

³⁴⁰ See SEAL GROUP STUDY 1 on the Knossos Temple Repository seals in **Catalogue D. Reminder**: SEAL GROUP STUDY 2 in the same catalogue covers the RUTSI HOARD; STUDY 3 the NICHORIA HOARD AND STUDY 4 the THEBES HOARD.

³⁴¹ According to Mackenzie it was found 'outside the back yard 1.20m above the external floor of the South House' (by implication thrown out of the Palace itself at the end of LMII) – Krzyszkowska *ibid.*.

³⁴² Most seals found in the shaft graves of Mycenae show warriors hunting or in aggressive conflict with lions (or each other), and not one lion and prey seal occurs (Karo **Schachtgräber** pl.xxiv) – however, four tombs outside the citadel did hold lion and prey seals (CMS I-70/77/100/103).

have been found at Troy levels VIII/IX³⁴³; a foot-bone at Tiryns level LHIIIb (5 bones from 4 different beasts); and even on the small island of Kea two lion's teeth in LMIB/LHII context ³⁴⁴ (we will refer to the astronomically significant 2M rock sculpture of the Lion of Kea (below) later). Pini (fn12).also quoted the possibility of lion bones found at Kalapodi. Further afield, Matthiae believed live lions were kept in the precinct of Ishtar at Ebla³⁴⁵ (did the Mycenaeans keep lions in enclosures too, on the model of the Stone Cult Terrace precinct of Ishtar at Ebla³⁴⁶?



The Lion of Kea - Richer fig. 48

Chapter 4 on the history of the Cat Family - especially in India and the Middle East – describes the different types of lion over history, some now almost completely extinct, like the Asiatic lion. For this *Chronological Focus Period* we know lions still abounded in Anatolia, round the Black Sea and in the wilder parts of Eurasia, Thrace and Greece – and certainly further east – a few stray examples are even recorded into the early 20C in the region. We know that either the Asiatic lion or a Eurasian version slightly larger could still be found in Macedonia up to Alexander's time. The first fact to note - absent from the literature on Mycenaeans and lions so far - is that the Asiatic lion is much smaller and compact than the African lion (there would be no hope of mastery at all if the latter were involved). When standing on its hind legs it would roughly be the height of a man, giving parity in combat. It is therefore likely there really was an initiation ritual amongst Mycenaean men of one-to-one combat with a lion to prove virility – a test of manhood still practised amongst the Masai in Kenya today (probably only with a young African lion or lioness, given the African lion is so much more weighty and huge than the Asiatic lion). Whereas lions still roamed quite freely in Greece, they often gave way in Central Asia to the local version of the tiger or leopard, the felids more likely to appear on Bactrian or the much later Scythian artefacts - as in **ForAtt-58** (see also **Ratt-56**).

LITERATURE ON THE LION IN MYCENAEAN GREECE

Early writers such as Evans and Nilssen always had perceptive comments to make about individual artefacts with lions on them but we go straight to the handful of more recent papers or chapters appearing between 1985 and 2000 - which can be taken as a body since they quote each other in cumulative succession. From the outset two main comments can be made which should be taken as statements of fact, rather than criticism, simply in the light of the special focus of this work, since in these short papers observations about lion behaviour and modes of attack are not intended to be encyclopaedic. Now that in this book (a) I have devoted an entire chapter to big cat behaviour in some depth and (b) broken down the different approaches of the lion attack on its prey into the eight categories A-H means separate threads of matches between real life and design conventions have been distinguished from each other, giving more precision to possible routes of transmission.

³⁴³ C W Blegen *Troy and Trojans* 1963 p.77 pl.26; H Ertem *Bogazköy Metinlerine göre Hititler Devri Anadolu 'sunun Faunası* Ankara 1965 p.152 note 4

³⁴⁴ Most references are conveniently brought together in Morgan *Op.cit. footnotes* 25-27

³⁴⁵ P Matthiae 'The Lions of the Great Goddess of Ebla: A Hypothesis about some Archaic Old Syrian Cylinders' in H Gasche et al. (eds) *Cinquante-Deux Reflexions sur le Proche-Orient Ancien offertes en hommage à Léon de Mayer* Louvain 1994 329-338

³⁴⁶ P Matthiae 'Middle Bronze Age II Minor Cult Places at Ebla?' in A M Maeir et al. (eds) *"I Will Speak the Riddles of Ancient Times": Archaeological and Historical Studies in Honor of Amihai Mazar* Winona Lake 2006 217-233

Then I have all along (c) considered the lion's astronomical connotations and (d) its place within the **Canon of Ancient Near Eastern Art** – neither of which concepts have so far been dealt with seriously enough to become mainline considerations in the academic world, though often individual writers on the subject have been on the brink of getting there. Hoping that my catalogues and commentaries will cover such gaps, let us note what emerged of use from these early attempts at covering the subject, while pointing out one or two statements that just cannot be true. It is erroneous, for instance, to state of the lion image in Mycenaean art that 'the rarer the animal, the more likely is it to be endowed with symbolic meaning' (Morgan³⁴⁷) since not only was the lion widespread all over the Ancient Near East, but it is the power of the beast at the top of the animal kingdom that gives it so many symbolic resonances. Her subsequent assertion that 'it was the Mycenaeans who appropriated its symbolic force' is not accurate either, given it had been appropriated on a regular basis by other near eastern kingdoms as far back as the Fifth Millennium. Basing her conclusion on the evidence of the **Palace of Minos** volumes alone she writes, 'Lions attacking their prey is largely a Mycenaean theme, although it was not unknown to the Cretans', believing from its frequent occurrence at Mycenae that it was probably invented at Mycenae itself. But with our wider perspective on the theme covering the Ancient Near East since earliest times, inevitably we must turn our thinking round on that score, and see Mycenaean artefacts using the lion-prey attack as pointing to their adoption of a symbolic group with a very long pedigree, turned to their own use almost as a badge of membership of the new club they had entered, a motif most immediately co-opted from Knossos (**Catalogue C**). But Morgan's brief in her masterful book was to study Thera wall paintings, in which lions appear as decoration on boats in the harbour set in a landscape where a lion chases its prey in the mountains above – and there is no reason we should expect her to be an expert on the motif's wider ancestry.

PAPERS ON THE REALISM OF MYCENAEANS' TREATMENT OF LIONS 1985-2000

The first notable piece on lions on late Minoan and Mycenaean artefacts was by Ingo Pini³⁴⁸ during the early years of setting up the **Corpus of Minoan and Mycenaean Seals** project (originally abbreviated to **CMMS**, now **CMS**) of which he was a founder. Not surprisingly, then, he concentrated on the array of collected seal material in their volumes to discuss the matter of lions in general and the lion-prey attack in particular, acknowledging their use on a larger scale in other media. He certainly made a start in the right direction by instancing the earliest examples of the use of the group on both Minoan and Mycenaean seals and contrasting several modes of attack against real-life photographs from a **National Geographic** of 1969. With hindsight we can now rate the paper as initiating a line of enquiry that still had many stages to go, art historically still leaving the reader with a sense of the trees rather than the wood, and no insights into what the lion might mean to the Mycenaeans other than in obvious terms.

Morgan's analysis of the lion in her book on Thera painting three years later dwelt on the usual approaches to the lion as a symbol expressing the power of the *wanax* and his status in overcoming the lion in the hunt – concepts we are familiar with from Early Dynastic Mesopotamian seals where the hunter intervenes in the lion's own attack on its prey. Nanno Marinatos³⁴⁹, queen of Bronze Age iconography, in her usual style looked for further depth in depictions of the hunt on Shaft Grave era stelai and decorated swords, formulating such tenets more forcefully than Pini or Morgan: 'The lion is either an opponent to be overcome, in which case the bravery of the human hunter is stressed, or a model to which the human hunter aspires', seeing any depiction of the hunt as intentionally symbolic and not simply the record of a real-life event for its own sake:

³⁴⁷ Livia Morgan *The Miniature Wall Paintings of Thera* Cambridge 1988 *Section on Lions* pp.45-9

³⁴⁸ | Pini 'Das Motiv des Löwenüberfalls in der Spätminoischen Glyptik' in *L'Iconographie Minoenne* **BCH Suppl.Vol.XI** 1985

³⁴⁹ Nanno Marinatos 'Celebrations of Death and the Symbolism of the Lion Hut' in R Hägg et al (eds) *Celebrations of Death and Divinity in the Bronze Age Argolid* Stockholm 1990, 143-8

We have seen two patterns here. In one the lion is used as an intensifier through equation and identification with the human warrior. In the other, the purpose is to establish a pecking order, as it were, a hierarchical structure in which humans are on the top, lions below them and horned animals at the bottom.

In acknowledging precedents from near eastern art in general, she stresses 'I am speaking here of conceptual links, not concrete cultural influences, although a general diffusion of the ideas is to be expected' – so for instance 'in Egypt the lion is either identified with the pharaoh or it is his adversary' (most notably in the XVIII/XIX dynasties). Overall, she concludes, the predominance of such imagery in Mycenaean - rather than Minoan - culture 'should tell us something: could the message be related to the ascendancy and consolidation of the Mycenaean aristocracy?'. Here she brings in that vital addition of *realpolitik* to the generalities: that lion cult and imagery is to do with the self-projection of the Mycenaean to the world outside and a display of its qualifications to hold power by using a visual language whose meanings were generally known and accepted in The Club.

Considering the plethora of zoological information available about lions available to her, Marijke Ballintijn's³⁵⁰ chapter on lions is patchy – so although she raises the question of the difference in size between African and Asiatic lions the stomach mane of the Asiatic lion (a key identifier) – is not pointed out, and although she goes into musculature at times, changes in emphasis on anatomical features explaining differences of style was not fully followed through. On the other hand she makes some headway in comparing modes of attack against what happens in real life, not always acknowledging her sources, but making several good points about the telling realism of depiction that meant carvers must have studied actual lions even if melded to pre-existing design prototypes. She states that 'the lioness with mane and teats is an Aegean invention' – but there are precedents on ancient near eastern artefacts that have appeared in our catalogues. As already suggested earlier, she interestingly raises the question of whether lions would have been held in captivity by Minoans or Mycenaean, saying that in her view 'such images are no proof that lions were tamed or held in captivity', but contradicts herself further on by stating:

Wall paintings from Crete and Thera indicate the existence of large well laid-out gardens where animals may have been kept in captivity. Such gardens also existed in the Near East and in Egypt. For instance in the 18C the Hittite king Anitta had an enclosure made for wild animals near a temple at Kültepe where, besides two lions, leopards, bears, deer, boars and goats were kept. ... J Leclant has found remains of such an enclosure near Amenhotep III's Jubilee temple at Soleb in Upper Nubia. ... In a relief on the wall of Pat-hotep's tomb at Saqqara dating from the VD one can see how a captured lion and leopard are being transported in cages on a sledge. ... Remains indicating a menagerie dating to the period between Set I and Ramesses III were found near the palace at Qantir [consisting] of the bones of a lion, elephant, different kinds of antelope and a gazelle.

Finally we come to Edmund Bloedow's two papers³⁵¹, the first simply citing the variation of examples in which the lion appears – alone, attacking its prey, or in chariot or hunting contexts – generously illustrated with many examples. He cannot textually back up the occurrence of lions on mainland Greece in Mycenaean times, but he usefully quotes Herodotos' description of lions attacking Xerxes' pack animals during his invasions of Greece in the 5C BC:

His pack-camels were attacked by lions, which came down from the haunts at night and – strangley – never molested either the men or any of the other animals,

³⁵⁰ Marijke Ballintijn 'Lions depicted on Aegean seals – how realistic are they?' in CMS Beiheft 5 1995, 23-37

³⁵¹ Edmund F Bloedow 'On Lions in Mycenaean and Minoan culture' in *Aegaeum* 8 1992 295-312; and 'On Hunting Lions in Bronze Age Greece' in *Aegaeum* 20 1999 53-61

adding the further comment, *this part of the country ... abounds in lions.*

The supposition is that if lions abounded then, it is likely they were as plentiful, if not more, in Mycenaean times. As with the pack-camels, clearly lions in the mid-2M would have been such a pest that cattle herds would constantly need protection and the lions hunting them needed to be killed – the down-to-earth explanation given for the rise of the lion-hunt in the first place. Bloedow quotes Evans' idea in *PM III* 120-3 that the Minoans probably hunted lions, not in Crete, but on the coast of Libya – explaining why they, too, demonstrated 'a first-hand knowledge of the great beast'. In fact, the many lines in Homer quoting lion attacks and hunts (which is where Bloedow comes into his own in his second paper) are a further indication of the prevalence of lions in Anatolia too during the time of the Trojan Wars – some references held over for consideration against examples given in *Catalogue F: The Bilateral Attack*.

Bloedow mentions Weingarten's scepticism, on the discovery of lion bones at Tiryns, about the lack of acquaintance some Minoan-Mycenaean carvers seem to show about the actual details of lion anatomy, seeming to rely too much on borrowed work. Clearly for any seal depicting a lion we could chart a graph on the balance between lion observation in the flesh, the borrowing of foreign designs, the repetition of local designs over time – and of course the mutual separation between the experience of the hunters in the field not necessarily shared by craftsmen sitting in their workshops. This is why animal studies as instanced in the Vapheio Hoard (*III.9-107*) are so interesting since they prove that in one particular context a craftsman made preparatory studies of the animal for the more symbolic images (c.f. *CMS I-245* with *CMS I-228*). *CMS I-246* to me looks like the study of a starved, dead lioness.



III.9- 147: (Centre) *Master of the Beasts Mycenaean seal (CMSI-89)* with closeup of head above, contrasted firstly (left top and centre) with other Mycenaean heads (*Krszowska Aegean Seals nos 236/7*) and (left bottom) head on BMAC stamp seal (man behind lion with snakes on verso) from *Francfort (fn.449, Fig.2)*; and secondly (right column) with a BMAC seal showing *Master of the Snakes (winged lion with snake-head on verso beneath)* – from *Pittman op.cit. fig.29*

It is worth contrasting the the Master of the Beasts motif often favoured by the Mycenaean on seals (as above in the Thebes Hoard, for instance) with its usage in the same period in the Central Asian BMAC – on which lions are often replaced by snakes - since the sealings shown above also introduce matches between male portrait heads from both territories, the biforked or goatee beard and shock of nape-length hair seemingly the common fashion. The Gilgamesh figure holding up two lions (or sometimes other beasts) is such a primordial image in the *CANEA*, going back to the 5M and beyond, that it must originally have been inspired by actual one-to-one male combats with lions or other wild creatures – the image in turn reinspiring later ritual practice as noted in the Mycenaean versions – and of course applied symbolically to astronomical realities. The next three images from the BMAC appear to suggest Central Asian seals merge master and beasts into lion-man hybrids blended with snakes, indicating a more hectic imagination.



III.9-148: (Left) Maybe trying to be a lion-man

Herzfeld (ibid.) gives an illustration of what he calls an Etruscan stela (below left) found in Italy (Monumenti Antichi 20 from Bologna) that shows two snakes coming down over its top, and a personified twisted pair reared up before a standing figure with bristling hair. I have placed against it a Bronze Age stone carving on a cist (common in Galicia,



III.9-149: (Left) An Etruscan stela from Bologna - Herzfeld op.cit. fig.129; (right) Cist carving at Conjo, Galicia – Savory³⁵² fig.70c

Portugal and Britain at the time of Bronze Age Stonehenge) illustrating not only daggers or spear points, but what John Dayton refers to as a head with a Sherden headdress.

Such small details provide further little indicators of the interconnectedness of pockets on Europe with Central Asian cults, often involving the cultivation of hybridity with human and animal figures to convey ideas.

We lean towards picking out further such links in the final handful of entries of the *Chronological Focus*, leading to the final DIVERSION of this Catalogue before we end with new conclusions about the significance of the lion-prey group – this time in the form of the *Forward Attack*. These will give a new view of the Calendar and Astronomy in the Aegean and the Levant in the second half of the Second Millennium, the observational work done then and the artefacts linked to it being absolutely vital in laying the foundations for the better-known 1M developments in Assyria and the Archaic Greek world.

FORATT-28: NUZI SEALS AND THE MITANNI

ForAtt-28 features ordinary Nuzi seals showing variations on the *Forward Attack* depicted alongside the standard Old Babylonian groups of Gods, rulers and attendants, with the fourth seal juxtaposing the reared-up variation against the Mitanni heraldic unit of nude winged, helmeted guardians with curled hair-locks holding up their characteristic winged standard with its double rows of feathers. In fact, the heraldic unit calls to mind a tradition stemming from Central Asia which should be mentioned here: the story of Gog and Magog who guard the gates of a great wall separating barbarism from the civilized world. So far has their story travelled that they are seen as the guardians of the gates of the City of London today: Geoffrey of Monmouth wrote that Britain was colonized by descendants of Trojans who had fled Troy following the Mycenaeans' victory, and 'Gog and Magog of the Guildhall' were understood as the guardians of Trinovantum, or 'New Troy', the early name of

³⁵² H N Savory *Spain and Portugal: The Prehistory of the Iberian Peninsula* London 1968

London before the Romans arrived. Moving on a few centuries to Islamic tradition, an Umayyad Caliph sent messages to different kings asking them to check their territories to find the wall - or the dam - of Gog and Magog. From the North-East came



Survival of old traditions: (left) Serpents in the spandrels of the Mosque at Anau, with 'Allāhu Akbar' in Kufic in the side panels and (right) Peacock stone relief labelled 'Allāh' above its head

the message that it had been found, and that it was very high, with a huge door with many locks, still with guards keeping watch. Witnesses added that its location was on the north-east side of the earth, where the land was spacious and its countless people lived on farming and hunting. In Sayings/Hadith of Muhammad, we are told they are of the Turkic race, with small eyes, flat noses and round, wide faces. Whilst *Jūj wa Majūj*/Gog and Magog, referring either to mythical individuals or to masses of peoples, are mentioned in the Old Testament, one of the fullest accounts of the story is given in the *Qur-ān* [18: 92-99] which states that God will hold them back behind the wall of iron and copper created by Alexander (evidently referring to his Empire's borders in Afghanistan where copper and iron are abundant) until the time in the Last Days when they will be released, 'surging like waves over each other' at the time of the Last Judgement. Evidently the story accrued and changed over the centuries, but the Trojan and Central Asian elements place its origins in the 2M, and it cannot be ignored that the idea of the twin Guardians of the Gate at its metaphysical level ties in with the *Gestalt* of the Mitanni heraldic unit.

FORATT-29/22: THE STORM GOD AND THE SERPENT LADY

It is in **ForAtt-29** that the Snake Lady appears again – winged - on a Mitanni seal, as also on a key Amarna tablet in the British Museum from a period when the Mitanni were in correspondence with the Pharaoh's court (*III. 9-183* shows photographs of both sides). Here is a theme we have gradually built up in stages throughout the catalogue on which we should soon be able to take a view in a final DIVERSION – important to deal with because more often than not she is juxtaposed with the *Forward Attack*.

We started to gather instances of the Snake Lady on the basis of her early appearance on the Old Babylonian tablet of **ForAtt-22**, and with a Wind Gymnast on another OB tablet sealed in the time of Warad-Sin of Larsa (*III. 9-182*). These Wind Gymnasts appear in several positions on the seal of Ithi-Teššub (*III. 9-164*), seemingly as part of the retinue of the Storm God, who is represented at the top right of the seal. The Snake Lady is not present on this one, although on the seal of Shaushtatar from the same period (*III. 9-65*) a long serpent might be taking her place as it undulates under another variation on the Mitanni heraldic unit – this time guarded by pairs of lions and birds.

We do have another instance of the appearance of the Wind Gymnasts and the Snake Lady together on an unusual haematite seal in the British Museum, cited both by Buchanan (*ibid.*) and Porada (*ibid.*), and known as the Spencer-Churchill seal (below). Two upright Wind Gymnasts walk towards the Snake Lady, one with wings outspread and the other with them folded back, behind whom is a third bending sideways, as on both the Warad-Sin and Itjī-Teššub sealings. Tucked in under the wings of the two striding Wind Gymnasts is the Storm God on the winged Lion-Dragon steed so beloved of the Mitanni, indicating that although he may be the divinity in charge of these figures - likely to be Winds blowing in different directions – since they appear



III.9-150: Impression (Buchanan *ibid.* pl.1e) and drawing (Porada *ibid.* fig.3) of the Spencer-Churchill seal BM 134773 (for a clearer impression see III.9-163)

to be honouring the Snake Lady, he is given the secondary role. (Note again the floating head in the top border of hieroglyphs, and eight-pointed star in Crescent placed in front of the Snake Lady's face, a strong indicator that she is Venus). Despite Buchanan and Porada's speculations on her significance, the obvious conclusion is that she is simply to be read as a version of the Storm God's consort, Ishtar, in a more unusual self-display in mid-transformation from or to the Underworld, spanning the realm of ordinary human life in her human torso, the heavens in terms of her wings, and the Underworld with her snake-legs. These are the parts we see imperfectly in the perhaps deliberately ill-defined middle figure in the trio at top row left of **ForAtt-29** (shown again below for ease of reference, contrasted with herself dressed with wings down – set against a winged Gilgamesh trio. These we can compare with the startlingly well-defined Mitanni version on a gold goblet from Marlik in III.9- 179 where again the phases of Ishtar unclothed, clothed and in between are combined in a *tour-de-force* of Central Asian hybridity.



III.9-151: Top register of ForAtt-29 showing vestiges of the Snake Lady between two courtiers on the left, consisting of birds, snake-heads or wings on the shoulders, a pair of breasts and two indeterminate shapes that could be serpent legs (possibly at the navel is an upsidedown crescent); at centre is Ishtar clothed with wings down, next to a Gilgamesh trio

To understand such combinations, we go back to our very early discussion of the entwined snakes of Ningishzida in the *Art History Section* to remind ourselves that this double-serpent God is described in some texts as a God of roots and underground growth, in a period when he was mentioned in the same breath as Tammuz' journey to the Underworld and also identified with Ea, approached as a healer God (the Caduceus survives to this day as the symbol of the medical profession). At this period, moreover, Ningishzida is said to be of interchangeable gender, with either both male and female sexual organs or consisting of one male snake, one female snake intertwined. These indicators are reiterated in the Snake Lady version of Ishtar which now with some perspective on the matter appears to incorporate *Protohistoric versions of the God(dess)* alluding to her bisexuality – its frequent juxtaposition with the lion-prey image simply a determinative confirming she is Ishtar. This is why, in **ForAtt-22**, it would be plausible to read the Snake Lady appearing at the shoulder of the charioteer as the intermediate form of Ishtar again, alongside her consort, the Storm God, Baal-Teššub, while also shown behind his chariot as the more familiar combined

clothed/unclothed standing figure complete with her own miniature *Forward Attack* – spelling out the three-stage process of the Journey as on the **ForAtt-29** seal above, the in-between hiatus stage of the Snake Lady rarely shown.

FORATT-30/31: THE SYRO-HITTITE INTERNATIONAL STYLE ON A DRINKING BOWL

Due to its domed shape the Kinik Bowl - like the 14C Ras Shamra bowl (**BaLu-31**, Aleppo Museum no.4572) it is often compared to - is the type of silver-gold or bronze bowl of early vintage overtly used for the depiction of cosmic symbolism - as opposed to the scores of later, more run-of-the-mill decorative bowls hoarded in large numbers at Nimrud (**ForAtt-38**) by the Assyrians, seemingly for bullion rather than special ritual use. In **Chapter 19** we devote an entire section to an early zodiac depicted on the bowl known as the Faroughi Bowl (**III. 19-151/III. 19-160/III. 19-165**), from its iconography probably dating from the last quarter of the 2M and one of the earliest overtly astronomical bowls - if not the first. Indeed, in J D Hawkins' commentary on his translation of the inscription on the rim of the Kinik bowl (given in the full drawing of the iconographic programme below), he points out that the Hittite logogram for 'SKY' is a bowl, 'presumably because the sky was conceived as an inverted bowl'. In a way the bowls can almost be classed as miniature variations of the Homeric Achilles' Shield (**III.9-76/III.9-77**) which of course had a much wider circumference, providing ample space to depict a more complex cosmic scheme.

The griffins flanking stylized trees of life round the Kinik bowl's central rosette are familiar ingredients in the International Style, while the register above shows lion-bull attacks - a *Bilateral Attack*, a *Forward Attack* and a pair of lions grappling with each other. The interspersed stag and boar aimed at by two Hittite spearsmen in the strip above should probably be taken as the Spring and Autumn equinox animals, and the lion-bull attacks the solstices – uniquely on the Kinik bowl these seem to be BIVISUALS included in a standard Hittite ritual hunt with one hunter in front of a tree with ritual backpack (see the Hittite rhyta discussed in our ENTERTAINMENT DIVERSION), an early form of the cornucopia and used by Perseus as the *kibisis* holding the Gorgon head. These traditional seasonal animals were also seen on the Eurasian Trialeti bucket and goblet (**III. 9-25/III.9-12**).

HOMERIC AND UGARITIC SYMPOSIUM DRINKING RITUALS

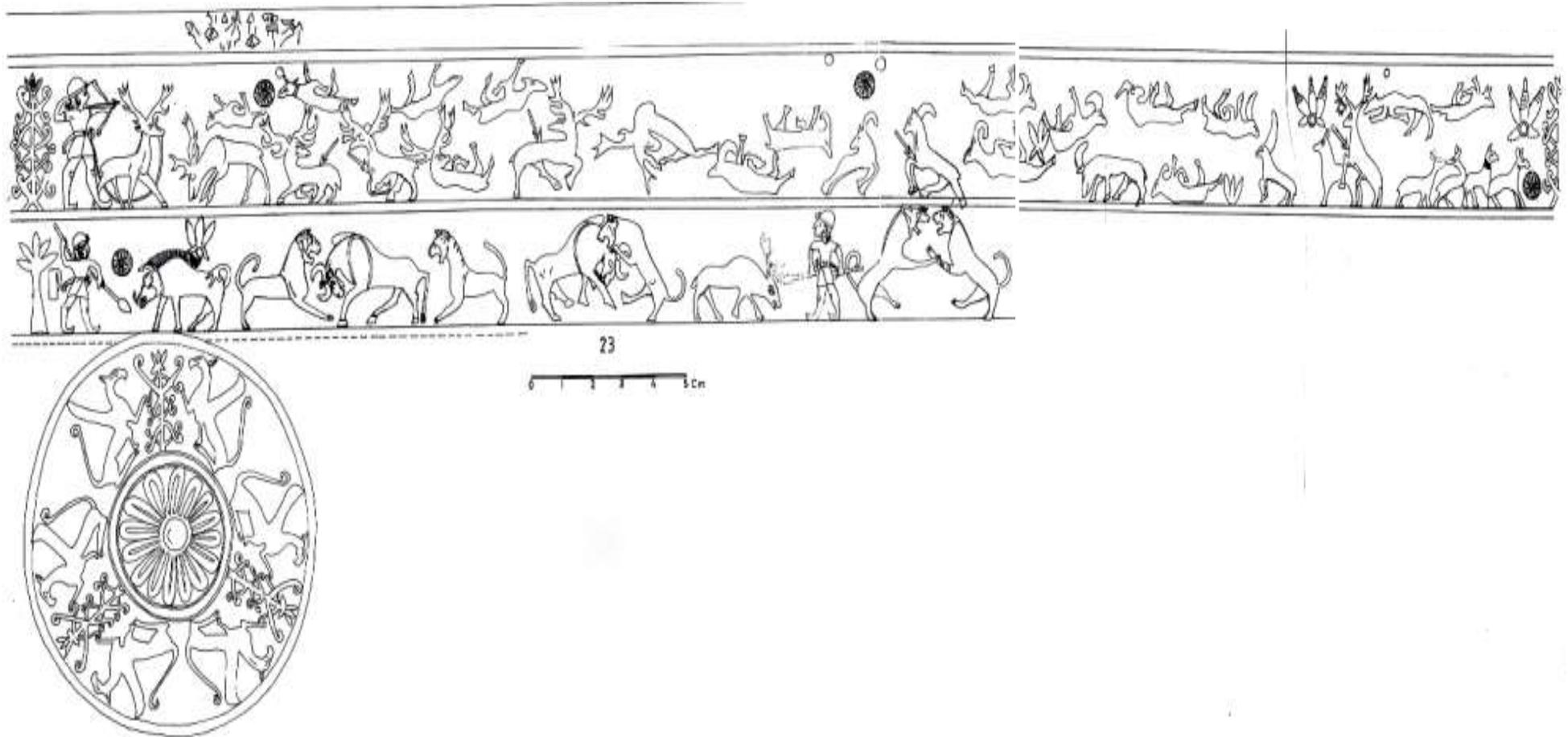
We have quoted elsewhere in this chapter that 'Sidonian bowls' were valued by the Achaeans and sometimes given as prizes, and it is worth raising here an interesting contrast made in a paper by Loretz³⁵³ between drinking rituals in the Homeric and Ugaritic worlds featuring cups, beakers, bowls or jugs that point to close overlaps (despite differences of level) between these two particular cultures – which helps to add a few more pieces to the jigsaw of traditions passed on within the Achaean/Trojan Aegean and Levantine worlds – these ones related to the central significance of the sacred drink in Indo-European cosmologies (whether *haoma*, *soma*, wine or beer, explored more deeply later) – and where the symbolic drinking vessels are often decorated with astronomical references. It is possible to make such comparisons because in this period, as Gordon³⁵⁴ puts it, 'In spite of great ethnic diversity, and of regional individuality, the ancient Near East was the scene of so much give-and-take that we may speak of an ancient Near Eastern civilization'. As keynote for the theme of the paper, Loretz gives as the text for discussion a handful of lines in Ugarit (KTU 1.3 I 10-15a) describing how *RDMNS* the cup-bearer hands to Baal, just returned from the killing fields of the Underworld and enthroned on the holy mountain of Mt Şaphon on New Year's day, a drinking vessel (the different four words describing it are emphasised in small capitals below):

<i>KRPNM b klat ydh</i>	he placed drinking vessels in his hand:
<i>BK rb 𐎠𐎵𐎲</i>	a beaker of the highest Lord;
<i>RDN mt 𐎲𐎠𐎲</i>	a rhyton of Death and Heaven [= Baal on the Ugaritic Mt Olympus];
<i>KS qdš I 𐎠𐎲𐎠𐎲 𐎠𐎲𐎠</i>	a holy bowl not seen by the likes of woman;
<i>KRPN I 𐎠𐎲𐎠 𐎠𐎲𐎠</i>	a cup [of a kind even] unknown to [Goddess] Athirat.

³⁵³ O Loretz 'Die Gefäße *Rdmns* für ein Marziḥu-Gelage zu Ehren Baals und der Nestorbecher der Ilias (zu mykenisch-ugaritischen Beziehungen nach)' in O Loretz et al (eds) **Ex Mesopotamia et Syria Lux: Festschrift für Manfred Dietrich zu seinem 65. Geburtstag** Münster 2002

³⁵⁴ C Gordon 'Ugaritic Guilds and Homeric Demiurgoi' in S S Weinberg (ed.) **The Aegean and the Near East: Studies Presented to Hetty Goldman** Locust Valley NY 1956 136-43

Inscription ↓ TAPRAMMI, HIGH OFFICIAL, DEDICATES THIS BOWL [TO] THE SCRIBE-GOD [= NABU-MERCURY]



III.9- 152: Forward Attack on the bowl from Kinik³⁵⁵ (compare with the stance of the lion on the Vapheio ring and seal of Ini-Teššub, King of Karkemish (see ForAtt-26) – Damascus Museum

³⁵⁵ Regrettably E Rossberger in 'Local, Foreign and International Arts and Crafts at Late Bronze Age Qatna' in B Eder et al eds *Policies of Exchange: Political Systems and Modes of Interaction in the Aegean and the Near East in the 2M BC* Vienna 2015 (fig.10) in her mention of the Kinik bowl does not give the whole design, thus omitting the two sparring lions and the 14 or so deer shown top right (which includes a mating scene).

The varied names of the vessel are not easy to translate, and need not necessarily refer to four *different* vessels successively handed to Baal as Loretz and most translators think. Astour³⁵⁶, for instance, has a convincing alternative translation concerning the root KRP/KRB which he associated with the Cherub who stands with the cupbearer on the Holy Mountain, covering it with the wings of his protection, as similarly described in **Ezekiel 28** 11-19. Half of Loretz' paper consists of the alternative translations given by many scholars in different languages – the wording above gives my selection of what appear to be the most intelligible renditions in the light of his subsequent cosmological interpretation of the lines. For a start, *bk* and *beaker* are close etymologically (c.f. **III. 9-22** – and, of course, *rdn* and *rhyton* (c.f. **III. 9-170/171**) – here Astour classes the latter as a person's name, which does not fit, but *RDMNS* himself is cited by him from several other pieces of textual evidence as the prototype of Ganymede a son of Tros, King of Troy, who became Zeus' cupbearer (**Iliad XX** 231-5³⁵⁷). He is the beautiful young man who equates to the *Rhadamanthys* who crops up in several Greek traditions, described in **Iliad XXIV** 321-2 as a son of Zeus and Europa, sister of Cadmus of Thebes – and thus brother to Minos of Crete (the latter in **Odyssey XI** 567-71 is even given the role of Judge of the Underworld). Astour refers to accounts of a Boeotian cult of Rhadamanthys – a territory of Greece particularly to be associated with links to Canaan/Phoenicia, the overall network of links between Ugarit and Bronze Age Boeotia and the Troad manifesting itself in such genealogies.

Then comes *ks*, taken by most translators as a much larger vessel (a jug or pitcher, perhaps on the scale of the Inandik or Hüseyindede ceramic beer vases described in this catalogue – **III. 9-163/164/165/167**), leaving *krpn* as the straightforward word for *cup* repeated in the first and last lines, which for our purposes I am speculatively taking as *bowl*, with the other three words after it being in apposition, describing the same one vessel handed to Baal with the drink of *mt šmm* (Death and Sky/Heaven). We cannot linger to discuss the niceties of individual translations as covered by Loretz, but since it is absurd four different vessels should be handed, one by one, to Baal, we hope our choices above convey the overall sense of the passage before moving on to simply take on board his main contention that compares the passage with the account of Nestor's Cup given in **Iliad XI** 632-41:

On it [the table] she [the lady Hecamede] put a bronze dish with an onion to flavour the drink, some yellow honey, and sacred barley-meal; and beside these a magnificent beaker adorned with golden studs which the old man had brought from home. It had four handles, each supported by two legs, and on top of each, facing one another, a pair of golden doves were feeding. Anyone else would have found it difficult to shift the beaker from the table when it was full, but Nestor, old as he was, could lift it without trouble. In this cup their comely attendant mixed them the pottage with Pramnian wine, and after making it ready by grating into it some goats-milk cheese with a bronze grater and sprinkling white barley on top, she invited them to drink, which they did. (E.V. Rieu translation)

As with the vessel(s) handed to Baal, the imagination is progressively moved from a dish with an onion, honey and barley-meal on it, to a beaker or large cup described as such a hefty vessel that only a warrior could lift it when full. The difference between the two passages concerns the presence of the presiding lady in Nestor's court preparing the meal (at a purely human level taking the part of *RDMNS*), who also adds condiments to the wine-full cup, where the Ugaritic passage emphasises that the vessel it talks is of a kind not handleable by women or even known of by the Goddess Athirat. Rather, Loretz argues, this is a description of a heavenly bowl known only in terms of the dome of heaven, with the *RDN mt šmm* revealing its true nature as a model of the sky itself – the sky being one and the same as the Lord of Life and Death, Baal (Mt Saphon/Mt Olympus being at the centre of the circles of heaven).

³⁵⁶ M C Astour 'RDMN/RHADAMANTHYS and the Motif of Selective Immortality' in M Dietrich et al. (eds) *"Und Mose schrieb dieses Leid auf": Festschrift für Oswald Loretz* Münster 1998

³⁵⁷ As Astour points out, elsewhere in the *Iliad* the role of cupbearer is taken by Hebe – and, significantly, once by Hephaestus.

Loretz here paraphrases G Fuchs³⁵⁸:

Dabei sind die Grenzen zwischen dem 'Globus' als Zeichen der Weltherrschaft und ihrem Träger fließend, so dass die Gottheit mit dem Becher und die Gottheit als Becher nicht mehr streng zu trennen sind. Der Gott Baal mit dem Becher ist also nicht nur der Herr des Kosmos, sondern auch der Kosmos selbst'.

We have left out the intermediate nuances leading to this conclusion and the reader should look up Loretz' paper for themselves, so valuable in bringing us to an appropriate level of interpretation for the symbolic overtones of the Kinik bowl iconography, to be understood, in Loretz' terms, as a vessel appropriate for use at funerary commemorative drinking feast (*Marzihu*³⁵⁹-Lage) –here in the Baal myth held on Mt Şaphon by the God who himself has conquered Death/Mot. Since further on in the same Ugaritic passage the cup-bearer *RDMN* closes the proceedings by singing with sweet voice accompanied by cymbals, we can mentally add this scene to those given under our ENTERTAINMENT DIVERSION. Placing the heavenly cupbearer on an exalted plane, Loretz explains him as 'der ugaritische Orpheus', whose 'enge Verbindung mit dem aus dem Totenreich auf seinen Thronsitze Şaphon zurückgekehrten Baal zeigt an dass auch RDMN dem Lebensbereich des Wettergottes zugeordnet ist [und].... dürften auch die griechischen Mythen über Rhadamanthys widerspiegeln, die ihn gleichfalls in Regionen ansiedeln, die dem Tod entrückt sind'.

ELAMITE, AMORITE AND PROTOZOROASTRIAN SACRED DRINKING RITUAL VESSELS

As we have said, the Kinik Bowl is a cadre of bowl which can appropriately be accorded a cosmic level of interpretation, and is unusual in combining both Hittite and Levantine imagery. Drinking rites are signalled by Kurochkin³⁶⁰ as a particularly Central Asian activity that was propagated by Mitanni influence into Syro-Mesopotamia and India. If the reader goes through all the decorated vases, goblets, cups, bowls and beakers illustrated in this catalogue (mostly of silver, gold or bronze, but sometimes also of ivory or clay) - from as far east as Quetta to as far west as Dendra in Greece – we can surely claim that Kurochkin identifies yet another powerful influence from Central Asia the Mitanni-linked élites in Syro-Mesopotamia fell under. This was the attraction of the Proto-Zoroastrian sacred drinking culture, whether shamanic, dedicatory or in celebration of calendrical turning points and later we will be able to give more detail about it. Their variety certainly bears out the lines quoted by Loretz giving different names for either one, or several, types of drinking vessel made to hold the brew put in Baal's hands – whether tot-small or communally large.

FORATT-32/33: MIDDLE ASSYRIAN SEALS

On Middle Assyrian seals we do not lack for examples of all kinds of lion-prey attack - including our particular focus here, the *Forward Attack* - on a variety of prey including stags and boars. The resuscitation of the old motifs and design formulas of the old tradition still held symbolic currency for the Semitic Assyrians, with the core New Year/Ishtar symbol of lion attacking bull given the many variations in treatment pointed out in the entries and *Art History Section*. We do not need to dwell on the astronomical implications of any Middle Assyrian seals here., but the introduction of hybrid creatures to convey compact astronomical messages was an invention of the Central Asian world, and taken further by the Neo-Assyrians after the 'Dark Age' intermission following the Sea Peoples' depredations lasting some 200 years, in the massive entrances to their palaces protected by lion-bull-eagle-man guardians. With the theme of Central Asian influence in mind, we also highlight interesting observations made by both Canby³⁶¹ and

³⁵⁸ G Fuchs 'Das Symbol des Bechers in Ugarit und Israel' in A Graupner et al (eds) *Verbindungslienien: Festschrift für Werner H Schmidt zum 65. Geburtstag* Neukirchen-Vluyn 2000 65-84

³⁵⁹ T Dawson *Whisper of Stone* Alresford 2009 p.168

³⁶⁰ G N Kurochkin 'The Archaeological Search for the Near Eastern Aryans and the Royal Cemetery of Marlik in northern Iran' in A Parpola et al. (eds) *South Asian Archaeology 1993* Helsinki 1994 389-95

³⁶¹ J V Canby 'A Glyptic Question' in *Aspects of Art and Iconography: Anatolia and its Neighbors - ~Studies in Honor of Nimet Özgüç* Ankara 1993 111-115, & pl. xvii

Herzfeld³⁶² regarding the appearance on Middle Assyrian seals of what we might call the 'flaming brazier'. Canby's interest was initiated by an uncatalogued seal in the Smithsonian Museum originally donated by the Rev. William Frederic Williams³⁶³, a missionary in the Nimrud area at the time of Layard's excavations who knew him and built up a small personal seal collection that he took back to America. The banded agate seal is a damaged, with a two-register design (Canby's figs 1&2, the sealing reproduced below left), the intact upper register showing a chariot scene next to the statue of an enthroned God or Goddess before an officiating priest - and flaming brazier between them (arrowed) as focus of the ritual.



III.9- 153: (Left) Uncatalogued seal from the William F Williams collection and (right) scene similar to its central group showing Baal with his lightning symbol and priest with Crescent above either side of a flaming brazier

Canby likens the latter group to a vividly down-to-earth version on a Middle Assyrian seal in the British Museum (above right) dated, from the style of Baal's hair and beard, by Mayer-Opificus³⁶⁴ to the reign of Tukulti-Ninurta I. She refers to Herzfeld's deep knowledge of Indo-Iranian texts which mention the 'self-feeding flame' of *naphtha* which appears from seal evidence already to be being exploited in order to adhere to the central tenet of the Proto-Zoroastrian/Vedic rite of keeping the eternal flame burning. When one thinks of the presently-known oil and gas areas of southern Russia, Turkmenistan, Northern Iraq and Western Iran, it is just those places that are mentioned in the later Yashts or by Classical writers as providing that 'flame that lives in the underground waters'³⁶⁵ that needs no fuel to burn. **Strabo LVII** mentions its availability on the banks of the Oxus, and Alexander the Great in his travels in the region is shown the phenomenon. To the Zoroastrians as such, the flame was associated, not simply with the aureole of both the monarch and the God Ahura Mazda Himself, but its physical availability from Caspian Sea to the Persian Gulf was a marker of the 'arischen ländern ... in gegenwart und in zukunft'. The argument does not hold that the braziers shown in the two seals are simply incense burners because incense works on smouldering fuels, with no vigorous flame – and there is no sign of physical pieces of fuel such as logs protruding. We cannot, of course, class the Assyrians as Proto-Zoroastrians, but we can at least flag up possible use of *naphtha* for their own purposes as another sign of intermittent Central Asian impregnation into their temple practices.

³⁶² E Herzfeld 'Die Kunst des zweiten Jahrtausends in Vorderasien II: Die Mesopotamische Gruppe Anzugliedernde Siegel' *Archaeologische Mitteilungen Aus Iran (AMI) IX* (Old Series) 1938, 1-89 –quoted earlier. The first and last pages of the paper are useful – otherwise the author spends pages in an exhaustive analysis of variations in the design of the Mitanni and Middle Assyrian Tree of Life too detailed to end in seeing the wood for the trees...

³⁶³ Frederick Williams was also instrumental in helping 'to secure reliefs from Nimrud from Layard for American colleges and universities'. (*ibid.*)

³⁶⁴ R Mayer-Opificus 'Bemerkungen zur Mittelassyrischen Glyptik des 13 und 12 Jhds. V.Chr.' in P Matthiae et al. (eds) *Insight Through Images: Festschrift Edith Porada* Malibu 1986 She usefully lists key experts' papers on Middle Assyrian seals, quoting the accepted view that they developed from Mitanni examples (perhaps slightly underestimating the contribution of Kassite designs that also played an important part.).

³⁶⁵ Hence an etymological link drawn by Herzfeld between *NaP[H]T[H]a* and the God NePTUNE

FORATT-34/35/36: MORE DRINKING CUPS - IVORY, GOLD AND CLAY IN CANAAN AND CYPRUS

FORATT-34 CANAANITE IVORY

In the case of **ForAtt-34** the act of deliberately hiding the Lachish pyxis in a cache within the last shrine level (*III. 9-205*) underlines the conclusion that this container - and the decoration on it – must have had high ritual significance. We have seen on 2M seals from the same *koine* how the stand-off and neck-bite versions of the *Forward Attack* were often used on seals, and in the context of their multi-level reference to the Calendar, the Goddess Ishtar and the authority of a local temple or ruler, the cup appropriately channels all these meanings – and we will consider the varied reasons behind holding a drinking ritual after our detailed look at the individual pieces under **ForAtt-34/35/36** which have revealing overlaps of iconography. The Megiddo vessel, found in a secular context, is likely to refer more strongly to the owner's allegiance to an Egyptian-style administration blended with the local Syro-Mesopotamian cultural mainstays. The Samarian ivories use the same motifs – here simply for secular and decorative use on furniture – but the Crowfoots' (*op.cit.*) assessment of the ivories as a body: 'no other finds have told us so much about the art of the Israelite Monarchy' – was no double because the imagery of the ivories altogether is along the lines described in the **Book of Kings** as adorning the interior of Solomon's Temple – carved by craftsmen known to have been loaned to Solomon by Ahab within the territory.

GUILDS OF CRAFTSMEN

In fact, in this period the organization of groups of people into guilds, according to the work they did, is a prime Indo-European contribution to Levantine society (the equivalent in the heroic age of Vedic India being the *gāṛṇā*). From his reading of the Ugarit texts Gordon *ibid.* tells us that not only bakers or brewers were taxed *through their guilds*, but so too were doctors; builders/*bršm*; potters/*pšlm*; sculptors/*nškm*; silversmiths/*nšk ksp*; coppersmiths/*nšk tlt*; singers/*šrm*; cymbalists/*mšlm*; as also the élite chariot warriors, the *maryannūma* (and their grooms/*kzym*). *Demiurgoi* is the Homeric term for such guild members, for whom it was a way of life to travel from court to court, those gaining immediate acceptance being doctors, musicians, bards - and craftsmen. There is absolutely no doubt that 'the source of this intricate guild system in the Near East of the Amarna Age was Indo-European migration from the east, bringing with it so many Indo-Iranian elements'. This channel of cultural transmission 'crossed international boundaries, spreading products, techniques and services over vast areas'. The immediate agents of this change were the Mitanni.

FORATT-35: CYPRUS GOLD

In the light of the frequency of gold head-bands in Cypriote graves, usually just embossed with flowers, the main entry for **ForAtt-35** showing a gold diadem with thirteen sideways iterations of the *Forward Attack* surely suggests it was worn by a priestess of Ishtar or her equivalent, especially since it was found in a grave outside a small village in the Paphos area with its temple to Aphrodite adjacent to the bay whence in myth the Goddess is said to have risen newborn from the waves. Cyprus, as today, was a convenient and strategic international base successively occupied by Mycenaean, Anatolians and Syrians/Assyrians, and the pieces under **ForAtt-35** and **ForAtt-36** where the entry information mostly speaks for itself indicate that similar offices (such as local priestess) and similar rituals (such as the New Year drinking feast) were followed there as in the palaces of the Great Powers, either on the part of visiting colonials from the Mycenaean or Canaanite worlds – or as taken up by local worthies to ape their elders and betters.

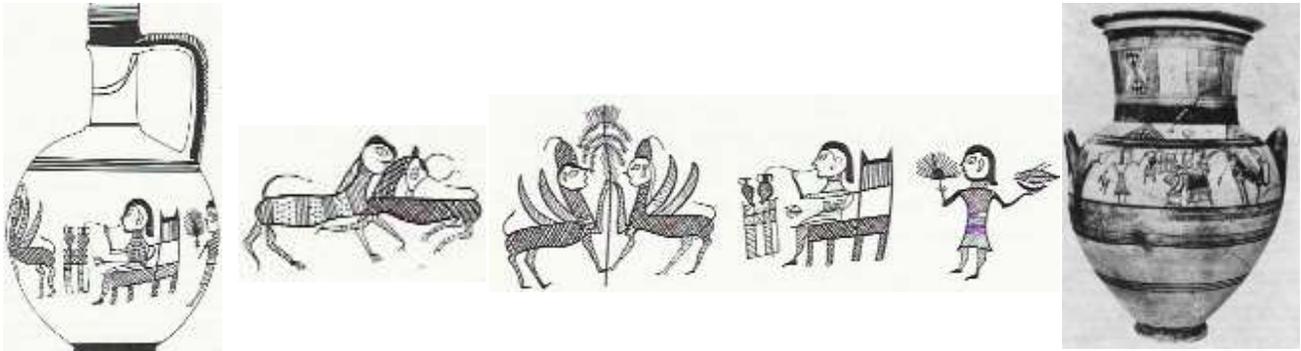
ForAtt-36 will hold our attention for longer due to the varied issues it raises - mostly in connection with Central Asian influence.

FORATT-36: ORIENTAL CEREMONIES ON PAINTED CLAY IN CYPRUS

Leonard Woolley attributed the style changes on such drinking vessels as due to 'an invasion of Cyprus at the beginning of the Iron Age by two kindred but distinct types whose original home was probably Asia Minor' (*AJ XVII,1* p.10). To this recipe, from other scholars' opinions, we should also add a strong sub-Mycenaean component after increasing numbers of colonial Mycenaeans settled on the island following the destruction of their palaces on the mainland. The map following *III. 9-125* delineates territories for

the *before* scenario, while the map at the end of this *Section* shows the more fragmented political situation for the *after* situation - on which we can certainly place the **ForAtt-36** jug as a late arrival to the ENTERTAINMENT DIVERSION corpus of decorated vessels as used in drinking rituals adopted throughout the Āryan-infused Levant. Its material may be humble, but the depictions on it have the primitive vigour of a rough and ready leader adopting the key **CANEA** image of the *Forward Attack* on a vessel that could indicate his status as local Calendar-keeper, in a personal rendering unashamedly portraying himself in local gear with a 'skin-head' hairstyle of the type noted amongst the Sea Peoples (c.f. **III. 9-149**).

Karageorghis³⁶⁶ not only points out the closeness of decorative style on this vase to another one found earlier at the same site



III.9-154: Iconography of the Jug with New Year celebration drinking scene from Khrysochou, Cyprus – Karageorghis figs. 5 & 6 and pls xiii/xiv; (right) the Hubbard Amphora – Karageorghis fig. 7 and Dikaios pl.7

depicting a chariot team (**III.9-140** – his fig.8) painted with the same provincial crudity, but also reminds us of a closely similar drinking scene depicted on an amphora from north-eastern Cyprus known as the Hubbard Amphora (above right)³⁶⁷.



Close-ups of front and back designs on the Hubbard Amphora – Dikaios pl.8)

Indeed, on the Cyprus jug the sphinxes either side of the palm tree wear the same type of polos as the rider on the chariot vase, with a tassel threading out at the top which is *directly comparable to the Mitanni figure on the Erlenmeyer seal of ForAtt-24* and one of the most tangible links to Mitanni culture. Karageorghis reads both human figures on the jug as female, but due to the presence of the *Forward Attack* in the overall scheme, on initial scrutiny it looks like a local chief's New Year celebration – but this could turn out to be very wrong - as we shall find out shortly. Certainly the iconographic programme on it closely mirrors the drinking scene analysed by Dikaios on the Hubbard Amphora (the illustration above shows the details of the narrative register on both sides of the vase). Both celebrants suck their drink from an amphora with a straw held in one hand (by this time a recognisable Syro-Hittite custom), while holding (not so clear on the amphora) a small cup or bowl in the other hand. Fish brought in by attendants appear to

³⁶⁶ V Karageorghis 'Kypriska Ic: Ritual Scenes on an 8C BC jug' in *Report of the Department of Antiquities Cyprus 1974* Nicosia 1974 67-74

³⁶⁷ P Dikaios 'An Iron Age Painted Amphora in the Cyprus Museum' *Annual of the British School at Athens XXXVII* London 1940 57-72

be the main food of the feast corresponding, Karageorghis points out, to actual remains of fish-bones in bowls in the Salamis graves he had also excavated. Yet there is more to say about their significance shortly.

As against the pair on the Khrysochou jug, on the Hubbard amphora one sphinx with elongated wing and wearing the same ovoid polos with tassel sniffs a lily as it guards the enthroned figure from behind. At the far end of the front scene on the other side is the protome of a bull, presumed to be the animal already sacrificed. On the back of the vase attendants brandish bunches of leaves or leafy fans, and the man holding up a lyre in a chain of linked figures on the back of the Hubbard Amphora procession confirms the idea of such an event as including music and dancing. When Dikaios compares the scene with those on the Ayia Triadha sarcophagus the matches with Mycenaean iconography on the coffin's long sides become obvious. There is no enthroned figure, but we have a procession of celebrants accompanied by harpist and pipes-player; the sacrificial ox is shown trussed up on the table; on both sides a priestess pours liquid (wine, blood or water?) from a jug, first on a flourishing tree and shrine with sighting horns on one side, and second before a twin set of double axes forming obelisks at one end and a shrine of the dead (with effigy) at the other. At the small ends of the coffin are chariots, one drawn by horses, the other by a griffin (for which we now have some idea of their astronomical and funerary significance). In other words, the scenes cover similar themes as on the Mycenaean mythological gold rings concerning life, death and resurrection, sealed by the bull sacrifice – though there is no drinking scene and the jug-pouring implies libations into the ground instead.

Looking back at the enthroned figure on the Hubbard amphora Dikaios comes to the conclusion that, since the vase had been placed in a tomb the subject should also be read at a funerary level, representing the deified deceased at a funerary meal (he notes



also matches with the iconography of the Ahiaram sarcophagus (14-13C) on which, again, the deceased king is shown on a sphinx throne, facing an oncoming procession ending in a chariot rider. Jung³⁶⁸ notes, in fact, how profusely Mycenaean pictorial pottery flourished in Cyprus, most notably the chariot kraters (see DIVERSION 10) – and it is interesting that at Ugarit (where the highest number of chariot kraters were found) Sauvage *ibid.* noted such kraters were often found together in burials with horse bones and chariot remains, supporting, says Jung ‘the older hypothesis that the socially powerful and royally privileged Mariannu charioteers had a predilection for Aegean chariot motifs’.

³⁶⁸ R Jung ‘Imported Mycenaean Pottery in the East: Distribution, Context and Interpretation’ in **B Eder et al eds Policies of Exchange: Political Systems and Modes of Interaction in the Aegean and the Near East in the 2M BC** Vienna 2015 243-273

THE PRIEST-MAGICIAN'S MUG

A third drinking scene on a clay drink container – this time from Ras Shamra-Ugarit - should be brought in here to throw a powerful spot-light on possible alternative readings for the identity of the seated figure and attendant on the Cyprus jug, radically altering our view on the possibilities of what the ritual shown on it might be. It is shown on a drinking vessel known as the Priest-Magician mug (illustrated below - RS24/440 – Schaeffer³⁶⁹ fig.1), on the basis of which Monchambert³⁷⁰ suggests there must have been a school of ceramicists at Ugarit catering for less-than-royal local clients - raising the possibility that the jug, amphora and cup could all have originated from there at a period when under strongest local combined Mitanni-Mycenaean influence. Nonetheless, Jung *ibid.* makes the point from sherd counts at recently combed Levantine palace sites such as Qatna that such pottery was not necessarily only supported by sub-élites, given Mycenaean illustrated pottery was popular all over the Aegean and Levant.

We note straight away on the mug that the seated drinking figure again holds out a small bowl in one hand, and this time himself wears the polos with long, curled tassel coming out at the top - and again there is a (fragmentary) attendant (probably wearing a similar polos) moving forward to fill the huge mixing amphora on the table in front of him from a jug. In an interesting intuitive jump Montchambert reads the trio of bird, fish and horse as referring to Air, Water and Earth (c.f. the Zoroastrian Heptad at *III. 9-204*) which, if correct, could point to the ultimately Central Asian nature of the drinking ritual (c.f. the Kültepe seals in *Catalogue C* showing similar scenes – two repeated in this one at *III. 9-13*).



(Top left) Design on mug found in the ' Priest-Magician's Room', Ugarit – Jung fig.8; (lower left) photo of the mug – Schaeffer 1966 pl.1; (right) relief interpreted by Schaeffer as the God El with attendant replenishing his drinking bowl from a jug – Schaeffer 1937³⁷¹ pl.XVII (note El's other hand raised greeting – or in blessing)

³⁶⁹ C F A Schaeffer 'Nouveaux témoignages du culte de El et de Baal à Ras Shamra-Ugarit et ailleurs en Syrie-Palestine' *Syria XLIII* 1966 1-19 and 4 plates

³⁷⁰ J-Y Monchambert 'Une École de Peintres-Céramistes à Ougarit?' in V Matoïan et al (eds) *Études Ougaritiques II (Ras Shamra-Ougarit XX)* Leuven 2012 159-66

³⁷¹ C F-A Schaeffer 'Les Fouilles de Ras Shamra-Ugarit Huitième Campagne (Printemps 1936): Rapport sommaire' *Syria XVIII* 1937 125-54 and plates

However, Schaeffer's own retrospective account of the discovery of the mug in 'the Priest-Magician's house' and his interpretation of it in relation to the other items it was found with – most specifically a tablet with an Ugaritic text describing a banquet held by the God El – incites us to consider an entirely new level of what it (and therefore the other drinking scenes on the other vessels) might represent. Though the drinking pair is not directly associated with the *Forward Attack* representation in all three cases, the fact of its presence on one of them (**ForAtt-36**) makes his views worth repeating in case we can make some retro-application back to our Catalogue entry. El, father of Baal, in the Levant represented the Upper Waters of the Firmament (hence also often spoken of in terms of Ea/Neptune – also a God of the Waters). He stands beyond Baal's atmosphere (somewhat like Imdugud in olden days) – on our God Table equated with Kronos/Saturn – and variously described as 'Father of the Years', Father of the Gods' or 'Creator of Humanity'. Although Eternal, in relation to the usurper Baal coming in from the Hurro-Hittite world³⁷², El is visualised as a grandfather figure with pointed beard, decidedly starting to fail in his powers and liable to inebriation. During the feast, a fragmentary passage on the tablet describes a two-horned, long-tailed monster emerging to confront him – by now a familiar ingredient (c.f. *III. 9-19*) though a monster does not appear on the mug.

Schaeffer characterizes the dots in the background as 'points représentant des astres', claiming the two figures must be El served by the king of Ugarit, since he rates the polos with curly stamen as either a divine headdress or, 'porté[es] sur certain monuments d'Ugarit par le roi' (we see in the next paragraph that Pope takes this headdress as *only* worn by divine figures, however). Schaeffer saw a direct parallel in the stone relief of El discovered in the Temple to Baal at Ugarit (illustrated above right) where, again, an enthroned, bearded figure with horned headdress holding out a bowl in his hand is served by a pharaonic-looking man with jug ready to pour, a bull-head sceptre in the other hand (Pope reads it as a serpent). Above is the winged Sun, the wings being the convention for referring to the Sky where El is also sometimes brought in as Sun-in-the-Sky. In a nutshell, Schaeffer interprets the two figures on the mug as the king of Ugarit paying respects to El in what amounts to a vassal-dom ritual.

Five years later Pope³⁷³ begs to differ with Schaeffer's interpretation by leaning on different Ugaritic texts that also mean Montchambert's view of the bird, horse and fish can be replaced by convincing and extremely interesting literary readings. He puts aside the tablet describing El's banquet Schaeffer found next to the mug (translated for him by Vrololeaud) as irrelevant, stating, 'Every major detail in the scene on the mug [can be] ...accounted for in the first half of Ugaritic Myth II AB'³⁷⁴. The fact that in the myth the name of the principal drinking vessel is given as either *hptr* or *hprt*, 'both of them Hurrian loanwords designating cult vessels of metal, gold and copper, occurring in inventories from Qatna, Nuzi and Alalakh' – and that Ventris and Chadwick³⁷⁵'s analysis of Mycenaean inventories include the *opitetera* and the *kurusupa* (of similar etymology) to describe the same kinds of vessel (the vocabulary of both deriving from Akkadian words) underlines that Mitanni-Mycenaean osmosis we are trying to pin down.

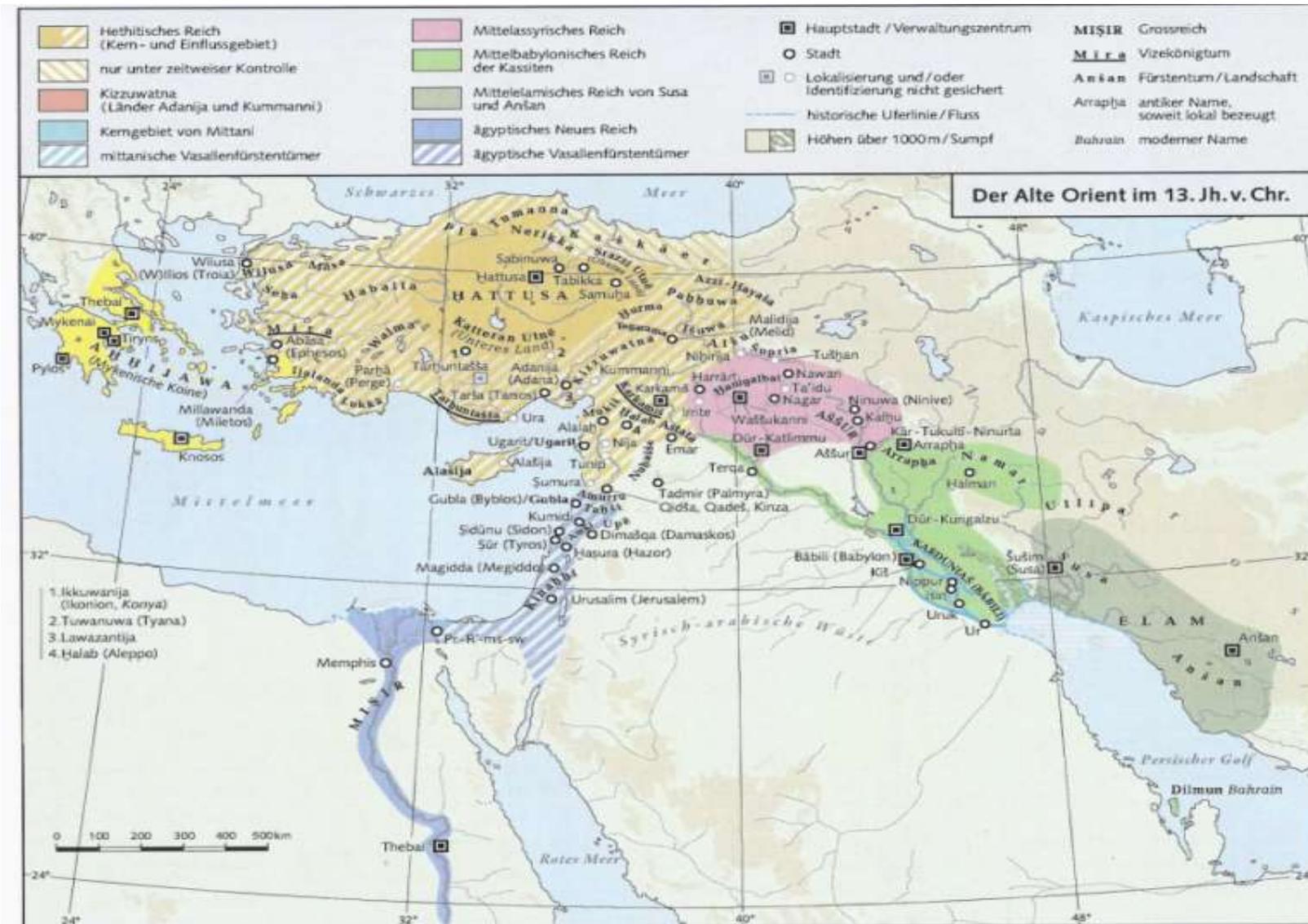
The amphora sits on little cones set on a frame which Pope manages to explain as mounds of charcoal on a brazier which heat the drink. In the myth Asherah, El's consort, discards her clothing in the sea, puts a vessel on the fire and makes ready to approach El with a request. As she does this, she looks up and sees her children, Anat and Baal approaching and worries that something has happened to them – but they explain they are coming to ask permission from El for Baal to build himself a house, and they ask Asherah for her help in pressing their case. She calls for her grooms to get her stallion/she-ass ready, and they 'put Asherah on the

³⁷² L K Handy in *Among the Host of Heaven* Winona Lake 1994 well describes the difficulties of pinning down the identities of the Ugaritic Gods due to the fact there is so little contemporary textual information surviving to go by.

³⁷³ M H Pope 'The Scene on the Drinking Mug from Ugarit' in H Goedicke (ed.) *Near Eastern Studies in Honour of W F Albright* Baltimore 1971 393-405

³⁷⁴ Numbered UT51/CTCA 4,II

³⁷⁵ M Ventris and J Chadwick *Documents in Mycenaean Greek* Cambridge 1959 – see pp. 327, 324, 330, 402



The changed political scene after 1300 -second frontispiece map from B Eder et al (eds) *Policies of Exchange: Political Systems and Modes of Interaction in the Aegean and the Near East in the 2M BC* Vienna 2015

back of the stallion, on the beautiful back of the stud'. Baal returns to Mt Saphon, leaving her to it, while we are told Anat goes on ahead to prepare the way. When Asherah finally arrives in El's domain he says 'Thou are surely famished, having journeyed; thou are surely thirsty, having travelled: Eat, yea drink'. If this is the text to be applied to the mug, does this mean El is *offering* his cup, and the fragmentary second figure pouring the drink into the amphora is female, representing Asherah, and is the horse the steed she has just dismounted from? The fish, Pope suggests, alludes to 'the watery nature of El's abode', with the pocked background representing, not stars, but water.

And what about the bird? Pope brings together several quotations describing Anat's locomotion (just like her counterpart, Athena) in the form of a bird as, for example, in the epithet, 'Anat, Super Flyer, She who soars' (RS 24.252 ONV. 6-9). As Pope puts it, 'Although nothing is said about Anat during Asherah's entreaty of El, the circumstances indicate that she was present and listening to the conversation'. After Asherah has extracted permission from El, the eavesdropping Anat sets off to take the news to Baal, very much the repeat of what happens in the Elkunirsa myth, whereby Anat listens to the conversation between Elkunirsa and his wife *in the form of an owl perched on his shoulder*, flying off to tell Baal afterwards.

REASONS FOR HOLDING DRINKING EVENTS

This journey through possible interpretations for the matching elements on the Cyprus jug and the Priest-Magician's mug is an object lesson in the pitfalls of jumping to conclusions and/or aligning text to pictures appropriately or inappropriately. One can only put forward alternatives on the understanding that they are as close as we can get on the evidence we have. Such variations mean this is an opportune point at which to remind ourselves of the many reasons for 'putting on' drinking events. I have always treated the presence of the lion-prey group against such scenes as indicating they are New Year celebrations as one such type of drinks event. Interestingly, this is barely mentioned as a reason for a drinking ritual in the papers given at a conference on ancient drinking held in Rome in 1990³⁷⁶. But some interesting points were raised by leading authorities in Ancient Near Eastern culture:

- ★ Bottéro³⁷⁷ gives quotations from the 3-2M literature which give personal appreciations of the relaxing effect drink has on the individual – which is why sheer conviviality is a base reason for having a party. But - just as today - it provides the setting for getting people – and Gods - into a benevolent mood (as in the story of Inanna, Enki and the *Me*) – or for coming together to make an important decision, such that even the Gods assemble together in a large family gathering to agree on a course of action (as when the Pantheon assemble at a banquet (*qerētu*) to nominate Marduk as their avenger in the great battle with Tiamat). As Bottéro puts it, 'Là encore le banquet s'est trouvé le seul cadre véritablement approprié à une aussi grande reorganization de la 'famille' des dieux'.
- ★ Pinnock³⁷⁸ covers familiar territory from the 3M onwards, and we need not refer to obvious occasions already dealt with in our ENTERTAINMENT DIVISION to mark marriages, funerals, oath-taking, commemoration of the ancestors (*kispu*) or the sealing of political alliances, whereby holding up the cup and drinking together implied both the binding of familial ties as well as demonstrations of vassalship and respect (under the latter criterion we could put Schaeffer's interpretation of the Priest-Magician's mug). Her discussion of the banquet scene in the Syrian region adds most - in her view they usually depict 'two personages, always males, facing each other and holding a cup in one hand, sometimes on both sides of a loaded table', and are seen by her as either divine figures, royal figures - or a mixture of both as Schaeffer does - and often

³⁷⁶ L Milano (ed.) *Drinking in Ancient Societies* Padual 1994

³⁷⁷ J Bottéro 'Boisson, Banquet et Vie Sociale en Mésopotamie' 3-13

³⁷⁸ F Pinnock 'Considerations on the Banquet Theme in the Figurative Art of Mesopotamia and Syria 15-26 and plates

to do with simply asserting royal power. She refers to the large statues from Ebla and Tell Halaf showing seated males holding a cup in one hand, testifying to 'the presence of a ritual, or of a tradition according to which kings or high priests were represented in public places of the towns as sitting statues holding a cup'.

- ★ Mazzoni³⁷⁹ gives a thorough assessment of the huge variety and amount of bulk liquid storage, pouring and drinking vessels found at Ebla in particular, with 'a high frequency documented in the equipment of Palace G' – to which she makes a direct connection with 'the cups held in the hands by the figures of the worshippers of statuary or in the banquet scenes in cylinder seals'.
- ★ Finally, Michalowski³⁸⁰ homes in on the quest in ancient cultures to achieve 'altered states of consciousness' and the problem of translating the plant names given in the texts from which appropriate brews could have been extracted, making precise identification of the ingredients elusive. He does not dwell on the divinatory help such substances can provide, concentrating mostly on their association with sexual ritual or the celebration of military victories. The mixture of sacred with profane behavior on such occasions enabled that communication between king or priest with God or Goddess, thanks to the boost of the sacred drink – and we should not leave out the idea of these drinking scenes as depicting that connection between worlds. He ends with the idea of 'the drinking vessel as a symbol of sovereignty *and* vassalage', depending on the rank of the figure holding the drink and their relationship.

With all these criteria in mind, looking back once more to the pairs of figures in the drinking scenes depicted on **ForAtt-34/35/36** we realize what care is needed in applying them to artefacts before arriving at any conclusion.

There is one final approach to take in order to lock these final artefacts into the bigger picture we are trying to establish.

JAHWEH'S CUP, JAHWEH'S DRINK - AND JAHWEH AS THE CUP

Given one can make a general equivalence in different eras between Abu in the 3M, El in the 2M, and Jahweh in the 1M, the identification of El on the stela *and* the mug by Schaeffer (accepted by Pope as valid) considerably expands the textual background one can bring into the conversation about drinking vessels in drinking rituals – raised in the papers of two scholars published in one *Festschrift*. (It is well established that Asherah is mentioned as Jahweh's consort in the Bible – and that Anat also rides a horse³⁸¹).

The starting point in Schunk³⁸²'s paper is, in fact, an actual cup - the Ain Samiya cup already analysed (see *III. 9-19*) - since archaeological speaking it is an actual ritual cup found in the Jerusalem locality (looking at its decoration again, we think of the monster that appears during Baal's feast!). Schunk asks what the cup or bowl held up in one hand should mean – could it be the gesture of making a toast; could it be being offered for replenishment – or could it even be being proffered to the person before him to themselves take a sip? Certainly from Old Testament mentions (all references given in great detail by Schunk) it becomes clear that Jahweh has a Cup, whose contents he gives to others to drink from – not only to bring reward and fulfillment ('my cup overflows'), but also punishment – such that it is the very embodiment of *karma*. For those who have behaved well, the drink offered from Jahweh's Cup brings happiness, but for those who have not, the drink is an expression of God's wrath, acting like poison, leading to death. Everyone receives their deserved drink on the Day of El/Jahweh (in other words on Judgement Day). Even in the New

³⁷⁹ S Mazzoni 'Drinking Vessels in Syria: Ebla and the Early Bronze Age' 245-255

³⁸⁰ P Michalowski 'The Drinking Gods: Alcohol in Mesopotamian Ritual and Mythology' 27-44

³⁸¹ K van der Toorn 'Goddesses in Early Israelite Religion' in L Goodison et al (eds) *Ancient Goddesses* London 1998

³⁸² C-D Schunk 'Der Becher Jahwes: Weinbecher – Taumelbecher – Zornesbecher' in A Graupner et al (eds) *Verbindungslinien: Festschrift Werner H Schmidt* Neukirchen-Vluyn 2000 323-30

Testament, Christ in the Garden of Gethsemane at the nadir of his mission, hoping to avoid the Fate set out for him, prays to his Father, 'Abba, let this Cup pass from me' – and of course the Cup is central to Holy Communion – here with the idea of partaking in an altered state of wisdom and immortality (in the Bible the drink in question is always Wine).

Fuchs³⁸³ confirms these direction of thought and then takes the enquiry further to look for the foundations of this Old Testament imagery in the earlier Ugaritic/Canaanite literature. Her references are manifold, so we just pick out key points to give a taste of their richness. She reminds the reader that the metal treasures of the Temple famously included the two Cups of Jahweh - one of silver and the other of gold (possibly lunar and solar references) - their existence confirmed in Josephus (**BJ6**, 388). Both in the story of Aqhat and in the Baal Cycle, Danil invites Anat - or El invites Athirat/Asherah - to 'drink the blood of the plants from a gold beaker – and then from a silver one'. As Fuchs puts it, 'Setzen die o.g. goldenen und silbernen Becher im Jerusalemer Heiligtum diese uralte Tradition der kanaänischen Götter fort?' In the story of Keret, again it is El (at the request of Baal) who blesses the King through drinks offered from vessels held in his left and right hands (**KIII**,ii, 16-20). Again the direction is *from* the God *to* the King.

The Cup in certain contexts indeed represents Jahweh himself (**Psalms 16**,5) and in later times coins of the region stamped with a Cup stood for the theocratic state ('A gold beaker is Babylon in the Hand of Jahweh...' (**Jeremiah 51**,7)). This idea is rooted in Ugaritic mythology (**BV**,i 10-17) where Baal's mighty bowl - which cannot be seen from Athirat's limited perspective - is the Cosmos itself). In our discussion of the Kinik Bowl (**ForAtt-30**) this is the text discussed by Loretz (**KTU 1.3 I 10-15a**) describing the many different vessels handed by cupbearer *RDMNS* to Baal – perhaps alluding to the varying distances of the planetary spheres. Fuchs gives other cross-references to the idea – that for instance the Mandaean expression for the highest divine sphere is *mana rabba* or 'Great Vase' – possibly the same referent for the Sea of Brass in the courtyard of Solomon's Temple. As Fuchs says, it is not much of a jump to have the God holding the Bowl of the Universe to be seen as one and the same as the Bowl itself: '[so] ist er sozusagen ein ugaritischer Atlas oder dessen Pendant, der Hethitische Weltenriese Upelluri' (it is only a short jump to Apollo).

This last group of entries has taken us up to that transitional period leading onto the First Millennium pieces we discussed prematurely in front of our *Chronological Focus* entries (and if desired these could be read again now, in their right place chronologically, to complete the story starting from page 21).

They raise issues requiring one last DIVERSION to bring in more evidence to draw this often surprising *Iconography Section* to a satisfactory conclusion, one that enables us to penetrate more fundamentally into Central Asian traditions, looking yet again at snake iconography, steppe drinking rituals and the meanings of monsters. From one Snake Lady on a Kassite kudurru seen in relation to more snake iconography on Gods, Goddesses, and in drinking scenes we will make up our minds once and for all about her identity. This all comes from imagery not belonging to the **Canon of Ancient Near Eastern Art**, so we probe into the importance of the Proto-Zoroastrian and pre-Vedic underlay for the astronomical iconography we so often refer to in this Catalogue. Certainly the sudden ubiquity of the Phoenix-like winged lion-griffin in the very centuries of our *Chronological Focus* period at a time when Egypt's inside knowledge of Sirius was seeping all round what Gordon calls 'the Mediterranean civilisation' – spreading hand-in-hand with craftsmen and the International Style - can be seen as the heraldic beast of Sothic Period renewal (see the SIRIUS DIVERSION). The griffin is as straightforward an allusion to Sothic Period awareness as the *Forward Attack* continued to be of the New Year point – and indeed we have noted several examples of *Forward Attacks* using the griffin as predator, combining both messages perfectly.

³⁸³ G Fuchs 'Das Symbol des Bechers in Ugarit und Israel' in A Graupner et al (eds) *ibid.* 65-84

DIVERSION 12 INDO-IRANIAN ELEMENTS ENTER THE CANEA

MYCENAEAN USE OF THE CANEA

Mycenaean artefacts, especially seals - like those of the Minoans - continued to use the same few **CANEA** motifs borrowed from the Ancient Near East, most importantly:

- ★ Goats either side of an axis (mountain or plant), as below;
- ★ A major preference for the lion and prey motif, in this Catalogue covered in *Forward Attack* mode only, mostly on seals.



III. 9- 155: Mycenaean kylix 1350-1300 – BMCatVases A00

- ★ Master of the Beasts (as on the carnelian ring *III.9- 23* or the krater *III.9- 46*), with hints of associations with Orion (and we remember this grouping has a long history on on Susan and Indus Valley seals³⁸⁴, one latter illustrated below right);
- ★ Mistress of the Beasts (example below left, which may have been the lid of the unfinished ivory pyxis from Ugarit under *Urusta-47*). The near-eastern theme of the Goddess holding up the solstitial goats as Queen of the Cancer-Capricorn colure, though found in Ugarit, shows her in ruched Mycenaean pantaloons or skirt (see other examples in *III.9-154*) - and pony-tail emerging from the top of her head exactly as seen on the male hero of the Erlenmeyer seal.



III. 9- 156: (Left) Pyxis lid with Mycenaean-type Mistress of the Beasts from Minet el-Beidha/Ugarit –BBCat-261; (right) Master of the Beasts seal (with tigers, rather than lions) from Mohenjodaro – Mackay *ibid.* no. 75 -both show head and thighs side view

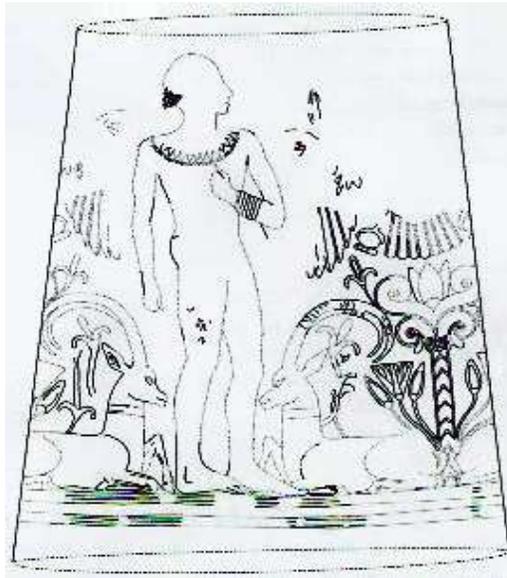
Nonetheless, this entire Catalogue has step by step served to throw into relief the extent of Mycenaean adoption of what are ultimately Central Asian themes mediated, I have argued, through extensive geographical and cultural links with the

³⁸⁴ See A Parpola 'New correspondences between Harappan and Near Eastern glyptic art' in B Allchin (ed.) *South Asian Archaeology 1981* Cambridge 1984 176ff

Mitanni, whether direct or veiled by the Levantine's own adoptions of that culture. Throughout we have tried to pinpoint the slightest indicators of Mycenaean interchange, not only through the Middle East as such (along with **CANEA** elements) but also possibly direct with fellow-Āryans moving South-West into Eurasia – such as the Luwians arriving in Anatolia along with the Hittites, and those initially identified as Hurrians, paving the way for the higher-profile insurgence of the Mitanni.

MYCENAEAN INCORPORATION OF ARYAN ICONOGRAPHY

From the outset, in processing the material for the catalogues it was more frequently noticeable than usual how images from the **CANEA** were being woven in with other preferences finding their way from the Central Asian tradition of the Oxus-Indus-Turanian region – the most immediate 'carriers' being the Mitanni. When considering the images forming the **CANEA** (see **Chapter 20**), as with Minoan usage we realise the Mycenaeans and fellow Levantines, as demonstrated



III.9- 157: Mycenaean imagery carved on the elephant tusk in III.9-154, left –Burns fig. 6.5

throughout this Catalogue were introduced to the technique of showing equivalents (BIVISUALS) borrowed from Indo-Iranian/Elamite traditions (often with astronomical overtones), such as:

- inclusion of dogs with the Orion figure (and of actual dog bones in burials);
- chariot and horses (and mentions in texts of horse sacrifices at funerals);
- the heraldic composition with central axis;
- emphasis on heroic body display with slim physique;
- snakes, the Snake Lady and other ophidian references;
- hybrid monsters such as the griffin or dragon.

Mycenaean élite 'priest-wanax' burials show the same strong emphasis as in Central Asian tombs on luxurious self-adornment, weaponry and drinking cups - suggesting the same code of behavior as now outlined under our next heading.

ORIGINS OF THE INDO-IRANIAN SACRED DRINKING RITE

Since we have just been discussing drinking rituals we here look at the origins of Central Asian drinking rites, not so much deduced from artefacts now, but from Vedic or Avestan texts where there are enough mentions to realise these began simply - within a nomadic society. From the **R̥gveda** we understand such occasions were particularly linked with the Maruts (the Winds) surrounding Indra and the Aśvin-Nāsatyau Vortex (which has connotations both with horses *and* the

whirlwind of the twisted snake-legs of the Snake Lady – see the tabled Mitanni Gods at *III. 9-109*). The Maruts were libated in celebrations by none other than that class of noble young horsemen³⁸⁵, the *mariyanni*, often accompanied by chanting, singing and simple pipe music. Haudry³⁸⁶'s paper on the subject is sufficiently vivid to call up the main facts:

- ★ The original sacrifice using the Soma/Haoma must have originated in a period before the split between Indian and Iranian – thus to before the demonization of the Maruts in the late Avesta as 'Bad Spirits', akin to the Furies. At Gonur plant residues of a mixture of poppy, cannabis and ephedrine plant residues were found;
- ★ The Avestan word for 'sacrifice', *yasna*, means 'banquet';
- ★ The **Sāmaveda** is a collection of songs sung at the sacrifice - at which participants sought 'une commune ivresse unissant les dieux aux hommes' (as Haudry translates it – not the link between *Soma* and *Sāma* (song));
- ★ In the earliest days the banquet would have been 'plutôt maigre', consisting of clarified butter, fresh and soured milk, little baked cakes made of rice and/or wheat – and above all the Soma (probably ephedra juice) diluted with water or milk – sometimes mixed with honey (the Avestan Haoma being the equivalent);
- ★ Not only would the Soma be consumed by the participants, but it would also be offered back to the Gods, poured over the fire and/or earth (at some point later animal sacrifices were added);
- ★ The Soma was sometimes addressed as a God itself – good and bad people/demons were said to perform the same libations or sacrifices (including the Turanian dragon Azi Dahāka);
- ★ The signs are that the instigatory celebrants were the young nomadic horseman class who saw themselves as embodying a particular set of Gods – 'les Maruts se partagent entre la société humaine, où ils représentent les *marya*/jeunes hommes' et le domaine cosmique, où ils représentent les vents d'orage... d'origine ou secondairement, les Maruts sont liés à un groupe de jeunes gens dans lequel, à en juger par les hymnes védiques qui leur soit adressés, apparaissent conjointement armés de parades, parures et fards, musiques, chants et danses, femmes, et tout ce qui constitue ou agrmente la fête ...';
- ★ Thus, rather than imagining a 'banquet of the Gods' on a heavenly mountain such as Saphon or Olympus, for the Indo-Iranians the Gods are evoked at the sacrifice ground itself. Soma was offered to the Maruts, inseparable companions of the Warrior God Indra and, as just quoted, particularly associated also with the entertainments described, versions of which we saw in our ENTERTAINMENT DIVERSION, notably on goblets and some Nuzi seals;
- ★ The hymns mention the elaborate self-anointing and self-adornment of the Maruts/*marya* with parures such as bracelets, rings, torques and pectorals – to the extent they are described as 'They who dress like women' (compare with Mycenaean warriors). Known as the 'bards of Indra', 'rhythmant [leur chant] autour de lui ... dans l'ivresse du Soma' they are famed as the singers of the hymns. Singing or chanting might be all that was needed to accompany the sacrifice though sometimes they danced, 'la poitrine [constellée] de plaques d'or'. In due course the priestly (brahmanic) caste became distinct and separate from this kṣatriya class of administrators.

Haudry distils the above information from many texts, often fragmentary, that had been written retrospectively in different periods (somewhat like the *Iliad*, the chronology of actual events described always problematic and the subject of much

³⁸⁵ On balance, H Falk in 'Das Reitpferd im Vedischen Indien' in B Hänsel et al (eds) *ibid.* states: 'Das Pferd wurde im 2. Jahrtausend v.Chr. nach Indien eingeführt', but that 'Alle archäologischen, literarischen und hippologischen Voraussetzungen sprechen dafür, dass Reiten schon vor dem **RgVeda** zu den Transportmethoden der Indo-Arier gehörte'.

³⁸⁶ J Haudry 'Banquets, Musiques et Parures: La Fête avant le Palais' *Journal Asiatique CXCIX*,2 2011 539-547

speculation). Haudry's point is to form a picture of how the sacrifice was enacted *before* its institutionalisation 'dans the palais' (hence the title of his paper). At this stage such occasions seem to have been rural and somewhat rough and ready, losing that open-air quality once formalised in later, more restricted palace settings.

ZOROASTRIANISM AND THE CANAANITE TRADITION

As an aside linking back to our previous section on Jahweh's Cup, we should mention here Sherwin³⁸⁷'s quotation of Mary Boyce³⁸⁸'s insistence that Zoroastrian threads within the Canaanite tradition (that means the Judaic tradition too) probably started c.1400-1000, and that the Proto-Zoroastrians of that period were located 'somewhere in the south Russian steppes'. Gnoli (see later footnotes) was more precise: 'the northernmost regions where Zoroaster carried out his work were Bactria and Aræia and southernmost Drangiana and Arachosia...'. Here we have to distinguish between the question of Zoroaster the historical prophet's emergence in the 6C BC in that region - and the fact that he embodied a millennia-long tradition of astronomical observation by nameless specialists long before him that nowadays for the 2M era is called 'Proto-Zoroastrianism' - in archaeological terms associated with the very same region, especially by Sarianidi.

As Haudry puts it, once the Soma ritual became part of formal court life, '*Avec Indra, les Maruts quittent la sphere cosmique des vents d'orage terrifiants et devastateur pour entrer dans la sphere sociale des rapports entre le seigneur et ses compagnons*', which gives in a nutshell what happened to Mitanni life after their infiltration into Mesopotamia and Syria. I think we can distinguish these two stages in the iconography of the earliest Mitanni seals as opposed to the later ones - seen shortly in relation to the Snake Lady and the 'Wind Gymnast' imagery of Ithji -Teššub.

In its formative stages this band of nomadic, celibate *maryas* loyal to each other as 'the chosen few' - devoted to Truth (*Satya*) and Cosmic Law (*Rta*) - played hard (drinking and singing in the company of the Gods) because they also fought hard ('activite de justicier' dans 'un rôle politique). One imagines that, like their Mycenaean cousins, they were at their best living the nomad ethic but had to adapt when taking on and mastering the urban civilisations. Because these knights were a *caste* - as Gordon *ibid.* explains in his key paper comparing the Ugaritic Guilds to the Homeric *Demiurgoi* - so in the same way did other such caste groups diffuse into the ancient Near Eastern theatre of activity - the most important being the craft guilds under the leadership of the God Kothar/Hephaistos. Mycenaean society also recognised craftsmen as different from labourers and also had a warrior class, both evidence of a cultural osmosis - a process we explore next.

TWO EURASIAN GOBLETS AS INITIAL POINTERS TO MITANNI INFILTRATION

In tracking the crossover process between **CANEA** motifs and new BMAC images coming into the Levant we have already considered the iconography of several drinking vessels within the ENTERTAINMENT DIVERSION and under separate entries. Picking up on the theme again, we analyse two 'Amorite' beakers that in many ways echo the iconography of the Karashamb goblet (**ForAtt-13**), all three of which drinking vessels we can judge straight away from their non-conformist imagery as products of nomadic societies interacting with urban conventions. These roughly contemporary, unprovenanced beakers (**III. 9-22**) described by Schlossman (*ibid.*) to some extent follow the tradition as seen on the Ur Standard - of post-war processions and celebrations in honour of kings and gods, and are punctuated by symbols for just two or three principal gods. Although sometimes classed as Amorite because of the inclusion of donkeys, motifs on the

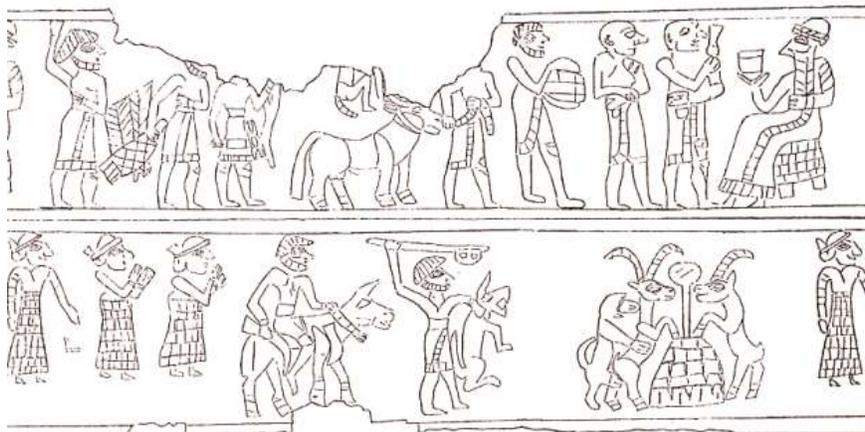
³⁸⁷ S J Sherwin 'Old Testament Monotheism and Zoroastrian Influence' in R P Gordon (ed.) *The God of Israel* Cambridge 2007

³⁸⁸ M Boyce A *History of Zoroastrianism I & II* Leiden 1975/1982. See also M Boyce 'Zoroastrianism: A Shadowy but Powerful Presence in the Judaeo-Christian World' (41st Lecture of the Friends of Dr Williams London 1987

second beaker seem to be Mitanni, so that between them the beakers embody two nomadic cross-currents – the one from the Semitic heartlands of Arabia to the south, the other from Central Asia to the north.

BEAKER 1: AMORITE DONKEYS

Already described in detail as **Ratt-16**, Beaker 1 (its iconography drawn out below) shows on the top row a tribute procession bringing gifts to a seated ruler with cup upheld at the moment of taking the oath (though we realise he could be a God giving his blessing) whilst on the bottom row the *Rear Attack* on one of the goats placed heraldically either side of an Asherah indicates the procession towards it must be in honour of the Gods involving these particular animals - probably Tammuz and Ishtar – while the figure brandishing the fenestrated axe has been interpreted as Baal – here holding up in the other hand a sacrificial baby donkey (or maybe a dog?). Schlossman interprets the animal led by a rope on the top register as a bull, and that carried by the figure with the fenestrated axe as a lion, but its ears are too long, and both are now thought to be donkeys, the latter possibly the foal of the donkey following it (for the Amorites, in a ritual in honour of Ishtar the female donkey was sometimes ritually washed, rather than sacrificed). Schlossman mentions also the remains of



III.9-158: Iconography of Beaker 1, originally on loan to the Israel Museum by Elie Borowski Kültepe

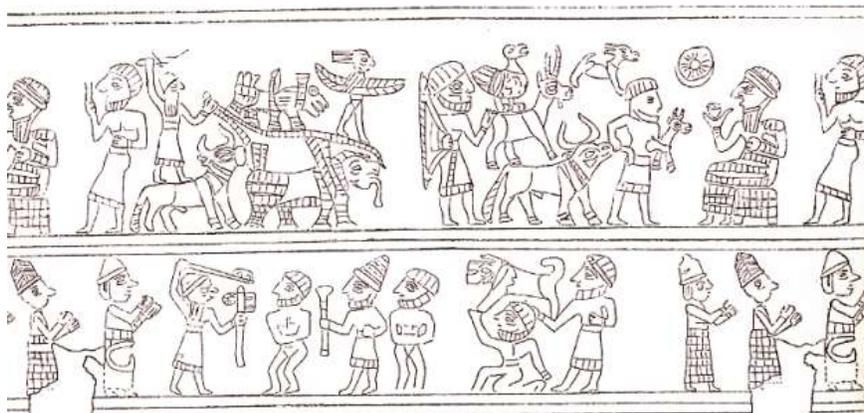
what is either a monkey or foetus over the donkey’s back which I now usually interpret as Kothar - the Syrian equivalent of Ptah/Hephaistos – the Craftsman God taken up by the Mycenaeans, discussed earlier in the Catalogue and in charge of Creation, foetuses and crafts. Much as on the Karashamb goblet, there are several straight Syro-Sumerian ritual features in the imagery, but adapted to local tribal use – here, seemingly, by an Amorite tribe. It should be noted, however, that the icon of lion attacking one of the pair of heraldic goats is almost exactly repeated on the base of the BMAC stamp seal of a camel with bull-leaping scene on the back (**III.9-159**) which is probably earlier in date, and moves the focus to Togolok.

BEAKER 2: THE MITTANNI DRAGON, ANZU AND THE WIND GYMNAST

The second beaker, less well-known, is in some ways even more revealing in its judicial placement of the main gods in full descriptive detail at certain points and from one perspective could be described as following familiar 2M formulae in subject and layout. But this one is even more mould- breaking on the part of its nomadic owners than Beaker 1 – not so much in its Sumero-Amorite characteristics this time, but in its provincial adaptation of features known in more polished examples as part of mainstream Mitanni imagery (backed by the texts quoted under our Ninurta and Anzu DIVERSION).

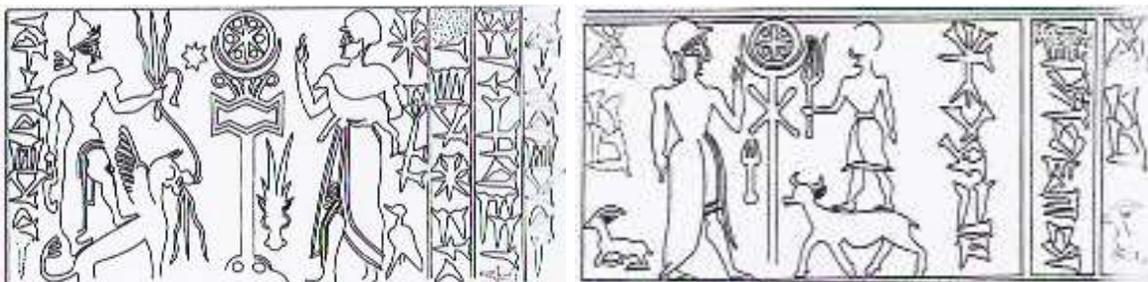
TOP REGISTER: SHAMASH AND THE STORM GOD

On the top row of this beaker the expected enthroned figure appears, holding up his cup, but this time with the Sun-in-Crescent next to him, indicating that he is probably Shamash (c.f. Shamash on the Karashamb goblet). Bowman and



III.9- 159: Iconography of Beaker 2, Brooklyn Museum, said to have been found in Luristan

herdsman offer him bull, goat, kid and bird, one standing over the other in receding size. Then the group behind shows a God standing on a bull, holding both it and a hybrid vomiting, feathered lion on two separate leashes (perhaps an indication of the dual cultural background of the owner of this beaker) – the latter monster much on the lines of the dragon-lion on the Ebla abluion basin (*ForAtt-14* and *III.9-19*), again with a stream of vomit/water coming out of its mouth to convey the idea of a roaring storm. Lambert³⁸⁹ stresses how the Anatolian textual sources emphasise the Storm God Teššub as the creator of terrestrial water (rain becoming rivers), important for the farmers of mountain regions not using irrigation - as opposed to the underground waters of the *Apsu* associated with Ea. To understand the context for the dual steed, on Nuzi seals the Storm God is usually shown standing on the back of the feathered lion with streams of water coming out of its mouth (as below left), but one Nuzi seal in the Silwa-Teššub Archive still has him on the old-fashioned, straightforward Anatolian-type bull steed (below right).



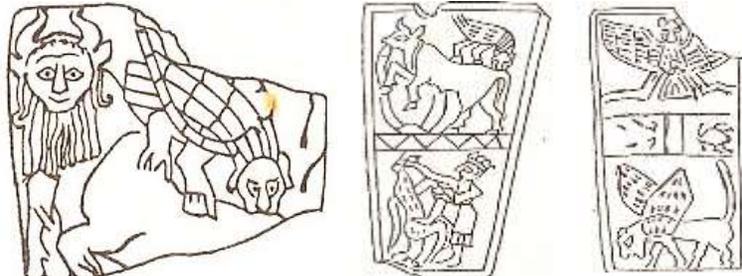
III.9- 160: Two seals showing the Hurrian and Anatolian steeds of the Storm God -Stein NuziCat-406 and 302

In contrast to the drama of his own thunder, lightning and rain, the texts confirm that in the 2M Teššub was often approached in the same breath as Shamash the Sun (actually also part of 'weather') at the top rank of the Anatolian Pantheon, his attribute of forked lightning held in the hand sometimes manifesting as a tree. The overlap between Teššub and Baal varies from area to area, with the general emphasis on Teššub being mostly a weather God as opposed to Baal, predominantly (but not exclusively) a warrior God who nearly always holds two weapons - as he appears in this beaker's second register (c.f. the Syrian seals of *III.9- 21*). The beaker thus differentiates between the two Gods, avoiding the ambiguity of role seen in their prototype Ninurta, whose 3M vaguer responsibilities matched those of the first Rgvedic Gods as described by MacDonnell *ibid*. But there is more to say about this group on the beaker since we notice a phase in the depiction of the story of Ninurta's battle with Anzu and the Winds as originally quoted it in the Ninurta myth.

³⁸⁹ W G Lambert 'Trees, Snakes and Gods in Ancient Syria and Anatolia' *BSOAS XLVIII* 1985 435-451

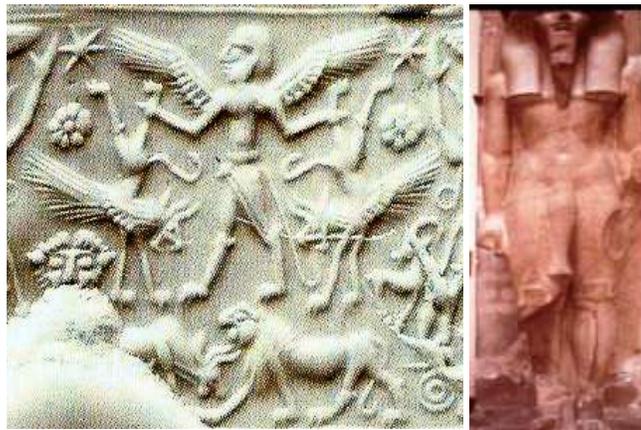
BOTTOM REGISTER: ANZU AND THE WINDS

Two small hybrids are perched on the leash securing the winged lion monster. One at first sight looks like the lion-eagle Imdugud in the more rarely seen sideways version landing on the back of a bull/bull-man (as in the Tello shell engravings



III.9- 161: Precedents for Beaker 2 iconography: engravings on pieces of shell inlay from Tello with lion-bird demon on the bull-man/bull's back, and in straightforward spread-eagle position with roaring winged lion underneath

above left and centre, already demonic in appearance and more like the predecessor of Anzu. Interestingly, in the Perati seal (*ForAtt-25* – detail below) the winged human bestraddling the *Forward Attack* holds up spindly versions of this lion-bird creature, here with full lion body and long ass-ears (compare with the horse or donkey ears on the Neo-Assyrian and Neo-Babylonian versions of Anzu (*III.9- 175*), and we remember the the donkey content of Beaker 1. Since there are two, and treated as prey, they seem more likely now to be demons rather than the God Imdugud (they are certainly not shown as a hieratic divine presence with wings benignly outstretched as in the Tello shell piece above right – which happens to have an embryonic version of the Storm-God winged lion underneath it – in vomiting position, but no vomit/roar).



III.9- 162: (Left) Winged figure on the Perati seal (*ForAtt-25*) holding up two lion-eagle hybrids (c.f. III.9- 161); (right) Compare his dress and physique with that of Amenhotep II as Libyan God Tanen wearing a North African penis sheath (Cairo Museum)

The other hybrid on Beaker 2's lion-monster leash is a little squat woman with hair blown backwards as if teetering on the dragon's back, balancing herself with outstretched wings. Schlossman points out that such wind-blown females occasionally appear on Hurrian/Mitanni seals in various positions (as on the seals in the coming two illustrations) and could represent a wind, or winds (Collon³⁹⁰ in her paper on Ninurta's iconography accepts this interpretation). The Spencer-Chruchill seal Schlossman cites in particular (below left) shows three acrobatic winged females with windblown hair appearing to represent the varied directions of the Winds of the Storm God – seemingly presided over by the Snake Lady: she and one of the Wind figures are shown in the same poses as their appearance on the early OB sealings discussed in relation to *ForAtt-22*. The Storm God himself is interposed as a secondary figure standing on the vomiting winged lion

³⁹⁰ D Collon 'The Iconography of Ninurta' in Paul Taylor (ed.) *The Iconography of Cyklinder Seals (Warburg Institute Colloquia 9)* 2006 100-109



III.9-163: (Left) Impression of the Spencer-Churchill seal BM 134773 1966 – 2 -18.34 - Schlossman's comparandum (her fig. 18); (right) one of the many zodiacal clay figurines from Petsophas and Traostalos studied by Blomberg who points out 'kometos' is Greek for both 'head with long hair', and 'comet' – Blomberg *ibid.* 2000 fig.10

holding his lightning fork, as on the beaker - and on the sealing of Iṭḫi-Teššub coming up next (III. 9-164). In much the same way as in the myth of *Ninurta and Anzu*, we remember from our discussion of Mitanni Gods related to ancient India how *Varuṇa* is roughly the equivalent of the Mitanni Weather God - and Ṛgvedic hymns in his praise specifically mention the winds that accompany him, including the Ašvin-Nāsatyau Vortex (*Varuṇa* and the Nāsatyau twin horses all being mentioned in the Mitanni-Hittite contract³⁹¹).

SUMMARY: TEŠŠUB, IŠTAR AND THE FOUR WINDS IN THE MITANNI & CENTRAL ASIAN TRADITION

Going back to the first group of figures on Beaker 2, even the bowman and the first tier of creatures walking towards Shamash could be read on the astronomical level as the sequence of constellations Sirius, Taurus, the Aselli stars (donkey reference) in Cancer, Aquila, and the Kids of Auriga – c.f. III.9- 6) – all of them important anchor constellations in calendar-fixing. Then on the second register come variations akin to the same register on Beaker 1 – the conventional lion-tamer group is shown as a wrestler heaving a lion over his head (Schlossman believed the lion is attacking him, but probably not). Then the man wielding both fenestrated axe and mace, must be Baal the Warrior God (on this beaker differentiated from the Storm God), overseeing the capture of prisoners, with possibly by the owner of the cup on their right – also holding a mace. Then three priestly figures (replacing the three priestesses or minor goddesses on Beaker 1) walk behind Baal in their ritual flounced skirts and layered *poloi* (without tassels).

In conclusion, even on these small provincial beakers the contrast between War and Peace celebrations seems to be the keynote, with different local characters presiding – sponsored by the Gods, rendered in provincial fashion. The fact that Beaker 2 was found in the mountains of western Iran makes sense of the dual-culture iconography, partly borrowed from the urban centres of the plains and partly deriving from the Mitanni homelands, shared along piedmont networks in an imaginative nomadic blend - perhaps contrasting against the slightly more culturally uncouth Amorite scenes of Beaker 1.

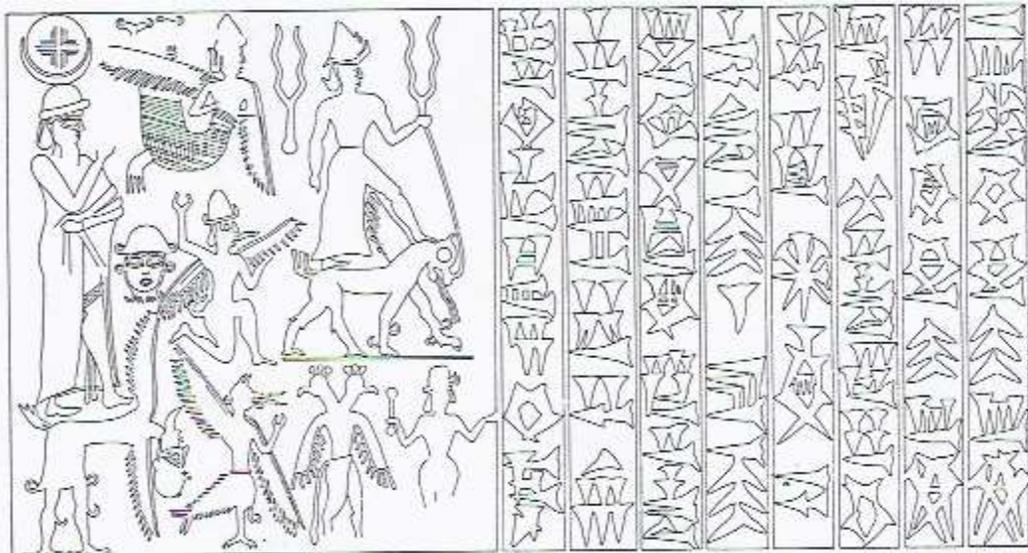
THE WINDS ON THE SEALING OF IṬḫI-TEŠŠUB

Though overall beaker 2's second cluster of figures on the top register might show a Mitanni/Hurrian³⁹² version of the Storm God and his helpers, given our analysis of the astronomical representation of Cardinal Signs as separate animals or

³⁹¹ For a succinct presentation and understanding of the morphology of Indo-Mitanni 'good' Gods to Zoroastrian 'bad' Spirits see T Burrow 'The Proto-Indo-Aryans' *JRAS* 1973 123-140

³⁹² For the difference between Hurrians and the Mitanni, see Gernot Wilhelm *op.cit*

as lion/bull/man/scorpion hybrid dragons, as suggested earlier it appears equally to refer to Teššub/Ninurta's mastery over all four directions of the sky - manifested in weather by the Four Winds – by reining them in and taming them as forces that



III.9-164: The sealing of Iṭḫi-Teššub (Stein NuziCat-659, its iconography also discussed by Porada³⁹³)

separately are inimical to cosmic order. If the Snake Lady with the Winds on the Spencer-Churchill seal does indeed represent Baal's 'Other Half', I recall suggesting very early on (p.21) that the twists of her legs might well represent the *vartis/Vortex* of the Ašvinau-Nāsatyau –they even have a centralizing, vaginal and fallopian turn to them. The latter seal implies the Maruts in the form of the Wind Gymnasts owe as much allegiance to her as to Baal- Teššub.

In much the same vein is the Kassite-style Nuzi seal of Iṭḫi-Teššub (above) discussed by Diana Stein³⁹⁴ which she interprets as the Storm God surrounded by local manifestations of his consort Shaushga/Ishtar, which I think is slightly off the mark. Apart from the worshipper at the left of the scene and the naked Ishtar with mirror in the bottom right corner, the Storm God Himself is depicted in due Mitanni style at the top right, followed by a train of four double-winged creatures that remind us of quintessential Zoroastrian cosmology in its reverence for the purity of the Four Elements causing us to wonder whether this is what is in play here. At the same time through their poses and wing positioning the four winged hybrids indicate different orientations or wind directions so that, taken as a group, they are even more meaningful as winds working through the Four Elements, more or less distinguishable as Water = fish, Air = bird/wings, Fire/lightning=flames and Earth=serpent/human (listed in the Heptad at III. 9-204). Included along the bottom is the two-headed eagle-man (c.f. his appearance on the secondary entries of **ForAtt-29**, as also on a typical 2M Bactrian ritual shaft-hole axe (below left), its outline perpetuated from Palaeolithic shoulder-blade weapons).

Thus in Stein's scheme it seems the only figure with any true precedent for representing Ishtar is the front-facing nude holding up drumsticks or mirrors at the bottom right corner of the seal, and looking back at the Spencer-Churchill seal the unusual winged female with back-blown hair and double-snakes instead of legs is the figure that makes most sense as another form of Ishtar, who does not appear in this form on the Iṭḫi-Teššub seal: this may be why in *BIVISUALS* on other artefacts she is so often placed alongside lion-prey groups, including the *Forward Attack* itself. From early on we came to

³⁹³ E Porada, 'Remarks on Mitannian (Hurrian) and Middle Assyrian Glyptic Art' *Akkadica XIII 1979* 2-25 and figs. 1-14

³⁹⁴ Diana Stein 'Mythologische Inhalte der Nuzi-Glyptik' in V Haas (ed.) *Hurriter und Hurritisch* Konstanz 1988,173-209

the conclusion the figure of the Snake Lady must be a combined image from separate representations of the Goddess' Journey to the Underworld (naked and clothed) in what for shorthand purposes we call BMAC terms.



III.9-165: (Left) Late 3M-early 2M Bactrian ceremonial silver-gilt bronze shaft-hole axe with winged lion-snake monster, doubl-headed eagle-man and boar –MMA; (right) a pure Forward Attack (Face-Bite) variant of this axe type, George Ortiz Collection. I believe both axes reference the Circumpolar star zone (often the Boar replaces the Bear)- with Leo as the Ecliptic

Due to its frequent juxtaposition with - and even substitution for - the *Forward Attack*, despite being shown in the company of the Wind Gymnasts I disagree with Wiggermann³⁹⁵ that she must represent the South Wind. We will see why when we come to her positioning on the Melishpak kudurru (*III. 9-173* and *III. 9-174*).

Having earlier in the Catalogue looked at the early use of twisted snakes imagery over several periods in Mesopotamia itself, we will get to this kudurru shortly – but after brief coverage in the next few paragraphs of ophidian imagery coming out of Central Asia direct or via Elam, preceded by a jump forward in time for a quick reminder of the permanent presence of snake imagery even into mature Greek art, notably with the figure of Athena Herself.

PERPETUATION OF SNAKE IMAGERY INTO ARCHAIC AND CLASSICAL GREEK ART

Having looked at examples of imagery coming in from Central Asia and penetrating the **CANEA** region, thus becoming available for Mycenaean use, we note how some themes became permanent features of later Greek art (we remember, among other things, the Hellenistic Tower of the Winds on the Athenian Acropolis housing a wind vane and water clock underneath³⁹⁶). Instances of Aryan iconography over time at first fed into archaic Classical Greek art, presumably inherited by one channel or another through Mycenaean precedents or readopted during the Orientalising period. We thus notice - apart from the 6C lion-prey motif lasting up to the 5C BC on the shield of Athena on vase paintings and the Pre-Parthenon pediment sculptures – that this Goddess is always draped with a python-sized snake on her statues. Back-tracking first to the transitional period, in the First Millennium the earliest images of Hera at the Heraion at Samos (below left) show her holding a snake – and of course at Delphi the original deity was a serpent, an oracular site usurped by Apollo in a battle much like that between Marduk and Tiamat. Much later, in Athens the massive chryselephantine statue of armed Athena inside the Parthenon (without her lesser attributes of lions or owls) not only had the snakes of the Medusa head that clasps her aegis crawling all over her shoulders (doubling, we think as octopus tentacles) but also she usually is flanked by a

³⁹⁵ F A M Wiggermann 'The Four Winds and the Origins of Pazuzu' in C Wilcke (ed.) *Das Geistige Erfassen der Welt im Alten Orient* Wiesbaden 2007 125-165

³⁹⁶ J V. Noble et al. 'The Water Clock in the Tower of the Winds', *American Journal of Archaeology*, LXXII, 4 1968 345–355

huge serpent nestling against her shield (statue below right). This serpent is not merged with her body, but traditionally represents her son Erechtheus, the first new era king of Athens: we are told a snake was kept in a basket (as in the Cult

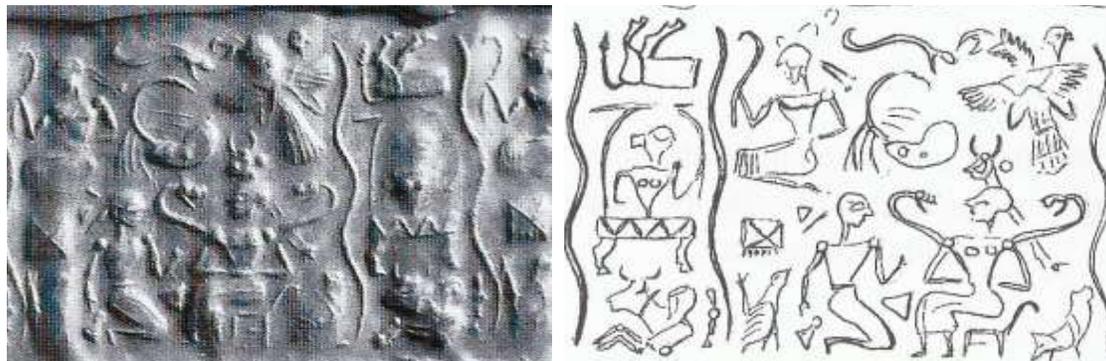


III.9- 166: (Left) Archaic statue of Hera holding a snake; (centre) detail on red figure vase by Lycurgus c.360-70 showing Athena statue with Medusa aegis (right) The Parian marble Athena Giustiniani, an Antonine Roman copy of an original Greek sculpture showing Athena with her serpent son Erechthonius catastrophically fathered by Hephaistos when he ejaculated on her – Vatican Museum

Centre at Mycenae) at the foot of her statue in the Parthenon to represent his presence. The vase painting above centre showing Cassandra seeking sanctuary from Ajax at a local statue of Athena at Troy is interesting for the detail of the statue's dress which closely echoes the snake twists on ancient Near Eastern seals.

SNAKE GODDESSES ON SOUTH IRANIAN SEALS USING BMAC IMAGERY

We have followed different threads through in this Catalogue, tracing them back to differing origins for the twisted snake image. In a final exercise we consider how the serpent in Greek art could be traced back to Mycenaean contacts made with the Central Asian world via Mitanni links with the BMAC and Elam, in turn overlaid by their interface with the Levant. Thus earlier on we portrayed the link between Ebla and Elam as particularly strong due to the metals and semi-precious stones trade route, which led onwards to Ugarit (if anything was left after court prerogatives had been exercised).



III.9- 167: Akkadian period Trans-Elamite seal in the Faroughi collection commented upon by Porada (her pl.IA).

Edith Porada and Pierre Amiet - and more lately Holly Pittman – have only comparatively recently gradually made connections between Oxus Civilization seals from roughly the Akkadian Period with shared iconography that over the decades has also emerged from stratified sites such as Shahdad, Tepe Yahya and (much later) Gonurdepe itself, helping

to throw light on a handful of more complex seals looted and sold on the market in earlier decades with no provenance. The two next seals (photographic and drawn versions) portray elaborate rituals involving the Snake Lady centre stage with snakes sprouting from her shoulders that have the same leonine heads as on the chlorite bowl from Khafaje (*Ill. 9-185*). Porada³⁹⁷ intuitively reckoned the cultural origins for the seal coming into the Faroughi collection in the early 1960s (shown above) to be Iranian (it had been bought from a dealer in Teheran by its Iranian owner). In an admirable leap of instinct³⁹⁸ she connected it with the story of a king known from the Sumerian King-List, **Etana and the Eagle**, already depicted once or twice on Akkadian seals³⁹⁹ the details of which story are worth recounting for their closeness to the imagery - taken in groups:

- (i) Between two upright serpents a small version of the Snake Lady seated on a bull-footed stool (of the low type still used today in India for seated musicians) crouches between the dismembered halves of an ox;
- (ii) in the next column a seated figure kneeling on its haunches holds up a curved baton (or snake) sitting over a box and a bird lying sideways;
- (iii) the principal scene at ground level shows the Snake Lady enthroned, a bird behind; she wears a bullhead helmet and a kneeling attendant faces her;
- (iv) overhead in the sky soars a baby snake next to an eagle with a tiny human head peeping over one wing. The bagpipe-looking object with several stray strings hanging down could - from a similar item in the next seal - be a lyre, but could also be read as an ox rib-cage, trachea and stomach.

Porada gives a summary of the story⁴⁰⁰ as follows (with slight editing for better flow, and with insertion of the relevant image reference):

*... This eagle... had sworn a pact of friendship with a serpent, confirmed by an oath before Shamash. Both creatures proceed to raise families, the serpent at the foot of the tree, the eagle at its top. The serpent, according to the Old Babylonian and Middle Assyrian versions, supplies the food for all. ... After a time the eagle makes up his mind to devour the serpent's young, though the reason for this decision is not made clear. ... The serpent carries its case to Shamash, who promises to bind a wild ox for the serpent. He advises it to open the inside of the ox, rending its belly, and pitch its dwelling therein (i). Shamash predicts that every kind of bird of Heaven will descend to devour the flesh, the eagle [amongst them]. When he enters the interior of the ox, the serpent is to **seize the eagle by the wings and tear them off**⁴⁰¹ - also his pinions and talons (ii) - and cast all the pieces into a pit.*

... Events proceed as foretold, and the eagle languishes in the pit until Shamash, who seems to have been the protector of both the eagle and Etana, yields to Etana's entreaties to help him procure the plant of birth for his wife, and directs Etana to the eagle. Etana finds him, feeds him, and helps him out of the pit. There is mention of a dazzling vision seen by Etana of a goddess on a throne (iii), at the foot of which are lions, which greatly frightens him. The eagle, however, reassures him, invites him to place his breast on his, his hand on the eagle's

³⁹⁷ E Porada 'Problems of Interpretation in a Cylinder Seal of the Akkad Period from Iran' in *Compte rendu de XIème Rencontre Assyriologique Internationale* Leiden 1964

³⁹⁸ Already in *Catalogue C* I discussed the dangers already raised by others (such as P Matthiae) about matching texts to images if dated centuries apart and/or found in different territories - a matter Porada broaches herself in this paper - but with the impossible spread of inadequate visual and textual information to hand, one must be allowed to use the imagination and make such bold leaps, if only under caution.

³⁹⁹ See H Frankfort *Cylinder Seals* 1939 p.IXXIVh and pp.95-191; or A Moortgat *Vorderasiatische Rollsiegel* Berlin 1940 no.234/5

⁴⁰⁰ Porada uses both R J Williams *The Literary History of a Mesopotamian Fable*, Phoenix 1956 71-2 and E A Speiser ed. J B Pritchard *Ancient Near Eastern Texts* Princeton 1955

⁴⁰¹ Precisely the strategy in the Ningirsu and Anzu story

feathers, his arms on his sides. There follows the flight with a description of how the [receding] land appears below (iv) in the end [looking] like a garden ditch. The preserved text ends with the fall of Etana.



III.9- 168: *Trans-Elamite seal (formerly Bailey Collection) now in the Louvre (Sb6707) – discussed by Pittman⁴⁰² (her fig.4a/b)*

The match between the seal elements and the story are remarkably close, giving high probability for the likely sense of most of it. Moving to the second seal - from the Louvre (above) - closely similar to it in many ways, the elements of the Etana narrative is absent but there is no doubting the display of the Snake Goddess on her double-level platform⁴⁰³ is the same, again with a bird perched next to her. She is accompanied by a fuller retinue of crouching and standing females, and the kneeling attendant and perhaps a lyre player (is he the story teller?) appear again. Both seals add totally new and exotic dimensions to our collection of drinking and entertainment scenes studied throughout this Catalogue!

Some 25 years later the kneeling figure leaning back on the haunches, holding up a snake (sex indeterminate) as on the Faroughi seal appeared again on a new one bought by the collector Jonathan Rosen in Vienna – this time depicted inside a circle with 11 pointed petals (below). Porada was again given the opportunity to comment on its iconography⁴⁰⁴ and her pls I-III show thorough, close-up details of the seal, with her pl.IV bringing in the Faroughi seal for comparative purposes – assessing both as made in the Akkadian period but not by the Akkadians. This is clearly not so much a ritual as an iconostasis, since the figure with snake and bowl is placed symmetrically over a mountain with trees and flanked by two moustached and short-bearded men with long hair seemingly drawn up in a bun, their muscular arms thrown up in adoration and kneeling on Asian griffins. The man on the left wears a bull helmet and has two snakes issuing from under his arms (c.f. the Cincinatti male nude III.9-1856) whilst the man on the right wears a lion helmet and carries a bow, his quiver ending in an animal tail hanging down his back (he can be matched to a figure on a straightforward Akkadian seal in the British Museum⁴⁰⁵). Between their upraised arms and heads float three tulip-like flower heads. The griffin's tail under



III.9-169: (Left) *Jonathan Rosen shell seal inspected by Porada; (right top) impression of a steatite seal from Tepe Yahya⁴⁰⁶; (lower right) impression of an alabaster seal from Shahdad Grave 163 –rephotographed by Pittman op.cit 2014 fig.7b*

⁴⁰² H Pittman 'Anchoring Intuition in Evidence: A continuing discussion of Cylinder seals from South-Eastern Iran' in E Bleibtreu et al. (eds) *Edith Porada zum 100^{er} Geburtstag: A Centenary Volume* Fribourg 2014 375-93 & 629-39 (ills)

⁴⁰³ Its hieroglyphic shape suggests the reverse of the Egyptian hieroglyph for Sky = the Earth/Underworld

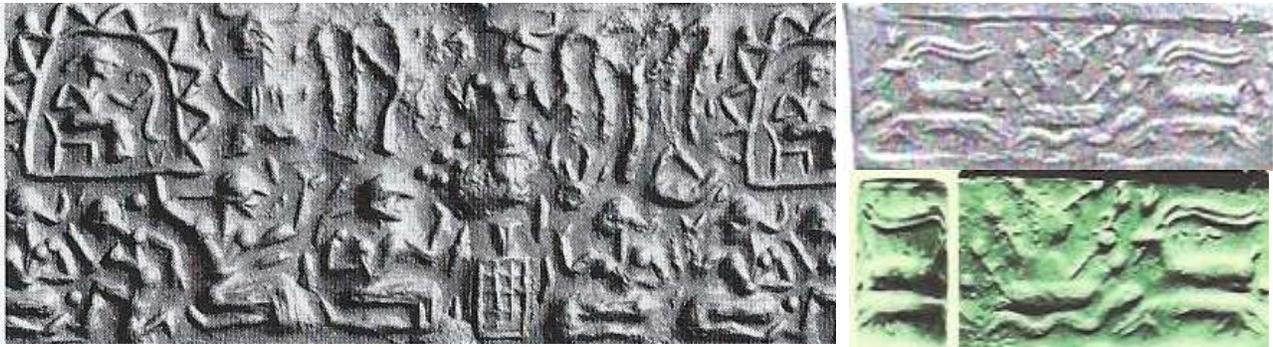
⁴⁰⁴ E Porada 'Discussion of a Cylinder Seal, Probably from Southeast Iran' *Iranica Antiqua XXIII* 1988 139-43/Pls I-IV

⁴⁰⁵ D Collon *Catalogue of the Western Asiatic Seals in the British Museum II* London 1982 no.141

⁴⁰⁶ H Pittman 'Glyptic Art of Period IV' in C C Lamberg-Karlovsky & D Potts *Excavations at Tepe Yahya, Iran 1967-75* Cambridge Mass 2001 fig. 10.48

the hunter figure is extended and looped (no sign of it being a snake) to form a throne for a horned female figure leaning forward, dressed in *kaunakès* and holding what looks like a wheat-ear, a figure of eight symbol above her head whose serpentine nature (or not) is ambiguous. Porada spotted the shaping of the horns as corresponding to the way they are shown on seals from Tepe Yahya or Shahdad (below right) – seals long known and collected together for study by Amiet in his classic analysis⁴⁰⁷. We see in the Shahdad seal a repetition of the sprouting flower or wheat ear theme, substituted in the Tepe Yahya seal by a pair of wings on the Goddess, again with twisting serpents either side of her throne.

Then Jonathan Rosen bought a second seal in similar vein in Afghanistan (below left), and another of the more common type of seal with truncated crouching figure on the lines of the ones from Tepe Yahya and Shahdad emerged at Gonur-depe (below right). Another 'take' of the seal from a further Sarianidi⁴⁰⁸ publication shows more clearly that there are one or two tulip head-type florets amongst the ball-topped spikes issuing from the female's shoulders, so both are given below). The animal under the ibex is unclear, but very dramatically the Gonur Goddess sits directly on a serpent.



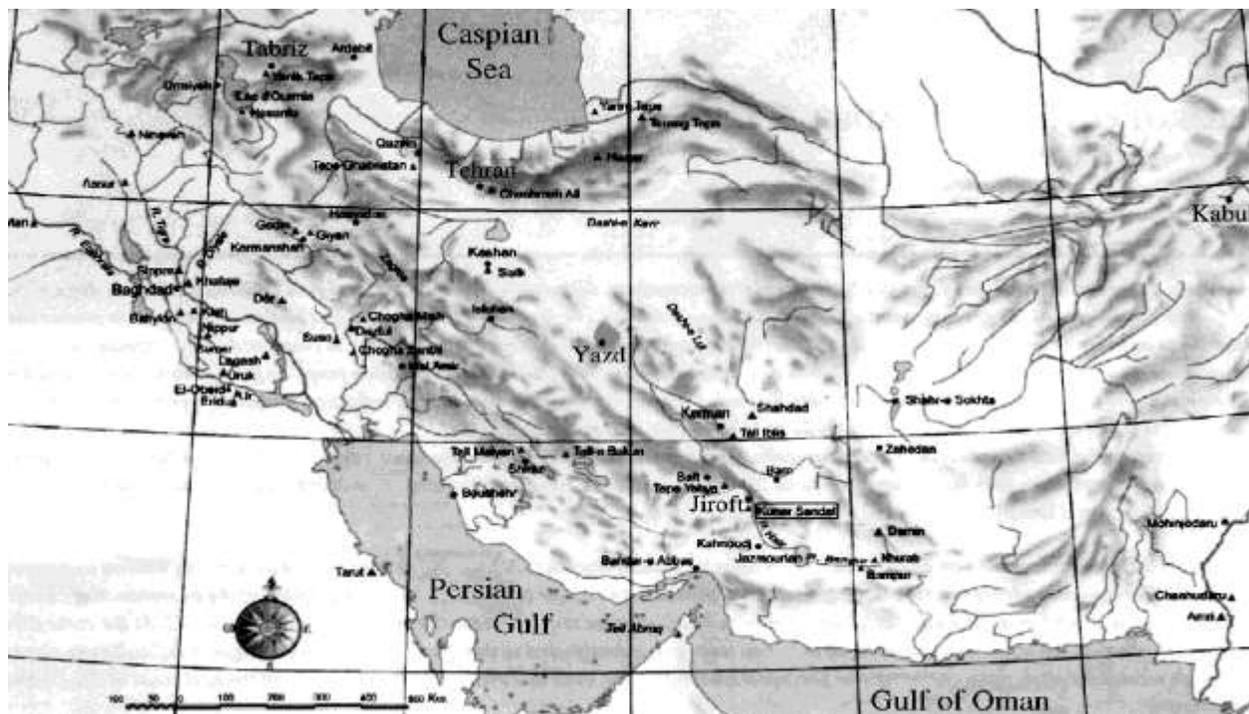
III.9-170: (Left) The second seal acquired by Jonathan Rosen discussed by Porada op.cit 1993 pl.31; (right) female with sprouting shoulders and head, crouched on a serpent and flanked by an ibex – Sarianidi⁴⁰⁸ fig.10 published as Sarianidi seal 1786⁴⁰⁹ and directly establishing the connection between the BMAC area and Iran/Elam

Coming back to the larger seal above left, again it shows the same figure seated sideways holding a serpent within the spikey 'cartouche', and a retinue of females crouching, others evidently of higher rank seated on low chairs, and the kneeling male attendant in abject obeisance possibly chanting or singing accompanied by hand gestures. They are again arranged as an iconostasis either side of a female goddess with the same flattened horns holding up two serpents and seated between two palm trees (a further female goddess is inserted next to the figure inside the petalled cartouche, bending forward in exactly the same way as the goddess on the Rosen seal). The principal goddess sits over a box grooved with squares, topped by a floret, and at her feet there seems to be a bull-head on one side and some constellation-looking dots on the other. Again Porada had the opportunity to discuss the seal at a seminar held in honour of V G Lukonin at the British Museum, which now after thirty years she compared against the Faroughi seal (**III.9- 167**) and the first Rosen seal (**III.9-169**)! I differ with her in the identification of the trees, which she saw as willows. She also noticed what again looks like a lyre under the right-hand tree and suggested at least some of the retinue were musicians. And as she so rightly says, in the first, beautifully executed Rosen seal, we appear to have the full Pantheon of Central Asian gods assembled (note in passing that the bowman figure was always identified with Ninurta by Frankfort). We cannot attempt to

⁴⁰⁷ Pierre Amiet *L'Âge des Échanges Inter-Iraniens* Paris

⁴⁰⁸ V I Sarianidi 'Chamber Graves of the Gonur Necropolis' in K Jones-Bley et al. (eds) *Complex Societies of Central Eurasia from the 3rd to the 1st Millennium BC Vol.II* Washington DC 2002

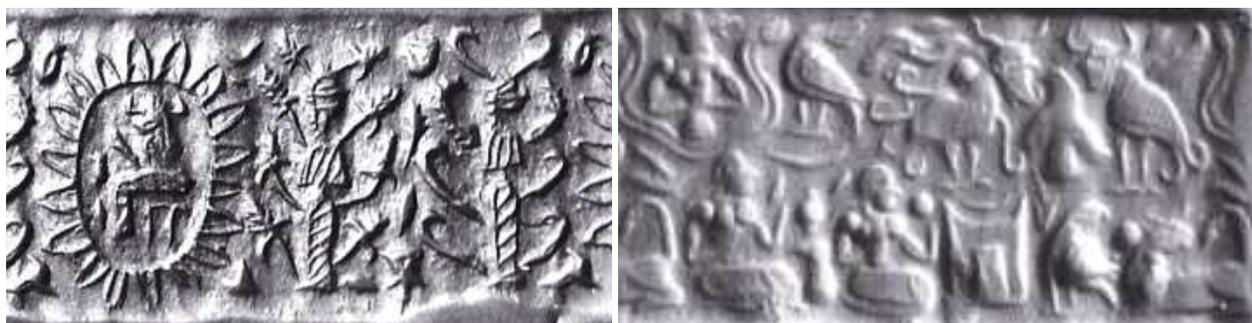
⁴⁰⁹ V I Sarianidi *Myths of Ancient Bactria and Margiana on its Seals and Amulets* Moscow 1998



III.9- 171: Map of Mesopotamia, Turan, Margiana, Afghanistan and the Indus showing the location of Kunar Sandal/Jiroft near Tepe Yahya on a valley opening onto a plain running down to the shores of the Persian Gulf where Arabia bites into Iran

place this Pantheon onto a table of equivalences as we do not know enough names, but can only note that somehow snake cults were held in common at places such as Knossos or Mycenae.

To cap the sequence of Elamite seals, some years on a seal similar to both Rosen seals (in that it had the same the figure inside the petalled enclosure), rougher in execution and with its iconography reduced to three figures, was found in the Temple of Sacrifices at Gonurdepe (below left) – complemented to some extent by a further seal from a burial there that repeats some of the other motifs from the unprovenanced, more complex seals, but also introducing two quaint bearded and horned bird-men. Such masterpieces served as the preamble to a final presentation in the Porada Centenary volume of fragmentary seal or sealing finds by Holly Pittman (op.cit 2014) from the site of Kunar Sandal not far from Tepe Yahya (map above), part of the now notorious Jiroft whose finds appear mostly to be fakes. The recently unearthed ziggurat at



III.9- 172: (Left) Black stone seal from the Temple of Sacrifices Gonur-Tepe – Pittman op.cit 2014 fig.6; (right) Impression of a stone seal from Grave 1393 at Gonur Tepe (after Sarianidi 2007) Pittman op.cit. fig.5

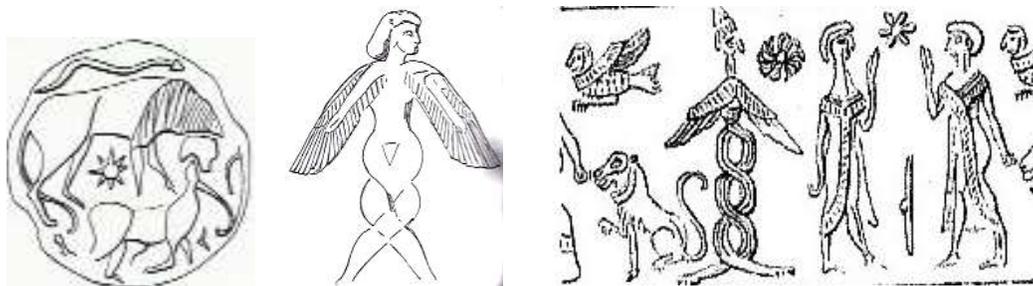
Konar Sandal (2006) - said to be a century older than the ziggurat of Ur - bears out the importance of the location, situated as close to the crossing point to Arabia as Iran can get and in itself explaining why its products should so easily have

travelled to India via the Makran Coast (III.9- 1) - in some instances reaching Margiana along the riverine way-stations of the Indus. Can we say that the snake cult was imported, or was it as indigenous to Margiana as it was to Elam and India?

SNAKES ON KASSITE BOUNDARY STONES- AND A RARE SNAKE LADY ON A KUDURRU

Given we are always on the hunt for primary astronomical references, the question we ask ourselves is whether at this time the double serpent could either stand for forward and retrograde motions of Venus – or the downward and upward nodes of the Moon on the Ecliptic, vital for predicting eclipses – in later times called the Head and Tail of the Dragon of the Eclipse (see Chapter 19 Ills 19-20 and 19-215). Quoting from that chapter, Duchesne-Guillemin points out⁴¹⁰, ‘the symbol for the head or tail of the dragon of the eclipse appears canonically on Neo-Babylonian boundary stones in a prominent position next to the Moon, Sun and Venus and above the symbols referring to the Tropics of Capricorn, Cancer and the Ecliptic (the Ways of Enlil, Anu and Ea)’. The North Node glyph (♁) is often placed over the Anu (the Ecliptic) symbol.

This statement leads us to consider a particular boundary stone/*kudurru* with the Snake Lady alongside more mainline astral symbols (III. 9-174). From the earliest period of the use of these stones dating from the time of Melishpak⁴¹¹ (one of 8 know kudurrus under his name) is one that is always displayed from the Sagittarius side in the British Museum. I would not have realised a facet on the other side has a Snake Lady, had Herzfeld *op.cit.* not noted it in a drawing (below right)!



III.9- 173: (Left) Cosmic protohistoric seal with Snake, Lion, ?Venus, Ibx; (centre) Herzfeld's drawing (his fig. 126) of the Snake Lady noticed on the Melishpak kudurru; (right) Seyrig's Syrian seal cited by Bisson de la Roque⁴¹² in relation to Elamite iconograph (his fig.14)

Bearing in mind how 5-4M Luristan stamp seals – or Protohistoric Ubaid Sumerian and Susan sealings – so often include a snake in the sky above other motifs that are also astronomical (as, for instance, the sealing above left – GMA-97 from Tepe Giyan – our BaLu-3), the cosmic serpent (whatever its meaning) certainly enjoyed a renaissance on boundary stones under the Āryan Kassites. The Kassites had close ethnicity with both the Mitanni and the Hittites, having themselves taken advantage of the power vacuum at around 1500 to install themselves in Hittite-sacked Babylon when the Hittites decided not to stay and rule. By ‘keeping Babylon in the family’ this suggests some kind of agreement between the two societies. In trying to understand the Mitanni Snake Lady - as two serpents now attached to a winged female torso, suggests a reading of Venus in terms of her forward and retrograde cycles, or in relation to her turns round the Earth/Ki itself (serpents are so often associated with Earth) - if not also to the interrelation between Venus, Sun (Lion) and Moon (Goat/Bull) cycles round the sky (note even on the early seal the eight-pointed star - which usually signifies Venus.

BRITISH MUSEUM MELISHPAK KUDURRU NO. BM 90829

Let us spell out the overall text and imagery of this *kudurru*, which at the start of its long cuneiform inscription is dedicated to Adad/Jupiter - though when found by Hormuzd Rassam it was situated in the Temple of Shamash at Sippar. The text on

⁴¹⁰ J.Duchesne-Guillemin 'Origines Iraniennes et babyloniennes de la Nomenclature Astrale' CRAI 1987, 234-50

⁴¹¹ L W King *Babylonian Boundary Stones and Memorial Tablets in the British Museum* London 1912 – BM no. 90829 pls XXIII-XXX and pp 19-23

⁴¹² F Bisson de la Roque et al. *Le Trésor de Tôd [Documents de Fouilles de l'Institut Français du Caire XI* Cairo 1953



Figure 1



B

Behind Marduk's two spades the bow and arrow of the preceding Sagittarian figure rises over the dog of Gula/Sirius; the bird and the perch referring to the Gods Šuqamuna and Šumalia, the Kassite kingship Gods
Figures 2-5



C

Figures 6-12



D

Figures 13-17

Marduk is represented by the kusarikku holding a spade, and also by the tasselled spade in front of them (see detail at facet B, right).

Figure 18: Coiled serpent on cone top

III.9-174: (Left) Boundary stone from the time of Melishpak II c.1300/1200 BM 90829; (right top) Facet A; (right upper centre) Facet B ; (right lower centre) Facet C; (right bottom) Facet D – figure numbering from L W King *ibid*.

its four sides records a deed of gift granting fifty 'gur' of corn-land in the province of Bit-Pir'-Amurri by Meli-Shipak II to Khasardu, the son of Sume. The land was situated in the district of the city of Shaluluni on the bank of the Royal Canal.

Four officials carried out the transfer of the property, and the deed was drawn up in the presence of seven high officials who are enumerated by name. Once the boundaries of the land have been stipulated, the protection of a long list of Gods is invoked in order to bring down their curses on anyone who later in time might break the agreement or take the land. Thirteen gods are named in the four text panels, referring also to 'all the Gods shown on this monument' - represented by a sequence of 18 images (figures and symbols) carved on the four facets of the cone above them.

All the images face to the right apart from the coiled snake at the summit (which we will look at in relation to other *kudurrus* later). Using L W King's original labelling, listed in anticlockwise order facets A-D follow each other as illustrated above.

ICONOGRAPHY OF THE KUDURRU CONE, FACET BY FACET

A. *Figure 1:* Composite being in the form of a centaur, with attributes of man, beast, bird and reptile. The god has two heads, one human, with beard and thick hair falling on the shoulders, and on it he wears a conical head-dress probably with horns; the second head, facing backwards, is that of a lion. The god's torso and arms are human and he is represented drawing a bow, the ends of five arrows in a sheath visible over his right shoulder. The body, hind legs, the lower tail, and the upper part of the fore legs are those of a horse; a second tail is that of a scorpion, and the forelegs end in scorpions, though only one scorpion is shown. Wings rise from the horse's shoulders.

SAGITTARIUS, NINURTA AND SIRIUS

Bearing in mind that in later star-lists Sirius is the Arrow within the constellation Ban/the Bow (making up Canis Major in European thinking) this is a divine weapon whose starry association (so strongly emphasised on Neo-Assyrian seals) is not to be overlooked – such that we have already revisited the meaning of seals with a kneeling man with bow and arrow, like the seals of **ForAtt-23** or the top line of the Karashamb cup. Note, too, (illustrated below) a possible Indus seal precedent for the hybrid figure of Sagittarius/the Centaur (we identified visual hybridism as a common Mitanni practice which Mycenaeans, Kassites and Assyrians copied).

In fact in **Chapter 19**, when looking at the sky in terms of oppositions of zodiac-sign pairs we saw how from one side of it or the other, both the Gemini-Sagittarius and Cancer-Capricorn axes are roughly shadowed by the Milky Way, more or less coinciding with its arc over the entire diameter of the sky. In particular, extending the line further down from Gemini on the Gemini-Sagittarius axis takes us down to Sirius, which is probably why Sagittarius on the opposite side of the sky holds a bow and arrow as a reminder Sirius is at the other end (and, indeed, has a dog-head on his shoulder sometimes). The human torso added to the horse-part of the traditional Sagittarius hybrid could suggest that Orion next to Sirius is also being alluded to – both being additions onto a sign that, we might surmise, was originally visualised just as a horse – and the people most likely to assign the



III.9- 175: (Left) Chalcedony seal with Ninurta as Sagittarius (8C BC, BM 119426); (centre) a similar chalcedony seal from Aššur (c.800, Vorderasiatisches Museum Berlin, VA 5180) (c.f. also the seals under III. 9-201); (right) centaur-type hybrid on an Indus seal a fusion of tiger, human and Markhor goat - quoted by Jeyakumara from the observations of B Hemtun (see later analyses of key Indus seals)

horse to that position would have been the Mitanni (even more so with the addition of wings as seen also in the case of the constellation Pegasus^{413!}). Neo-Assyrian seals like the ones above particularly emphasise Ninurta's bow and arrow in place of his mace as he leaps up from his hybrid lion-dragon steed (much as a horse would) towards the Wind demon Anzu in front of his consort, Gula, seated on her dog throne (again a reference to Sirius). In the seal on the left he is surrounded by stars which, apart from the Sibitti group, are striated, conveying the effect of the seething starry river of the Milky Way.

B. *Figure 2:* Leaping dog

Figure 3: Bird on perch

Figure 4: Kusarikki grasping in both hands a spade as standard, the shaft formed of a palm-stem

Figure 5: Spade-headed standard, with tassels (reinforcing the Marduk representation)

C. *Figure 6:* Solar disc with four-armed cross inside (note its position just round from the Sagittarius figure (1))



Figure 7: Mace with twin lion-heads

Figure 8: Spade-head

Figure 9: Goddess, carrying bowl and brush or flail

Figure 10: Eagle-headed mace

Figure 11: Lunar disc (on the opposite site of Facet C from the Solar disc, and flanking the Snake Lady on Facet D)

Figure 12: Lightning-fork

D. *Figure 13:* Lamp (Nusku in the shape of a shoe)

Figure 14: The Snake Lady (placed between the symbols for the Moon (11 above 12) and Venus (16 above 17):



Figure 15: Ram-headed crook

⁴¹³ V Haas (op.cit.1994) in his footnote 70 quotes both L Malten and F Schachermeyr as stating that the homeland of Pegasus (Luwian *piḡaš*) was Caria in SW Anatolia, though in the same paper Haas gives a vivid picture of widespread horse-breeding and training by the Luwian dynasty ruling Kültepe at the time of the Assyrian trading colony much earlier.

Figure 16: Eight-pointed star

Figure 17: Cylindrical headdress, with feathered top and decorated with circles, standing on a carved table

Figure 18: Serpent in a coil at the top of the cone. The Solar and Lunar discs and the Eight-pointed star, though here separated, form a group in the spaces in the upper field immediately underneath the serpent's outer coil - see the usual arrangement of these three planets at the top of other kudurrus, as below, with significant comparanda:



III.9-176: (Top left) Coiled snake at top of BM90829 (looking down on the Solar cross and Lunar disc on the left facet); (centre) 10C boundary stone BM90840 with the symbols for Venus, Sun and Moon at the very top (only the star symbol for Venus is visible over the scorpion); (top right) detail of top of another standard boundary stone, possibly the equivalent of the Nebra disc symbols (bottom right) and the Bactrian plate from Ai Khanum showing the chariot of Kybele with Sun/Moon/Venus⁴¹⁴

The coiled serpent could as much stand for Hydra, Draco, The Milky Way or the Dragon of the Lunar Nodes., though the Kassite boundary stone below also evokes Ea as the *Apsu*/subterranean waters in the form of a horned serpent encircling the stone around its base (a second, smaller one encircles the circumpolar region at the very top, in the position of Draco):



III.9-177: 12C Kassite Boundary Stone (probably of Melishihu) found as booty at Susa – Louvre Sb25

⁴¹⁴ Illustrated in Paul Bernard 'The Greek Colony at Ai Khanum and Hellenism in Central Asia' in F Hiebert et al (eds) *Afghanistan: Crossroads of the Ancient World* (British Museum exhibition catalogue) London 2011 81-130, Cat.23 (c.300BC)

FINAL THOUGHTS ON THE IDENTITY OF THE SNAKE LADY

We now know enough about the Snake Lady to understand why it has been used on the Melishpak *kuduru* – and through her placing between all the other divine symbols round the cone we can be more certain of her identity:

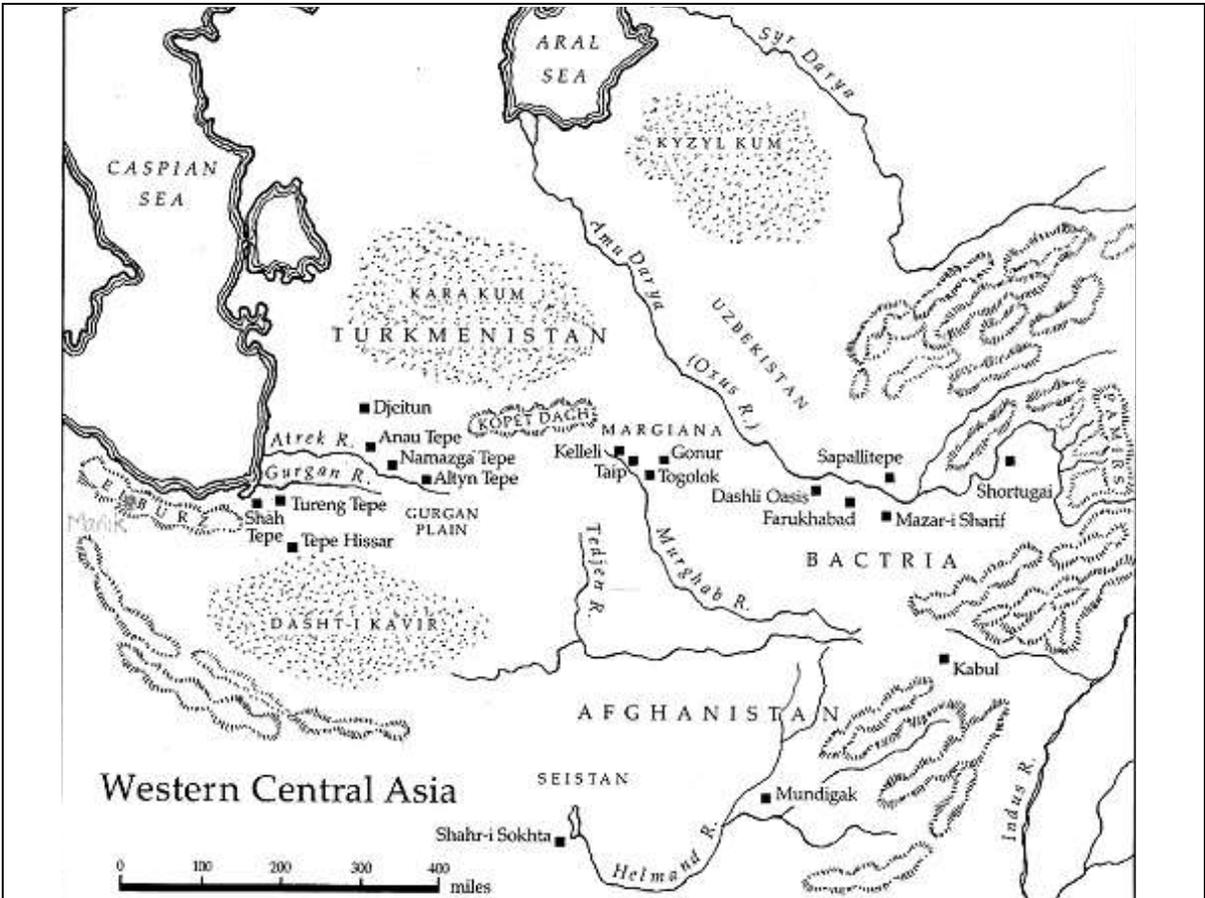
- (i) It is a Kassite piece so its cultural referents are both Babylonian with insertions seen elsewhere as Āryan Mitanni;
- (ii) The God Marduk is particularly Kassite – half the officials testifying in the text have names ending in -Marduk. As we know, after Marduk has overcome Tiamat ‘with the arrows of his winds’ and constructed the heavens with the arch of her ribs, his *alter ego* Enlil places her tail in the sky as the Milky Way – one interpretation for the upright serpent on *kudurrus*;
- (iii) It is because Ea’s mother, Nammu, requests Ea to create Man as servant to the Gods in order to help the Gods keep the Cosmos in order after this great battle that Ea creates the First Man from Water and the blood of Kingu – he is the first of the Seven Apgallu (Ab = water; gal – great; lu – man) and named Adapa (the subject of the seal in *III. 9-167*). This is why the serpent men (perhaps better described as fish men) described in *III. 9-185* and *III. 9-186* have been linked by the commentators to Ea;
- (iv) The Melishpak boundary stone with the Snake Lady on it is a dual culture piece – meaning that the abstract symbols for the stars, planets and Ways of Anu, Enlil and Ea appear to be inserted as a gloss on the anthropomorphic symbols for the pantheon – including the rare single case of the Central Asian rendition of Inanna in her Underworld form (her consort Adad’s lightning fork is placed immediately to her right on the previous facet; and the entire stone is dedicated to him in the text, even though his updated persona, Marduk, is signalled by the spade iconography);
- (v) According to Wiggerman (*ibid.*), the winged Snake Lady is The South Wind figure and, with the ram-headed crook to her left, to be associated with Ea. She could not, in fact, be a Wind since in our earlier analysis of seals showing the Winds these are the winged females that lean in different directions. I believe the Snake Lady is simply the version of Inanna/Ishtar sometimes used by the Mitanni and the Kassites (the latter barely use the lion-prey icon for Her, or even BIVISUALS). A text quoted by Nougayrol⁴¹⁵ at the very end of a short paper names the Gods the Four Winds are dedicated to, breaking off at the mention of Ishtar’s name as a fifth component as ‘Goddess of the Steppes and Deserts’ (surely a Central Asian reference) which could well intend Her to represent - as I have suggested earlier – the central whirlwind of the *Ašvin-Nāsatyau* vortex common in such regions, making her worthy as the consort of Adad in this axial form implying the range of the Underworld journey from top to bottom through the Three Worlds – a qualification none of the other directions deserve. This is the quotation:
... l’image du Vent-du-Sud, vent qui se ten[ait] devant Ea, ... du Vent-d’Est, vent qui se tenait devant Enlil... l’image du Vent-du-Nord, vent qui se tenait devant Adad et Ninurta, ... du Vent-d’Ouest, vent qui se tenait devant Anu.
 Another quaternary follows, equating the mountain and the Tigris [presumably the North] with Enlil; the upper waters and the West with Shamash; the lower waters and the East with Ea; the Euphrates [presumably the South] with Shamash – and finally the Steppes and Desert with Ishtar (at which point the text breaks off).
- (vi) My interpretation of who she is is emphasised by the fact that on the *kuduru* her head and shoulders lie between the eight-pointed star of Ishtar and the Sun inside the Moon disc.

⁴¹⁵ J Nougayrol ‘Les Quatre Vents’ *Revue d’Assyriologie et d’Archéologie Orientale LX* 1966 72-74

(vii) The Sagittarian figure that follows is again typically Āryan in that the horse has been given wings – and a double head half human, half dog. This refers both to the Sagittarius-Sirius colure (almost coinciding with the Milky Way) of the Solstices for the Age of Aries – and also to the constellation Pegasus which along with the Ram of Aries underneath it (the crook in front of the twisted-legged Snake Lady) refers to the start of the Year at the Spring Equinox (from which day the Sun-Moon-Venus reconciliation is counted). It has scorpion tail and forelegs as a BIVISUAL pointing to its replacement for the former Taurus-Scorpio opposition for that Spring Equinox Year Beginning.

THE SNAKE CULTURE OF BACTRIA AND TURAN PAST AND PRESENT

It is the BMAC territory running on into northern Iran-Iraq (see map below) that appears always to have been the heartland of a particularly intense snake cult - and consideration of Indo-European culture as a whole is the only way to make sense of artefacts found at sites all round the southern end of the Caspian Sea such as Hasanlu or Hissar, and up to the sites of Margiana in that middle ground between Asia and Mesopotamia to its east. We thus get Snake Lady imagery on metal goblets found in the rich burials from Marlik and notice continuity of snake traditions even up to today in what was northern Mesopotamia, in Yezidi territory where a snake emerging from a hole in the ground and climbing up a cone of earth is their symbol for the Creation of the World. Even Islamic occupation of the same area could not make a break entirely from the snake cult tradition – such that we see the depiction of double snakes on some mosques (see our **ForAtt- 28** discussion



III.9- 178: Map of Western Central Asia from Pittman⁴¹⁶ with the site of Marlik in an Elburz Mountain valley added in pencil

⁴¹⁶ H Pittman *Art of the Bronze Age: Eastern Iran, Western Central Asia, and the Indus Valley* (with comments on style and iconography by Edith Porada) Metropolitan Museum of Art Exhibition Catalogue New York 1984

on Gog and Magog). We noted in our DIVERSION on Ningishzida/Ninurta how the twisted snakes were not necessarily thought of as female - and Snake-Men sculptures belong to the same era as the Snake Lady manifestations, made for a short time around Gonur, Togolok and into the borderlands between Afghanistan and India. We will take brief glances at each of these instances of snake cult evidence, mostly allowing the pictures to speak for themselves.

THE GOBLETS OF MARLIK AND MATCHES WITH MYCENAEAN PIECES

Our starting point for Marlik in this catalogue was the seal at **ForAtt-23**. The high-relief gold vessel from the same site (shown twice below left) is a dramatic rendering of the Snake Lady betraying the typical Central Asian love of snakes and wings. This contrasts with straightforward borrowings from the **CANEA** on most of the other goblets found in the rich burials of Marlik -- of a community that clearly pursued the drinking culture at a high level of luxury (they lived close to all the raw materials). The Marlik Snake Lady goblet is a *tour de force* in combining all the attributes of the Central Asian Steppe Ishtar into a still recognisable female figure, with its bird feet, snake legs, human thighs and torso with full breasts, and wings melded to her outstretched arms holding up two animals, thus eliding with the Mistress of the Beasts idea, capped by the twin leopard heads in place of the female head. The fragmentary ivory piece from Hattusas below right is extremely interesting as a likely Hittite version of the Snake Lady – the **BBC** catalogue entry reckons her legs are crossed because she is dancing but in the context of all the visual evidence we have collected, these are broken-off twisted snake-legs – and along with the fact she wears the triple-horned headdress of a goddess – points to the same Central Asian



III.9- 179: (Left) Two views of the electrum vessel from Marlik – Louvre AO 20281; (right) Ivory snake lady fragment 14-13C from Temple VII at Hattusas – Metropolitan Museum of Art New York (BBCat-112)

identity (and note her Hathor-type curled tresses and the dagger stuck in her belt). Such tell-tale formations are overtly made into the same blend on one or two Mycenaean octopus vases and seals (below), with an octopus or a monstrous face doubling as the divine female body (we go back to the links between octopus tentacles, snakes and Athena).



III.9-180: (Left) Painted pot from Mycenae decorated with an octopus overtly here a metaphor for the female form/the Goddess/Octaeteris, her familiars fishes rather than goats⁴¹⁷; (centre top) Mycenaean amygdaloid seal (CMS V-SIA-181) with female breasts and palm tree creating a face or seated figure; (centre below) Goddess with snake frame flanked by two griffins from lalysos (CMS V-654); (right) another Marlik vase illustrated as Ratt-29 in Catalogue C showing a Rear Attack over a Mitanni-type heraldic unit with two-breasted central axis planted in a vase, guarded on either side in the usual way

A second Marlik vase (above right) brings in the combination we have often seen between the lion-prey group and Snake Lady, this time in the form of a heraldic unit using a double-breasted totem as axis. If we look for a Mitanni equivalent, note in the innocuous wall frieze from Nuzi below how an abstracted form of the Snake Lady (rather close to the Mycenaean octopus vase) even appears between the human head and Bull head.



III.9-181: Wall frieze from Nuzi – Harvard Museum

After much time spent tracking the Snake Lady in this Catalogue, reverting to Nougayrol's text (2 pages back) I believe we can now be so bold as to state that *the Snake Lady is Venus revered as Goddess of the Steppes and Deserts* by nomadic peoples, iconically summed up in the **ForAtt-22** sealing showing Baal in chariot with horses, the Goddess before his face.

CONTINUITY OF TRADITION TODAY IN NORTH IRAQ AND THE FORMER BMAC

The snake cult is still as strong as ever today amongst the Yezidis of northern Iraq. Two women who travelled through their community and made friends with them best were Mrs E S Drower (later Lady Drower) - and much later Emma Sky. Two

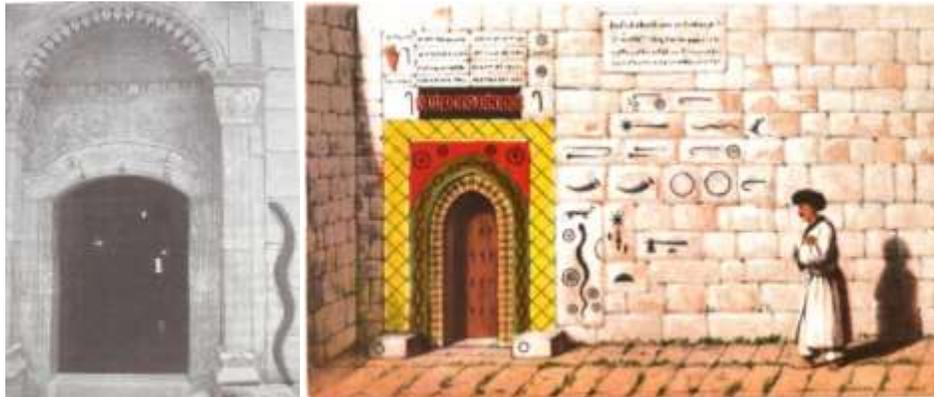
⁴¹⁷ Examples of such vases have been found at Perati, Kos, Naxos and Rhodes (see entry no. 70 regarding an unprovenanced example in D von Bothmer (ed.) *Glories of the Past: Ancient Art from the Shelby White and Leon Levy Collection* (Metropolitan Museum exhibition catalogue) New York 1990

of Drower's photos below show a Yezidi snake charmer and his daughter, each with snake draped over their shoulder and its head in their mouth - and the entrance to the shrine of their main saint, built over a spring - photographed in the 1940s.



III.9-182: (Left) Snake charmer Yezidi man and his daughter; (right) entrance to the principal Yezidi shrine of Sheikh Adi – both photographed by E S Drower⁴¹⁸ in 1941

In the next century Emma Sky visited the shrine following the Iraq War. Many of the markings next to the snake, as recorded by Ussher⁴¹⁹ (see below) had long faded - and sadly the entire shrine was destroyed by Da'esh in 2015.



III.9-183: (Left) Entrance to the same Yazidi shrine at Lalish, Iraq – photo Emma Sky⁴²⁰; (right) Ussher's watercolour recording the original part-painted, part-carved hieroglyphs surrounding the snake at Sheikh Adi's shrine

Kurdish Iraq and onwards up into Central Asia even today has mosques featuring the double serpent - as on the *iwan* of the Anau mosque cited earlier - and Lady Drower when visiting churches and monasteries in the Mosul area⁴²¹ refers in several places to snakes appearing in their decoration too.

⁴¹⁸ E S Drower *The Peacock Angel* London 1941

⁴¹⁹ John Ussher *A Journey from London to Persepolis* London 1865

⁴²⁰ E Sky *The Unravelling* London 2015

⁴²¹ E S Stevens (written under Lady Drower's maiden name) *By Tigris and Euphrates* London 1923



III.9- 184: (Left) Door knocker from Turkoman mosque doors in Museum of Turkish and Islamic Arts, Istanbul (Inv.no. 3749); (right) double serpents on an archway on the Sultan Kayseri caravanserai

Given the Yezidis are an extraordinary cultural remnant who to survive continued to patch onto their Zoroastrian underlay pieces of later religious traditions, we could here take into account from Neo-Assyrian and Neo-Babylonian times two relevant snake omens from the astrologers⁴²² - the first (No. 243/CT 40 21) is Assyrian and the second (No.237/CT 28 37) Babylonian - which appear still to hold good with the protection of mosques or shrines in mind:

If a snake is seen in a temple: the offerings of that temple will continue for a long time;
If a snake keeps scaring [people] in a temple: angry gods will return to the country;
If a snake is seen in the temple of Ishtar: there will be a food-offering of Ishtar
 and
[If a snake] hangs [from ... of the ent]rance, blocking the way: a deity protects that house.

Next, how do we make sense of the Snake Men, whose image does not travel into the Near East like the Snake Lady?

OPHIDIAN OR PEACOCK MAN

The most telling section of Francfort's paper in the *Antiquity 68* BMAC Special⁴²³ is his discussion of three versions of the ophidian leader type coming from the BMAC, possibly holding a colonette under the arm (the one centre left below might



III.9-185: (Left) Ophidian Man from Eastern Iran, Louvre AO 21104; (centre left) a version in the Faroughi Collection, Teheran; (centre right) a third version in a private collection loaned to the MMA NY – photos from AFC-244 and Francfort *ibid.* figs 3/4 respectively; (right) fish scale and peacock feather tattooing suggesting alternative interpretations for Ophidian Man's skin

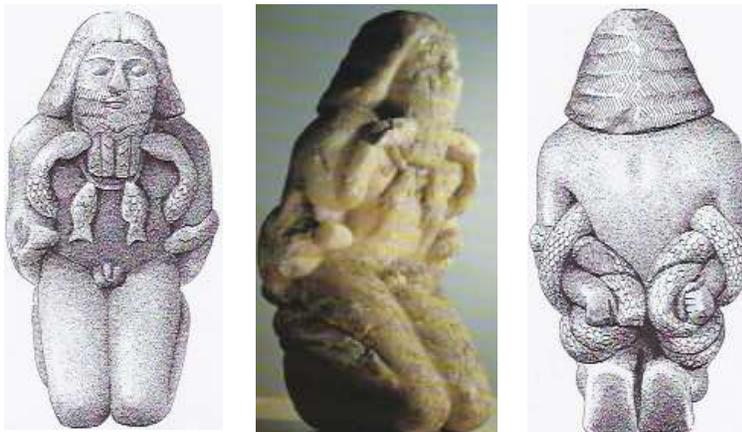
⁴²² Quoted from H Hunger (ed.) *Astrological Reports to Assyrian Kings* Helsinki 1992

⁴²³ H-P Francfort 'The Central Asian dimension of the symbolic system in Bactria and Margiana' *Antiquity LXVIII* 1994 406-418

also be wearing a more truncated version on his head). These figures are still as Neolithic in spirit as the 2M seals showing Snake Goddesses or priestesses holding snakes and the scales seem sometimes to blend with feathering (hence our suggestive photo above right). Whether these figures embody Snake Gods or are priests tattooed as snakes/birds or fish (given they have been associated by some with the God Ea), we cannot say. More examples of these figures in private collections are illustrated in M Vidale's⁴²⁴ recent book (sadly most look suspiciously like fakes). But the dismantled example shown below (his Ill. 166) is useful for showing their general makeup of contrasting marble and steatite pieces, using the same blocky parts as their counterparts - the so-called 'Bactrian princesses'.



Talking of pieces suspected to be fake, we return to the three Snake Men in **III. 9-185** after looking first at 'the Cincinatti Man with Snakes' (below) - on two occasions discussed in papers by Edith Porada⁴²⁵. Four snakes twine round the man who holds the bodies of two of them behind his back: the heads of one pair meet at the front against his beard, and the heads of the second pair also emerge at the front just above his elbows, nearly touching the tails of the two fish hanging



III.9-186: The Cincinatti Snake Man – selected from Porada 1992 and 1993

round his neck (Vidale's book has an example like this one, quite obviously a crude fake). There was dispute about Cincinatti Man's authenticity, but Parrot had illustrated it in his book on Tello soon after it was found, since he believed it was not only illegally excavated at the site, but also stolen with a number of other items that later turned up in the shops of dealers in London and Paris. The figure was eventually bought by the Cincinatti Museum and assessed by Porada as authentic (especially when compared with two or three other clones of the figure which were obviously fakes). Of interest is the pair of fish round the nude hero's neck which appears to be a pointer to the God Ea – again bringing serpent and fish together (as they are, for instance, on the Priest-Magician's goblet or on some seals). Indeed, discussion of his iconography led Porada to the conclusion that he represented a guardian of Ea, God of Waters, rather than the

⁴²⁴ M Vidale *Treasures from the Oxus* London 2017 – photographs by Valerio Ricciardi

⁴²⁵ E Porada (i) op.cit 1993 (fn. 79) and (ii) 'A Man with Serpents' in *Von Uruk nach Tuttul: Festschrift Eva Strommenger* Munich and Vienna 1992, 171-5 + pls

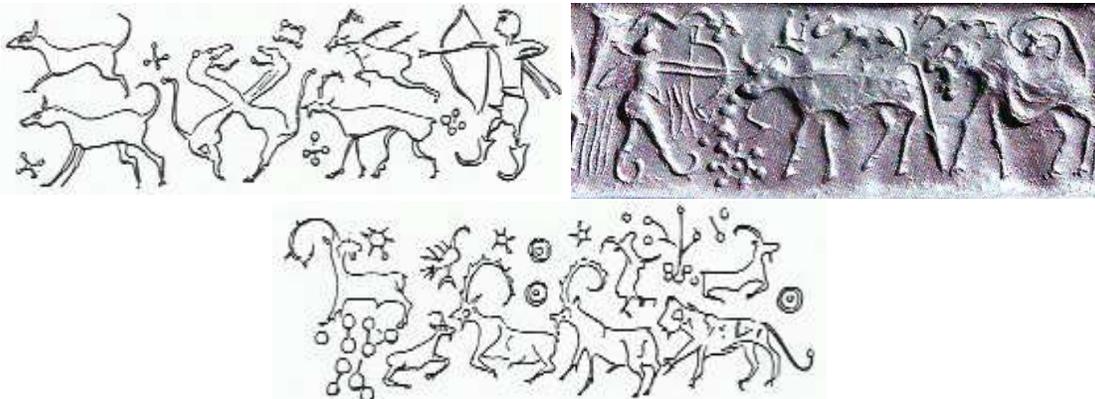
Gilgamesh-type hero wrestling to overcome the serpents. If he does indeed derive from the Sumerian site of Tello, then he predates by almost a millennium the BMAC ophidian men, who in a different blend of symbolism have merged with the snakes so that they are now humans with scaly skin. Either they represent a deity, representing the underground version of Baal in the underworld - or they are shamanic priests.

The cylinder seal from Gonur depicting some kind of acrobatic ritual enacted to music and drum (below) appears equally shamanic in character since the figures holding up the pole in particular appear to have animal heads, one of them looking like a lion-man. A kneeling figure may hold a staff in his hand, but it is more likely to be a pipe since he is part of the musical ensemble. The cylinder's stamp seal end showing a flower with two leaves can be read as a pointer to plant-life in general (or perhaps the ephedra in particular) – echoed on another stamp seal (below bottom row) which has a snake behind a similar flower with two leaf sprays (the snake-headed lion-dragon on the other side has a serpent penis). The tulip-looking plant could allude to the plant-life component of Protozoroastrianism (see the Heptad table, *III. 9-204*).



III.9- 187: (Top) Steatite cylinder seal design and stamp seal end from Togolok 1 tomb 10 – Hiebert 1994 fig.9.16 ; (bottom) plant motif on Togolok seal (enlarged) compared to BMAC stamp seal showing winged (recto) snake-lion with snake penis and (verso) a similar plant motif with snake behind, both symbols of 'Life' -Pittman op.cit 1984 fig.28 (see also Francfort 2010⁴²⁶; (right)details of the Snake Men heads (III. 9-185) showing the diagonal scar - from Winkelmann op.cit. fig. 69.4

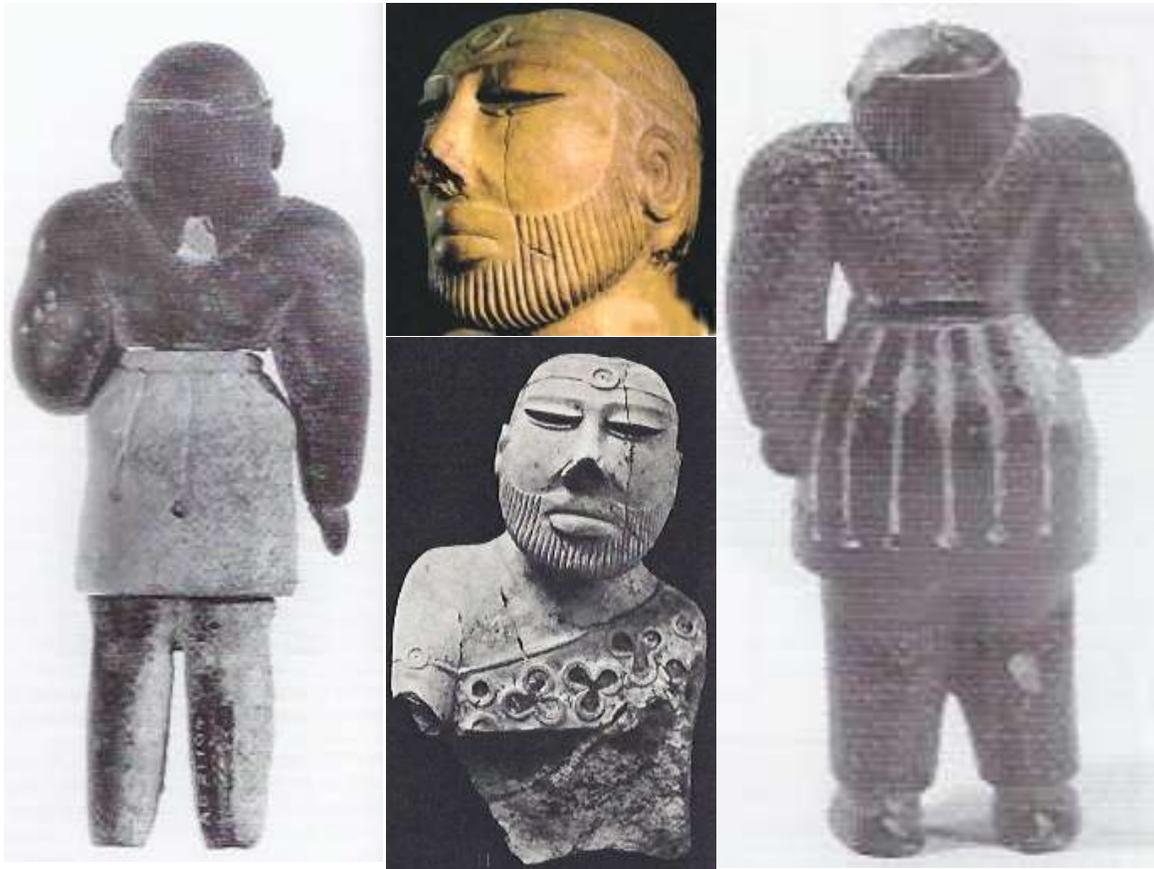
Still with the Togolok cylinder seal in mind, and looking at the figure over the drummer, in her 1993 paper Porada remarked on motifs on two seals (below top row) from Nineveh and Godin (c.f. also our *Ratt-9*, reproduced again below bottom row), consisting of short lines ending in holes, not dissimilar to the twiggy items held by the figure on the Togolok cylinder. Note also that the hunter on these seals wears the same pointed shoes as the snakey Big Man above right in *III. 9-185* (more obvious from side view), also like the well-known Brooklyn ibex-helmeted man of the mountains shown in *III.9- 23*.



III.9-188: (Above) Seal designs discussed by Edith Porada 1993 figs 15/16 and (below) our Ratt-9

⁴²⁶ H-P Francfort et al. 'Marhaši et la Civilisation de l'Oxus' *Iranica Antiqua XLV* 2010 51-223

Looking at the back views of two of the ophidian shamans – and now bringing in the roughly contemporary, more well-known priest figure from Mohenjo-Daro (below centre), from other examples in Sumerian sculpture Parpola⁴²⁷ points out the trefoil on his cloak must refer to the Sky, so he may in some way either be a Sky God or priest of the Sky God. We notice all three illustrated below wear a simple diadem encircling what may be a bald pate but could simply be bare because their headdress is missing. Francfort *ibid.* noted that on the back of the figure below left was an empty groove at the nape of the neck for the fixing (he thought) of wings. Winkelmann⁴²⁸ in a study already referred to in the *Art History Section* noted that the principal Snake Men have a diagonal scar across the face (compare *III. 9-185* and *III. 9-187* above). Her map showing the links between these sculptures and Elamite figures precedes *III.9-34*, from whose distribution she concluded the strongest stylistic links were definitely between Elam and ‘the mountains and highlands of Afghanistan, Seistan and Baluchistan’ – and only secondarily with the Indus down in the valley. The Indus Sky Priest is a much finer work, but the question is whether his trefoils are the equivalent of the snake scales/peacock feathers on the other figures.

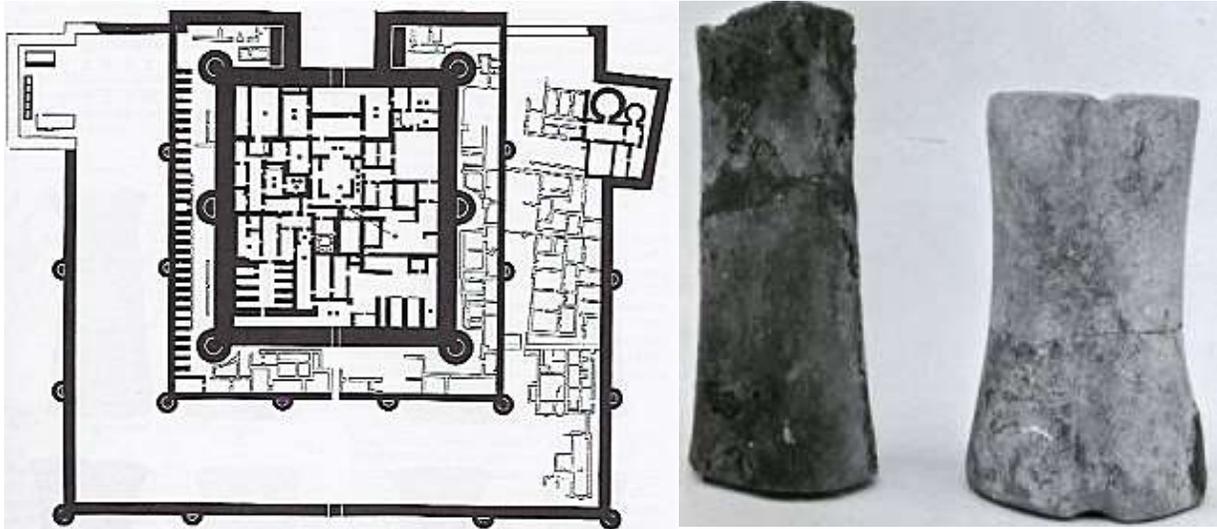


III.9- 189: Back views (left and right) of the Ophidian men (left and right) in III.9-185; (centre) the Indus Valley Sky God/Priest

As already mentioned, at Hissar, in the Gonur Necropolis and even encroaching close to Indus territory (*III. 9-67*) staffs of office were often found singly in male burials, in some cases still with their mace-headed top. In some burials this staff was paired with dumpy colonettes made in all sorts of carefully chosen, beautifully coloured grained marbles, and a large quantity of them was found distributed throughout the temple shrine at Togolok (below):

⁴²⁷ A Parpola *The Sky-Garment: A Study of the Harappan Religion and its relation to the Mesopotamian and later Indian religions* Helsinki 1985

⁴²⁸ S Winkelmann 'Intercultural relations between Iran, Central Asia and northwestern India in the light of squatting stone sculptures from Mohenjo-Daro' in A Parpola et al (eds) *South Asian Archaeology 1993* Helsinki 1994 814-831



III.9-190: (Left) The Togolok 21 fortified Temple, with the small black squares indicating positions of miniature columns (29 whole or broken were found in the building) – Hiebert 1994 fig. 9.20; (right) colonettes from Tureng Tepe - Deshayes *ibid.* fig. 4

These could have been part of a special ritual, but given their large numbers, it is quite possible they were simply high-class stools (note the Peak-Capped Ruler's seat on a seal under **Ratt-18f** - shown again below):



III.9-191: The peak-capped ruler seated on a miniature-column-type stool – from the Ratt-18f entry

The Snake Men Francfort analyses all appear to be holding one of these miniature columns under their arm, but as only the top circumference is shown it is hard to be sure we are right.

This somewhat rambling DIVERSION I hope gives some idea of how Central Asian hybridism and love of ophidian imagery gradually found its way into - and struck a chord with - the Indo-European worlds: eastwards to India and westwards to Greece - where for instance we could even say the anguiform monsters on the Hellenistic Altar of Pergamon are a direct result of that ophidian tradition.

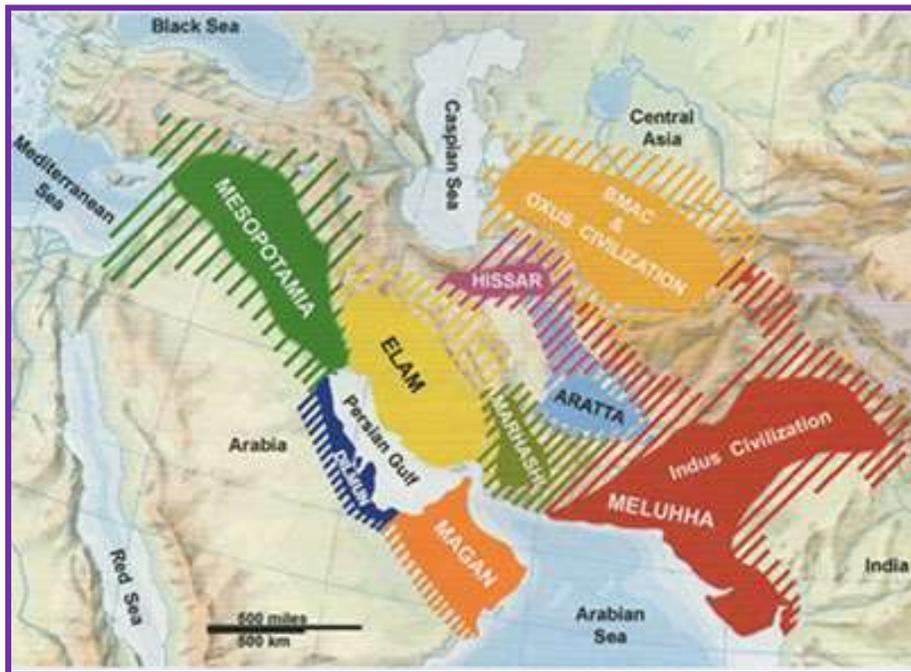
END OF DISCUSSION OF CHRONOLOGICAL FOCUS ENTRIES ICONOGRAPHY

INTERIM CONCLUSIONS

NOW IN THE FINAL PAGES WE TRY TO COME TO AN UNDERSTANDING OF THE IMPLICATIONS OF MYCENAEAN USE OF THE FORWARD ATTACK FROM THE CANEA TRADITION, BUT IN COMBINATION WITH ELEMENTS OF CENTRAL ASIAN AND INDUS ICONOGRAPHY THAT CHIMED IN WITH THEIR OWN MORE EUROPE-BASED, YET SHARED ĀRYAN CULTURE. TO DO THIS, WE FIRST GIVE A FLAVOUR OF WHAT TO EXPECT FROM INDO-EUROPEAN ARCHAEOLOGY AS AGAINST THAT OF THE NEAR EAST. WE SPELL OUT THE EVIDENCE FOR PROTO-ZOROASTRIANISM -V- PROTO-VEDISM IN CENTRAL ASIA AND ITS INFILTRATION, NOT ONLY INTO THE MYCENAEAN WORLD, BUT ALSO THE LEVANT OVERALL, ESPECIALLY AS ENHANCED BY IRAN- AND INDIA-TRENDING MITANNI MEDIATION. WE TRY TO DISCERN AND ASSESS LIKELY CONTRIBUTIONS MADE BY THE TURANIAN WORLD TO AEGEAN CALENDAR MANAGEMENT IN THE AGE OF ARIES.

THEATRE OF INDO-IRANIAN ACTIVITY IN THE BMAC, CENTRAL ASIA AND THE WEST

In most ancient near eastern archaeological scholarship the roots in Central Asia of the Hurrians, Hittites or Mitanni were rarely looked into more deeply than taking their arrival in Anatolia, Syria and Northern Iraq/Iran as read, but for explanations of changes and spread of iconographies into the Levant and Aegean in this Catalogue we have looked not only to Eurasia – as we did to account for quirks in the Maikop or Karashamb artefacts - but more in this Catalogue to Central Asia further north and east, to be able to explain aspects of Mitanni and Elamite iconography making their way south-westward. The Mycenaeans and Mitanni were in the position of being outlier fellow-tribes to those in the BMAC while at the same time - chameleon-like – absorbing the traditions of the Near East. Having accumulated a handful of key indicators from each *Chronological Focus* entry in this Catalogue, further expounded upon in the detailed DIVERSIONS attached to them, we have already cemented into place several secure pieces of mosaic



III.9- 192: The BMAC sphere in relation to surrounding zones – Expedition magazine

to start filling out a bigger picture bringing into view the many tentacles of international ‘reach’ the Mycenaeans commanded, discernible from the materials and artefacts found in their own palaces and tombs. As outlined in the *Art History Section*, these two societies were neatly complementary to each other, since the Mycenaeans were sea-going nomads where the Mitanni, completely lacking practice in sea-lore, were at home negotiating vast tracts of plain and mountain on horseback.

Both used astronomy for navigation and orientation which intertwines with calendar-keeping, and what we are really after is to find out whether the incorporation of cultures of indigenous peoples from further north and south by the Indo-European migrations can help explain those dimensions of cultural practice to some extent bound up with a variety of observational conditions when viewing the sky⁴²⁹ that might explain different calendar management solutions (and thus also their iconographies). Ultimately our aim is to gain some understanding of the two main strands of Avestan and Indus astronomical traditions, inasmuch as they could have filtered through to palace or temple observatories further west. Although so little textual record survives of either of these traditions until centuries later (and then often in garbled form), I believe we can glean some quite arresting touchstones to at least provide pointers.

⁴²⁹ The work of B G Tilak *The Arctic Home in the Vedas* Poona/Bombay 1903 is discussed in this regard in relation to Vedic astronomy.

To better understand the fascinating process of interchange in iconography, mirroring the criss-crossing of vast territories, we first look into the nature of the core 2M Indo-Iranian culture emanating from the BMAC. Early in his career Sarianidi⁴³⁰ (who invented the term, 'Bactria-Margiana Archaeological Complex' - BMAC) read the direction of influence as mostly coming from Syria and Anatolia into Central Asia, but then started to pick up on the equally influential counter-currents at work in that society before it split off into major emigrant branches. We will try to summarise these shortly.

Knowledge about Central Asian archaeology before the Scythians has only developed comparatively recently in the West: the sharing of information beyond Russian-occupied Turkmenistan was mostly only possible for western scholars after *Perestroika* which at last opened up the Russian academic world to the West. US specialist scholars realized they could only tap into work that had been going on there by taking the trouble to learn Russian, while in the same breath Russian scholars started more regularly to write their papers in English and mesh in with US and European scholarship since two-way cooperation was to their advantage. After the break-up of Russia its archaeological institutions were split up amongst the independent Republics (for us, most significantly in Turkmenistan) so in archaeological terms the Former CCCP itself was now on its knees through lack of funds and staff: taking on self-funding foreign archaeologists onto their teams became the new strategy⁴³¹. There are vastly complex problems in interpreting the presence of, and difference between, Proto-Indian and Proto-Zoroastrian trends before the parting of the ways⁴³² out of the BMAC, well highlighted in papers given at one of the very earliest conferences, held in Dushanbe in 1977⁴³³. If not already cited, we bring out the main issues raised in some of the papers in English (key titles are listed below⁴³⁴) to give an idea of the issues raised.

INDO-EUROPEAN MIGRATIONS: THE ARCHAEOLOGY OF ARYAN PRESENCE



III.9- 193 Distribution of Indo-European language speakers by 400 BC - from Anthony fig. 1.2

Having done the first year of a Sanskrit degree at SOAS before moving on to my PhD work, I had at least been aware of the researches of linguists in trying to track the spread of Indo-European languages from Central Asia (see the language tree in III. 9-40

⁴³⁰ V I Sarianidi 'Margiana and the Indo-European World' in A Parpola et al. (eds) *South Asian Archaeology 1993* Helsinki 1994 667-680

⁴³¹ C C Lamberg-Karlovsky in his Foreword to F T Hiebert *Origins of the Bronze Age Oasis Civilization in Central Asia* Cambridge Mass 1994 describes the stages of collaboration between archaeologists of West and East made possible after *Perestroika*, and that it was on his advice Hiebert learned Russian so that he could take part in V I Sarianidi's excavations at Gonurdepe and Togolok-21.

⁴³² Stated by B Lyonnet 'Central Asia, the Indo-Aryans and the Iranians: some reassessment from recent archaeological data' *South Asian Archaeology 1993* #38

⁴³³ Soviet Committee on the Study of Civilisations of Central Asia of the USSR Academy of Sciences *Ethnic Problems of the History of Central Asia in the Early Period (Second Millennium BC)* Dushanbe Conference papers published under the auspices of UNESCO Moscow 1981

⁴³⁴ J Harmatta 'Proto-Iranians and Proto-Indians in Central Asia in the 2M BC (The Linguistic Evidence)' 75-83

K Jettmar 'Fortified Ceremonial Centres of the Indo-Iranians' 220-228

B B Lal 'The Indo-Aryan Hypothesis vis-à-vis Indian Archaeology' 280-293 (he associates grey painted ware with sites referred to in the *Mahābhārata*) 295-300

B Allchin 'Archaeological Indications of ... Nomadism in the Indus Civilisation: ... [and its] Significance for the Movements of Indo-Aryans into India...' 321-5

L Gopal 'Non-Aryan Contributions to Indian Culture' 350-368

and *III. 9-43*). Inasmuch as we can track their progress through vocabulary, this was a process thought to have taken some 4000 years, and the maps above and below sum up the end result in basic terms for how cultural zones had established themselves by 400BC – buffered by coastlines. Aligning this knowledge to archaeological remains has occupied scholars for decades and is a field in its own right, well-known to be fraught with traps. With languages developing ever more specifically as they changed territory, splitting from each other as they went their different ways, as far as Āryan archaeology is concerned, for our particular enquiry there are three main questions needing answers:

- (i) *DID ĀRYANS LEAVE MATERIAL TRACES BEHIND THAT WE CAN COUNT AS INDICATORS OF THEIR MOVEMENT AND PRESENCE?*

There is a short answer to this in terms of recurring common archaeological remains such as:

- a. Painted grey-ware pottery, often egg-shell thin (among other places, found at sites associated with the *Mahābhārata* (see B B Lal *ibid.*);
- b. Pestles and mortars for the grinding of plants for the *Soma/Haoma* drink – and strainers;
- c. tanged bronze daggers; cast flat axes; bone pins;
- d. iron tools and slag, often found in association with the painted grey ware (see R C Gaur *ibid.* who gives the date arrived at for the introduction of widespread iron use, including at Marlik, as around c.1150 (see DIVERSION 2 ON METAL PROCUREMENT),

but the fuller answer involves other, more unusual material evidence which has to be dealt with.

- (ii) *DO SUCH MATERIAL TRACES REVEAL A COMMONALITY OF CULTURE - AND FOR OUR PURPOSES CAN WE FROM SUCH REMAINS ASSESS FROM VARIATIONS IN THEM THE LEVEL OF SPLIT FROM THE ORIGINAL GROUP, AND ITS TIMING?*

We will mostly consider this under our heading dealing with the hallmarks of Indo-Europeanness.

- (iii) *HOW FAR IS IT POSSIBLE TO PROVE HOW MYCENAEAN CULTURE INDICATES PARTICIPATION IN GENERAL INDO-EUROPEAN ACTIVITY?*

We have found it best to continue to point out occurrences as they arise, with our main purpose being to understand possible shared state astronomy.

Not being an expert in this field, and aware of the dire inadequacies of my 'O' Level Russian, I must lean on others' conclusions in attempting to answer the first two questions before making a case for a strong reply to the third. I have already prepared the ground for answering these questions by dropping clues throughout the Catalogue as specific issues have cropped up. Now at this point we will try to analyse the immediate Indo-Iranian background of the Mitanni in depth - from our perspective at not too specialist a level – because in everyday life they provided the most immediate Central Asian interface with the Mycenaean world (see *III. 9-53*).

1. INDO-EUROPEAN DIFFUSION IN CENTRAL ASIA AND INTERACTION WITH TURAN AND THE INDUS

Anthony *op.cit.* in his chapter, 'The Wagon Dwellers of the Steppe', singles out the Yamnaya culture in particular as chronologically



III.9- 194: Yamnaya male from grave 1, Kurgan 4 Kutuluk cemetery Volga region – Anthony op.cit. fig.13.8

fitting in between the end of the Maikop Culture (outlined in **Catalogue C**) and the beginning of the BMAC – and that their archaeological remains are the material equivalent of that crucial move of Indo-Europeans from the West side of the Caspian sea over to its eastern side (whether by northern or southern routes) and onto the plains of the Margiana region where Gonur and Togolok were founded c.2300/2200. A case in point that nicely represents the intermediary role of what Anthony calls ‘the Yamnaya horizon’ (see area 1 on the map below) are the staffs of office (with or without mace-heads) used by males to indicate authority - in Sumer (**III.9- 8**) or Gonur (**III. 9-149**) often topped by a sculpted head to turn it into a club. Early 4-3M forms appeared in Eurasia, as in the instance of the burial of a Yamnaya male above, holding what has been interpreted as a massive copper staff of office.

The difficulty is that nothing of the transient Yamnaya camps remains. But they did leave mound burials on the plains – the Kurgan graves – and here and there traces of more permanent settlements also stand. We follow Anthony’s assessment, summarised next.



III.9-195: Map for 3300-3000BC indicating the spread of ‘the Yamnaya horizon’ (marked 1 on the map) in relation to surrounding cultures (including Late Maikop) – Anthony op.cit. fig.13.1

For an initial time anchor, looking again at the map above it is useful to think that the Yamnaya began to get seriously on the move during the last stages of the Maikop culture. Their increased mobility was enabled by the invention of the wagon which suited their pastoral lifestyle since it meant they could constantly move from pasture to pasture with greater ease – the mobile home carrying tents and supplies providing a base (like a modern-day caravan) alongside daily sorties on horseback to tend far-flung flocks (there seems to have been a wholesale changeover to sheep rather than goats, valued for the wool that could be traded further south). As they travelled, ownership of the steppes was extended and consolidated, and over time those tribes participating in this mode of life formed the Yamnaya identity, cemented by similar customs, leaving non-participants out of the picture (zones 2-5 in the map above). As Anthony puts it, ‘Those behaviours crystallized into a fairly stable set of variants in the steppes around the lower Don and Volga rivers. A set of dialects went with them, the speech patterns of late Proto-Indo-European. This is the sequence of changes that I believe created the new way of life expressed archaeologically in the Yamnaya horizon dated c.3300-2500BC [which is] the material expression of the spread of late Proto-Indo-European across the Pontic-Caspian steppes’. Note that Anthony uses the label ‘Yamnaya horizon’ to avoid implying there was shared ethnic identity across the board – rather it is a title for ‘a fashion in material culture that is rapidly accepted by and superimposed on local cultures across a wide area’ (see the related material on horses and wagon burials in our DIVERSION on the HORSE AND CHARIOT).

For a representative Central Asian benchmark I have concentrated in particular on Sarianidi's excavations in the cities of Gonur-depe and Togolok in in Margiana - present-day Turkmenistan - which represent the next stage of Yamnaya movement round to the east side of the Caspian Sea - from whose remains dating 2300-1700BC he has deduced it was an early Āryan settlement from the time before the split of its peoples towards either Iran/Iraq or India. Individual artefacts found on site show links with both India (carnelian necklaces), S-E Iran (distinctive shoulder-blade shaft-hole axes) and Elam (Elamite-type cylinder seals found in the tombs of Gonur (c.f. *III.9-170* with *III.9-1702*). All through we have noted signs of incipient differentiation whereby, as the Mitanni move south into the Near East in the centuries immediately after this time, trends emerge reflecting either what were to become Indian cultural indicators, or others that developed into Avestan trends: the Indo-European Gods cited in the Mitanni-Hittite contract is a sounding board we keep returning to as the indicator of the North Syrian Mitanni mix – see *DIVERSIONS 6, 9 and 12* concerning their GODS).

MASSON AND PARPOLA'S OVERVIEW OF THE NATURE OF ĀRYAN PRESENCE IN CENTRAL ASIA

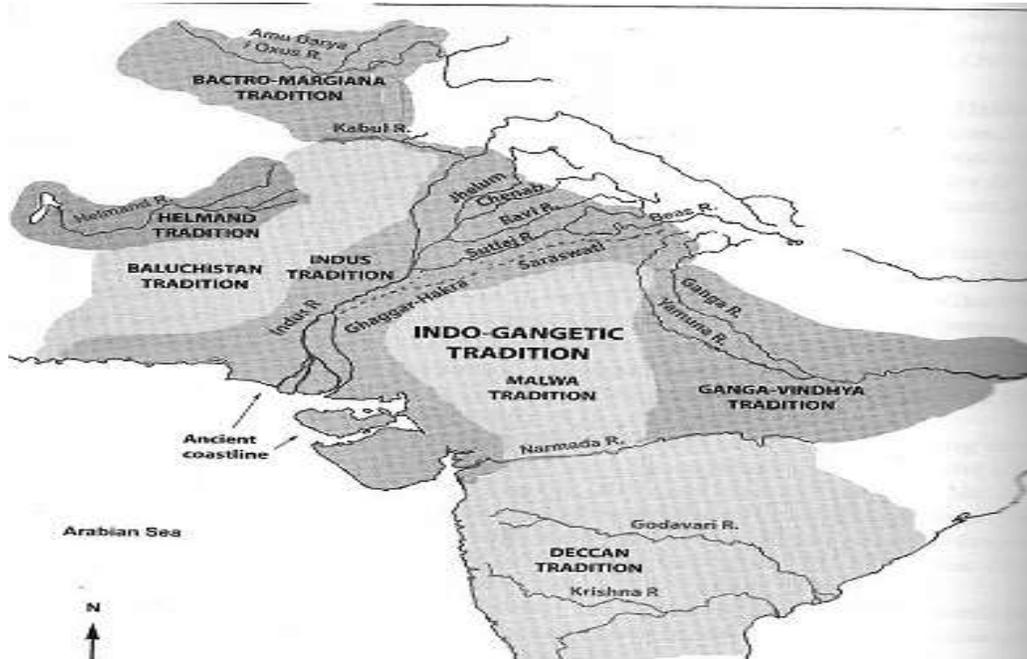
The following pointers to Āryan presence - significant in the light of their spread to the Mitanni and Mycenaean - were made by Masson in an early paper⁴³⁵ that tried to generalize about several hundred Steppe Bronze Age sites, mostly from the 3-2M time block with some reaching full intensity only in the second half of the 2M. We amplify these with later insights by Parpola.

- ◇ The move towards agriculture with the use of small canals running off Central Asian rivers indicate societies were moving down from the piedmontese slopes to the plain. It is these societies (first given the label 'Oxus Civilisation') that used materials and iconography within the Karakum bowl (now Turkmenistan) overlapping with Mesopotamian and Eurasian usage. As he puts it: 'There is a sharp strengthening of western, Elam-Mesopotamian contacts that considerably enriched the local art culture... It assisted in the formation of the entire block of new civilizations existing between the macrozones of Mesopotamian and Hindustani cultural progress'



⁴³⁵ V S Masson 'Cultures of the Steppe Bronze Age and Urban Civilizations in the South of Central Asia' in K Jones-Bley et al. (eds) *Complex Societies of Central Eurasia from the 3rd to the 1st Millennium BC Vol.II* Washington DC 2002 547-557

- ◇ For more detail, Parpola⁴³⁶ (newer on the scene and thus making fresh connections) makes the case for the peoples of Turān (defined by the crescent arrangement of sites forming an outer ring round central Iran as given on his map above – his fig.6) as being the *Dāsas* referred to in the *R̥gvedic* hymns written down 1500-1000, and responsible for introducing the horse to the Indus in the 2M using the Sind corridor as their access point, responsible for bringing in what we interpret as BMAC-type artefacts such as colonettes and trumpets – the latter used, he thinks, for training horses and chariot signalling in battle. His long paper conjures up a more complex picture than Masson's, and needs reading closely for up-to-date local nuance. He assumes the Indus peoples, on the other hand, had been indigenous to the area since Chalcolithic times - and that they spoke Dravidian (here Kenoyer's⁴³⁷ summary map of *Prehistoric South Asia* gives a general idea):



- ◇ Due to their monumental temple complexes and use of glyptic, the foundation of urban centres such as Gonurdepe and Togolok appeared to Masson to have been 'under theocratic social organization' (i.e. nascent Vedic-cum-Zoroastrian). Parpola's overview is of *two* main Āryan language-speaking infiltrations: the first being the Turanian *Dāsas* interacting with the Indus territory, and the later a second invasion of the Vedic Āryans who speak in the *R̥gveda* of their interaction with the now-settled *Dāsas* in the Punjāb (who had different rituals from them and had already intermarried with local Dravidians – thus described as dark-skinned). Sidharth notes that 'the names of a number of Hindu epic dynasty families, for example the Kurus, can be traced to Greater Iran [Turan]. Similarly tribe or community names from Hindu epics like the *Vṛkas* can be traced right up to the Gurgan Plain', and as he puts it so well, 'the Indus Valley may not have been the epicentre of the then prevalent Vedic civilization - which was probably centred in adjacent Greater Iran... [and] ... the fact is that in the *Mahābhārata* itself places such as Gandhāra [birthplace of *Pāṇini*, just quoted above], Kamboja (Afghanistan) and Sindh ... are featured'. Takṣaśila/Taxila is another Kashmiri place-name associated with the famous

⁴³⁶ A Parpola 'The Coming of the Aryans to Iran and India and the Cultural and Ethnic Identity of the *Dāsas*' *Studia Orientalia LXIV* Helsinki 1988 195-302 (His label for the Turanians as 'the Greater Iranian Bronze Age culture of the Namazga V phase' has not caught on, so the definition used for its coverage is still 'Turanian').

⁴³⁷ J M Kenoyer 'Measuring the Harappan World' in I Morley and C Renfrew (eds) *The Archaeology of Measurement* Cambridge 2010 106-122, fig.9.1

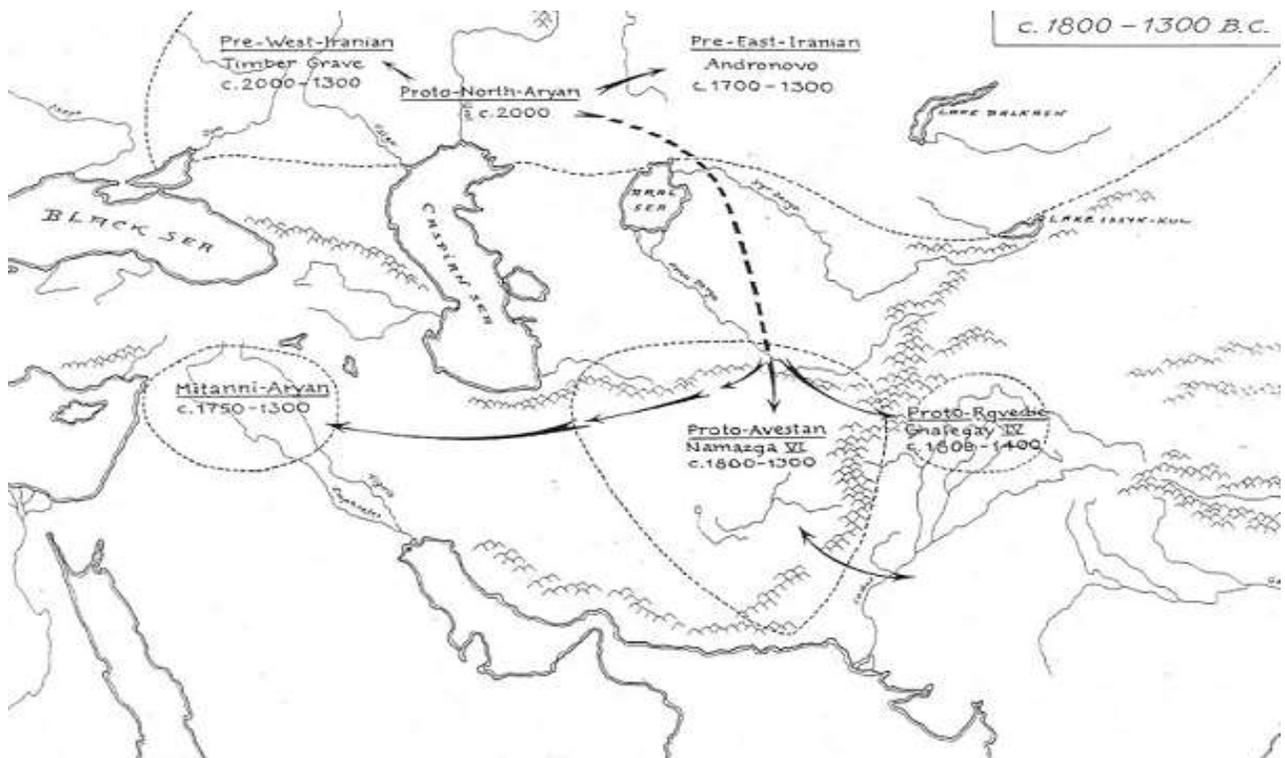
snake sacrifice made by Janamejaya, son of Parikshit. Not just places in the territory, but also separate peoples still today recognised as from the region come into the epic, such as the Tusharas (Tocharians of China); the Šakas (later associated with the Scythians); the Yāvanas (later associated with the West Anatolians/Ionians); the Pahlavas of Iran; the Valhikas and of course the Pāṇḍavas themselves, who are associated with sites round Peshawar/Puruṣapūra. The Mitanni fit into this doubly (indeed triply) impacted backdrop, explaining some already Vedic elements in their culture despite moving west and south - rather than east - into Syro-Anatolia.

- ◇ Even if many smaller groups in the southern Central Asian region must have spoken in a variety of languages, Masson says, ‘the creators of at least the majority of the steppe cultures should be referred to as the Indo-Iranian language group... . At the same time we cannot deny that there was a definite assimilation of the dominant ethnic group in this diversity. Such an approach to the problem makes it possible to compare the movement of the Steppe Bronze Age tribes in the Central Asian vastness with the migration of the Indo-Iranian tribes’. This penetration of peoples who then gradually gained ascendancy over local populations is discernible in the co-option of local gods into the dominant religion, and the blending of iconographical components. As Parpola puts it, ‘Indra and Varuṇa are *both* included among the oath deities in the pact of the Mitanni... with the Hittite[s]... . This suggests that the Mitanni Aryans are descended from the mixture of the Ṛgvedic Āryans and the Dāsas, and that this amalgamation probably took place before 1550BC’. (Indra dominates in most core Ṛgvedic hymns, whereas Varuṇa the Dāsa god is mentioned just now and again in later hymns as ‘twin’ to Indra).
- ◇ The 2M artefacts of the oases of the Oxus Civilization (many discussed in this Catalogue) indicate increasing interaction with the large-scale urban cultures of Turan, Mesopotamia *and* Indus. As Masson describes it, ‘there was also a direct penetration of cultural components of the steppe type and the actual steppe heritage into the settle urbanized cultures’. This precisely fits the process of infiltration of the Mitanni into Syro-Anatolia in the next phase: indeed, Pinnock⁴³⁸ in a footnote (13) tellingly refers to the origins of one queen of Ebla from one such an infiltrated region to the east whence in terms of ‘Mesopotamian ideology... desert and mountains represent chaos ... homeland to nomads who ... dress in sheepskins... live in tents in wind and rain ... do not offer sacrifices... dig up truffles ... and are restless... eat raw meat ... and are not buried according to proper rituals’ – exactly the complaint of the Ṛgvedic Indians about the Dāsas!).



⁴³⁸ F Pinnock ‘Dealing with the Past at Ebla: Ancestors’ Cults and Foreign Relations’ in O Kaelin (ed.) *Proceedings of the 9th International Congress on the Archaeology of the Ancient Near East [CAANE] Vol. I* Wiesbaden 2016 395-406

- ◇ If a break-away group from the Aryanised population of Margiana and Bactria ‘with high cultural standards’ moved on as a conquering, armed élite to form what became the Mitanni Empire, then in that region, Masson says, we would expect to find ‘the richest thematic set of mythological scenes of glyptic inscriptions alongside Near Eastern forerunners [that] might have certain northern traditions and prototypes’. As already explored in **Catalogue C**, we know from Otto’s reading of cylinder seals⁴³⁹ of the 19-18C BC, that earlier the foundations had been laid by the Amurru nomads coming up from the south, initiating the division of Syria and North Mesopotamia/Subartu into separate kingdoms with minor palace administrations modelled on Hammurabi’s Babylon (see her map above). Those kingdoms (even Aššur and Ekallatum in the end) during the mid-2M gave way to the *northern* nomadic Hurrian/Mitanni surges southwards as the balance of power between the different regions shifted once Babylon’s supremacy unravelled following Hammurabi’s reign. As Parpola puts it, ‘The R̥gvedic Āryans, the Pre-Zarathustrian Āryans and the Mitanni Āryans, therefore, should all belong to the same hypothetical first wave [out of Central Asia, since].... in their language the “Iranian” change **s**→**h** had not yet taken place’ - see his map below (*ibid.* 1988 fig. 32):



- ◇ This is supported by the occurrence of burials of charioteers armed with spears, sometimes with battle axes, associated with circular settlement-cum-fortresses such as Togolok or Arkhaim⁴⁴⁰, accompanied by horse skeletons and riding equipment such as bits or cheek pieces indicating a move to rulership by armed élites, at times now associated with temple architecture and seals with mythopoeic iconography. Parpola talks at length about the difference between the square forts (e.g. Togolok) and circular forts (e.g. Dashly) of Central Asia - from descriptions in the literature indicating

⁴³⁹ A Otto ‘The Collapse of the Balance of Power in the Middle of the 18C BC and its Reflection in Syro-Mesopotamian Glyptic’ in P Matthiae et al. (eds) *Proceedings of the 1st International Congress on the Archaeology of the Ancient Near East [CAANE] Vol.3* Rome 2000 1235-1246

⁴⁴⁰ A P Medvedev ‘Avestan “Yima’s Town” in Historical and Archaeological Perspective’ in K Jones-Bley et al (eds) *Complex Societies of Central Eurasia from the 3rd to the 1st Millennium BC* Washington DC 2002 285-7

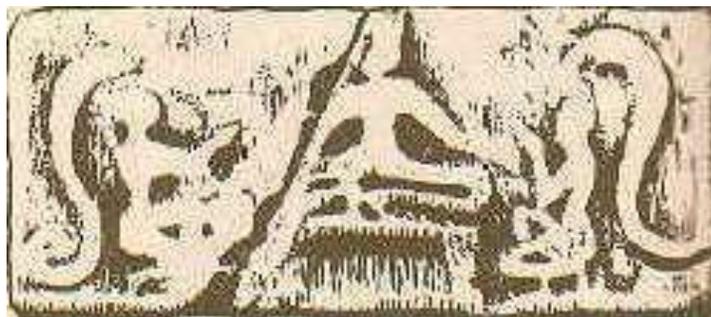
occupation by Proto-Zoroastrians (good) -v- Dāsas (bad people). (The circular city of Arkhaim is similarly said (Medvedev *ibid.*) to be the city built by King Yima referred to in the Avesta; that it was a temple-observatory comparable to Stonehenge; that the territory it was in was the homeland of the Aryans - and traditionally the birthplace of Zoroaster, said in one tradition to have been buried at Sintashta after his death). Certainly in the Vedic literature Dāsas are associated with forts, in turn associated with the worship of the Goddess Durgā (often represented by a tiger, rather than lioness).

FORTS, DURGĀ, SEVERED HEADS AND SERPENT WORSHIP AS PROTO-MITANNI INDICATORS

Being Goddess of the wild forest, War and Death, Parpola quotes from a Tamil epic the description a Durgā precinct in the grounds of a cemetery which will become relevant to an Indus seal we analyse shortly:

The trees in front of the temple carried the heads of men who had voluntarily made the prime sacrifice to the goddess: the worshipper tied his head to the branches by the hair, and himself severed it with a sword. Emaciated ascetics doing penance in the cremation ground made garlands of broken skulls.

Durgā was especially worshipped in a festival at the end of summer - at the onset of autumn - lasting nine days, with 'Victory day over the demon buffalo' on the tenth. Using the familiar Mesopotamian BIVISUAL, this could actually be



expressed as a *Forward Attack* (in this context, of tigress on a buffalo!) since the number of days involved implies she was Goddess of the Intercalary Days needed to square the shortfall between lunar and solar years up to the synodic New Year point - which if not dealt with leads to disorganization of the Calendar due to an eleven-day slippage every year. As to the astronomical significance of the severed heads offered to her, we come back to that theme shortly, but in the meantime the Harappan seal above⁴⁴¹ nicely fits another description given by Parpola of the worship of a 'feline-faced goddess Carcikā worshipped with phallic rites and a serpent cult at Hingulāja, a volcanic site producing vermilion or cinnabar (*hingula*) in south Baluchistan, an Early Harappan area where Dravidian is still spoken'. He quotes the prescription, "Of the unguents applied to the body, vermilion causes the greatest delight to the goddess" – explaining the connection between Durgā and the red tilak daubed on the forehead by her worshippers, probably alluded to by an Indus script sign on another important seal from Harappa also to be analysed later. We will find the seated figures on these seals can be male or female.

Before we leave this particular seal, the serpents in the Indus ritual on the seal above are interesting in the light of our interpretation of the Snake Lady on Syro-Mesopotamian seals as a Mitanni import (the *R̥gveda* refers to *Sarpa Ranji*, a serpent queen, while the *Atharva Veda* mentions two snakes, *Aligi* and *Viligi* – and not surprisingly, Indus clay figures sometimes feature snakes as crude as those found in the Cult Centre at Mycenae). Today the Snake Goddesses *Manasa*

⁴⁴¹ See J Newberry *Indus Stamp-Seals from the Vats Excavations at Harappa* Victoria BC 1985 (John Newberry intended his pamphlets on the Indus Seals to be part of a proposed book entitled *The Mitanni: to Tushratta and Tut-Ank-Amon*, only excerpts from which were ever self-published (unobtainable, one copy at Cambridge University Library under no. 84921940, not seen).

Devi and *Naga Yakṣi* are still worshipped (see also our Nepalese example at *III. 9-190*, where even now a pre-pubescent girl represents the Living Goddess, sitting on a throne with a canopy of seven snakes).

To complete this combined thumbnail sketch of Proto-Indo-Iranian movement around the BMAC zone, although with Anthony's help we started by dwelling mostly on the idea of the spread of the Yamnaya as the definitive Indo-European cultural drive relevant to our enquiry, we must not leave out Kuz'mina⁴⁴² (in agreement with Parpola) who brings into the picture between 2000 and 900BC the influence of the Andronovo tribes in setting up connections between the agricultural communities of Central Asia - including the BMAC - with tribes in the Tien Shan, Altai, Tuva and Pamir mountains as farming gave way to pastoralism at the onset of drier climatic conditions, especially since this people appears to have been particularly associated with mining and the dissemination of metallurgy. Judging them to be Indo-Iranian, she gathers together the many parallels between the archaeological record and Ṛgvedic or Avestan texts. For completeness, we should also mention that Kenoyer⁴⁴³ endorses the idea that it was more likely the Dravidians who introduced the horse and the camel into Iran (which might also explain the introduction of the peacock) and that the BMAC population itself 'could have been Dravidians pushed onto the Iranian Plateau by Altaic and/or Indo-Iranian steppe nomads' (Vedic texts refer to the high-quality horses to be found in Sind). In a nutshell, we must imagine counterflow movement of populations in opposing directions, and take all maps with arrows going one way only as only being half the story.

2. INDO-EUROPEAN CULTURAL HALLMARKS

Given that over time different split-offs from the main tribes continually developed specific customs we cannot be too doctrinaire in our criteria for what constitute the hallmarks of Indo-Europeanness - but taking the BMAC as our tuning fork for the median ground it is possible to pinpoint obvious commonalities of cultural behavior and/or material remains⁴⁴⁴ that help us draw parallels reaching as far as Mycenaean society. Taking the Yamnaya horizon as our ground-line, as Anthony puts it, 'The behavior that really set the Yamnaya people apart was living on wheels' – preceded, of course, by the domestication of horses to pull them. The adoption of the way of life of the Yamnaya horizon gave rise to 'the political infrastructure to manage larger herds from mobile homes based in the steppes. This gave rise, among other things to shared [cults], customs and language' (this way of life is still followed today in areas like Tajikistan⁴⁴⁵, for instance). Just as a quick ball-park pointers, it is interesting to note from a paper about the contents of the refuse pit outside Ebla's Northern Palace⁴⁴⁶ that there was a preponderance of sheep over goats (as well as cattle), with the skeletal remains of dogs and horses as well as donkeys – many of them signs (see the categories below) of Mitanni culture. It is interesting to see how early on the Mycenaean adopted the horse and chariot, given they appear on the stelai of the Shaft Graves.

Throughout we have laid the trail preparing for firm conclusions by highlighting clues drawn from the artefacts in the Catalogue, and as the narrative has gathered momentum, like a detective story it dawns from many small details that we are dealing with confluence points of Āryan and Near Eastern culture (dogs as pets, luxurious warrior burials, presence of horses and chariots) so that in our

⁴⁴² E E Kuz'mina (ed. J P Mallory) *The origin of the Indo-Iranians* Leiden 2007

⁴⁴³ M L Kenoyer *Ancient Cities of the Indus Valley Civilization* Oxford 1998

⁴⁴⁴ G N Kurochkin attempted this in relation to Marlik in his 'Archaeological Search for the Near Eastern Aryans and the Royal Cemetery of Marlik in Northern Iran' in A Parpola et al. (eds) *South Asian Archaeology 1993* Helsinki 1994 389-95 (though tending to jump forward chronologically too much to the Scythians) - but we have included useful suggestions from his paper in our list. Sadly all his other papers are in Russian, which I cannot read easily.

⁴⁴⁵ Levison Wood's trek along the foothills of the Himalaya range starting in the Wakhan corridor in Afganistan on the Karakum and on into Pakistan and Iran passed through typical Central Asian territory of high mountains and flat plains in the valleys (see DVD entitled *Walking the Himalayas*, first shown on Channel 4 TV 2015).

⁴⁴⁶ J de Grossi Mazzorin et al. 'The Northern Palace of Tell Mardikh-Ebla (Sykria): Archaeozoological Analysis of the Refuse Pit F.5861/F.5701' in P Matthiae et al. (eds) *Proceedings of the 1st International Congress on the Archaeology of the Ancient Near East [CAANE] Vol.I* Rome 2000 311-322

summary check list below we realise most topics have already been introduced. For our purposes the aim is to note how many of the following common characteristics the Mycenaeans shared with Āryans in general – and most immediately with the Mitanni:

- ★ THE 'GUEST-HOST' CODE - meant that honour required those passing through a certain host's territory be treated as guests and given hospitality. Those taking on the mutual guest-host relationship served to distinguish between those who belonged - and outsiders - to the extent that, as Anthony points out, 'The guest-host institution might have been among the critical identity-defining innovations that spread with the Yamnaya horizon'. He points out that it 'was bound by oaths and sacrifices so serious that Homer's warriors, Glaukos and Diomedes, stopped fighting and presented gifts to each other when they learned that their *grandfathers* had shared a guest-host relationship'. This is subtly different from the Semitic Amorite code of adopting outsiders as sons or fathers.
- ★ THE HORSE SACRIFICE (*Aśvamedha*), – made not only at funerals, but later in India (as described in our HORSE AND CHARIOT DIVERSION) was enacted at the peak of a leader's lifetime to signify territorial ownership and kingship. The Mycenaeans adopted the horse and chariot as early as the Shaft Grave era - in other words before the Levant did.

With the imminent analysis of a key Harappan seal in mind, we stop to consider Subhash Kak's⁴⁴⁷ explanation of the rationale behind the horse sacrifice



III.9-196: Foal sacrifice in a high-status grave at Gonur

- ★ DOGS embedded in the household are included as companions in burials (e.g. III. 9-28 (Gonur) and ForAtt-25/26 (Perati/Vapheio) (see a full coverage of Dogs in Mycenaean and BMAC tombs under DIVERSION 8).
- ★ MUSIC AND HAOMA/SOMA DRINKING – often accompanied by DANCING, MUSIC, STORY-TELLING and other ENTERTAINMENT such as acrobatics and animal games (see DIVERSION 5). This social behaviour has emerged throughout the Catalogue,



⁴⁴⁷ S Kak *The Asvamedha: The Rites and Its Logic* Delhi 2002

given New Year celebrations in particular are often alluded to on artefacts with the *Forward Attack* BIVISUAL, in turn partly related to the Mycenaean cultivation of the lion (DIVERSION 11) and bull/bull-leaping - traceable not only back to N-E Anatolia but also as far as the Indus (see Mohenjodaro seal no. 312 above referred to by Jeyakumar *ibid.* and c.f. the similar seal found later at Banawali, above right). Involving an expansionist, rugged lifestyle perpetually on the move and fuelled by high spiritual ideals, overall we can say that Āryans put as much effort into playing hard as they did to working and fighting.

★ SELF-ADORNMENT, BODY CULTIVATION AND SELF-DISPLAY

- metal mirrors, combs and other makeup paraphernalia (c.f. the contents of the Griffin Warrior's grave);
- jewellery in semi-precious stones or/and precious metals (DIVERSIONS 2/3);
- concern for fitness and well-kept physique (DIVERSION 1)

★ MOUND BURIALS

- the mound covers a hollow burial chamber with body and goods inside as if in a room or small house;
- in the case of élites, luxury possessions interred with the body;
- burial posture lying supine, head usually facing N/N-E;
- sacrifice at funerals of wagons, carts, sheep, cattle/camels, horses and dogs (c.f. *III. 9-26* at Gonur);



III.9-197: Sintashta sacrifice of six horses (right), four oxen and two rams - from Cunliffe 2015 fig. 4.18

- often sacrifice of spouses or retainers alongside;
- most skulls dolichocephalic (as in *III.9- 194*) – a physiological indicator of Aryanness – in the flesh they were handsome, and men *and* women cultivated their appearance (see above at SELF-ADORNMENT).

★ MYTHPOEIC ICONOGRAPHY: Hiebert characterised the iconography of the BMAC as embodying themes from Indo-Iranian mythology – in the state of Aryan mythopoeia preceding the split into the Avestan and Ṛgvedic panthaia (comparative Indo-European mythology is an entire subsection of scholarship). We can extend his definition to include later scripture and literature still harking back to earlier times – though not all their imagery can be explained this way. We can make obvious parallels, for instance, between great battles centring on the issue of stolen wives in the *Mahābhārata* and the *Iliad*⁴⁴⁸ – or the idea that the Gods' home is on a mountain-top (whether Mt Meru, Saphon or Olympus). Francfort in his paper in the *Antiquity* 68 Special⁴⁴⁹ avoids Zoroastrian symbolism, trying unsuccessfully to tabulate and engrid the components of BMAC iconography by motif. But Aryan iconography also has metaphysical levels, and expressions of duality in Mitanni composition (DIVERSION 1)

⁴⁴⁸ See, for instance, J Baldick *Homer and the Indo-Europeans* London 1994: he himself was inspired by C S Littleton 'Some Possible Ind-European Themes in the *Iliad*' in J Puhvel (ed.) *Myth and Law Among the Indo-Europeans* Berkeley 1970 229-46. See also Martin West *Indo-European Poetry and Myth* London (paperback 2008), written as a counterpart to his *The East Face of Helicon* 1997 which pointed out the Near Eastern Influences London

⁴⁴⁹ H-P Francfort 'The Central Asian dimension of the symbolic system in Bactria and Margiana' 406-418

and iconography, can be traced back to Central Asian iconography with its fundamentally Proto-Zoroastrian concern with the duality between Good and Evil. We come back to this question in relation to the metaphysics of the Zoroastrian Heptad in contrast to the Vedic approach (see *III. 9-204* and also DIVERSION 9).

- ★ HYBRIDISM AS A VISUAL LANGUAGE Kurochkin noted how the double-headed eagle was quintessentially Central Asian (seen on a seal under **ForAtt-29** in combination with the Snake Lady) – it survives even today in Russian and Austrian heraldry. He missed the opportunity to fully identify what I term their ‘chimaeric imagination’⁴⁵⁰ that combines features of different animals as their default visual convention in order to communicate truths about the Seasons or the Gods (such as adding wings to a figure to read it as heavenly). This Central Asian contribution came to be completely embedded into Assyrian and ancient Greek art and taken for granted as their own tradition (see the example of Sagittarius, most recently discussed above). We have referred also to Mitanni use of BIVISUALS – but this seems to have been more a localised flair for symbolic communication in a dual cultural situation where the subject people’s culture is in mid-absorption.
- ★ CONCERN TO UPHOLD COSMIC ORDER AND TRUTH (ṚTA/ARTĀ) – expressed in rituals depicted in seal iconography (DIVERSIONS 1/7) reflecting their religious texts – the ideal confirmed through royal names and the names of the Seasons (ṚTU). From the observation of astronomical ṚTA, Good Government follows (‘the science of the movements of heavenly bodies is said to be the eye of the Veda’ (*Pāṇiniya Śikṣā* 41-42⁴⁵¹).
- ★ AN AGE-OLD ORAL ASTRONOMY TRADITION IN RELATION TO STEPPE LIFE LIVED IN NORTHERN LATITUDES: The image of Orion and his dog is purely Zoroastrian in inspiration, whereas the projection of the gazelle head on those stars is Vedic. Differences arose from the very beginning between western and eastern Yamnayas due to variations in geography: the eastern were more mobile with their herds, meaning the more sedentary western Yamnayas were in a position to grow crops – reflected not only in finds but also in differing vocabularies for common items in a regional way of life. Earlier we looked at words for ‘plough’ for instance (in relation to Ursa Major/Minor/Arktos), as also words for ‘horse’/equus and ‘chariot/charioteer/Auriga’ in relation to readjustments to the Age of Aries calendar whose incorporation in the Mycenaean world of the entire Mediterranean basin bears the signature of Central Asian inspiration (one of the key Vedic asterisms/nakṣatras is *Ashvinī*–‘Horsey’).

To end the *Iconography Section*, the last part of this Catalogue tries to draw all the material in this Catalogue together to make sense of it by concentrating on the above final category, first by attempting to differentiate between the Zoroastrian and Vedic astronomical traditions, taking into account they were initially fused (areas of mutual sharing will become obvious). This is a vast subject, so for simplicity we will concentrate on the zone of the sky defined by the Polar Centre - Ursa Major - Orion colure and immediately surrounding constellations, just as we did for the Mycenaean sky map described by Homer in the Trojan War. In the Asian traditions these stars, unsurprisingly, also take centre stage as constant and reliable benchmarks governing Time. Keeping to the basics and leaving images to speak for themselves will help make the essential character of these two cosmologies stand out.

We ease in gently from a toehold in archaeology, the references to actual sites and artefacts helping us anchor our analyses. The criteria established above have prepared the ground, simplifying our task of outlining two core cosmological structures.

⁴⁵⁰ The extent of variation using this visual method is apparent in V I Sarianidi’s *Myths of Ancient Bactria and Margiana on its Seals and Amulets* Moscow 1998

⁴⁵¹ *Apud* A Beinorius ‘On the Philosophical and Cosmological Foundations of Indian Astrology’ *Mediterranean Archaeology and Archaeometry XIV* 2014 211-21

THE ZOROASTRIAN ASTRONOMICAL TRADITION

Since Sarianidi reads the BMAC civilization – through artefacts rather than texts – as providing a picture of an Āryan society at a certain stage of development, its material and his interpretations of it provide a neat sounding board against which to imagine the subsequent Mitanni departure and ensuing encroachment into the Near East – meaning the journey of Central Asian cultural traits into Mycenaean ones. The narrow skulls of the skeletons in the Gonur burials, along with the instances of wagon burials and horse or dog sacrifices (described earlier in full detail), qualify Gonur as undoubtedly an Indo-European site of Yamnaya horizon origin. Intermittent links to India at this period are suggested by an Indus seal and ivory artefacts found in one of the tombs (see illustration



III.9- 198 (Top Left)) Indus seal found at Gonur; (top right) Ivories from Grave 3245, clearly sourced from India; (below) overview of the fortified Gonur-Tepe kremlin/walled settlement

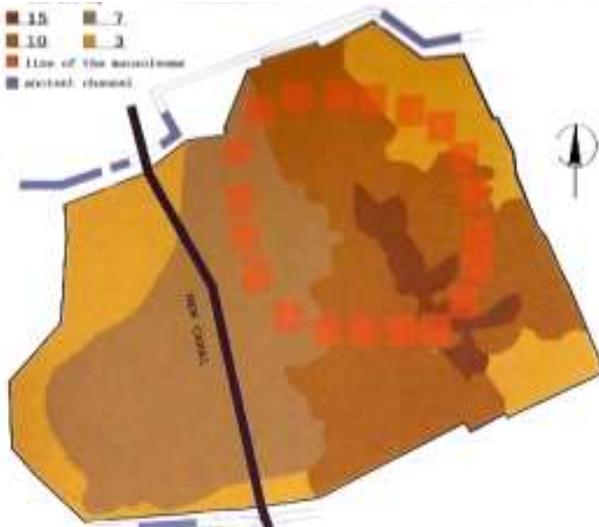
above). And in the necropolis Sarianidi saw the layout of élite tombs like rooms in a house (III. 9-199) as another Āryan custom.

BMAC ARCHAEOLOGY EXPLAINED AS PROTOZOROASTRIAN - AND ISSUES CONCERNING THE EARLIEST ZOROASTRIAN CALENDAR

Furthermore, Sarianidi⁴⁵² insisted the evidence of architectural features such as the Gonur palace's astronomical orientation N-S and E-W (which he likened to that of Knossos) and the white rooms in the shrines at Togolok 1, Togolok 21 and Gonur South Mound for purification rituals and the preparation of Soma – let alone the specific character of individual finds at both Gonur and Togolok 21 (such as ephedra remains, fire altars and even a possible *dakhma*) – pointed overwhelmingly to their being nascent Zoroastrian sites, in certain details uncannily conforming with later Avestan texts. We primarily associate the Zoroastrian religion with the practice of astronomy, yet when thinking of Zoroastrian beliefs we tend to think of them in terms of the Seven Levels of Creation and the seven metaphysical qualities as embodied in the Achaemenid *Heptad* (III.9-204), but in modern times (just as in Jewish orthodox

⁴⁵² Sarianidi in the *Antiquity* 68 Special 1994

circles) the practice of astronomy by priests directly connected with a community adhering to its religion has long died out. It is possible to pin down to some extent when these two halves of Zoroastrianism began to split, given we know that during the Parthian and Sasanid dynasties the grip on corrective intercalation slackened, resulting in calendar maintenance running completely out of kilter with the actual seasons. Looking back to 2M Gonur, on the other hand, finds also provide the background for trends long before such a split, providing a physical scenario where inherent Avestan -v- R̥gvedic strands are still combined, some centuries before the entry of the second wave of conquering Āryans into India, as defined by Parpola above.



III.9- 199 (Left) Plan of the Gonur necropolis with circle of elite mausolea (c.1800-1600) marked by red squares - from Ligabue & Rossi-Osmida op.cit.; (right) view of a typical mausoleum-type tomb (no. 2650 built like a little house – from Sarianidi 2010

Sarianidi came up against the problem of squaring the reputed era for the birth of Zoroaster as against the 2M dating of the Margush civilization showing these Zoroastrian characteristics (as far as the academic world was concerned, orthodox opinion only accorded the prophet a starting date of c.600BC). But today Iran-based Zoroastrian communities on the basis of Pahlavi writings officially quote their religious era as beginning from the day Zarathushtra proclaimed his Divine Mission to humanity at *Now Rūz* (the vernal equinox) 1737 BC - known as 'the Year of Religion' – precisely when, according to their calculations, the new period of Aries began (2017 is 3754 ZRE, as against Jewish Era 5777 for 2017). The re-establishment of this Zarathushtrian Religious Era was only made in 1990, and the Assembly responsible for doing that now formally observes this date as the beginning of the Zoroastrian calendar, even if - due to the many centuries of confusion - counter-calculations are still made by other communities in different parts of the world (or abdication from making any at all). These 2M and 1M datings still contrast with that of a handful of scholars who place the tradition to as far back as c.6000BC - not necessarily in terms of the birth of an actual individual, but to account for the practice of organised astronomy 'somewhere in Central Asia' following the last Ice Age⁴⁵³, thus building on late Neolithic beginnings.

Current Jewish chronology originating in Mesopotamia is a parallel living example of how a community can keep calendrical origins alive from a remote time in its history, and their Calendar goes back even earlier than the official Zoroastrian one, giving credibility to the real possibility of a 6M Ubaid start to the organised calendar in the Ancient Near East overall (that there was a merged, sole tradition that far back is possible, but this can only be speculated upon). Despite these living testaments - and aspects of the visual evidence in the archaeological record which they could not read (the **CANEA**) - scholars who started out giving Zoroaster a Sixth Millennial beginning were more or less forced to change their minds due to narrow-minded and rationalistic Western academic

⁴⁵³ Bal Gangadhar Tilak *The Arctic Home in the Vedas* Poona/Bombay 1903

fashion – such were Gnoli and others cited by Sherwin⁴⁵⁴ - but one feels they went against their better judgment. A 6C BC individual called Zoroaster may well have reformed the tradition in Achaemenid times when the metaphysic of the *Heptad* as enshrined at Persepolis became canonical. For the 2M dating, the practice of astronomy associated with a cadre of Magi knowledgeable about the calculation of the Seasons became a separate *silsila* in the tradition handed down over many centuries, unlikely to be attributable to one person alone, but probably part of a primordial tradition of observation and mnemonic cult practised by astronomer-priests over many generations. At least today this is formally acknowledged as traceable to an individual in Seistan in the 2M who must have masterminded the adjustment of the Calendar to take account of the new Aries Vernal Point – underlined in many ways by the physical evidence of the BMAC and, as we shall see, in Indus iconography (recently Talpur⁴⁵⁵ and others have looked into the many local languages associated with the area, looking for words that may be keys to unlock Indus Seal images – the most notable being the word for the brazier or manger standing in front of the bulls on most seals - which is *ahura* in Sindhi. The fact there is evidence in the Classical Greek writings of Magian esoteric time-counting in long aeons calculated in units of 3,000 years going back into the past does seem to validate an older tradition beginning well before 2000BC⁴⁵⁶ that need not necessarily be associated with one particular man named Zoroaster but, rather, with the ‘camel territory’ where it developed over centuries before reaching fruition.

ZOROASTER AND THE CAMEL: IMPLICATIONS OF THE 2M AGE OF ARIES ZOROASTRIAN CALENDAR ADJUSTMENT FOR MYCENAEAN PRACTICE

For our purposes it is both compelling and significant that the comparatively orthodox 1737 date accepted in Iran today (explained again more fully below) happens to accord with Sarianidi’s reading of the 2M birth of Proto-Zoroastrianism in the BMAC. The fact that the Age of Aries is now taken as the starting point of their calendar by a mainstream indigenous Zoroastrian authority⁴⁵⁷ is remarkable since it gives foundation to our speculation that Central Asian astronomical knowledge really did filter through in some kind of ‘technology transfer’ to affect the recalibration of 2M Levantine and Aegean Calendars too. The adjustment needed to replace benchmark stars following the Sun’s Precession to the Aries Vernal Point was hinted at in DIVERSION 8 on SIRIUS, since the Sothic Period Renewal of 1320 at the end of the Mycenaean period would have served as a major double-check, helping explain why Sirius is the chief star for the Zoroastrians (the matter of the *Regulus-Ursa Major* fiducial line from the Indus system comes into this – explained later). We will describe the Zoroastrians framework of stars - after culling one more telling fact from the BMAC context.

If we go along with Sarianidi’s convincing view that Gonur and Togolok bear the hallmarks of Proto-Zoroastrianism it means this



III.9- 200: Camel engravings on silver and gold vessels from Gonur Tomb 3220 (note the bow between the camel humps on both)

⁴⁵⁴ G Gnoli’s *Zoroaster’s Time and Homeland* (1980) followed this view – unfortunately recanted in his later *Zoroaster in History* (2000). As S Sherwin points out in his paper on Zoroaster in R P. Gordon (ed) *The God of Israel*, few these days favour the very early date.

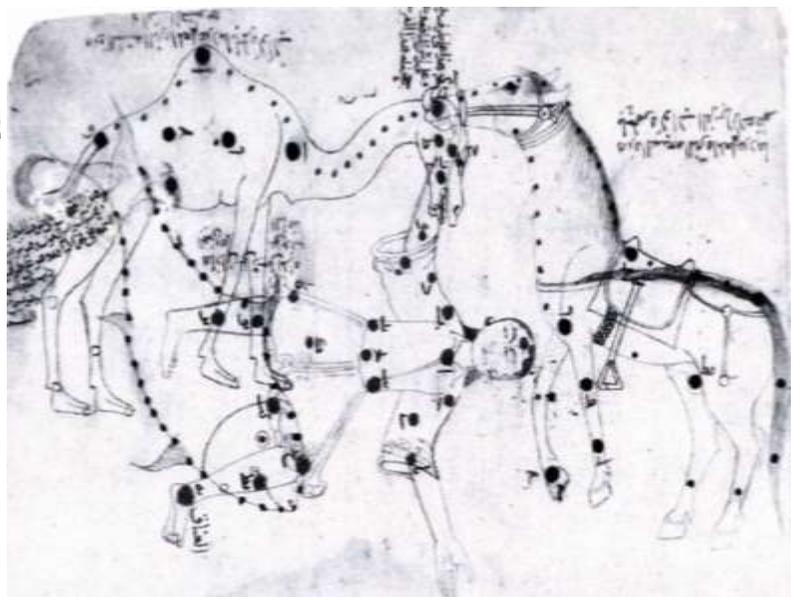
⁴⁵⁵ P Talpur *Indus Seals 2600-1900BC Beyond Geometry* self-published SIJ Books 2017

⁴⁵⁶ My www.cosmokrator.com newsletter, ‘The Zoroastrian Concept of the Saošyant and the Virgin Birth’ conveys some idea of esoteric Zoroastrian periodicity.

⁴⁵⁷ Current Zoroastrian orthodoxy can be explored on-line these days – google, for instance, Jaffray *The Zoroastrian Calendar*.

stage of the tradition was practised in or before 2300-1700, and he makes a fascinating comment on the etymology of Zoroaster's name worth taking seriously, since it sheds unexpected light on the camel iconography on artefacts from Gonur and surrounding region (which would include Seistan). Engraved on two artefacts from a Gonur tomb (above) is a floating bow (?Ban/Sirius) between the two humps of the camel as if aiming at sighting horns, giving both images a marked astronomical resonance. We have already commented at length on the unusual camel stamp seal from the temple at Togolok 21 (III.9-159) with bull leaping scene on its reverse angled along a guilloche/double serpent, against a background of stars and tumbling humans. Sarianidi writes, 'In Avestan, *Zarathushtra* is generally accepted to derive from Old Iranian *zarāt-uštra*. While the first half of the name, *zarāt*, has the connotation 'golden' from the old Eastern-Iranian and Modern Persian *zar* = gold, the word does not itself appear in Avestan. But the second half of the name, *uštra*, is universally accepted to mean 'camel'⁴⁵⁸. If the Bactrian camel is the totem animal of this religion it underlines the location of the more systematic 2M Zoroastrian Calendar as indeed rooted in Margiana and Turanian 'camel country'.

In Pit Burial 3900 at Gonur - already referred to in relation to the burial of the large number of dogs - two camels and two donkeys were also included (III. 9-28, also III. 9-26). The proportion of horses sacrificed at Gonur amounted to about the same number as the dogs – but camel burials were a rarity - possibly only to be associated with astronomer-priests? Rogers⁴⁵⁹ very interestingly mentions constellation imagery local to the region as later preserved in some versions of the Persian Al-Sufi's *Book of the Fixed Stars* (originally written in 964AD in Arabic but copied many times in the following decades). In the MSS in the Bodleian Library, Oxford (below left)⁴⁶⁰ and in the Museum of Islamic Art, Doha (below right)⁴⁶¹ the constellations in the Cassiopeia-Auriga-Perseus-Andromeda-Pegasus-Cetus region feature a drawing of Andromeda standing on Cetus with right hand touching the nose-to-nose heads of a camel (Auriga with Perseus) and a horse (Pegasus, not winged in any of the rescensions, signals it was the 2M Mitanni version that was kept in the Greek world!). Do the camel images from the Gonur tombs refer to the camel constellation? Certainly



⁴⁵⁸ A R Wadia in his small book, *The Life and Teachings of Zoroaster* (Madras 1938) explains this etymology - mentioning, however, that though Zoroaster may have been born in Bactria (and strong associations with Takht-e-Suleimān in Azerbaijān), he is thought in his maturity to have operated in Seistan – note these are sites at the extremes of the Turanian Crescent.

⁴⁵⁹ J H Rogers 'Origins of the ancient Constellations I: The Mesopotamian Traditions' *J British Astronomical Association* 108,1 1998 9-28 [his contribution does not bring Zoroastrian or Indus factors into account - nor does his part II paper on the Mediterranean traditions appearing in the following volume, Vol. 108,2

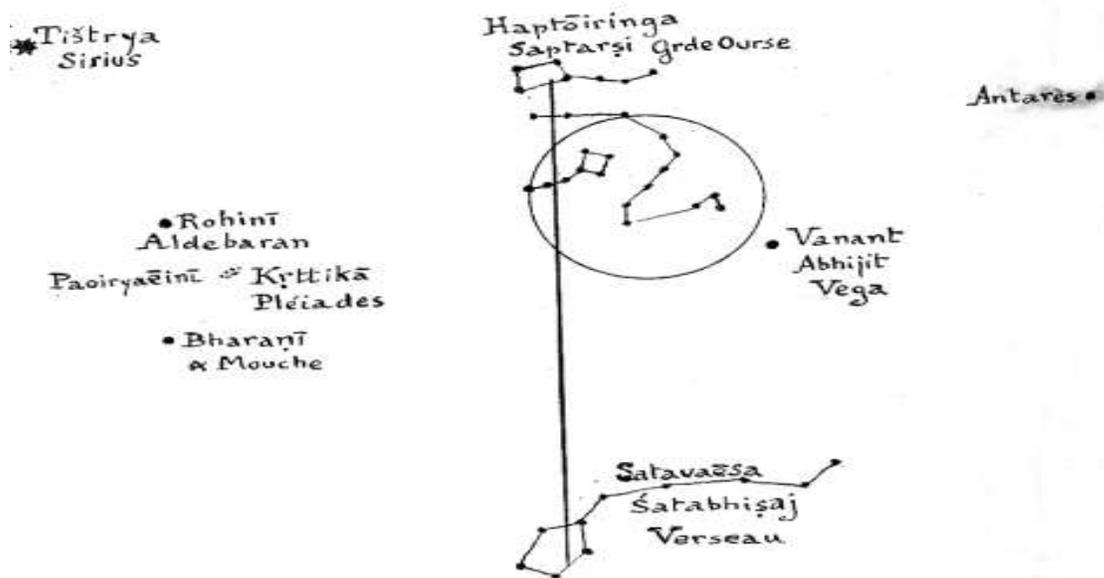
⁴⁶⁰ Reproduced by Rogers as his fig. 9

⁴⁶¹ Conveniently viewed via an Al-Sufi manuscript summary given by R H Van Ghent via this link <http://www.atlascoelestis.com/al%20sufi%20van%20gent.pdf> p.19

for us is the association of the camel with the Auriga and Perseus star area is significant, for if it is the totem animal of Zarathushtra it is our strongest pointer that Zoroastrian influence was somehow bound up with sharing of astronomical knowledge with the West.

ZOROASTRIAN ASTRONOMY AND THE GENERALS, LED BY SIRIUS AND ORION

In trying to get at the essence of the original Zoroastrian astronomical tradition without later accretions (it adapted its system in the light of progress in astronomy in other countries at later periods), although coinciding in several ways with the Indus tradition (inevitably they both deal with the same sky), it was founded on a markedly different - dare we say almost unrealistic - attitude towards the cosmos, espousing different emphases that gave primacy to Sirius, Orion, the Bears and three other major stars including Aldebaran and Antares (surviving in concrete form centuries later in the Mithraic taumachy – see *Icon A* in **Chapter 19**). Although we mostly only have late evidence for the codification of the Zoroastrian astronomical tradition in the *Bundahišn*⁴⁶², considered a post-Sasanian commentary on the astronomical content of the earlier *Avesta* (itself dating from the 2M), certainly on the basis of the officially accepted Zoroastrian 2M calendar of today, overall it is clear its *original* astronomical priorities show little reliance on an Indus-type *nakṣatra*/lunar asterism system⁴⁶³ or its associated peacock symbolism - considered in context later.



The Four Generals and the Two Bears with Draco - Filliozat⁴⁶⁴ fig. 1

From what we can make out, as Nadershah⁴⁶⁵ points out, in the time of the Avestas each *day* of a *Māhya*, or Lunar Month, was separately named, consisting of four sets of seven days named in a sequence of categories, described in various *Yashts*:

- ★ The **AMESHASPENTAS**/ARCHANGELS, led by Ahuramazda accompanied by Bahman, Ardibehesht, Shahrevar, Aspandārmad, Mitra and Khordādamardād (corresponding later to the Yezidi Seven Archangels led by *Tāwūs*, the Peacock Angel). An alternative list gives Vohu-Mānah, Asha-Vahishta, Khshathra-Vairyā, Spenta-Armaiti, Haurvat-Ameretat, Geustashan/ Geusurvan and Ātar;

⁴⁶² For a reliable English translation of the account of the *Creation of the World* and Avestan Calendar (reprinted from the Sacred Books of the East series) see the early chapters in S H Nasr and M Aminrazavi (eds) *An Anthology of Philosophy in Persia I: From Zoroaster to Umar Khayyām* London 2008. In it all the variations of transliteration from the languages of the original texts - obvious in the other papers I quote from - are tidily ironed out, making for smoother reading.

⁴⁶³ Apart from one rather significant exception concerning the two stars *Paioryaeni* and *Upa-Paioryaeni* (= modern Persian *Parvīn/UpaParvīn*) meaning the Pleiades, immediately following the Four Generals in importance, with peacock connotations (though the present-day Farsi word for peacock is *ṭāwūs* - as for the Yezidis)

⁴⁶⁴ Jean Filliozat 'Notes d'Astronomie Ancienne de l'Iran et de L'Inde' *Journal Asiatique* CCL 1962 325-50

⁴⁶⁵ J D Nadershah 'The Zoroastrian Months and Years with their Divisions in the Avestaic Age' in J J Modi (ed.) *The K R Cama Memorial Volume* Bombay 1900

CATALOGUES OF EVIDENCE

E: THE FORWARD ATTACK CHRONOLOGICAL FOCUS ICONOGRAPHY

- ★ The **SEVEN PLANETS**, being Hormuzd-Jupiter, Âtar-Mars, Âp (Naheed/Anahita)-Venus, Hvare-Khshaeta-Sun, Maonha-Moon, Tishtrya-Mercury, Geozurvan-Saturn (note the crossovers of names between Angels and Planets);
- ★ The **SEVEN MORAL AIMS (OR VIRTUES)**, and
- ★ The **SEVEN RELIGIOUS OBJECTS (RITES)**.

Even though another *Yasht* quite clearly states: 'fifteen days the Moon waxes; fifteen days the Moon wanes', clearly contradictions in the documentation are evidence of the astronomers' struggle at this time to come to terms with the shortfall between lunar, solar and synodic Year-length. The *Māhya*-names were evidently a way of counting the passing of the month with distinctive names for each week in it, and additional mechanisms for taking account of the longer months. All we need note here is the interpenetration of astronomical fact with angelic and metaphysical powers, the particular hallmark of the Zoroastrian mindset already showing up. Though one suspect the notional 28-day sequence of names is an embryonic form of the *Nakṣatra* system formally adopted much later, *there is no evidence of their linkage to asterisms* in this period. As the centuries went by, from remaining records we see how different regions formalised the twelve months of the entire year by mixing and matching (cherry-picking) their names mostly from the two first categories above.

THE FOUR GENERALS

All through, the Zoroastrians still had to take into account the Solar year to keep in tune with the Seasons - which is the purpose of their choice of the Four Generals stars - in the end absorbed into the lunar mansion system through increasing contact with the Indus culture, but really only taking centre stage in Islamic times in forms we know of inherited from Sogdia and India via Arab astronomy, as attested by Al-Birūnī. The miniature of the *Nakṣatras* from an illustrated Persian manuscript shown further on gives a vivid rendering of that fully coordinated system after centuries of observation and switching from one alternative to another.

The stellar foundation of the primordial Iranian astronomical tradition thus rests on four orientational stars (marked on Filliozat's sketch above), roughly arranged to signpost the four main directions circling the Pole (c.f. our *Icon C* discussion in **Chapter 19**).

- East: *Tishtrya*/Sanskrit *Tvaṣṭar* (Sirius);
- West: *Vanand*/Sanskrit *Abhijit* (probably Vega, but could be Antares);
- North: *Haftorang*/Sanskrit *Haptoiringa/Saptarṣi* (Ursa Major⁴⁶⁶), and
- South: *Sadwes*/Sanskrit *Śatavaeśa* (?Aquarius - ?mirroring Orion on the Milky Way),
- with *Meh-i-Gāh*, the Sky Peg at the Polar Centre on Ursa *Minor*'s tail⁴⁶⁷ as 'General of Generals'

THE PRIMACY OF SIRIUS AS FIRST GENERAL

Sirius did not qualify as a lunar asterism since too low under the Ecliptic, but in the *Avesta* this brightest star is described as one of



⁴⁶⁶ Its name is explained in the *Bundahishn* as having its seven stars attached by seven ropes to the Seven Continents in order to control them.

⁴⁶⁷ We have noted elsewhere that Aratus gives the name 'Kynosura/Dog Tail' to Ursa Minor.

the four prime marker stars known as 'The Four Generals' (see Filliozat's star map above). As already shown for Mycenae, often in Āryan sources Sirius is visualised as a Dog following its master Orion the Hunter, to the Zoroastrians embodied in the full-height constellation, possibly sometimes to be understood as the hero Gayomart. For an idea of how old this concept could be, John H Rogers⁴⁶⁸ refers to a cylinder design from Susa in the Louvre dating to c.2500BC (ref. Sb 6680, rolled on a clay door sealing, photos above). His annotated caption under the drawing of its reconstruction is quoted below with my one addition (c.f. III. 9-108), revealing a mix of Sumerian, Elamite and BMAC iconography, starting top left with a Hunter-God on two dogs (c.f. the two dogs buried with Patroclus at Troy - and the Mycenaean vase showing a man with two dogs for Canis Major/Minor – see DIVERSION 8 on SIRIUS.)

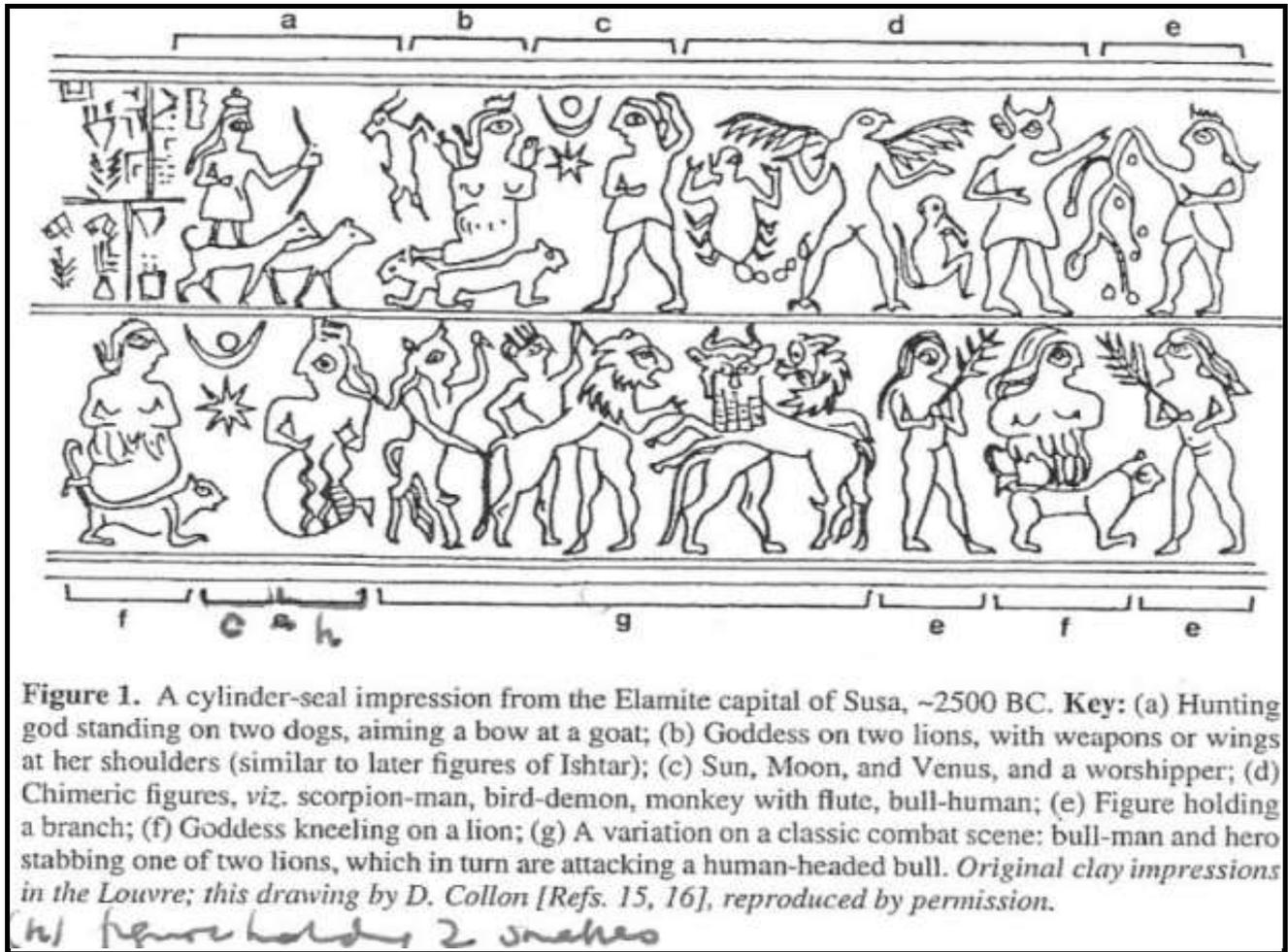


Figure 1. A cylinder-seal impression from the Elamite capital of Susa, ~2500 BC. Key: (a) Hunting god standing on two dogs, aiming a bow at a goat; (b) Goddess on two lions, with weapons or wings at her shoulders (similar to later figures of Ishtar); (c) Sun, Moon, and Venus, and a worshipper; (d) Chimeric figures, viz. scorpion-man, bird-demon, monkey with flute, bull-human; (e) Figure holding a branch; (f) Goddess kneeling on a lion; (g) A variation on a classic combat scene: bull-man and hero stabbing one of two lions, which in turn are attacking a human-headed bull. Original clay impressions in the Louvre; this drawing by D. Collon [Refs. 15, 16], reproduced by permission.

(h) figure holds 2 snakes

Filliozat⁴⁶⁹ discusses the etymology for *Tištrya*/Sirius at length (see again his fig. 1 above), and the most sensible seems to be its derivation from the root *Tviš* 'to shine brightly', mentioned in the *R̥gveda* as *Tvaštar*, also known as the artificer and creator God, equivalent to Kothar/Hephaistos in the West (see DIVERSION 9), again a God imported into the Levanto-Mycenaean world (where in the light of the Sothic Period Renewal of 1320 the link to Sirius is doubly significant). In fact Filliozat mentions Nyberg's view that *Tištrya* was originally a Turanian God adopted by the Zoroastrians, reminding us that in *R̥gveda X*, 82 *Tvaštar* is celebrated 'comme l'instituteur et l'ordonnateur cosmique, comme "l'Un par delà les Saptarṣi/Ursa Major"' – again giving primacy to Sirius.

⁴⁶⁸ Rogers *ibid.*

⁴⁶⁹ His diagram brings in Indus asterism names for contrast

THE SEVEN-STAR OF URSA MAJOR

Marking the same Duat star alignment already familiar from Egypt - and described on Achilles' Shield in the *Iliad* - the Zoroastrian sky scaffold puts *Haftorang/Ursa Major* - a non-Ecliptic star group - as General of the North at the zenith (if not also Orion in the nadir position below as *Sadwes* – see again Filliozat's sky map showing the Generals above). Both traditions set great store by the apparent annual revolution of the Bears in any one year (*III. 9-68*) as sidereal countercheck to heavenly behaviour lower down – how this worked unfolds later. In the map below from Jeyakumara⁴⁷⁰ (his map 10) note how strongly Auriga the Chariot features just off



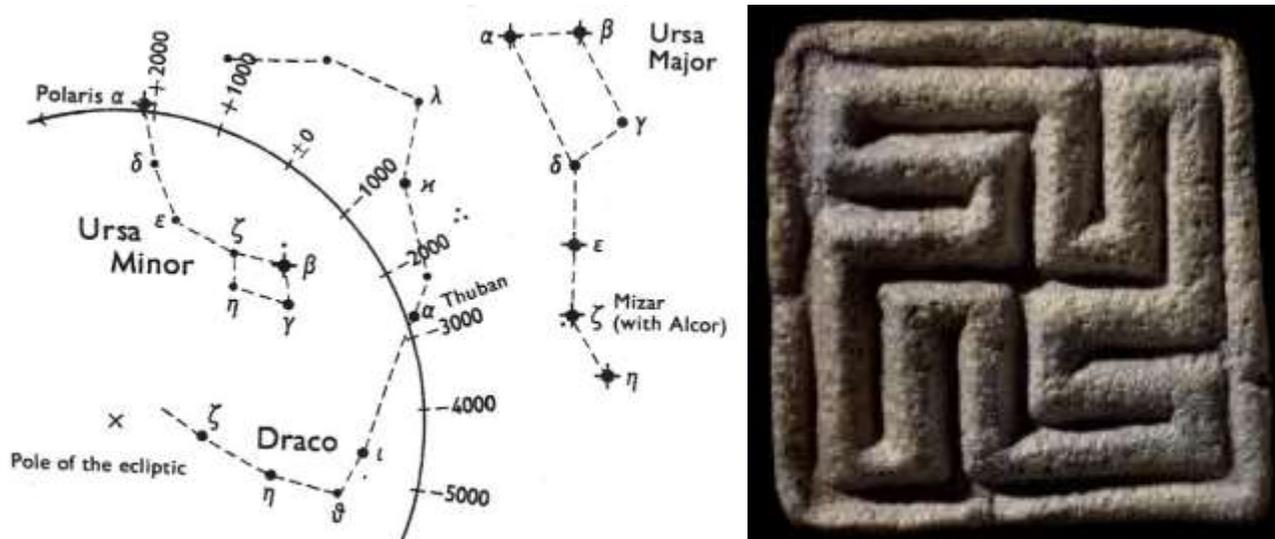
that alignment, so important, along with Perseus, as paranatellon for locating the newly important Aries VP below (for the Indus area often described as a Goat) (these are the stars featuring in the Al-Sufi camel illustrations). Jeyakumara's black highlighting shows that the shift to the new alignment along Auriga really was not much of a readjustment (typical that the Mitanni and Mycenaeans should choose the chariot instead of the Camel (but local stars in it - Capella the Nanny goat and her Kids – refer to goats/kids).

Not only was the revolution of Ursa Major (sometimes misunderstood as revolving independently from the rest of the stars of the sky) during the Year used as the 'gear' whereby one could note how the *Nakṣatras* infinitesimally locked in to the Solar Cycle⁴⁷¹ – but it

⁴⁷⁰ See <https://archive.org/details/NewInterpretationsOnIndusValleyCivilization> R Jeya Kumar *New Interpretations on the Indus Valley Civilisation* 2012 (downloadable as .pdf)

⁴⁷¹ Ashfaque *ibid.* explains a further regulatory device using 'a five-year cycle...for adjustment of errors and discrepancies in the luni-solar year ... based upon an approximation of 67 revolutions of the Moon with reference to ... the *nakṣatras* ...'.

could ultimately also be used as a circumpolar indicator of Solar Precession round the Ecliptic underneath it since visible all year round (below left). Indeed, quite apart from referring simply to the Four Directions of the sky and the Four Seasons, which we deal with in more detail shortly, we do not know whether the *svastikā* seen on BMAC and Indus seals might equally refer to the revolution of the Circumpolar stars and the Solar Year – let alone vaster cycles like Solar Precession.



(Left) Ursa Minor -v--Draco tracks Precession⁴⁷² (monitorable via alignment with Ursa Major; right) Indus Swastika seal, British Museum

IDENTITY OF VANAND AND SADWES

Out of the Four we are only certain of the identity of Sirius and Ursa Major: For the two remaining Generals *Vanand* and *Sadwes/Shatavaeša*, we can only provide probable translations. By simply using the summaries and commentaries of Henning⁴⁷³ and MacKenzie⁴⁷⁴ either side of Filliozat, as convenient thumbnail views, we find definitions are open to several identities: their mentions are based on fragmentary original sources anyway, where translation upon translation from several different languages into each other - and our authors' incomplete command of present-day astrological terminology - compounds the garbled impression when not necessarily always so. One might have thought that, as in Sumer, the strong Aldebaran-Antares opposition would feature somewhere – and indeed Henning (who consulted different native astrologers (*dastūrs*) from the other two) does give *Sadwes* to Antares due to one etymological chain in some texts pointing to 'the Sting of the Scorpion' (several ancient Central Asian languages are involved) – and the opposition of Antares to Orion (just under Taurus) is just as well known. While some are resigned to *Vanand* as Vega, Filliozat mentions du Perron's association of *Vanand* with *Rigel*, the foot of Orion, though it is more the upper half of Orion (his shoulder, *Betelgeuse*, in particular) that dips into the Milky Way (photo bottom left). Having already looked at the Indus 'take' on Orion, we have noted that a key Vedic *nakṣatra* did use the Belt of Orion, but it was conceived as an arrow piercing a Gazelle Head (*Mṛgashiras*), with Sirius considered the *Mṛgavyādhā* ('the Gazelle-Killer'), equating it to the Bow idea already seen in Sumer (and on the camel artefacts from Gonur). As we saw from our early illustration (III. 9-45/III. 9-46), *Mṛgashiras* corresponded only to the upper torso of Orion seen as animal head (an Indus interpretation of this upper torso as the squatting figure of *Prajāpati* Lord of Time on a well-known Indus seal-type, considered later). The choice of gazelle imagery could go back to a temporary homeland in north Syria where desert gazelles grazed in winter - territory which included Göbekli Tepe c.7,000-7000BC whose archaeological remains

⁴⁷² Fig. 1 in A Parpola 'Beginnings of Indian and Chinese Calendrical Astronomy' *JAOS* 134 2014 107-112

⁴⁷³ W B Henning 'An Astronomical Chapter of the Bundahishn' *JRAS* 1942 229-248

⁴⁷⁴ D N MacKenzie 'Zoroastrian Astrology in the Bundahishn' *BSOAS* XXVII 1964 511-29

have indicated seasonal gazelle hunting happened round the site⁴⁷⁵. The name *Sadwes/Šatavaeša* which Filliozat assigns to Aquarius is a word that in the Sanskrit version translates as 'one hundred mansions', suggesting, he thought, the quantity of stars surrounding Aquarius representing the water he pours (but they are faint – see the contrast between the two constellations below centre and right) – like Sirius also a water-bringer (in Central Asia more as rain). Although I am more inclined to see *Šatavaeša* as



Positioning of Orion leaning into the Milky Way



Photo of Sirius and Orion in surrounding star field



Aquarius (surrounded by fewer stars, but Fom-al-Hūt stands out)

Orion leaning into the seething stars/(hundred mansions) at the base of the Milky Way as the right candidate (*III. 9-25*) – perhaps also intended to be extrapolated to Aquarius only roughly opposite in the same way the dog-head of Sirius was often placed on Sagittarius' shoulder as a reminder to bear the complete line of the colure in mind - perhaps we should give the casting vote to Aminrazavi in Nasr and Aminrazavi *ibid.* (2008) who, like Filliozat, plumps for *Fom-al-Hūt*, the only bright star just under Aquarius.

Whatever their identity, the overall idea at the heart of the arrangement is that four key stars were visualised as Four Generals (overseen by the General of Generals, *Meh-i-Gāh*/the Polar Centre) appointed by Ahuramazda to lead the Army of Stars in a Great War against the darkness and chaos embodying the Aggressor/*Ahriman*. Their choice seems to be a quadrature betraying northerly nomadic origins with a calendar start date at the Winter Solstice when Orion is high in the sky at night, since the overall lopsided asymmetry of the Zoroastrian Grand Cross emphasises stars high up in the northern sky: both Bears are Circumpolar, and *Vanand/Vega* (if correct) is also just outside the Circumpolar region, far north of the Ecliptic. Either way, it contrasts with the Sumerian equivalent which as we know from *Chapter 19 (III.19-164)* also used four of the brightest stars in the sky – but all on the Ecliptic band - to form two pairs of oppositions to mark what we know today as the Four Cardinal Points, being the Grand Cross of *Aqrab-Aldebaran* (Scorpio -v- Taurus) and *Regulus-Fom el-Hūt* – lower paranatellon for the fainter stars of Aquarius (Leo -v- Aquarius) spaced at almost exactly at 90° intervals to mark the Four Seasons starting points in the full round of 360° when first seen conjunct the Sun at dawn. Ashfaque *ibid.* even suggests the Zoroastrian calque came first, adapted and improved upon in Sumer.

THE HOROSCOPE OF THE WORLD

The Horoscope of the World as it looked on Day One before the dreaded 'Mixture' began is provided in the *Bundahishn* and once translated by Mackenzie *ibid.* (his fig. 1) it became clear that it was none other than the positions of the planets in their exaltations (analysed in *Chapter 19, III. 19-29/Sky Anchor 2*), along with the placing of the Head and Tail of the Dragon of the Lunar Nodes with

⁴⁷⁵ S M Ashfaque in 'Primitive Astronomy in the Indus Civilisation' in J M Kenoyer (ed.) *Old Problems and New Perspectives in the Archaeology of South Asia* Wisconsin 1989 207-219 cites an amulet from the Indus site Rehman Dheri (his fig. 21.2) - carved with 2 scorpions flanking a turtle on the obverse and two gazelles on the reverse surrounded by an arrow and directional markings - as alluding to the Scorpio-Orion opposition, a strong and bright alignment probably used as a benchmark then, akin to the relief of two humans either side of a toad/tortoise from the site of Nevali Çori c.8000BC not far from Göbekli, also often cited by Sidharth *ibid.* In one myth *Prajāpati* disguised as an antelope makes advances on his daughter *Rohini* (Aldebaran) which enrages Sirius/*Mṛgavyādhā* (also called *Rudra/Red*).

head exalted in Gemini and tail in Fall in Sagittarius (possibly represented by the Crocodile on Indus seals). As Mackenzie translates it, 'the Dragon stood in the middle of the sky like a serpent, its Head in the Two Images and its Tail in the Centaur'⁴⁷⁶ so that at all times there are six constellations between its Head and Tail'. Chapter VB of the *Bundahishn* states that the Milky Way makes manifest the 'brilliance of [that] Dragon' – understandable, since we pointed out earlier how the $\text{II}-\text{x}^{\text{a}}$ colure runs more or less parallel to the Milky Way over the sky, in the process slanting from one side of it to the other. (This passage leads us to ponder whether the serpent on Kassite *kudurrus* represents the Milky Way, the Dragon of the Lunar Nodes - or both or neither (there are other options). Henning realises the only 'unmixable stars' referred to in the *Bundahishn* (i.e. immutable and not subject to change) are in fact the galactic stars of the Milky Way - all the others being 'mixable' (i.e. liable to change and confusion) - even including the Circumpolar Stars that in the Sumerian system are taken as constant because they never set. This perhaps gives us some understanding that aspects of serpent worship tracked in this Catalogue mark the appeasement, not only of the Dragon of the Lunar Nodes which brings eclipses, but also an acknowledgement of the incorruptibility and permanence of the stars of the Milky Way. As regards the 'mixability' of all these stars, there is more insight to be gained later on serpent symbolism from Vedic myth.

THE EARLIEST FORM OF THE HEPTAD: COMPATIBLE & INCOMPATIBLE BODIES AND SKY LEVELS

In the *Bundahishn* the Moon is said to contain the 'seed of all animals' (the connection had evidently been made with the reproductive cycle); while the Sun ('whose horses are swift') is placed above the Moon, with both set by Ahura Mazda in authority over the Stars (three levels). Between the Sun and the Throne of Ahura Mazda is the Throne of the Amesha Spentas (Level 2), acting like an osmotic barrier between the Ahura's Empyrean and the Sun and Moon enabling the transmission of the Endless Light of Ahura Mazda down into Creation, its only saving grace. Finally, in this scheme comes the Cloud and Weather sphere beneath the Stars. These add up to Six Levels in all – surely an early iteration of the *Heptad* – with virtuous Mankind its Crown representing the Seventh Level on Earth, in charge of it all. Thus the Cosmos is viewed as one great Being (*Gayomart*, described on the next page).

As if laying out an overall battle plan, much of the *Bundahishn* goes into a lengthy enumeration of the pairs of planets and stars that will cooperate with - or are inimical to - each other. Hemming dwells on the mentions of the 'tethers' connecting them to each other. In modern astrology these would be the combinations of planets in helpful or unhelpful signs and their trine, sextile or square angles to each other causing gradations of harmony or conflict: so that, translated into modern astrological language, these combinations on the whole make perfect sense. Mackenzie's fuller iteration of *Bundahishn* Section V concerning cosmic oppositions and compatibilities reveals that it is not just heavenly bodies that are mentioned in such combinations, but also overall clashes between higher heavenly and demonic powers, along with 'a list of 30 oppositions between demonized vices such as falsehood, cold, dissatisfaction and their spiritualized counterparts, [such as] truth, heat, satisfaction, etc.').

Another way in which the Zoroastrian view of the sky detects Ahriman at work is in the retrograde motion of the planets at certain times – and even more the constant process of Solar Precession: *Ahriman retards what is forward*, quotes Desai⁴⁷⁷ from the *Dinkard*. These added qualitative overlays in the field of cosmology confirm what we have also discerned in their names for the days of the month as that 'ritual metaphysical underlay' sensed in Mitanni seal designs early on in DIVERSION 1. Amongst larger fields of dissonance to watch out for, a further array of minor and major demons and spirits are mentioned, both male or female, manifesting in weather or other realms, while 'other sorcerers and peris came with all the destructive planets to [oppose] the fixed stars [and] the seven generals of the planets to the seven sidereal generals':

⁴⁷⁶ Why didn't he translate as 'Gemini and Sagittarius'? This is an example of not using current astrological terminology, thus making it harder for us to understand what is already a difficult text!

⁴⁷⁷ E N B Desai 'The Persian Year' in J J Modi (ed.) *The K R Cama Memorial Volume* Bombay 1900 241-43

- ★ Mercury -v- *Tishtrya*;
- ★ Jupiter -v- *Haptoiringa*;
- ★ Mars -v- *Vanand*;
- ★ Venus -v- *Sadwes*;
- ★ Saturn (Commander-in-Chief of the Planets) -v- *Meh-i-Gāh*;
- ★ and the Dragon (*Goçīhr*) and tailed Mush Peri -v- the Sun, Moon and Stars all together.

Altogether this Grand Heptad in the process of its fulfilling its conflicted intermixtures on reaching its completion is nothing more than a vast creature at war with itself - the Universal Man, *Gayomart* (similar in concept to the much calmer and more stable Kabbalistic *Adam Kadmon* or the Vedic *Puruṣa* – the Universe and all its parts seen as one Being or Universal Man) whose existence and life cycle is ordained by Ahura Mazda). This creature presumably comes to an end at a pause after completion of the full Precessional Cycle of the Sun, measured at intermediate points by the smaller cycles of Venus or Sirius⁴⁷⁸). From the descriptions given, *Gayomart* is most discernible through the influence the War in Heaven has on Earth (most immediately through Weather), so that it may be more accurate to say that *Gayomart* in the end simply stands for Planet Earth - itself a vast creature subjugated to the 'mixtures' going on in the heavens above. Mackenzie quotes the statement from an obscure text that *Gayomart* 'lived for 3,000 years free from aggression and for 30 years during it... and as soon as the Aggressor came upon him he died on the spot...'. The number 3,000 often features in esoteric Zoroastrian periodicity and comes up in my *Cosmokrator* newsletter concerning the Zoroastrian concept of the appearance of a *Saošyant*/Saviour every 3,000 years (referenced in a footnote a few pages back), one of them being Zoroaster himself and others thought to be Plato and Jesus (see a further, planned piece on the Magi and the Star of Bethlehem⁴⁷⁹). This is probably sufficient to gain a picture of early Zoroastrian astronomy for our *Chronological Focus* – but we can consolidate by looking briefly at the vicissitudes of Zoroastrian Calendar maintenance over later periods up to the present time.

STAGING POSTS FOR CHANGES IN THE ZOROASTRIAN CALENDAR UP TO MODERN TIMES

In outlining the main facts on the more recent development of Zoroastrian Calendar here, I started with summary information given on-line by a present-day Zoroastrian, Ali Jafarey, that provided the basic facts on the later textual traditions that survived, giving later versions of month and season names, though other sources have contributed. For every-day current practice, since the gradual demise of their astronomer-priests at the end of the Sasanian period, just as in the case of the Jewish Calendar the Zoroastrian religion is now to all intents and purposes severed from its roots in the direct practice of naked-eye observational astronomy.

The *Gāthās* speak of the paths of the sun and the stars, and about the waxing and waning phases of the moon. They also make an important historical statement, found in other post-Sasanian Iranian astronomy books, that Zarathushtra built an observatory in Zabol, Seistan (*eastern Iran/the Makran*) and that it was inaugurated on 21st March 1725 BCE, the day King Vishtaspa and his courtiers joined 'the Zarathushtrian Fellowship'. They state that the Good Religion had been founded by Zarathushtra exactly 12 years earlier at the vernal equinox of 1737 BC – and this date is taken as Year 0 by a commanding group of orthodox Zoroastrians in Iran today (we include Zabol under a later heading on sacred pools as observatories). Given our concentration on the Second Millennium as ushering in the Age of Aries in this Catalogue, and having demonstrated through art historical information the interaction during that time between the Indus, Iran, Elam and the BMAC, this foundation event reinforces the picture we have built

⁴⁷⁸ See my explanation of the dovetailing of Solar, Sothic and Venusian Precessional cycles in 'The Venus Cycle and Venus Worship in the Ancient Near East' in P Bukovec et al.(eds) *Religionen im Vorderen Orient IV Hamburg 2017* 63-89. Striking modern confirmation was given by C Hazell in a letter to the *Irish Times* stating that on 21 December 2017 Venus was observable *only on that evening* with the Sun at sunset inside the Newgrange passage at the Winter Solstice – a phenomenon that has repeated (despite Precession) since the Late Neolithic period every eight years (private correspondence).

⁴⁷⁹ A Haleem 'Identifying The Star of Bethlehem in the Light of the Zoroastrian Astronomical Tradition' www.cosmokrator.com Newsletter (forthcoming 2019).

up of new developments in astronomical practice as coming through to the Levant and Aegean at just this time from Turan/Central Asia. Parpola's map⁴⁸⁰ reproduced earlier labels Seistan and surrounding key sites as lying literally at a fulcrum between the Indus, the BMAC, and Elam in Turan, and is the best graphic for suggesting how astronomical practices could have radiated thence.

STARTING POINT OF THE NEW YEAR AND THE SIX GĀHĀNBĀRS

Sometime during the later Avestan age the year was measured as a purely lunisolar year of 360 days with twelve months of thirty days, and the five Gāthā days forming the intercalary period. Today the Iranian New Year begins on Spring Equinox day (on or about 21st March⁴⁸¹) at midnight, though there is evidence that at some point the first six months of the year were originally 31 days each, the following five months 30 days, and the last month 29 days (30 days in the Leap Year). Before the use of the Leap Year, historical evidence shows five intercalary days were added at the very end of the year as summer ended, dovetailing with the start of the New Year which must then have been at the Autumn Equinox. The *Vispered*, dedicated to the six seasonal festivals/*Gāhānbārs*, shows that originally the early Zoroastrian calendar was based on the old Indo-Iranian lunisolar calendar with the months based on the Moon's phases, though the year still had to be squared with the precise Solar cycle against the stars, the problem being to maintain accuracy over long periods (as we intimated above, these contradictions show that different methods were used in order to harmonise the calendar, still going on today. The difference between the two cycles (0.12484 days, 2.99616 hours shorter – was corrected by an intercalation of eleven days at the end of the year in the *Hamaspahmaidhaya Gāhānbār* of the Vernal Equinox. Only a further intercalation of one day after eight years (precisely after 8.010253 years) could keep the seasonal festivals in their proper places (measured by the 8-year Venus synodic cycle). We know from a 9C Pahlavi tradition that the correction of five hours and a fraction was made good every four years - or the community had to wait 40 years to intercalate 10 days, or 120 years to add a thirteenth month of 30 days! This reference to one month intercalation at the end of 120 years points to a long period of lapse in applying the discrepancy formulas in time, and to the ensuing disorder that ultimately prevailed in the last days of the Sasanian Empire - to the extent that they completely lost their grip on the calendar, probably one reason for their demise.

The Year in general was called *yāiri/yāri*, but the intercalated solar year was known in Old Persian as *Saredha*, (c.f. the Sanskrit *sharad/autumn*) – the only form of the Year invoked in the *Avesta*. The Zoroastrian era followed by the *Shahenshahis*, *Qadīmīs* and Parsi *Faslis* today is based on the ascension of the last Sasanid king, Yazdigird III (632-642 AD + 10 years of wandering until his murder by Khosrow the miller), and compared to the 2M date given in the *Gāthās* just mentioned, has no religious significance at all. Today those mostly residing in India and many Iranian Zoroastrians have given up the *Qādimī* calendar in favor of the *Fasli* calendar, though the majority of Parsis (mostly based in Bombay) use the Imperial/*Shahenshahi* calendar which the Parsis have not intercalated since 1126 AD (their year now begins on August 21st, a full seven months plus one day behind). Iranian Zoroastrians following the *Qādimī* Calendar abandoned intercalation since 1006 AD and the 365-day uncalibrated year has also now retrograded their New Year Day by eight months. This means neither calendar is precisely "Gathic" - let alone astronomically scientific in terms of today's Western calendrical norms. Moves to unify all Zoroastrians under one corrected calendar⁴⁸² have not so far succeeded, but the re-establishment of the ZRE Calendar, only achieved in the 1990s on the basis of the 2M Seistan date, does have authenticity.

The Sasanids had continued to maintain both the *yāiri* of 365 days and the *Saredha* of 365.24224 days. The first they called *Ushmordik* meaning "rememberable/reckonable" and the second *Vihesakik* meaning "intercalary". While the *Ushmordik* was easy for

⁴⁸⁰ A Parpola *ibid.* 1988 fig.6

⁴⁸¹ 21 March 2001 corresponded to 1st Farvardin 3739 of the 2M version of the Zoroastrian Calendar as founded in Seistan/the Makran in 1737BC

⁴⁸² When Ardashir Babakan took in hand the reformation of the Religion there were said to be seventy different sects in existence!

the laity to memorize and count by names (surely the reason why the *Shahenshahi*, *Qadāmi* and *Fasli* calendars are still adhered to today), the *Vihezakik*/intercalary was the domain of the astronomer priests operating within the imperial court, at least to some extent keeping the formal year precise and in tune with the seasons. But the fall of the Sasanid Empire meant the demise of the astronomer priests from their position of influence, even though Pahlavi books tell us attempts to maintain the intercalary year did continue until the 11C AD. With the decline of the *Vihezakik* Year it was lay (amateur) priests who continued with the *Ushmordik*, falling back one day out of season every four years.

After the rise of Muslim Empires in the region, economic and seasonal revenue collection forced the Muslim Caliphs to maintain the intercalary year in addition to the Islamic calendar of a purely lunar year (which officially slips back eleven days every year with no attempt at Solar correction), and this they evidently achieved through those Zoroastrian astronomer priests who had embraced Islam. It was this *Vihezakik* year maintained halfheartedly by Muslim rulers which was eventually improved, perfected and formally restored by Umar Khayyam and fellow Iranian scientists and named the *Jalāli* calendar after its patron, Sultan Jalāl al-Dīn Malikshah Saljuqi (1072-1092 CE). Evidence that the problem was still not fully resolved is Anquetil Duperron's report of his arrival in Surat⁴⁸³ on 1 March 1758 to find Indian Zoroastrians 'embroiled in a bitter dispute over intercalation'. In a nutshell, the *Fasli* year also officially observed by Iranians in modern Iran – whether Zartoshtis, Jews, Christians, or Muslims -- is the *Saredha* of the Avestan people, *Tharda* of the Achaemenian, *Vihezakik* of the Sasanids, and the *Jalali* of Omar Khayyam⁴⁸⁴. In the same breath, however, the progressive Zarathushtrian Assembly today meshes it in with the precise solar year as reckoned by all observatories in the world as the Universal Astronomical and Scientific Year - in Iranian secular terms known as the *Khorshidi*/Solar Year. This scientifically exact calendar (down to the last milli-second) can surely be seen as the final word on the corrected calendar that the Zoroastrians, Sumerians and Indus peoples were struggling to master from prehistoric beginnings.

AVESTAN MONTH NAMES AND LATER VARIATIONS

Traditionally each of the 12 *Avestan* months (*mahyas*)⁴⁸⁵ were named after a deity, some of them old Aryan gods and goddesses said to have been discarded by Zarathushtra but reintroduced later by priests, others being Gathic life principles personified by them as divine entities called *Yazatās*. In the table below the names of the twelve months in modern Persian and a version of their corresponding Avestan forms are given, with their current Zodiac start dates. Note the sequence still begins with Aries and - due to non-correction of the calendar due to Precession - has not moved on to the Vernal Point for the Pisces Era now almost over - let alone showing readiness to enter the imminent Aquarian VP!

The Achaemenids, Sogdians, Chorasmians, Seistanese and Armenians each had their own names for the months. The Achaemenid months as given in the bas-reliefs of Darius the Great in Old Persian indicate that at one point they were mainly based on the natural seasons and social activities, being (1) *Irrigation-canal-cleaning month*; (2) *Full spring*; (3) *Garlic-collecting month*; (4) *Hot-stage*; (7) GOD VENERATION; (8) *Wolf-birth*; (9) FIRE VENERATION; (10) *Anāmaka*/Nameless, and (12) *Digging-up*. Three names were not given in Old Persian but in Elamite - and all except the two in capitals are nonreligious. This could well be a tradition going back to the BMAC - we saw on the Bactrian silver cups portraying agricultural scenes how farmers celebrated rural activities through the imagery used on them (*III. 9-176*). This way of life, attuned to nature for day-to-day seasonal tasks, would have used the customary rural rule-of-thumb guidelines by watching natural phenomena – as well as solar and lunar behavior – to read the changes in the seasons. For

⁴⁸³ See *Extracts from the Narrative of Mons. Anquetil du Perron's Travels in India* 'translated from the French by K E Kanga' Bombay 1876 [*print-on-demand*]

⁴⁸⁴ See S H Nasr & M Aminrazavi (*ibid.*)

⁴⁸⁵ See Nadershah *ibid.*

the days of the month, the Achaemenids used numbers instead of names (and overall this is still the case in Iran for the civil calendar – see below on the days of the week - meaning that the naming of months and days after pre-Zarathushtrian deities in later centuries was a retrospective revival, the indications being that this was done in the reign of Artaxerxes II (405-359 BCE) to imitate Egypt, recently made an Achaemenid province. It appears the former names had in some kind of dark age been so comprehensively erased that in many cases we do not fully know what they really originally were, though it appears the priestly caste in one province or another did their best to carefully preserved them down the generations.

The summary table below gives present and past month names that roughly match up with those given by Nadershah from the *Yashts* as given at the beginning of this section.

ORDER	PRESENT-DAY MONTH	AVESTAN MONTH	SOLAR MONTH	START DATE
1	FARVARDÎN	FRAVASHI/FRAVARTI (Remembrance of the Dead)	ARIES	21 MARCH
2	ARDÏBEHESHT	ASHA VAHISHTA (Heat)	TAURUS	21 April
3	KHORDÂD	HAURVATÂT (Health/Clouds)	GEMINI	22 May
4	TÎR	TISHTRYA (Rain)	CANCER	22 June
5	AMORDÂD	AMERETÂ (Trees/Vegetation)	LEO	23 July
6	SHAHRÎVAR	KHSHATHRA VAIRYA (Noble authority/ Angel of Metal, especially iron)	VIRGO	23 August
7	MEHR	MITHRA (Increasing Light)	LIBRA	23 September
8	ÂBÂN	ÂP (Angel of the Waters)	SCORPIO	23 October
9	ÂZAR	ÂTHRA (Spenta Mainyu/Fire)	SAGITTARIUS	22 November
10	DEY	DATHVA (Devoted to God)	CAPRICORN	22 December
11	BAHMAN	VOHU MANAH (Angel of herds, flocks and milk)	AQUARIUS	21 January
12	ESFAND(ÂRMAZ)	SPENTÂ ÂRMAITI (Angel guardian of Soil)/Land	PISCES	20 February

Kuka⁴⁸⁶ in the same volume as Nadershah shows how these names varied when taken over to the Parsee domain, calculating the original placing of Farvardin, for instance, at the Summer Solstice instead of the Spring Equinox, and Dey at the Spring Equinox rather than at the Winter Solstice, which is really Mithra's month (this *does* fit). This allocation of the months means, he thinks, that 'at least the months Fravashi, Tishtrya and Mithra must have been named more than 6,000 years ago' (the properties he translates for all the months are inserted into the above table in brackets). The Parsee order of the months has a knock-on effect, of course, on the positioning of all the other months, and is probably connected not only with a change of latitude and geography to further south but also to variations in the practice of intercalation. The Remembrance of the Dead aspect of Fravashi would take place in the intercalary days just before New Year start.

⁴⁸⁶ M N Kuka 'An Enquiry into the Order of the Parsee Months and the Basis of their Nomenclature' in J J Modi (ed.) *The K R Cama Memorial Volume* Bombay 1900

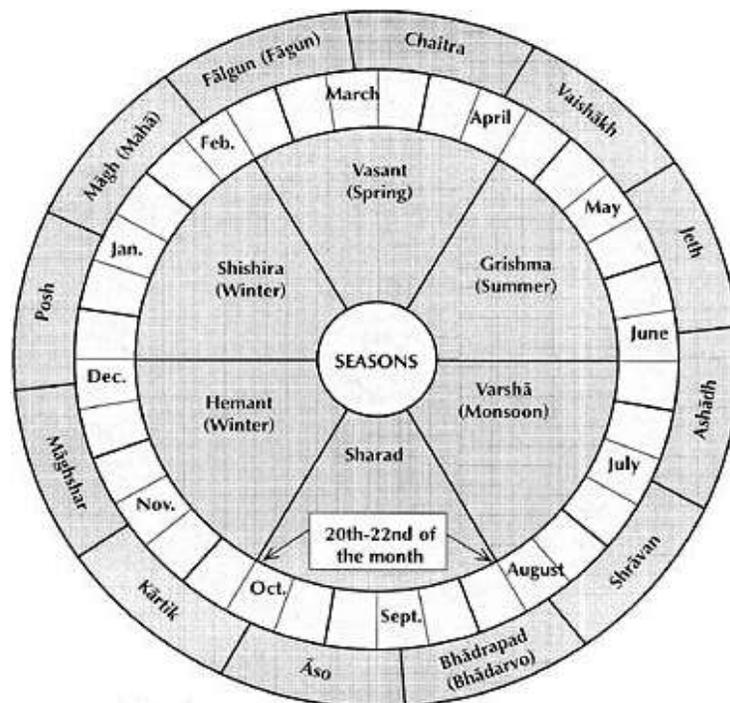
THE GĀHĀNBĀRS (SEASONS) AND THEIR FESTIVALS

For the Gathic generation aware of how to correct the discrepancies between planetary cycles there was no complaint about the festivals drifting from their relevant agricultural seasons. But since over time each Iranian dynasty, following the pattern set by other Near Eastern rulers, founded a new era from their ascension to the throne, with as many as 80 rulers on the Iranian throne during the thousand-odd years of Achaemenid, Macedonian, Parthian, and Sassanian rule further confusion arose, and as dating went increasingly out of kilter the chaos was compounded as astronomical practices and methods lapsed or were simply forgotten.

Nonetheless, the Seasons were roughly attuned to *Saredha*, the tropical solar year, with activities adapted to accord with variations in terrain, divided into six phases. The end of one phase and the start of the next were celebrated in six seasonal festivals - many corresponding to Indian, Egyptian and also some European Celtic festivals of today:

1. **HAMASPATHMAIDHAYA**/Vernal Equinox (today the 1st day of FARVARDĪN), not only marking the beginning of Spring on or about 21st March, but also to celebrate the end of the Old Year and the start of the New Year. It was, according to the *Avesta*, the time to "reset" everything in preparation for the next year;
2. **MAIDHYOI-ZAREMAYA**/Mid-spring (today the 14th day of ARDĪBEHESHT on or about 4th May – corresponding to May-Day in Britain) was the time to celebrate the birth of calves - enabling 'abundance of milk' - and to bring in late winter crops.;
3. **MAIDHYOI-SHEMA**/Midsummer (today the 12th of TĪR on or about 3rd July – corresponding roughly to Mid-Summer and the heliacal rising of Sirius) marked the start of the harvesting season;
4. **PAITISH-HAHYA**/Harvest (today the 25th of SHAHRĪVAR on or about 16th September) marked the completion of harvesting;
5. **AYĀTHREMA**/Staying Put (today the 24th day of MEHR on or about 16th October) meant the end of the to-ing and fro-ing of trade caravans and the time to mate cattle before the onset of Winter;
6. **MAIDHYĀIRYA**/Year Turn (today the 15th of DEY around 4th January) celebrated the turning point of Winter a fortnight after the Sun had changed direction at the Winter Solstice peak - a dormant period of agricultural preparation.

Evidence from both the *Avesta* and the *Vedas* shows that the Indo-Iranians in essence needed to follow a lunisolar year for animal husbandry and agricultural purposes but developed very different cultic emphases – interestingly the interplay between Iran and India in the calendar is still active today, with local variations in practice. The names of the six *Gāhānbārs* above show the calendar



In its wider sense was inevitably based on the different climatic seasons and labours of the year, and are more or less in line with the six Vedic seasons (see the diagram for the corresponding months and seasons in the Indus tradition above). For the Zoroastrians each festival was traditionally celebrated for one to five days and still today the Zarathushtrian Assembly celebrates the **Gāhanbārs** with a recitation and discussion of the **Gāthās**, ending in a feast. A passage in the **Avesta** directs that all participants should contribute with firewood and food ingredients to make a ritual stew, today in the form of the sophisticated Iranian *âsh* or the Parsi spiced *dhansâk*. The folk music and dance entertainment enacted in the past is still observed among Iranian tribes all over the Iranian Plateau and beyond today (see DIVISION 5 on ENTERTAINMENT for ancient precedent!).

DAYS OF THE WEEK

Since the lunar month, one of the earliest ways of reckoning time, is alternately of 28 or 29 days with two phases of waxing and waning, it was quite easy to further divide it up into four quarters of seven days. The later Avestan solar calendar, based on 30 days in a month, gives each month four quarters -- the first two of seven days and the last two of eight days. Interestingly, modern Persia still follows the Hebrew pattern of having Saturday as Shanbeh (the Persianized form of 'Shabbath'), then counting from one to five as Yek-shanbeh, Do-shanbeh, Se-shanbeh, Chahâr-shanbeh, Panj-shanbeh, with Âdineh or Jom'eh for Friday from Islamic influence, being the day of coming together for mass prayers. In other traditions weekdays are named after the seven planets visible to the naked eye but the present universal week used in Iran has been generalized on the Achaemenid pattern of simply numbering the days, with the added input of Jewish and Muslim influence for the weekend.

Before our next big step characterising the Indus astronomical tradition, this is a good point at which to summarise and consider any obviously Proto-Zoroastrian cultural strands discernible in Mycenaean culture, mostly propagated through the agency of the Mitanni.

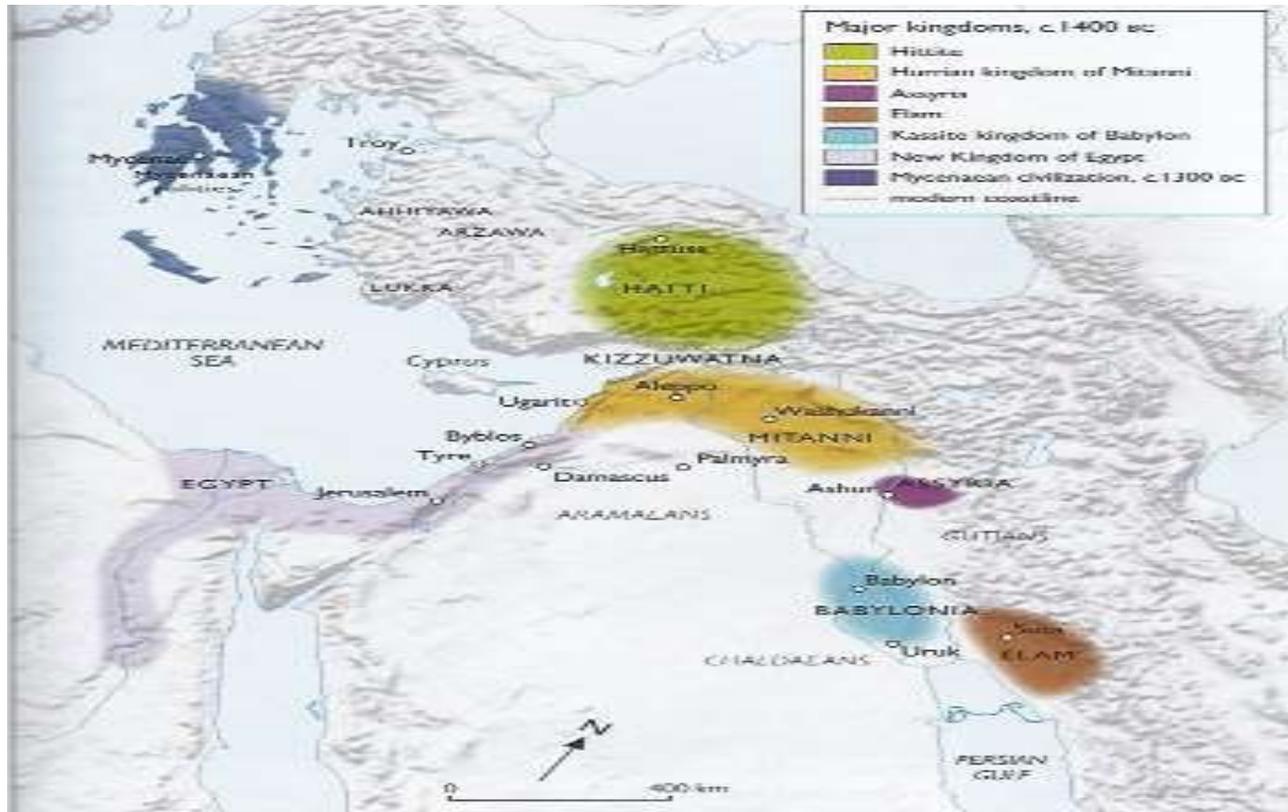
3. 'INDO-EUROPEANNESS' IN MITANNI AND MYCENAEAN CIVILISATION

THE MITANNO-MYCENAEAN HINTERLAND IN ASIA

Taking into account all that Dayton discovered about links between western Europe and the Mycenaeans (see DIVERSIONS 2 and 3), it is not far-fetched to accept that both the Mycenaeans and the Mitanni were positioned to benefit from their geographical situation to link up at several points north to currents of steppe migration between 1700 and 1400 and mesh in with Indo-European practices that accorded with their own circumstances – infused simultaneously nonetheless (in agate fashion) by ancient near-eastern intrusions. Cunliffe's map cited earlier portrays his perspective on the continuous 'steppe corridors' connecting the nomadic realms of Central Asia and Eurasia even as far as Hyperborea. The one below from a different publication shows the positioning of the Mitanni following on from the known presence of Āryans in the BMAC territory which Sarianidi dates to 2300-1700 – thus we must imagine the Mitanni were on the move southwards somewhere during the period 1800-1500 - Parpola's graphic map given earlier (p.251) visualises a half-way stage clearly, simply and perhaps more accurately. Elsewhere Parpola⁴⁸⁷ reminds us Young⁴⁸⁸ 'linked the Mitanni Aryans with the Early West Iranian Grey Ware that suddenly appears in great quantities all along the Elburz mountains, in Azerbaijan and around Lake Urmia c.1500BC'), and he also reminds us that 'The earliest directly preserved written evidence of an Aryan language is found in documents relating to the kingdom of Mitanni in northern Syria dated c.1500-1300BC' (being the famous Mitanni-Hittite contract). As well (not shown on Cunliffe's map), we should keep in mind the naturally occurring route running across Anatolia from Mesopotamia and north Syria to reach Europe at the Dardanelles crossing point (later formalised as the Royal Road

⁴⁸⁷ A Parpola 'The Problem of the Aryans and the Soma: Textual-Linguistic and Archaeological Evidence' in G Erdosy (ed.) *The Indo-Aryans of Ancient South Asia* Berlin 1995 353-381

⁴⁸⁸ T C Young Jnr 'Early Iron Age Iran revisited: preliminary suggestions for the reanalysis of old constructs in J-L Huot et al. (eds) *De l'Indus aux Balkans: Recueil à la Mémoire de Jean Deshayes* Paris 1985 361-377



III.9-201: Geographical position of Mycenae in relation to Asian steppe corridors, and alternative sea access - Cunliffe 2015 fig. 5.1

from Susa to Sardis) which accounts for why the siting of Troy right next to this bridge between Europe and Asia was so culturally significant. Let us revisit key stepping stones in our knowledge about the arrival of Central Asian influence into the Near East, built up - as shown earlier - in several stages of increased scholarship on the subject.

DIFFUSION OF THE BMAC CULTURE AND ITS IMPLICATIONS FOR MITANNI AND MYCENAEAN ART

From early on in the study of Mesopotamia there were the odd attestations of seals turning up at Ur from the Indus Civilisation⁴⁸⁹ - then thought to have arrived via the sea route rather than by land - but the idea that the Ur royal burials bear the stamp of Bactrian artistic taste (lapis/carnelian/gold bead necklaces and cultic practices akin to Soma drinking – since each person buried held a cup) did not have enough specifically Central Asian imagery to compare with to be more than a fleeting generalisation – but we can now be much firmer about such a ‘take’ on the Ur burials. In fact, all our Catalogues so far, through the handful of objects cropping up with shared iconography preceding the ED period in the Susa or Abydos regions - especially use of the lion-prey theme⁴⁹⁰ – have already given well established evidence for one particular ‘Age of Interchange’⁴⁹¹ using Zanzibar Triangle connections seemingly already in use in the Protohistoric/Ubaid/Jemdet Nasr time-block at the end of the 4M/running on into the 3M. Then the odd appearance as early as the 3M of Eurasian/Central Asian objects using the lion-bull attack (Maikop for instance at **Ratt-10**) as I saw it then still did not constitute an overall trend, though from dealing with Jemdet Nasr and Early Dynastic material it was clear Sumer was already importing huge amounts of desirable goods from Turan via Elam including a glut of lapis lazuli and gold, as well as

⁴⁸⁹ John Newberry *Indus seals from Ur, other West Asian & minor Harappan sites* (pamphlet) London 1985

^{490/490} See G J Tassie *Prehistoric Egypt: Socioeconomic Transformations in North-East Africa from the Last Glacial Maximum to the Neolithic, 24,000 to 4,000 BC* 2014 and the continuing archaeological reports of Protohistoric finds at Abydos by Flinders Petrie in the early 20C and then of the Deutsches Archäologisches Institut [Kairo Abteilung] in the last quarter of the 20C.

⁴⁹¹ P Amiet *L'Age des échanges inter-iraniens 3500-1700 avant J.-C* Paris 1986

chlorite vessels from SW Iran⁴⁹². Indeed, the recent discovery of Indus (below left)⁴⁹³ and BMAC seals at Konar Sandal north of Tepe Yahya fills in another gap on the route. The Tepe Yahya-type Khafaje bowl (**Belland-4**) with humped bulls (*III. 9-185*) is another prime example of the link: indeed, in hindsight the bowl uses Central Asian motifs such as heraldically placed crouching figures with hips and legs blended holding huge snakes – and a side-group tucked in showing small bears flanking a ‘Palm Tree of Life’ in the characteristic change of scale already demonstrated on Mitanni seals such as the Erlenmeyer or Spencer-Churchill examples.



(Left) Bronze stamp seal and sealing from Konar Sandal with crocodile over the bull – Pittman fig. 4.1; (right) Indus seal found at Kish

In the *Art History Section* in this Catalogue we thought some tombs at Gonur uncannily comparable to the Vapheio burial, with brief comments on the status of the lady with all her finery in the Gonur Dog Mausoleum as on a par with the women of the Mycenaean Shaft Graves. How could such far-reaching matches be plausible? Publications in English about those comparatively recent discoveries in Central Asia put us quite speedily in a position to check in detail certain matches or contrasts – out of which the spectacular token sites of Gonurdepe and Togolok⁴⁹⁴ are the most resonant. In picking up on the clues about Mycenaean participation in 2M Internationalism in the *Chronological Focus*, Central Asian impingement on their world appeared at first glance to have been facilitated (whether on Anatolian or Levantine fringes) in particular through Mitanni links – long known as Indo-Aryans purely on the basis of their contract with the Hittites that mentions their own Gods using exactly the same Vedic names invoked as protectors of treaties as in the R̥gveda (see **RV X.125.1bc** which - as pointed out by Thieme⁴⁹⁵ - even mentions the same group of gods in the same order - see also DIVERSION 9 comparing Panthaia).

The possibility of direct, meaningful links between the Mycenaean and *other* Aryans⁴⁹⁶ more closely to hand in Central Europe also seems from the material evidence (especially in our sections on metals and glass) to be have been exceedingly likely – already throughout my commentary I have pinpointed such cross-currents on the basis of material, stylistic or iconographic matches as they cropped up in Catalogue entry artefacts. Hence in my brief accounts of the movements of the Āryans, an appreciation of the world of the Steppe tribes and the continuous corridor of communication between such peoples - from Central Asia to the Balkans (Cunliffe’s map says it all) - needs to be acknowledged sufficiently in order to see how the Mycenaean could not have avoided being caught up in its wake, and why in particular their grave goods reveal so many points of cultural similarity from all the way East to all the way West ((sword matches alone confirm the picture).

⁴⁹² C C Lamberg-Karlovsky ‘Urban Interaction on the Iranian Plateau: Excavations at Tepe Yahya 1967-1973’ *Proceedings of the British Academy LIX* 1973 5-43; H Weiss and T Cuyler Young 1975 ‘The Merchants of Susa: Godin V and plateau lowland relations in the late Fourth Millennium BC’ *Iran XIII* 1975 2-18

⁴⁹³ H Pittman ‘New Evidence for Interaction between the Iranian Plateau and the Indus Valley: Seals and Sealings from Konar Sandal South’ in S Abraham et al. (eds) *Connections and Complexity: New Approaches to the Archaeology of South Asia* Oxford and New York 2013 63-90

⁴⁹⁴ Already cited several times earlier in the catalogue, in date order of publication the titles most often referred to were G Ligabue et al (eds) *Bactria: an Ancient Oasis Civilization from the sands of Afghanistan* Venice 1988; G Ligabue and G Rossi-Osmida (eds) *Margiana: Gonurdepe Nectropolis* Venice 2002; V I Sarianidi *Gonurdepe: Salarny we Hudaylarin Saheri/City of Kings and Gods* (in Russian, Turkish and English) Ashkabad 2005

⁴⁹⁵ P Thieme ‘The “Aryan” Gods of the Mitanni Treaties’ *JAOS LXXX* 301-17

⁴⁹⁶ Taking into account also the criteria given in M M Deshpande ‘Vedic Aryans, non-Vedic Aryans, and non-Aryans: Judging the linguistic evidence of the Veda’ in G Erdosy (ed.) *ibid.* 67-84

STAGES OF OPENING UP TO THE BMAC: THE ELAMITE AND WEST IRANIAN INTERFACE

When starting work on this catalogue I took for granted the already well-established Elamite role in the earliest interchange period between Sumer and protohistoric Iran - neatly summed up in an early paper by Lamberg-Karlovsky⁴⁹⁷ in which he sketches out the cultural and/or trade interactions between Susa and a string of sites more or less running in a semi-circle around the mountains of Western Iran such as Tepe Hissar, Godin Tepe, Sialk, Choga Mish, Tell-i-Ghazir, Tell-i-Malyan, Tepe Yahya and Shahr-i-Sokhta



III.9-202: Map from Lamberg-Karlovsky *ibid.*, his fig. 1

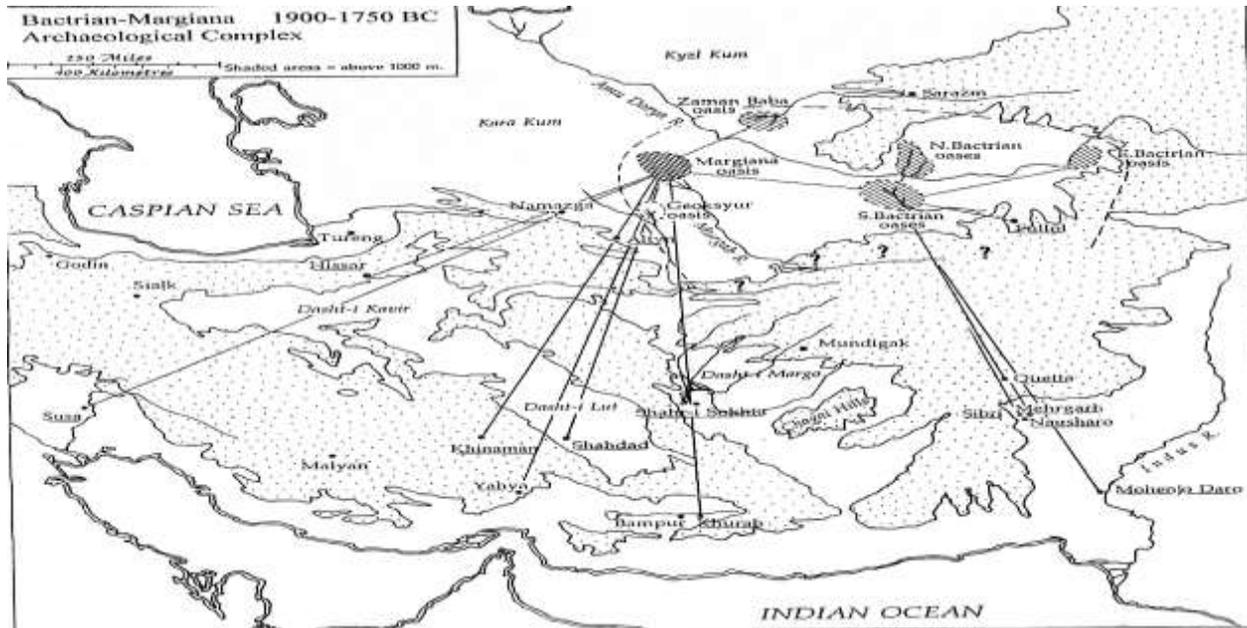
(see his map above) which we could characterise as West Turan. The indicator finds linking these sites included Elamite accounting tablets, seals and/or sealings and ceramics, betraying some kind of temporary settlement and trade exchange process, with each site appearing to specialize in one commodity or another (such as a particular metal, or carved chlorite vessels) but as Lamberg-Karlovsky puts it, 'It is apparent that in each of the areas in which these sites are located, there were indigenous cultures with little, if any, direct interaction uniting them'. Certainly the stratigraphy at each site revealed material indicating any Susa presence did not have permanent occupation or empire-building in mind - more flying visits on the part of visiting Susa scribes and/or trade officials to obtain desired commodities from the workshops of local population for their cities back home. As early as in *Catalogue A's Chronological Focus*, thanks to the interpretation of Fred Hole⁴⁹⁸ I had understood these forays into Iran from Susa (often marked by pieces of lion-prey sealings left behind) as interspersed by phases of isolation - which he read as revealing the spasmodic nature of the on-off relations between far-flung village workshop sites and the grand emporium at Susa they fed into singly. Our study of the Snake Lady in this Catalogue also well exemplifies the early stages of our understanding of the image, thought at first to be simply an Elamite phenomenon. It was only after digging more deeply for DIVERSIONS 2 & 3 dealing with the Mycenaeans' access to metals and stones that, after following the opposing arguments of Dayton and Lamberg-Karlovsky I started to realise Central Asian and ancient Indian raw materials (and accompanying cultural influences) needed to come more forcefully into the picture and their knock-on relevance to the Mycenaeans tracked and admitted more strongly.

⁴⁹⁷ C C Lamberg-Karlovsky 'The Proto-Elamites on the Iranian Plateau' *Antiquity* LII, no. 205 July 1978 114-120

⁴⁹⁸ F Hole *The Archaeology of Western Iran* Washington DC 1987

INTERCONNECTEDNESS OF CENTRAL ASIA, TURAN, ELAM AND INDUS

Even in the late 1970s Lamberg-Karlovsky's paper gave only hints that the line of sites on his map above could in turn have been interacting with more distant places in Central Asia and the Indus Valley – similarities of finds from sites such as Shahr-i-Sokhta, Quetta, Fullol and Shahi-Tump⁴⁹⁹ to the east were pointers – one being that 'the carved chlorite bowls of Yahya IVa compare



III.9-203: Distribution of BMAC objects 1900-1750 – Hiebert 1994 fig.10.8

precisely to fragments found in the lowest excavated levels of Mohenjodaro...’ but at this stage of knowledge he could only state ‘The interactional patterns which integrate Sumer, Elam, the Persian Gulf, the ‘Helmand Civilization’ of Seistan, Turkmenistan, Baluchistan and the Indus Valley remain poorly understood’⁵⁰⁰. In fact, at Shahi-Tump the richest Āryan male burial there also revealed a warrior with a necklace of lapis, agate and onyx, with copper spearhead and shaft-hole copper axe⁵⁰¹. In our section on Mycenaean access to metals we referred to the spread of swords, mid-ribbed daggers and shaft-hole axes, seen by many⁵⁰² (including Sarianidi) to be diagnostic of ‘the spread of the warlike Āryans from Central Asia into India, the Near East and Eurasia’, which had in turn surely impacted on both the Mitanni and the Mycenaeans. Yet we cannot rule out earlier Dāsa input or Dravidian impact from the south, whose most powerful indicator (we will see shortly) is the spread of the peacock - and peacock imagery.

In a review of Masson and Sarianidi's book, *Central Asia before the Achaemenids*, written five years earlier⁵⁰³ Lamberg-Karlovsky's impression was that Turkmenia appeared ‘as an independent interaction sphere of primary and parallel development which not only derived much from the West but also contributed to it... [so] not entirely [a] cultural backwater and continuous recipient of external influences’, and he had come to the conclusion by the end of the review that, given the newly exhibited finds from Shahdad⁵⁰⁴, much work needed to be done to map inter-site communication across the entire Iran-Turan-Indus-Oxus theatre.

⁴⁹⁹ See, for instance, H D Sankalia 'The Painted Grey Ware of the Gangetic Valley and Shahi-Tump' in R C Gaur (ed.) *Painted Grey Ware Jaipur* 1994 40-45 where in this high-status grave 11 types of Greyware were represented.

⁵⁰⁰ Egypt was linked through the evidence of Tod treasure which included Bactrian lapis lazuli discs and low-grade pieces of Elamite seals., one featuring upright snakes as in III. 9-167. Bisson de la Roque in his report on the treasure cited a seal belonging to Henri Seyrig showing a snake lady for comparison (III. 9-173 right).

⁵⁰¹ H D Sankalia *ibid*.

⁵⁰² D H Gordon *The Prehistoric Background of Indian Culture* Bombay 1958

⁵⁰³ C C Lamberg-Karlovsky 'Prehistoric Central Asia' *Antiquity XLVII* no. 185 1973 43-46

⁵⁰⁴ A Hakemi *Catalogue de l'exposition: Lut, Shahdad "Xabis"* Teheran 1972

From the late 1970s scholars in the forefront - including Lamberg-Karlovsky himself - realized it was now time to work at a 'joined-up' view of the Near East, Elam and Iran in relation to Central Asia and work more closely with Russian archaeologists – in which process the Peabody Museum at Harvard (of which he is still Director) made the first move in organizing an international conference there. From then on the complexity of such inter-territorial links began to open up, gradually feeding in also from the Indus end. From a significantly median site in this web of connections, the Shahi-Tump weight under **BaLu-4** (see also **III.9- 1**) is a highly significant recent find, even more so in the light of the reputed refounding of the Zoroastrian era in the territory (just referred to in our discussion of the Zoroastrian Calendar above). This is underlined by the fact that its inlaid decoration uses two lion-prey attacks (referring to the New Year start) and two flies– which when we look at the *nakṣatra* for a New Year beginning in Aries will soon make sense.

ARGUMENT FOR THE SELF-SUFFICIENCY OF CENTRAL ASIAN ICONOGRAPHY

Hiebert judged Central Asian iconography as mostly self-generated, given any 'Trans-Elamite' influence of the 4-3M, an already culturally established system of iconography, was long past. He described its 2M reciprocal dissemination back into Mesopotamia as far-flung, reaching into Iran, Syro-Sumer and Akkad (see his diffusion map above). Before the change of focus to the Central Asian oases, earliest attempts at coming to grips with Elamite and Iranian iconography by Amiet, Porada and Pittman based on individual artefacts were long known, with the emphasis on what the Elamites brought to Iran, Bactria and even India. On the emergence of an entirely new universe of artefacts at the BMAC sites from the 1970s onwards various scholars, both Eastern and Western, tried to characterise the nature of its pantheon and its iconography by grouping artefacts such as seals/amulets, metalware or pottery⁵⁰⁵. In the special number of **Antiquity** in 1994 several authorities on the BMAC, introduced by Lamberg-Karlovsky himself, put forward their thoughts with some level of ability to arrive at an overview. Hiebert⁵⁰⁶ sketched in the main parameters as follows:

Specific attributes of these images appear in the later iconography and myths of Iran, South Asia, and even the eastern Mediterranean⁵⁰⁷ (Mitanni). Archaeologists, art historians and linguists (Erdosy)⁵⁰⁸ suggest that this group of symbols is associated with a shared Indo-Iranian mythology reflected in both Vedic Indian and Avestan (Persian) myths (p.373-4⁵⁰⁹).

Hiebert's map from his later book gives a one-way view of the ultimate spread of BMAC influence, since he pointed out there was barely any sign of the importation of manufactured finished objects from outside into the BMAC other than stone arrow heads (only 1 Indus Valley seal, and one *Forward Attack* stamp seal, for instance) while there is profuse use of a variety of raw materials⁵¹⁰ - whether metals, stone or semi-precious stones – all available from the mountain regions in the immediate region (especially Afghanistan and India). Even in the case of agates, it is possible the ones so valued at Gonur were rarities from further north in Central Asia (see Agate Distribution Map in DIVERSION 3). Working these materials so inventively, in Period 1 (2300-2000) this oasis civilization abounded in talented craftsmen; while in Period 2 (c. 2000-1700) they were moved inside the fortifications – seemingly the prelude to the more war-like times that followed (a strategy also adopted by the Mycenaeans in late Mycenae).

Can the Proto-Zoroastrian dimension identified earlier be spotted as part and parcel of this dissemination of influence to the West?

⁵⁰⁵ V I Sarianidi 'The Bactrian Pantheon' *Information Bulletin of the International Association for the Study of the Cultures of Central Asia* X 5-20

⁵⁰⁶ F T Hiebert 'Production Evidence for the Origins of the Oxus Civilization' *Antiquity* 68 1994 372-87. The map is from his book, published in the same year, *Origins of the Bronze Age Oasis Civilisation in Central Asia* Princeton 1994

⁵⁰⁷ Julian Baldick in *Homer and the Indo-Europeans* London 1994 compares the *Māhabhārata* of India with the *Shahnameh* of Persia and the *Odyssey* of Greece for points of commonality (clearly Hiebert had this kind of cross-current in mind). I see more parity between the epic battles of the *Māhabhārata* and those of the *Iliad*.

⁵⁰⁸ G Erdosy (ed.) *The Indo-Aryans of Ancient South Asia: Language, Material Culture and Ethnicity*, New Delhi 1997

⁵⁰⁹ Kurochkin *ibid.* states, for instance, that the iconography of the Hasanlu bowl 'conforms to integral passages of the *Avesta*, found in the 21st chapter of *Vendidad* and the 5th Yasht devoted to *Anāhita*.'

⁵¹⁰ See 'Notes on Lithic Finds' by geologists at the Agip Laboratories in Ligabue and Rossi-Osmida (ed.) *Margiana Gonurdepe Necropolis* 2002 112-117

ZOROASTRIAN METAPHYSICS, THE ZOROASTRIAN HEPTAD AND THE MITANNI

Our table categorising the Zoroastrian Heptad in **Catalogue B (III.6-38)**, reillustrated below for ease of reference) - which scholars see as the canonised form of Zoroastrian doctrine expressed in the Achaemenid foundation deposits at Persepolis⁵¹¹ some 1000 years later (see the right-hand column) - provides seven hard and fast categories that we have already indicated must have been in a nascent stage of formulation in Turan and the Oxus Civilisation in the mid-Second Millennium. Even if anachronistic, for our purposes it is useful to run through the metaphysical levels of the religion as expressed here because we earlier pointed to a much more astronomically based early stage of it in our overview of the Zoroastrian Astronomical Tradition – detectable here and there in artefacts from the BMAC (and Levantine) archaeological record. As we see from the table, the three categories added to Fire, Air, Water and Earth to create the canonical Seven Sacred Levels of Creation are Plants (specifically the Haoma); Animals (specifically Cattle - rather than Horses); and Mankind (as embodied in The Just Man - whether High Priest or King).

Translated into Central Asian *imagery*, is it possible to see parallels with the Levels of the Heavens just described in the **Bundahishn**? It is at least worth holding them in mind, since we could just as well equate the snake with Earth (rather than the Milky Way) and wings with Air as well as Sky – perhaps enabling a reading of Central Asian dragons as a hybrid depiction of the Four

	ELEMENT	DIVINITY	MATERIAL REPRESENTATIVE
1	SKY AETHER	KHSHATHRA (VAIRYA)	STONE (stone box containing deposit)
2	LIGHT/FIRE - DAY SUN	ASHA (VAHISHTA) (MITHRA)	GOLD (Gold Sheet with trilingual Darius Declaration of Rulership of the Four Quarters/four lion and bull Croesids)
3	WATER - NIGHT MOON/SIRIUS	HAURVATAT (APAM NAPĀT/ VARUNA) ANAHITA*	SILVER (Silver Sheet with trilingual Darius Declaration of Rulership of the Four Quarters/one silver Griffin tetradrachm from Abdera; one silver Turtle stater from Aegina)
4	EARTH EARTH	SPENTA ARMAITI	CAVE/HOLLOW/MOUND the hollow foundation holding the stone box
5	PLANTS	AMERETAT	PLANTS, embodied in the Haoma ceremony
6	ANIMALS	VOHU MANAH	ANIMALS, especially Cattle
7	MANKIND	AHURA MAZDA SPENTA MAINYU	JUST MEN, especially King and Priest

III.9-204: The Zoroastrian Heptad as represented in the NE Persepolis Foundation Deposit (the constituents of the SE Foundation Deposit were similar, but with different silver coins) – information compiled from Nimchuk (2010). Fully analysed in Catalogue B.

⁵¹¹ Cindy Nimchuk 'The Persepolis Apadana Foundation Deposits' in Curtis and Simpson (eds) *the World of Achaemenid Persia* 2010, 221-30): this was the topic of her PhD thesis supervised by Margaret Cool Root.

Elements – a monster vitally important to place under Man's Good Government (otherwise their mixture becomes the untamed, destructive demon, Ahriman). At planetary and stellar levels their prime female Goddess *Anahita* was to be found in the clarity of mind and virginity of Virgo - with the connection to still Water already seen in Sirius, Venus and Moon behaviour. Fire, Light, Justice and Gold, on the other hand all radiate the presence of *Shamash*, while Mankind is meant to reflect the glory of *Ahura Mazda* in overall command on his empyrean throne, overlooking all. It is Plants and Animals in particular that are even more complex versions of Stellar and Planetary influence, subject to a host of cross-harmonies and dissonances. Awareness of a hierarchy of interlinked levels of meaning generated from within the cosmic sphere of each Element has consistently been sustained as the main scaffolding underlying Āryan thinking over the ages, taken up again in Platonism and related cosmologies up to the present day. It means that if Athena-Venus is parallel to *Anahita* and Apollo-Jupiter to *Ahura Mazda*, both found their way into Greek myth and its Pantheon via Anatolian pathways – making the Trojan War a particularly important ten-year process of cultural osmosis that would have included conflicting calendrical considerations worth fighting for. Overall, we can go a long way in seeing Central Asian hybrid monsters as expressing the cosmic mixtures and oppositions of the Heptad (yet seen simply expressed in the duality between the pale and dark stone used to make the colonettes (III. 9-67)).

There appear to be other material *Sibitti*/Heptad references, possibly some coincidental, but some surely intended: we mentioned Pit Burial 3900 with its 7 dogs and 7 humans, with a further dog on top, along with two camels and two donkeys. Also buried in that grave was what Sarianidi called a Seven-Symbol – seven metal balls linked together (illustrated below). This chimes in with observations made by Van Seters (*ibid.*) on finds made at Nahariyeh and Byblos, unsurprising if we ascribe them to Mitanni presence. Thus at the Nahariyeh temple 'The lower courses of stone of the *bāmah* were saturated with oily matter, and between the stones were placed small pottery bowls each with seven miniature cups ... Other cult objects found were seven-wick saucer lamps and fragmentary incense stands... gifts included many beads of semi-precious stones and jewelry of bronze, silver and gold...'. Similarly, at the Temple of the Obelisks 'the finds.... Include[d] the groups of seven cups, or *kernei*, and much miniature votive pottery'. The clincher was at Ugarit in a sounding made under the temple, which again brought up miniature votive pottery and seven-cup *kernei*, 'pointing to a homogeneity of religious practice'. Within a variety of burial practices in the Syria-Palestine region, the use also of *shaft graves* there in Egyptian mode forces us to reconsider Mycenaean shaft grave use from a wider perspective.



III.9-205: The seven balls in situ in Pit Burial 3900

Overall it is the metaphysical element showing up again in Mitanni seal design (see DIVERSION 1) that betrays the same Zoroastrian mind-set, underlining the need to take fully into account the original Mitanni connections with the Central Asian heartland.

REASONS FOR THE PARTING OF THE WAYS: AVESTAN AND VEDIC PERSPECTIVES CONTRASTED

As against the hidden iceberg of long oral tradition, extrapolating from the earliest scriptures we can access (dated roughly to the Second Millennium) on one hand the Vedas of India explain the material world as an Illusion (*Māyā*) that veils its inner workings in Spirit, but with differences in levels of reality seen in terms of a continuous process of transformation from one level to the next and great concern with keeping up the routines of sacrifice that act as mnemonic or counting methods (we expand on this later). We have seen something of this as well in the Avestan Heptad/*Sibitti* sequence discussed above (*III. 9-204*) but the distinguishing character of the Zoroastrian approach to the created world is an obsessional abhorrence of the irreconcilable oppositions between Matter and Spirit, seen as in continual and confusing conflict.

Even the archaeologist Hiebert saw the use of contrasting materials such as black steatite -v- white alabaster in the BMAC colonettes or multi-media sculptures as an evocation of 'the structural dichotomy of Good -v- Evil and Purity -v- Pollution which emerges in Zoroastrian ideology'. Certainly in Hiebert's thinking the rich gamut of materials in use at Gonurdepe can all appear to have inherent meanings, alluding not just to rank, but also to divine qualities, which gives deeper significance to the use of semi-precious stones, as much in the BMAC as in the élite tombs of the Mycenaean world - or the royal tombs of Ebla, Ugarit and Qatna between (Elisa Rossberger in her recent assessment of the grave-goods from the royal tombs of Qatna⁵¹² tries to make associations between ancestor rites and semi-precious stones). Thus especially in the context of priestess (as in the case of Uruk – *III.9-129* and *III. 9-130*) or priest (as at Altyn Tepe – *III. 9-117*) necklaces, the stones could well have been intended to convey metaphysical and divine qualities if we only knew the code - but there is sparse evidence for different stones representing different Gods, other than lapis lazuli for Inanna/Ishtar which is certain. Due to the dualist approach to existence expressed in the Avesta overall, the paramount pursuit of ritual purity is the consequence, whereby the tainting of everyday physical life must be kept to the minimum. This leads to a concentration on the separate Four Elements constituting the material world on the first four levels of the Heptad:

- Earth must not be polluted by dead matter, so dead bodies must be excarnated by vultures or dogs, and left outside to be stripped clean before burial (in the Vedas, cremation is the norm);
- the eternal flame of Fire must be kept burning unceasingly (at Togolok, hearths and fireplaces were found all over the site). It was prescribed in scripture that he who kept the flame burning is buried with the Soma pestle and mortar at his legs. (We will see there is a different angle on the fire sacrifice and the bricks of its altars in the Vedas);
- Water is the agent of cleanliness and purity and lakes and rivers are sacred, to be kept unpolluted and virginal (purification by self-immersion in rivers is paramount in the Vedic religion but the waters are considered able to absorb impurities);
- Air (represented by stone in the Achaemenid Heptad) stands for the cosmic permanence of the Sky (thus also astronomical regularity and its Order/*Rta/Arta* – a concept common to both).

This leaves Plants, Animals and Mankind as the remaining three levels of the Heptad (*III. 9-204*) which constitute the material world in more complex combinations of the Four Elements - their utmost purity further down the line to be maintained. In the Vedas these seven components of the Avestan view of the Creation (to some extent equatable to the Seven Planets/and the Seven-Star/*Sibitti*) certainly come up, but are approached very differently and certainly not categorized in the same way. Was it that more down-to-earth acceptance of the levels of material creation that ultimately led to the parting of the ways - and were differing latitudes and territory these tribes lived in (flat -v- mountainous) a factor, not only in variation of ritual but also even in the astronomical dimension of their practices? For instance, in the established Vedic system fire sacrifices were held daily, weekly, monthly, quarterly, half-yearly and annually, aiding the upkeep of an ordered Calendar, but for those originally living north of the Caspian Sea closer to the Arctic Circle,

⁵¹² E Rossberger *Schmuck Fur Lebende Und Tote: Form Und Funktion Des Schmuckinventars Der Konigsgruft Von Qatna in Seinem Soziokulturellen Umfeld* Wiesbaden 2016

the balance of day to night (or Darkness -v- Light) and observational conditions for viewing Sun, planets and stars further north would have been in more extreme ratios (very long, almost perpetual night in Winter, for instance) so that the idea of simply keeping the flame perpetually burning in the darkness or twilight would be a very real issue and the higher imperative.

THE COSMIC BATTLE OF STARS AND PLANETS IN THE AVESTAN AND VEDIC VIEW

We cannot go into all the detail of how the *Bundahishn* deals with the less important stars: it is, in any case, a problematic text combining information from different periods in history even as late as Parthian and Sasanid times, and even thought to have Hellenistic inclusions - though the picture could sometimes be the other way round (for instance, Pingree in his useful paper comparing Sumerian with Vedic star systems⁵¹³ places the Vedic (rather than Indus) astronomical tradition into the First Millennium, making it consequently dependent upon the seeming pioneering work of the Sumerians). What we need to highlight first, though, is the more obsessive Zoroastrian view of sky behaviour in contrast to what we will understand as the Indus approach - mirroring that chimaeric imagination already evident from the hybrid monsters carved on BMAC seals – whereby the purity of the Empyrean as ordained by Ahura Mazda (Level 1) is described as already upset on Day One when planets and stars that used to be in their right place at all the levels beneath His Throne start to get confused (Henning *ibid.* uses the word 'mixed'), and thus are immediately corrupted from the purity of their true, stand-alone influence. This is summed up by the passage (A19) quoted by Henning:

Before the Aggressor's arrival the Moon, the Sun and the stars stood still and did not revolve. In purity they passed the time: it was noon perpetually. After the Aggressor's arrival they started revolving - and will not stop revolving until the end [of Time].

This one sentence neatly expresses the rationale behind Zoroastrian dualism, revealing an almost psychotic (certainly unrealistic) denial of the processes of change the material world is subject to as the Horoscope of the World unfolds from its original perfection.



The corresponding story in Vedic myth is less disastrous in tone: at the transition between two Ages/*Yugas* great confusion in the universe ensues, and the *Churning of the Milk Ocean* takes place during which *Viṣṇu* as a tortoise provides the support for a great

⁵¹³ D Pingree 'Mul-Apin and Vedic Astronomy' in H Behrens et al. (eds) *Dumu-Ez-Dub-Ba-A* Philadelphia 1989 439-45

spindle coiled round by a great serpent, successively pulled at each end by demons and Gods to make it turn – probably representing the rotations and counter-rotations experienced by Earth (the Lotus at the top of the spindle) in the Sea of Atmosphere. The reason it is an Ocean of *Milk* is that milk comes from the Stars, given they are visualised as herds of thousands of cows⁵¹⁴, attested also in the Sumerian tradition (see **Chapter 19**). To Ashfaque the myth ‘seems to reflect the first realization in human consciousness of a calendar going wrong due to the precession of the equinoxes’. Clearly the knock-on effect in upsetting the clear understanding of the sky order is so drastic that it is, indeed, as if planets and stars are all churned up from their familiar stations. If it is the God *Prajāpati* providing the new fiducial line to bring it all back into order (the star alignments creating that meridian are explained under our **NAKṢATRAS** heading later) – then in the legend this is the spindle enabling the Churning process to ultimately end successfully which is certainly more optimistic than the Avestan view of the disaster. This means the rippling snake pulled back and forth by Gods and Demons stands for cyclic movement and change – whether of the turning Earth and/or Sun (Sidharth’s view), or even the power of the Precession which led to the unravelling in the first place. In the end *Viṣṇu/Brahman* overcomes the demonic disorder led by Rahu and his cohorts, who now ends up as the Dragon of the Lunar Nodes with his head and tail fixed onto the *nakṣatra* framework. *Viṣṇu* (corresponding to the Elamite God Inshushinak) ends up in charge of it all again, and is now free to recline on the great, Endless Serpent of Time, *Ananta/Endless*, also called *Ādiśeṣa/the Primordial Snake*.

Earlier we began to suggest some corrective astronomical practices traceable to Indo-Iranian observation in Central Asia may have helped ‘the West’ to take a grip on their postponed changeover to the star benchmarks of the New Age of Aries as their own calendars started, too, to go out of kilter. Having so far mostly dwelt on the nature of the Zoroastrian calendar, we now forge on to fill in the picture from the Indus perspective, almost to the end of the chapter. All along we have pointed out how aspects of the Mycenaeans’ choice of iconography bear witness to some borrowings in this direction that turns out to be particularly true of an image we have not so far dealt with at any length – and that is the peacock griffin hybrid – a topic that turns out to be so significant that it will also help us to distinguish between proto-Zoroastrian and proto-Vedic contributions to Mycenaean iconography.

⁵¹⁴ The evidence is brought together neatly in W Heimpel ‘The Babylonian Background of the term “Milky Way”’ in H Behrens et al (eds) *ibid.* 249-252 (previous fn.)

THE VEDIC ASTRONOMICAL TRADITION

This subject requires huge expertise in language and astronomy if acquired in the original from scattered sources stretching over a wide period of time which I do not have. Yet from a handful of books and papers processing the information – sometimes retrieving the one diamond hidden amongst the dross of maverick publications – I do think it is possible to glean valid pointers that add up sufficiently for our particular lines of enquiry to hold water. To an extent the current conservative academic orthodoxy of chronology and interpretation is just as much under scrutiny as the wilder theories.

THE MYCENAEANS, MITANNI AND THE PEACOCK-GRIFFIN: THE INDUS ELEMENT

I at first wondered if I was being fanciful in making so much of the Mitanni as the ‘middle men’ between Central Asia and the Near East – was it plausible that the Mycenaeans, seemingly on the fringes of the network, should not only have become involved in a complex web of international interchange that began with a desire for the rare materials not available in their own territory, but then progressed to include knowledge and iconography exchange? In following a chain of evidence in difficult publications it is worth dutifully following up references: I tracked down a paper by Parpola⁵¹⁵ mentioned in passing by Hiebert *ibid.* that turned out to have startling subheadings such as ‘The Indo-Āryan affinity of the Mitanni Āryans’ or ‘The BMAC and Mycenae’ that confirmed my presentiments, especially as Parpola’s method is based on the kind of text and artefact matching I also use that showed beyond doubt the Mycenaeans *must* have benefited from the extended BMAC web depicted in the last few maps. Although we have tracked individual instances of BMAC imagery transmission occurring in different areas in different phases, in the final analysis we are still left with little idea of the precise circumstances under which a particular Mitanni group (probably poets, priests, royalty and craftsmen) crystallised it in their own terms to propagate their own beliefs, distilling it from centuries of prehistoric oral tradition.

The Mitanni and Mycenaeans were so placed geographically and culturally as to be able to partake in and blend both Near Eastern and Asian/Eurasian influences, making their interchange almost inevitable. Sadly, a paper written by Edith Porada⁵¹⁶ which might have added to Kurochkin’s analysis of ‘Mitanniness’ (referred to earlier) is reported in a recent Festschrift⁵¹⁷ in her honour ‘as probably never published’, likely to have been misplaced in manuscript form with an Italian publisher. While the physical evidence of raw materials acquired by Mycenaeans speaks for itself, we have seen already how the accompanying cultural borrowings are more elusive to spot. Nonetheless, there are telling instances where very precise and conclusive matches can be made - as already pointed out in the case of the griffin-prey attacks discussed in *III. 9-59/III. 9-60* (reillustrated below centre left and right). Particularly in relation to the phoenix/griffin as symbol of Precession and Sothic Period renewal (see DIVERSION 8), the Mitanni-Mycenaean



Seal from the Thebes Hoard (Porada⁵¹⁸ no. 6) (note the peacock crest - and floating head)



Detail of the Erlenmeyer seal (Mitanni) under ForAtt-24



Mycenaean Rhodian Hunt Group seal (CMS IX-D0201)



CMS II,8-192: a telling Minoan signet ring Bilateral Attack cited by Aruz seemingly showing a transitional moment in the blending of lioness body with peacock forepart

⁵¹⁵ See A Parpola ‘The Problem of the Aryans and the Soma: Textual-Linguistic and Archaeological Evidence’ in G Erdős (ed.) *The Indo-Aryans of ancient South Asia: Language, Material Culture and Ethnicity* Berlin and New York 1997 353-380

⁵¹⁶ E Porada (with E Lacheman) ‘Iconographical Motifs in Mitannian Glyptic Art’ for *Studi di Archeologia et Storia dell’Arte del Vicino Oriente I* 1973 1-18

⁵¹⁷ E Bleibtreu et al. (eds) *Edith Porada zum 100.Geburtstag* Fribourg 2014 (see E Porada *Bibliographie* p.9)

⁵¹⁸ E Porada ‘The Cylinder Seals found at Thebes in Boeotia’ *Archive für Orientforschung XXVIII* 1-70

sharing of style – and possibly its content too - is striking, and we can now go further and explore this use of the peacock protome melded onto the lioness body, adding a precessional layer to the lion-prey New Year meaning.

INDIGENOUS DRAVIDIAN-CUM-INDUS ORIGINS OF THE PEACOCK

The general consensus is that this spectacular bird of the pheasant family was native to South India⁵¹⁹ and gradually introduced by Dravidians to the north at the time of the Indus Valley Civilisation, whence over the centuries - along with monkeys, indigo and lapis lazuli - this exotic creature spread westwards (in material fact and in literature). The Second Millennium was the period it 'hit' Iran/Iraq and the Levant – and without doubt it then passed into the Minoan/Mycenaean world along what became well-known routes (Nair⁵²⁰ reminds us of the Bible references⁵²¹ telling us how at the start of the 1M King Solomon used the services of the Phoenicians - masters of the Indian Ocean and Arabian Sea as much as of the Mediterranean - who every three years at the port of Tarshish brought in India's 'silver, ivory, apes and peacocks'. That the Mitanni were situated mid-way in this process seems clear from the grafting of the bird's forepart onto the lioness on so many of their seals to form the peacock-headed griffin, identifiable by its chicken head and long, slim neck with, in most examples, its distinctive crest. In Porada's catalogue of Nuzi seals (e.g. *NuziCat* nos 17, 92, 662, 676, 856/7), two of the clearest examples reproduced below show one in the form of a griffin *Rear Attack*, the other indicating their other frequent role as guardians of the Nuzi version of the Tree of Life/the Planets. This hybrid lived long in later Persian and Indian art, still featuring in Sasanian myth as the *Senmurv* - as Brentjes *ibid.* puts it, 'So we shall not err if we identify the 'griffin' of the Mitanni seals as a forerunner of the *Senmurv*'. The ensuing long history of the peacock throne in the region up to modern times is well-known - as also are cultic survivals sustained amongst the Yezidis of the peacock as *Malik Ta'wus* (Angel Tammuz⁵²²)).



(Left) Porada NuziCat-676 ; (right) Porada Nuzi-Cat 856/857

Altogether we have a reliable backdrop of attestations of the peacock as an iconographical element that ultimately came to feature in the Levantine International Style by the end of the 2M. Hence we can view it as the indicator *par excellence* of the spread of Central Asian iconography into the Mycenaean world originally by means of the Mitanni interface, the peacock-griffin itself not lasting beyond the Mitanni dynasty as it gave way to the *eagle*-headed griffin which became its canonical form thereafter. Thus on seals seen so far in this Catalogue we have argued the Indian peacock head (rather than the eagle head) is specifically used by the Mitanni as the bird component on their renderings of the griffin - even on the Common Style seal from the tomb in Cyprus shown in *III. 9-56*. What we shall try to demonstrate is that the peacock-griffin is into the bargain a prime example of Mitanni-devised astronomical imagery as expressed through hybrid creatures, later given perpetual currency by the Western world - its calendrical significance being mostly overlooked today in the face of its eminently decorative charms. Interestingly, Aruz⁵²³ cites a Minoan signet ring design from Knossos (previous page) that reveals a somewhat clumsy early stage of working out the fusion, though the Knossos Throne Room

⁵¹⁹ For chapter and verse of the Dravidian and Sanskrit references and later art history see F W Clothey *The Many Faces of Murukan: The History and Meaning of a South Indian God* The Hague 1978; A K Chatterjee *The Cult of Skanda-Kārttikeya in Ancient India* Calcutta 1970, and K Sinha *Kārttikeya in Indian Art and Literature* Delhi 1979-

⁵²⁰ P T Nair *The Peacock Cult in Asia* 1974 (only available as a pdf. on-line)

⁵²¹ *I Kings* 10, 22 and *II Chronicles* 9, 21

⁵²² On some amulets the peacock god is sometimes given a goat head and identified with the fig tree – see Parpola's papers cited below

⁵²³ J Aruz 'Intercultural Styles, Animal Combats, and the Art of Exchange' in W Müller (ed.) *CMS Beiheft 8* Mainz-am-Rhein c.2010 73-82

griffin (illustrated on the next page) achieves a smooth join. The Mycenaean seals from Thebes and Rhodes above are direct proof of such interchange when compared to the griffins on Mitanni seals, and quite clearly retain the peacock head/head-crest. One way or another, the Mitanni origin of the peacock-griffin in Mycenaean iconography - traceable to origins in the Indus Civilization - is spectacular evidence of their mutual relationship.

THE PEACOCK IN THE INDIAN PANTHEON

Originally the peacock of Dravidian India was worshipped as the Earth Goddess, often honoured by the presentation of living snakes (and this is still the case in some remote villages) but later in the north it was absorbed and blended with the Āryan victory god *Karttikeya* - the astronomical reasons for which we will fully realise shortly. It is still worshipped today in the south in the form of *Murugan*, smiling and eternally youthful child of Shiva and Parvatī, while in the North *Kṛṣṇa* devotees have a version of *Kṛṣṇa* in *Murugan* dress complete with peacock crown (below right), and dress up their young boys in celebration of the God's birthday by inserting a peacock feather in their headdress borrowed from *Murugan* (below left). Thus the peacock was not initially a bird sacred



to the Āryans, but in adopting the youthful War-God *Murugan* called him *Skanda-Kumara* in their language, all names with associated meanings, analysed shortly. Significantly, the first impact of the peacock on Northern India is traceable to the Indus Valley civilization, from which it must have been transmitted into Mitanni and Aegean imagery. The Āryans co-opted it as the vehicle (sometimes even the *alter ego*) of their Vedic War-God, *Indra*, leader of the Gods and killer of snakes – sometimes equated by association with *Rudra*, the ruddy one, who could represent both Mars or the rising Sun.

For our purposes we should bear in mind the parallel likely to have been made in the 2M between the Mitanni *maryanna* and the warlike, yet youthful, peacock God - since the Vedic word for 'peacock' is *mora/mayura* implying this warrior élite were 'the peacock men' – handsome young men of battle emulating Indra. The later Indian Maurya dynasty etymologically was 'The Peacock Dynasty, its totem animal being the peacock, and in the early Indian dynasties between 500BC and 900 AD the peacock constantly appears in sacred sculpture and on coins – and of course continued as a symbol of kingship into Mughal times after Shah Jehan had the Peacock Throne fashioned out of hundreds of precious stones (consisting of a peacock on either side guarding a bejewelled tree on the back - the prime Mitanni heraldic *Gestalt*). The Indian Jātaka stories tell that anyone eating the peacock's head would become king - or at least immortal. We are told that in Tamil Nadu, even as late as under British occupation, a youth was sacrificed to

Murugan every year under a fig tree (more of which on an Indus seal, below). Once Independent India adopted the peacock as its national symbol, killing peacocks was outlawed (as late as 1969 a young boy was fined 10 rupees for killing one)⁵²⁴.

Most relevant for our own purposes, peacock images can not only be traced as in use on Indus Valley or Elamite artefacts, but also in relation to several astronomical meanings discerned in Indus hieroglyphs. These two lines of enquiry now follow in some detail.

INDUS VALLEY AND ELAMITE PEACOCK IMAGES: SOME MITANNI CENTRAL ASIAN PROTOTYPES

From India itself, Brentjes⁵²⁵ points out from Mackay's further report on the Mohenjo-Daro excavations (which unearthed hundreds of small finds that included many clay figurines of animals) that one or two look like peacock representations (below left) – bearing in mind the type of peacock shown is likely to be the Himalayan Monal which has a less copious tail spread. Halim's photos and



(Left) Models of peacock head and peacock from Mohenjodaro - Mackay⁵²⁶ pls lxxv,3 and lxxx,22; (centre left and right) the Himalayan Monal; (right) stylised treatment of the Knossos griffin – one of a pair flanking the throne in the Throne Room fresco

drawings of Harappan pottery (below) show the peacock was specifically used to decorate burial urns at Harappa, especially in Cemetery H - one, indeed (not shown), even has a snake in its beak. This could imply an association between the peacock symbol and the idea of death and resurrection, given it was considered to be a bird of war and death (hence, perhaps, its 'unlucky' associations sometimes retained up to today in Britain). The peacock was also spotted as featuring in the form of two 2M Elamite



(Left) typical peacock designs on Harappan urns, from from Vats *ibid.* pl. lix,3 & lxii; (right) actual painted peacock design on another burial urn – photo from M A Halim⁵²⁷. (see also the photos of Kars-de Vries⁵²⁸)

ritual shaft-hole axes/hammers by Mecquenem⁵²⁹ - illustrated below – conveniently the one on the left with an inscription naming Shulgi between the two heads places them to the turn of the 2M. It is clearly fashioned in similar mode to the shoulder-blade

⁵²⁴ Nonetheless, India now supplies most of the peacock feathers used by the Western world in the decorative arts.

⁵²⁵ B Brentjes 'The Mitanni and the Peacock' in Soviet Committee on the Study of Civilisations of Central Asia of the USSR Academy of Sciences *Ethnic Problems of the History of Central Asia in the Early Period (Second Millennium BC)* Dushanbe Conference papers published under the auspices of UNESCO Moscow 1981 145-148

⁵²⁶ E J H Mackay *Further Excavations at Mohenjo-daro (vol.II, plates)* Delhi 1938/reprinted 1998

⁵²⁷ M A Halim 'Burial Practices at Harappa' in M Jansen et al (eds) *Forgotten Cities on the Indus* Mainz 1991 198-206 – pls 180/185

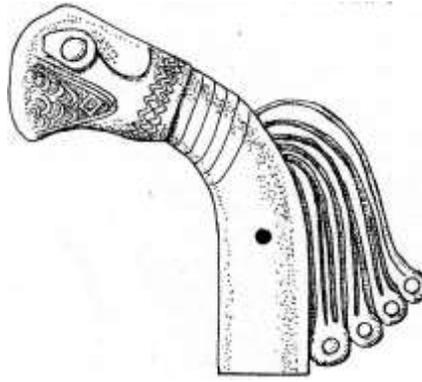
⁵²⁸ G J Kars-de Vries 'The Peacock Design During the Chalcolithic Period' in C. Jarrige (ed.) *South Asian Archaeology 1989* Madison 1992 137-144, fig. 17.2

⁵²⁹ R de Mecquenem 'Têtes de Cannes Susiennes en Métal' *RA XLVII* 1953 79-82

CATALOGUES OF EVIDENCE

E: THE FORWARD ATTACK CHRONOLOGICAL FOCUS ICONOGRAPHY

Bactrian axes of the same period (e.g. III.9-165). The second hammer/standard (below right) combines peacock crest with serpent head (note the peacock feather texturing inside the mouth). Brentjes *ibid.* points out that in Vedic tradition the peacock (known to kill snakes) was 'therefore subordinated to Indra and connected with the thunderbolt, so that [sometimes] ...Indra is sitting on a peacock throne'. Hence he traces the two Susa ritual pieces below to the peacock 'as animal of battle in Elam...' – ending up with the same role as in Northern or Dravidian India.



(Left) Double peacock-head shafthole axe from Susa inscribed with the name of Shulgi– Louvre, III. 25 in Vidale⁵³⁰; (right) serpent head axe with peacock plumes cited by Mecquenem *ibid.* fig.2-3 (his fig. 2-4a delineates the Shulgi inscription on the left axe)

Having established these telling early signposts we can now concentrate on the astronomical features of this Indo-Iranian tradition to see what can be deduced about a notional 2M Central Asia-wide calendar based on the Moon's movement against star asterisms, helped by Parpola's observations on some Indus seals.

ASTRONOMICAL CONNOTATIONS OF THE PEACOCK IN THE INDUS SCRIPT AND ON SEALS

From three Indus script signs on seals (below) - believing they do not refer to products and quantities as on the tablets of Uruk and Susa - Parpola⁵³¹ in a key paper on the cult of *Skanda-Kumāra* the peacock God relates them to the stellar implications of *Murugan*.

THE ENTWINED BANGLES, EARRINGS OR ANKLETS OF MURUGAN

First, the sign consisting of intertwined circles/bangles (below left) he interprets as the Dravidian sign for the peacock God whose Tamil name *Muruku* literally means 'young man' or the young of any animal, but also a homophone simply meaning 'bangle', or anything circular. It is a sign often scratched on many of the actual bangles unearthed at Indus sites, thus with an amuletic function. Such bangles are still worn today by women seeking to become pregnant, and often placed as offerings on fig tree branches. *Murugan* also is sometimes associated with Fire/*Agni*, the hidden embryo in wood ignited by fire - also portrayed as a youth.



ENTWINED BANGLES (MURUKAN/MURUGAN)

BRIGHT STAR [VENUS]

SIX STARS (PLEIADES/KRTTIKĀ)

Indus Script signs interpreted by Parpola as involving *Murugan* the youth-God; *Venus* - and *Kṛttikā*/the Pleiades respectively

BRIGHT/WHITE STAR VENUS

Second, Parpola considers the Indus script fish shape as another homophonic *rebus* with again the double meaning of its sound *m̃n* for fish – but also a word meaning 'star'. This seems to hold water. He goes on to reason that varied dashes next to it sometimes refer to colours - with the two parallel lines next to it (as above centre) meaning 'white/bright' and thus, he suggests, specifically

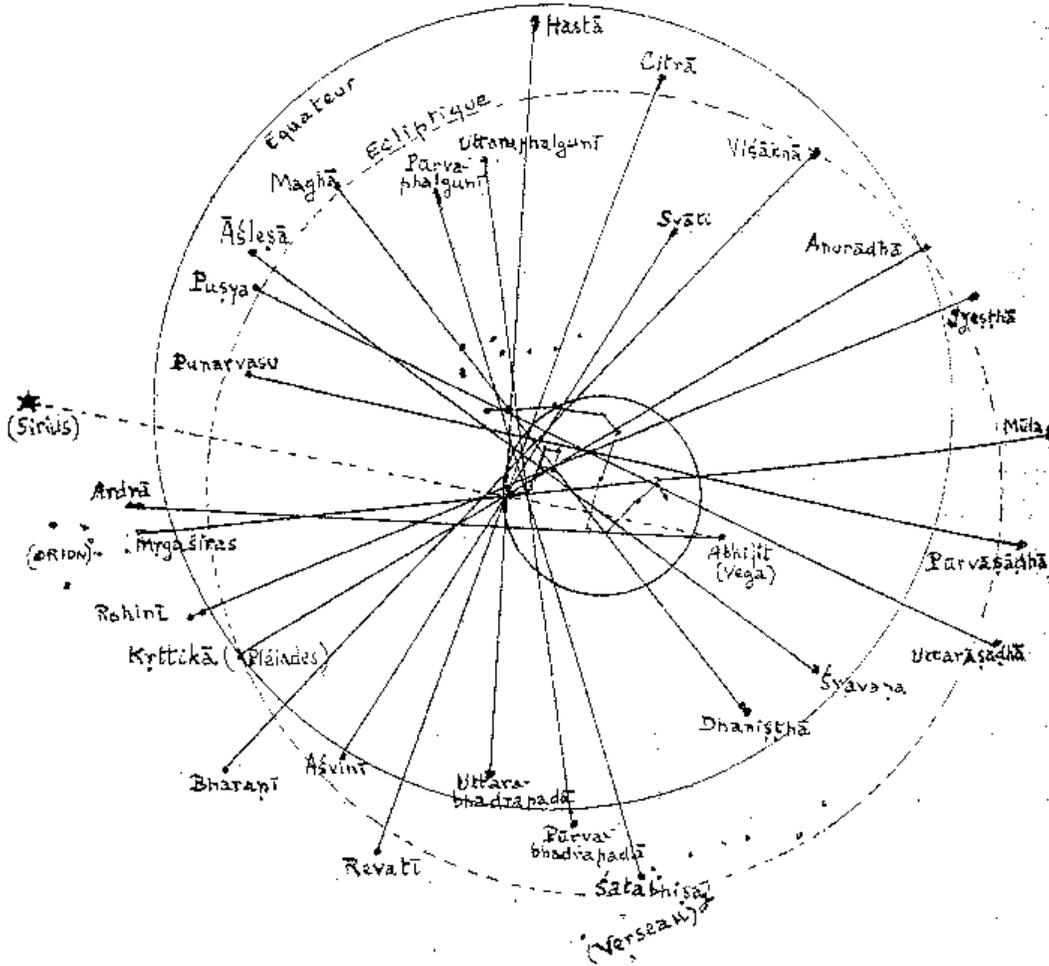
⁵³⁰ M Vidale *Treasures from the Oxus* London 2017

⁵³¹ A Parpola 'Bangles, Sacred Trees and Fertility Interpretations of the Indus script relating to the cult of *Skanda-Kumāra*' in M Taddei (ed.) *South Asian Archaeology 1987* Rome 1999 263-284

referring to Venus. Similarly, the sound *may/black* before it refers to Saturn and *paccal/green* to Mercury. If this appears far-fetched, it is important to follow the intermediate steps of his reasoning which we cannot repeat in full here. Suffice it to say that he ends up associating the parallel lines with *Murugan* as God also of sexual desire and procreation equating to the Tamil word *Ve/*, closing the circle with *ve/-mān* as again an established Tamil reference to Venus.

THE SIX STARS OF THE PLEIADES AND THE SEVEN STARS OF URSA MAJOR

Third, having already established the astronomical connotation of the fish pictogram as 'star', most interesting is Parpola's assignment of the fish sign with six dashes after it arranged in two rows (above right) to *Kṛttikā* = the Pleiades, the first *nakṣatra* of



The 14 pairs of oppositions of the Vedic Nakṣatras starting with the Spring Equinox at Kṛttikā – Filliozat's fig.3. Coinciding with two of them he has inserted all Four Generals of Avestan astronomy (Sirius-Abhijit/Vanand & Ursa Major-Šatabhisaj, though as we know Sirius and Ursa Major are not nakṣatras (the intercalary Sirius-Abhijit/Vanand alignment becomes the spindle used to churn the Milk Ocean)

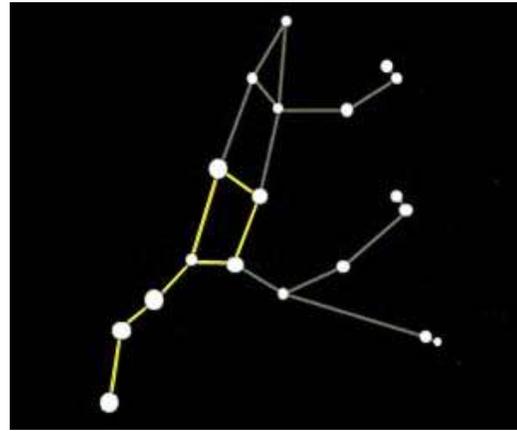
the 27 *nakṣatras* in the Indian system of lunar sky divisions in the Age of Taurus (see the diagrams above and below – and under III.9- 206). We know already that 'Karttikeya' is one of *Murugan* the peacock God's alternative names, in fact a God associated with 'sixness' – such as the six seasons⁵³² represented by his six heads needed to suckle from his mothers, the brightest stars of the Pleiades and - like Apollo - worshipped on the 6th of every month, *Murugan's* lunar birthday. In fact, it does not take much

⁵³² These six seasons (Sanskrit Rtu, Avestan Ratu) - evidently modified to meet the climate in the Indus Valley - were: Vasanta (Spring), Grīshma (Summer), Varsha (The Rains), Sharad (Autumn), Hemanta (Winter), and Sishira (the Cool season).

imagination to read the fuzzy Pleiades star cluster and surrounding smaller stars as a peacock facing left (below left) - even the dog-leg outline of Ursa Major (seen as a bull-leg in Egypt or Mycenae) can at a stretch - in the upright position with all its surrounding



PLEIADES



URSA MAJOR

minor stars - be imagined as an outline peacock (above right). Parpola then considers the fish with *three* dashes after it (thought to have been pronounced *mu-m-m̄n* in Dravidian) as the well established sign for the *Mṛgashiras nakṣatra*, the three stars of the belt of Orion visualised as an arrow piercing a gazelle head (*III.9- 109*) - the asterism marking the *third* lunar station of the year in the traditional order. The order of these *nakṣatras*, as we will see, are crucial for our understanding of the history of the Indus calendar. Unsurprisingly, having decided the fish with six dashes represents the Pleiades, Parpola goes a step further.

THE INDUS SCRIPT SIGN FOR URSA MAJOR

Having established several meanings for the fish dependent on the number of strokes next to it, Parpola was sure that if it had *seven* dashes next to it – as seen on the Harappan seal below top left⁵³³ - that it must refer to Ursa Major, a reading already pretty well



established and agreed by several other scholars independently (there is also an argument for interpreting the Mitanni double-winged standard as representing the 'wings' of the Two Bears either side of the Polar Axis – we see why shorty). The obvious parallel of the Harappan seal's iconography with the image of *Meskhetiu*/Ursa Major as depicted by three hieroglyphs and an entire bull on Egypt's New Kingdom star ceilings - above top centre - gives pause for thought. Given the bull in front of a brazier/fire altar or feeding trough is the most common image on hundreds of Indus seals, only the skin patterning given to it on the amulet shown above top right helps in suggesting it is the Sky-Bull we are already familiar with from Mesopotamia that stands for the entire sky and

⁵³³ First published by M S Vats *Excavations at Harappa II* pl.lxxxiv, top seal. See also J Newberry *Indus Stamp-Seals from the Vats Excavations at Harappa* (pamphlet) 1985 – seal no. 4009, also shown on the title page of a further pamphlet by Newberry, *Indus Seals and Mouldings from Harappa* 1985

quite clearly the key totem animal representing the Indus kingdom. The three- and four-lobed cloud markings on its body appear again on sculpture fragments from Mohenjodaro (as above lower left) and - most strikingly of all - on the robe⁵³⁴ of the more intact Priest-King figure found there (*III.9- 189*) dwelt on at length in book form by Parpola⁵³⁵). In **Chapter 19** we show how **Icon D** - a damaged steatite bowl from Ur (*III.19-177*, reproduced in miniature above bottom right) with rim originally consisting of two reclining calves forming a horizon - was decorated in the same paste-inlay cloud shapes. Between their rumps is the Sun in Crescent with six-pointed and five-pointed stars either side – maybe Mercury and Venus. While the intact one of the pair has the unmistakable outline of Ursa Major picked out in seven dots on the shoulder and a cubic 8-star on its chest (maybe connoting the *Octaeteris*), if the other calf had been decorated symmetrically (likely), its seven dots could have been intended to represent, if not Ursa Major also, then its twin, Ursa Minor – discussed under **Icon C**, and more on which shortly.

In fact I argue throughout **Chapter 19** (summarised under the heading *Differentiating Seven-Star Iconography in Icons A-E*) that the Seven Stars of the Pleiades (six bright and one faint) could in Mesopotamian astronomy sometimes be confused not only with the Seven-Star of Ursa Major (my illustrations *III. 19-69* and *III. 19-70* also contrast the stars of the Pleiades with those of Ursa Major with similar photographs), but in some cases with other prominent 7-Star constellations. Interestingly, Parpola's enquiries show - on the basis of the Purānas which describe the Seven Sages/*Saptaṛṣi* (the stars of Ursa Major) and their wives (the stars of the Pleiades/*Kṛttikā*) - that in the Indus tradition these two sets of stars *are* often closely linked⁵³⁶. In other stories *Agni* and *Shiva* (two Gods closely implicated with *Murugan*) also marry them. In what way these Seven-Star groups tie in with the *Sibitti* of Mesopotamia may become clearer as we proceed.

In a paper dealing with other iconography that also has a fish hieroglyph in yet another combination on one particular Indus seal, Parpola applies his work done on initial readings of these Indus pictographs relating to Karttikeya even further – but before considering it, our reference to the *Kṛttikā nakṣatra* means we should stop to take stock of the whole *nakṣatra* system, referred to in a R̥gvedic hymn to the Aśvins as a twelve-spoked wheel, sometimes with a thirteenth mentioned when needed for intercalation (probably the origin of the idea of the Twelve Suns/*Ādityas* also referred in the hymns).

THE NAKṢATRAS

For chronological authenticity we will mostly rely here on Filliozat's useful summary of the main features of the *nakṣatras* as used both in India⁵³⁷ and later in Iran (much already given in **Chapter 19**) - but with further diagrams and sources inserted. Pingree *ibid.* usefully summarises the oldest textual sources remaining today that give lists of the *nakṣatras*: **Atharvaveda XIX 7, 2-5; Taittiriyaśamhitā IV 4, 10, 1-3 and Taittiriyaśr̥hmaṇa 15 and III 1, 4-5.** On the Iranian side (from much later in time) Henning *ibid.* writes, 'In Iranian we have four lists of the Lunar Mansions: that of the **Bundahishn** in Pazend, a Sogdian list in Beruni's **Chronology**; a Khwarezmian one given by the same authority; and the list published by Freiman... from a Sogdian manuscript' (in fact identical to the Khwarezmian list). By the same token the Persian miniature of the lunar mansion shown a few pages on is many centuries later, but useful in not needing labels and the way it graphically incorporates the moon phases. As Pingree points out, roughly speaking two *nakṣatras* fit into one zodiac sign (illustrated below), but for those interested the modern Jyotishamaṇḍala

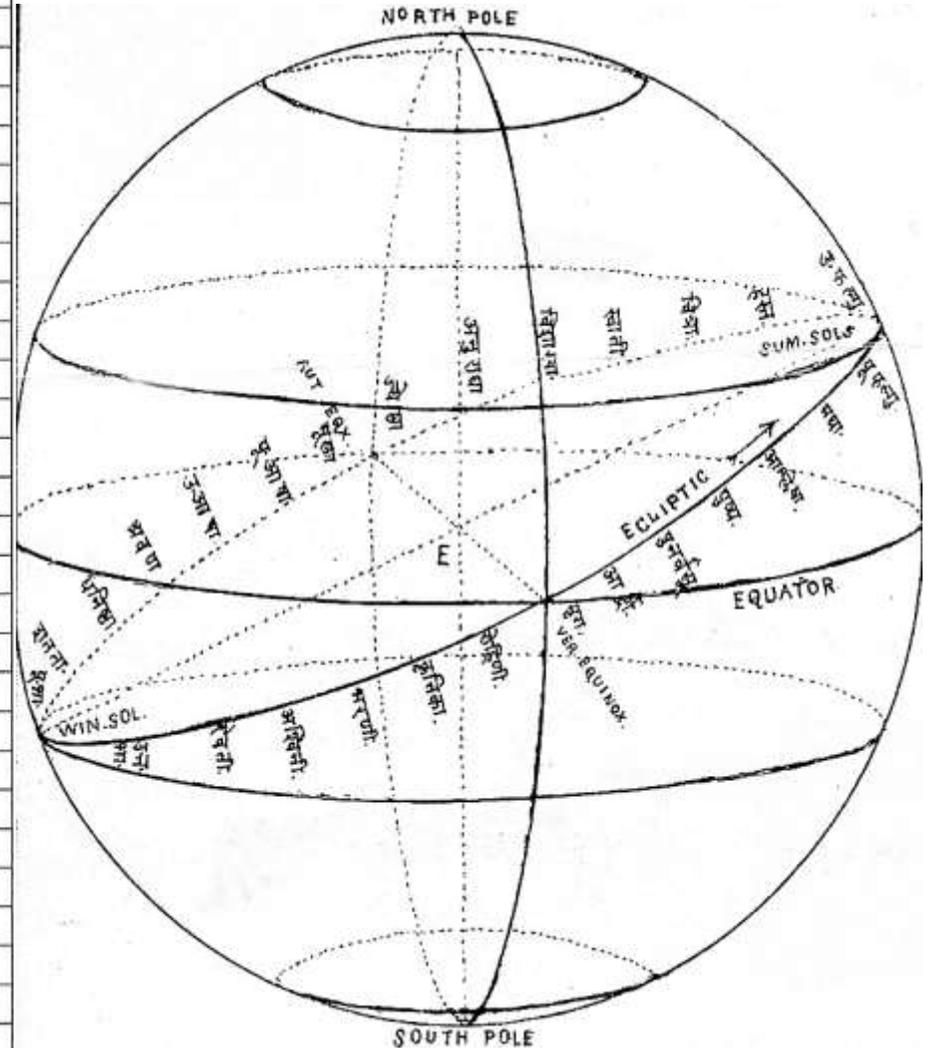
⁵³⁴ A Parpola 'The Harappan Priest-King's Robe and the Vedic Tārpya Garment' in J Schotsmans et al. (eds) **South Asian Archaeology 1983** Naples 1983 385-403

⁵³⁵ The subject of a book-length analysis by A Parpola **The Sky-Garment: A study of the Harappan religion and its relation to the Mesopotamian and later Indian religions** Helsinki 1985

⁵³⁶ Parpola notes the seven fire altars at the Indus site of Kalibangan citadel was each set with a lingam-type stone. The cult of Shivalingam is said to have started when the Seven Sages castrated Shiva, outraged that he had impregnated their wives, the Pleiades – but his seed fell to the ground so the linga cult was inaugurated by the Seven Sages (the stars of Ursa Major) to atone to Shiva (compare to the Greek myth of the castration of Saturn, from whose spilt semen Venus was born).

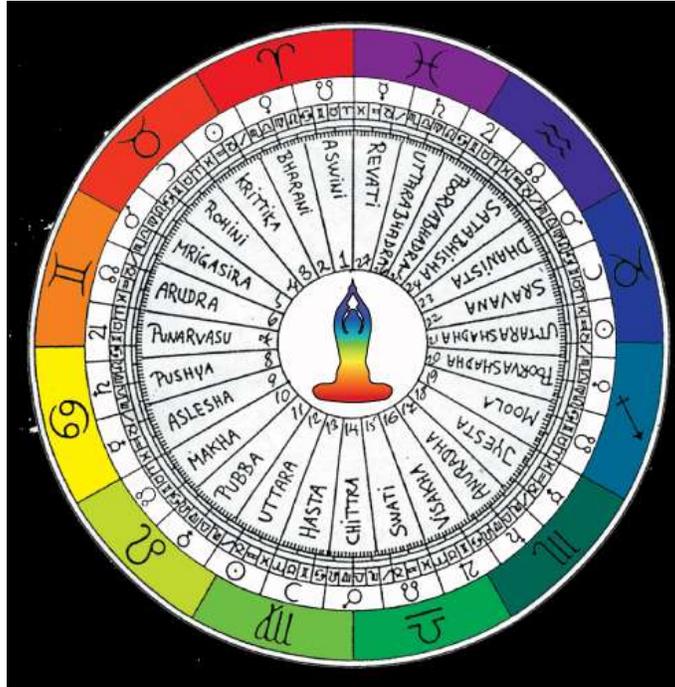
⁵³⁷ J Filliozat 'Notes d'Astronomie ancienne de l'Iran et de l'Inde' **Journal Asiatique 250** 1962 325-50

	Nakshatra	Ruler	Degrees of Zodiac	Degrees in Sign
1	Ashwini	Ketu	0°00' to 13°20'	0°00' to 13°20' Aries
2	Bharani	Venus	13°20' to 26°40'	13°20' to 26°40' Aries
3	Krittika	Sun	26°40' to 40°00'	26°40' Aries to 10°00' Taurus
4	Rohini	Moon	40°00' to 53°20'	10°00' to 23°20' Taurus
5	Mrigasira	Mars	53°20' to 66°40'	23°20' Taurus to 6°40' Gemini
6	Ardra	Rahu	66°40' to 80°00'	6°40' to 20°00' Gemini
7	Punarvasu	Jupiter	80°00' to 93°20'	20°00' Gemini to 3°20' Cancer
8	Pushya	Saturn	93°20' to 106°40'	3°20' to 16°20' Cancer
9	Ashlesha	Mercury	106°40' to 120°00'	16°40' Cancer to 0°00' Leo
10	Magha	Ketu	120°00' to 133°20'	0°00' to 13°20' Leo
11	P Phalguni	Venus	133°20' to 146°40'	13°20' to 26°40' Leo
12	U Phalguni	Sun	146°40' to 160°00'	26°40' Leo to 10°00' Virgo
13	Hasta	Moon	160°00' to 173°20'	10°00' to 23°20' Virgo
14	Chitra	Mars	173°20' to 186°40'	23°20' Virgo to 6°40' Libra
15	Swati	Rahu	186°40' to 200°00'	6°40' to 20°00' Libra
16	Vishakha	Jupiter	200°00' to 213°20'	20°00' Libra to 3°20' Scorpio
17	Anuradha	Saturn	213°20' to 226°40'	3°20' to 16°40' Scorpio
18	Jyeshtha	Mercury	226°40' to 240°00'	16°40' Scorpio to 0°00' Sagittarius
19	Mula	Ketu	240°00' to 253°20'	0°00' to 13°20' Sagittarius
20	P Ashadha	Venus	253°20' to 266°40'	13°20' to 26°40' Sagittarius
21	U Ashadha	Sun	266°40' to 280°00'	26°40' Sag to 10°00' Capricorn
22	Abhijit		276°40' to 280°53'20"	6°40' to 10°53'20' Capricorn
23	Shravana	Moon	280°00' to 293°20'	10°00' to 23°20' Capricorn
24	Dhanishta	Mars	293°20' to 306°40'	23°20' Cap to 6°40' Aquarius
25	Shatabhishak	Rahu	306°40' to 320°00'	6°40' to 20°00' Aquarius
26	Purva Bhadra	Jupiter	320°00' to 333°20'	20°00' Aquarius to 3°20' Pisces
27	Uttara Bhadra	Saturn	333°20' to 346°40'	3°20' to 16°40' Pisces
28	Revati	Mercury	346°40' to 360°00'	16°40' to 30°00' Pisces



III.9- 206: The Nakṣatras in table form with Right Ascension positions today⁵³⁸ and traditional planetary crossovers – and a spherical rendition on the celestial sphere from Tilak ORION

⁵³⁸ K Sutton *The Nakṣatras* Bournemouth 2014 - p.5

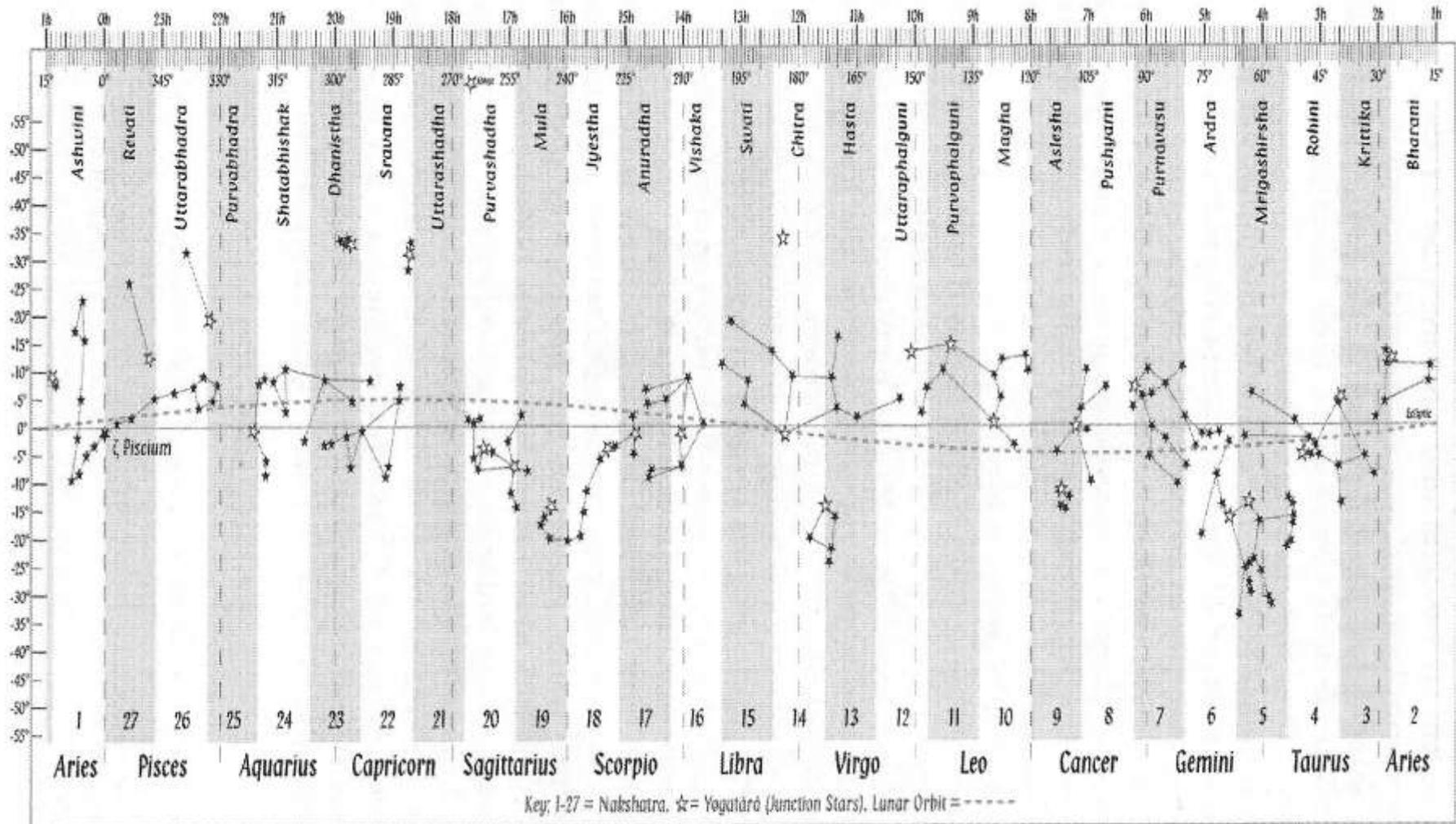


Modern-diagram positioning the ruling planets and Lunar Nodes for the 27 Nakṣatras as corresponding to the Signs. They differ from the Egyptian New Kingdom system of 36 Decans where each Zodiac Sign is divided into thirds of 10° each, unrelated to Moon behaviour

shown further on gives the minutiae equating nakṣatras to zodiac signs (Sidharth thinks the Three Steps of Viṣṇu are the three points at which the start of a zodiac Sign and a nakṣatra exactly line up). For mythical context we have the vivid legend given in the *Purāṇas* describing Daksha the Sky who has 28 daughters, 27 married to Soma/the Moon (Son of Agni), with the 28th, intercalary one (*Abhijit*) given in marriage to none other than Shiva/*Prajāpati* (*Digambara*/Sky-clothed) - more on the significance of this shortly). The *Nakṣatras*/Lunar Asterisms are regularly spaced star markers on or near the Ecliptic, crossed by the Moon night by night, marking each day of the month. As the next star chart shows, not all are particularly bright (as with the example of *Bharānī* - the Fly – looked at shortly). As also in the case of the Zodiac this means neither the two Bears nor Sirius can be counted as lunar stations,

AXIS	No.	NAME	AXIS	No.	NAME
EAST	1	Krttikā	WEST	8	Anurādhā
	2	Rohinī		9	Jyeshthā
	3	Mrgashiras		10	Mūla
	4	Ardrā		11	Purvashadhā
	5	Pūrnāvāsu		12	Uttarashadhā
	6	Pushya		13	Abhijit
	7	Ashleshā		14	Sravana
NORTH	15	Dhanishta	SOUTH	22	Māghā
	16	Shatabhishaj		23	Pūrvaphalguni
	17	Pūrvabhadrapadā		24	Uttaraphalgunī
	18	Uttarabhadrapadā		25	Hasta
	19	Revatī		26	Citra
	20	Ashvinī		27	Svātī
	21	Bharānī		28	Vishākhā

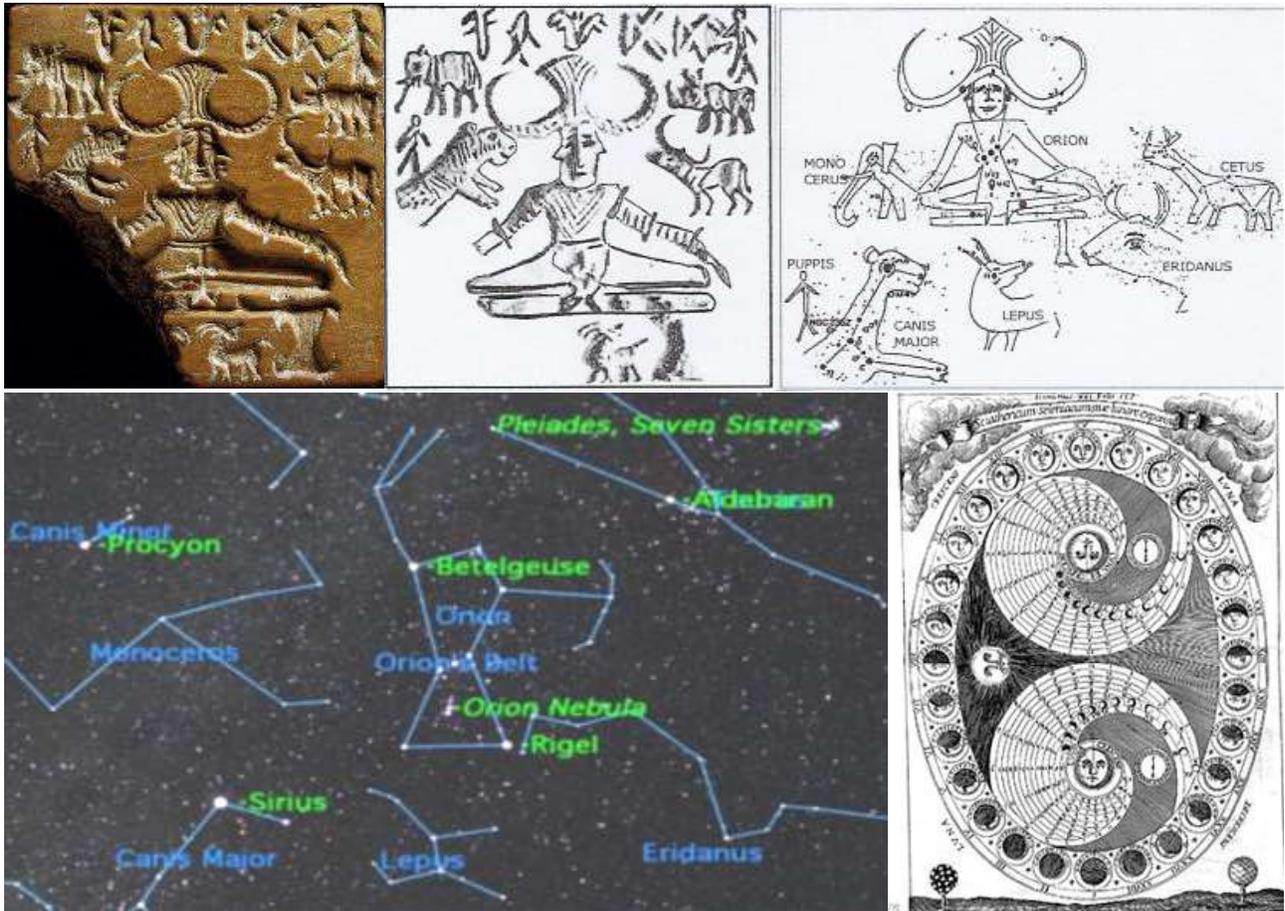
The Vedic Nakshatras arranged in oppositions (c.f. their present-day numbering in the table at Ill. 9-206 that starts with Ashvinī/Aries)



Actual Lunar Path weaving along the Ecliptic with the positioning and naming of the Nakṣatras in current use today – Mason⁵³⁹ p.86

⁵³⁹ A Mason *Vedic Palmistry* London and Philadelphia 2017

though these still play a key role in coordinating the *Nakṣatras* with the solar year - with the top half of Orion (Betelgeuze/Ārdrā and the Belt of Orion/*Mrgashiras*) also playing a part in one early era. It is interesting to note that *Kṛttikā*/Pleiades was the first lunar station for the end of the 3M BC, taking over from Aldebaran/*Rohinī* to mark the start of Spring in the Vedic system, clearly coinciding with the solar year Vernal Point markers in Taurus used in Mesopotamia during the same period. Precisely as described in *Mul Apin* (discussed in **Chapter 19**), observation of the setting of one star against the rising of its opposite number (**Sky Anchor 8, Chapter 19**) was the method used in the Harappan/Vedic lunar station tradition too – but it also incorporated the opposition of Rahu -v- Ketu (the conjunction points of the lunar nodes with the Ecliptic – known as the Dragon of the Eclipse). Most oppositions between *nakṣatras* cross one or other Bear or different parts of Draco (see Filliozat's fig.3 above) and the alignments between Sirius and *Abhijit*/Vega - or Regulus/*Māghā* with Ursa Major - are used as stabilising 'rudders' in the time-keeping process. Indeed, looking more closely at the oppositions between *nakṣatras* given by Filliozat we see that in fact more cross Ursa *Minor* than Ursa Major (the latter with Regulus and Sirius coming into play most crucially at the solstices).



(Top Left) The *Prajāpati* sealing from Mohenjodaro (Mackay 222); (centre and left) Jeyakumar⁵⁴⁰/Hemtun's stellar interpretation; (below left) the sky area in question; (below right) a Gardner's Calender showing the Moon cycle's waxing and waning halves

INSERTION OF THE ARIES-LIBRA OPPOSITION AND ITS PARALLEL IN THE INDUS SYSTEM

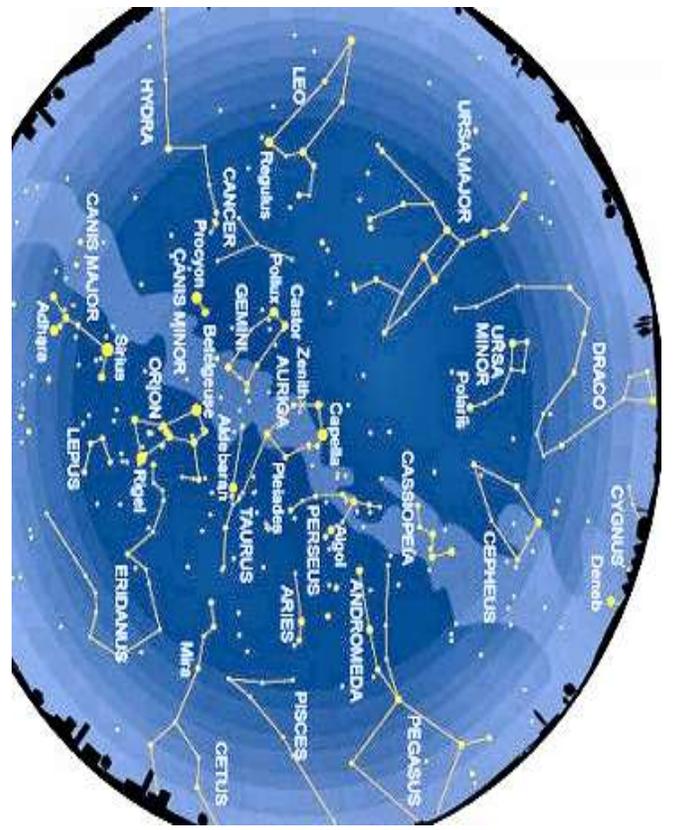
Ashfaque *ibid.* explains the alignment between Regulus/*Māghā* to the two stars on the outer side of Ursa Major - *Dubhe*/*Pulaha* and *Merak*/*Kratu* (c.f. Filliozat's fig.2 with corresponding sky map next page) as the juncture at which the lunar asterisms and the Solar

⁵⁴⁰ R Jeyakumar fig. 19 at <https://ia800307.us.archive.org/18/items/NecropolisTheoryOnIndusValleyCivilization/Ver-11.calendarTheory-july-2012.pdf>

CATALOGUES OF EVIDENCE

E: THE FORWARD ATTACK CHRONOLOGICAL FOCUS ICONOGRAPHY

year could be brought into coordination at the Summer Solstice c.2400. In the Harappan age 'it was very significant that Regulus occupied a position almost in a straight line connecting the Pole Star and the two pointer stars of the sacred *Saptarshi* constellation', at which point *the intercalary asterism of Vega/Vanand/Abhijit would have been inserted* 'in an attempt to reform the calendrical scheme despite the fact that the asterism was situated much too far north of the ecliptic zone.... [no doubt because] *Abhijit* happened to be almost precisely opposite Regulus across the [then] Pole Star, Thu^oban'. The idea of inserting a new fiducial alignment and bringing it to the fore as prime benchmark was, I believe, a critical precedent for the West to lean on when they came to insert the Aries-Libra opposition into their own zodiac. Ashfaque, regarding *Prajapati* as Lord of Time, goes on, 'This imaginary line in heaven had probably come to be regarded as the fiducial mark from which *Prajapati* had set the cosmic vortex in motion'. In other words, this is the spindle enabling the Churning of the Sky Ocean, which may also explain why on the Indus seal below he is shown as ithyphallic, graphically bringing attention to that meridian. Note also that, as Lord of Time, he is shown with the three faces of Time Past, Time Now and Time Future. We cannot resist bringing in here the superimposition of this image onto the top half of Orion illustrated above, an idea put forward by Jeyakumara *ibid.* following Benght Hemtun (www.catshaman.com), whereby the God of the Year is surrounded by the animals of the surrounding stars (it corresponds well to the star map underneath) and enshrining the centrality of that constellation as Lord of the Zodiac. His buffalo horns suggest the waxing and waning colures of the yearly extremes (horns are especially equated to the Moon). Sidharth *ibid.* reminds us of the story that *Prajapati* (often identified with *Shiva-Digambara*) changed into a deer in order to mate with the *nakṣatra* Rohinī, making his identification with the *Mrgashirṣa* asterism suggested by Hemtun quite plausible, and simply a way of explaining the changeover to a new *nakṣatra* at the beginning of a new Age (see the small table, next page).



(Left) The Vedic Nakṣatras and the Ursa Major-Regulus circle of displacement/precession - Filliozat fig.2; (right) actual positions of stars

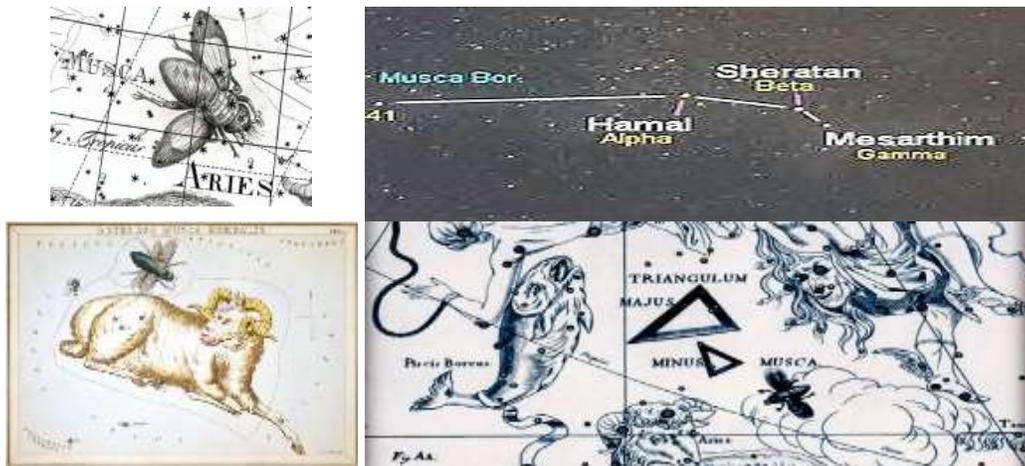
Ashfaque remarks that the equivalent Chinese Hsieu system continued to use the Vega-Regulus line from Harappan times ‘right down to the time of the classical Hindu astronomy of post-Hellenistic times’. Nonetheless, for India itself, the intercalary 28th nakṣatra eventually outlived its usefulness when instead the line between Regulus to midway between Dubhe and Merka in Ursa Major now coincided with the solstitial colure c.1400BC, but with a changeover to alignment with the celestial pole instead of the ecliptic pole: ‘this line provided the correction factor of about 11° in retrograde motion for every hundred years in the five-year yuga cycle referred to earlier’ Ashfaque notes – but that move marked the changeover point from Harappan to Vedic astronomy.

THE LUNAR ASTERISMS AŚVINI-AND BHARĀNĪ AND THE NEW ZODIAC SIGN OF ARIES

Given we are looking for clues on possible cooperation between different cultures in dealing with the changeover from the Age of Taurus to the Age of Aries, having given some idea by now of how Mṛgashiras would have given way to Rohinī, and Rohinī in turn to Kṛttikā, we give in the small table below their order taken from the full nakṣatra circle. For our purposes we need only concentrate on the sequence of those first six nakṣatras (two nakṣatras roughly equating to one zodiac sign) noting in particular that in turn

NAKṢATRA Vernal Point	EQUIVALENT ZODIAC SIGN
Ardrā [α Orionis]	GEMINI ♊ [above Orion]
Mṛgashiras [Belt of Orion]	
Rohinī [Aldebaran]	TAURUS ♉
Kṛttikā [Pleiades]	
Bharānī [Musca Borealis]	ARIES ♈ [paranattellonta Al-Gol, Auriga & Pegasus above it]
Ashvinī/Ashvayuj [Aries]	

Bharānī and Ashvinī correspond to the Sign of Aries, succeeding Kṛttikā as leader of the nakṣatras during the 2-1M one after the other in the same way that Rohinī and Kṛttikā before had succeeded Ardrā and Mṛgashiras. Before commenting on the significance of the ‘horse’ star marker, we see that Bharānī before it corresponds to the tiny Fly star group of Musca Borealis, giving significantly



increased depth to our encounters in this Catalogue with the iconography of the fly as an infrequent motif on artefacts from the Makran and the BMAC, and reaching as far as Egypt and the Aegean. The asterism of Bharānī preceding Ashvinī is equated by Filliozat to the ‘Fly’ constellation, Musca Borealis (not to be confused with the Musca in the vicinity of the Southern Cross). It turns out to be the group of faint stars west of the signature star of Aries – Hamal - along the Ecliptic (to which the VP would have first slipped before reaching what we call Aries itself (the picture above below right shows its positioning in relation also to Taurus, Perseus and Al-Gol higher up – though here the image was reversed when printed).

In contrast to constellation imagery promotion in Syria and Mycenae, what is immediately obvious is that in the *Nakṣatra* system the Aries stars are *not* associated with a sheep, but with the fly and the horse - chiming in with the primacy of horse culture and fly imagery we have noted all through this Catalogue on the precious cups and lead weights made round the Turanian Crescent. Why further west they should prefer the sheep as the new Sign corresponding to *Bharāṇī* and *Ashvinī* points to individual priorities we still need to get to the bottom of. It may be something to do with the emphasis already being transferred to constellations covered by the winged horse of Pegasus, the four-horse Chariot, Auriga, and the severed head *Al-Gol* in Perseus – all paranatellonta higher in the sky that helped to align the 0°meridian to the shifted Age of Aries Vernal Point more easily than making out the paucity of distinctive enough stars along the *nakṣatra* route. The Āryan nomenclature of *Ashvinī* (along with *Bharāṇī*) for the Aries zone enhances the idea that for the Indus-connected Mitanni who cultivated both horse and fly imagery it was really the Age of *Equus-Ashvin* – and the fact remains that the differently assigned uptake of fly and horse iconography further west remains a strong pointer to a quite esoteric level of interconnection. Overall what we witness on the part of the West is an independent-minded alternative mix of horse-themes gradually brought in from Central Asia and the Indus domain projected onto different stars.

Against this picture we see the absorption of the peacock image into western use betraying similar origins - again with differences of emphasis since they did not use the *nakṣatra* system but *were* concerned with Precession. This we concentrate on next.

THE PEACOCK GOD AS IMAGE OF THE NAKṢATRA-MANDALA

Having earlier described the introduction of the peacock into the BMAC from southern India, and shown early instances of its depiction at Indus and Elamite sites, from the peacock naming of the *Kṛttikā nakṣatra* (which we matched against peacock-tail-type



photographs of the Pleiades), it is fair to say everything points to the conclusion that the transition from the previous leader *nakṣatra* to *Kṛttikā* must have taken place at a time when the Indus civilisation was flourishing. Would it be a step too far to think we could read the peacock tail-spread as intended to stand for the entire *Nakṣatramandala* – or that the peacock God is described as ever-

CATALOGUES OF EVIDENCE

E: THE FORWARD ATTACK CHRONOLOGICAL FOCUS ICONOGRAPHY

youthful due to the fact the system was given an updated starting point, making it young again? Indeed, could Murugan's snake refer to the Dragon of the Eclipse incorporated into the circle, and does the human form of *Karttikaya* represent the Cosmic Man, *Puruṣa*? Below right we have a rendition of the *Nakṣatramāṇḍala* in human form from Gujrat – the area most associated with crossovers between Central Asia, India and Turān – including the very presence of Zoroaster's early years.

In the end these questions can only be answered under the concept of the Vedic Sacrifice in its astronomical dimensions - but bearing in mind our ultimate goal is to validate connections between the Mycenaeans and Central Asia, we will first sneak a preview on why the peacock-griffin - for just two centuries in use by Mitanni and Mycenaean alike – is so significant, both in symbolism and as the most striking and undeniable evidence we have of interchange between Turanian and Mycenaean worlds.



(Left) Representation of the *Nakṣatras* (outer ring) in relation to the phases of the Moon and Zodiac Signs from a 16C Persian Manuscript⁵⁴¹; (right) the *Nakṣatras* as the Universal Man, *Puruṣa*, from a 19C Gujurati MS (apud. Beinorius *ibid.*)

THE PEACOCK GRIFFIN AS AN ASTRONOMICAL HYBRID REFERRING TO SOLAR PRECESSION

THE BEARS AND REGULUS

The *Nakṣatra* system is likely to be the hidden contribution of the Indus civilisation to the Western world for coping with Precession - including the Mycenaeans and ever afterwards into the early Greek world. This would account for their adoption of a foreign bird, the peacock - in itself proving their connection with India and Turan/the BMAC - in rare cases depicting it on their seals in *Forward Attacks* to announce not just the usual New Year point, but New Year day at the precessed Vernal Point. It means the Mycenaean and Mitanni owners of those seals would have been involved in that work, being rare and important individuals. This does not mean

⁵⁴¹ *Map of the universe: The Globe, the Seven Saints [planets] of the heavens, the Zodiac and the position of the 28 days of the month* – hand-coloured woodcut from the original Persian manuscript, *The Tales of Luqman (1583)*, Museum of Turkish and Islamic Arts, Istanbul (illustrated in *Universe: Exploring the Astronomical World* compiled 2017 by Paul Murdin, Senior Research Fellow at the Institute of Astronomy, Cambridge).

the *nakṣatra* system as *such* was adopted, but key mechanisms used from it appear to have been applied, meaning the adoption of the peacock griffin referred to Mitanni and Mycenaean awareness of Precession and its application to the state calendar. Filliozat was intrigued by the tradition in Vedic astronomy that due to the obliquity of the Ecliptic the precession of the equinoxes could be tracked through one grand revolution (backwards through accrued small slippages over thousands of nights) of the Great Bear in harness with Leo/*Regulus* (the alignment just referred to in Ashfaque's observations above). This phenomenon could in turn be tracked in its intermediate stages by the Moon's movements round the 27 *nakshatras* (28 in an intercalary year), the whole process taking c.27,000 years to complete on just the same basis as the Sun's precession backwards along the Ecliptic was measured by its synodic periods against the zodiac constellations.

Filliozat's fig. 2 above depicts the precession of the Polar Centre in a tight circle over millennia (in myth represented by Mount Meru), explained in our **Chapter 19**. In other words, *if observed at exactly the same time each night*, as it slips backwards in relation to the Solar Year *Saptarṣi/Ursa Major* appears to spend 100 years⁵⁴² in each *nakṣatra* - the entire process, of course, being locked in to the Sun's Grand Precession along the Ecliptic via its leader, *Regulus in Leo* (also slipping back), which sets the benchmark by its line-up to *Ursa Major*). Thus *Saptarṣi/Ursa Major* acts as circumpolar Grand Paranatellon counter-checking the Sun's own backslide through the Signs, while at the same time it is the Moon's intermediate role in relation to *Ursa Minor*, covering smaller fractions of the cycle, that gives an intermediate measuring tool for dividing up the process into manageable units over generations. In this light that link between *Ursa Major* and *Regulus* is even more significant than we realised, bringing to mind our interpretation of *Ursa Major in Catalogue B* as represented by the upturned tail of the lioness that features so pointedly on the 3M Uruk stone vases.

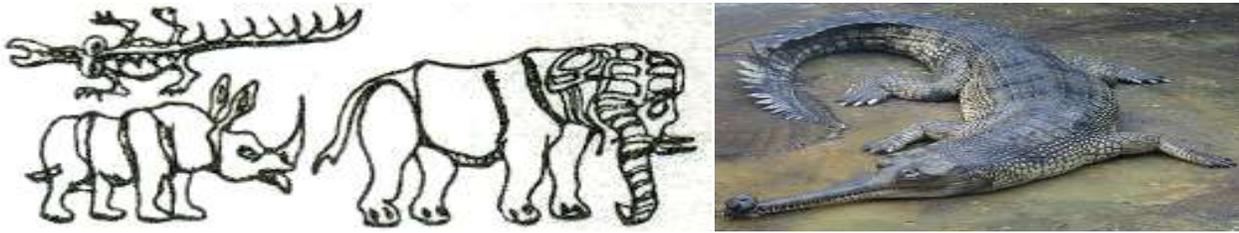
When using the Āryan tradition of measuring out the calendar by asterisms, it is obvious how the *nakṣatra* oppositions played a strong part in pinpointing *Ursa Minor* so as to locate the Polar Centre - all of which in a way takes the emphasis off *Ursa Major* as the most important constellation in the sky, putting them more on the equal basis later accorded to them by Aratus (and possibly the real significance of the winged standard of Mitanni iconography). The importance of the Two Bears, Sirius, the Pleiades, the Belt of Orion and Vega/the intercalary *Abhijit* stands out, and at this point in the narrative what also emerges in Filliozat's fig.2 above is how the movement of the Polar Centre marked by the end of *Ursa Minor's* tail also played a part in tracking Precession, standing as it does on the crossing points of many oppositions, as well as featuring on the Sirius- *Abhijit* line (see also the detailed Polar Precessional Circle given by Parpola earlier). We look at the whole question of Solar Precession and the more precise numbers for what Plato and the Zoroastrians called *The Great Year* in **Chapters 19 & 20**, but it is worth making a quick reference back to **Icon A** in **Chapter 19** where at the end we quote Ulansey (*ibid.*) in his last two chapters on the Mithraic Mysteries who cites some obscure references for why in Roman times Mithras was regarded not only as Kosmokrator (Ruler of the Cosmos) but also *Lord of Precession* - due to the esoteric connection of the *taumachy* with *Ursae Majoris et Minoris*⁵⁴³.

ASTRONOMICAL IDENTITY OF THE CROCODILE ON INDUS SEALS

Parpola makes observations that associate another animal on the Indus seals to such questions: the small crocodile that swam in NW India's rivers usually known as the gharial (it has a thinner, more toothy snout than the ordinary crocodile) appears to have been

⁵⁴² This could be an alternative meaning for *Shatavaesha* - meaning '100 mansions'

⁵⁴³ To differentiate the Polar Axis/Polar Centre/Polar Star in the Zoroastrian and Vedic traditions see A Panaino 'Uranographia Iranica II' **AFO 42/43** 1995/96 190-207



intended to represent Ursa Minor. In his paper on the beginnings of Indian and Chinese astronomy quoted earlier, he refers to local customs in both Bengal and Gujrat featuring the gharial, quoting chapter and verse:

In the Taittirīya-Āraṇyaka (2,19,3) it is a heavenly mighty crocodile which..... is worshipped with a prayer at dusk, addressed to the Pole Star, Dhruva. Later Purāṇa texts ... tell that God appears in the sky in the shape of a starry crocodile, with the Pole Star in its tail. This matches the position of the pole in the tail part of the crocodile images of Gujarati tribals... The heavenly crocodile turning around in the sky with the Pole Star as its pivot apparently devours the Sun and other planets like the later crocodile-shaped Eclipse demon Rāhu, possibly represented by the Harappan images of the fish-eating crocodile’.



Three-sided terra-cotta moulded tablet with fish-eating gharial on one facet – Mohenjodaro MD602 – Kenoyer *ibid.* fig. 5.11

Not only does this bring to mind the crocodile on Taweret’s back on 2M Egyptian star ceilings and the Minoan Genius derived from it, possibly referring to Draco (see the details below centre), but we gain more traction from its appearance on other Indus seals such as the one found at Konar Sandal illustrated earlier, shown over an antelope (drawn by Holly Pittman⁵⁴⁴ below left), and even taking centre stage as a cosmic ‘Master of Beasts and Humans’ in the Mohenjodaro seal below right that underlines its centrality. Indeed,



⁵⁴⁴ Holly Pittman ‘Glyptic Art’ - Section IX in Y Madjidzadeh ‘Excavations at Konar Sandal in the Region of Jiroft in the Halil Basin: First Preliminary Report 2002-06’ *Iran XLVI* 2008 69-103, fig. a (a photograph of the seal and sealing is shown on p.596

Parpola goes on to reiterate how the *Purāṇas* describe the Pole Star on the Crocodile's tail as the hub of the entire stellar system, upholding all stars and planets, an alternative to the image of the Fig Tree that also can also refer to the entire sky, like an orrery. What is more, Talpur *ibid.* particularly associates the gharial with the Sind region and, astonishingly, describes a crocodile cult still alive today at the shrine of Mangho Pir near Karachi, peopled by generations of crocodiles whose leader is addressed as *Mor Sahib – or Mr Peacock!* She believes the cult is particularly linked to African immigrants (Sheedis) who tend to arrive in Gujrat, Sindh and the Makran on ships blown in that direction by the Monsoon winds from East Africa – which leads us on to Vahia and Menon's view.

THE HARAPPAN STARTING POINT

For one point in the circuit of the Great Bear over one year, Vahia and Menon point to a significant position in 2500BC at Harappa – when as it rises upside down and low, parallel to the horizon at sunrise (as below) it marked the Monsoon period – in contrast to its evening position when it reached the opposite horizon, still parallel to it but the other way round (this is when it looks most like a plough, with Arcturus standing behind it like the ploughman (referred to in **Chapter 19, III. 19-190**, with fuller sky view in **III. 19-56**).

To the Vedic Indians each star in the Plough/Seven Sages had its own identity:

- The three stars of the Plough shaft were *Marichi*, *Vasistha* (his wife the 7th, faintest Pleiades star *Arundhati/Alcor*) and *Angiras*.



The Northern sky at the start of the Monsoon period at Harappa in 2500 BC – Vahia & Menon⁵⁴⁵ fig.8 (note the Regulus-Saptarṣi line-up)

- The four stars forming the bed of the Plough were *Atri* (N-E), *Pulastya* (S-E), *Pulaha* (S-W) and *Kratu* (N-W), *Kratu* being the first to rise across the horizon (because India was further south than Mesopotamia the Plough was seen more as an Anu Star – but we have seen this is so for certain times of the year further north in Mesopotamia also).

The Arabs later continued to give separate identities to the linear 'Handle' part of the Dipper and its square 'Pan'.

There is no doubt that from the Vedic tradition we have strata of textual and visual backup for understanding the central importance of The Seven Sages (*Saptarshi/Saptariksha*) as the sign-post *par excellence* for Precession - as much as serving as marker of the Seasons. Even if the textual strata are chronologically dislocated from each other – and later than datable artefacts - they do at least point to one level of the significance of the *Sibitti* as known in Mesopotamian astronomy - or the *Heptad* in Avestan astronomy.

THE PEACOCK GRIFFIN AND THE PHOENIX

According to the Āryan tradition, when at the Spring Equinox the two top stars of the Great Bear *Pulaha* and *Kratu* line up against *Māghā* (Regulus in Leo)⁵⁴⁶ this marked the start of the new era known to the Hindus as the Kali Yuga, calculated to have started in 3102 BC. The only other stars serving later as meridional lines that are mentioned in the texts are *Tishya/Pushya* and *Ashleshā*,

⁵⁴⁵ M Vahia & S Menon 'Foundations of Harapan Astronomy' in T Nakamura et al. (eds) *Mapping the Oriental Sky* Tokyo 2011

⁵⁴⁶ Obviously, the Bears do not precess independently of the Ecliptic – which is what the Aryan tradition almost seems to assume, since all the stars are locked together in one apparent motion caused by the spinning of the Earth. Only the planets move independently across them.

both in Cancer, the sign after Leo, its weak stars often proxied by the Sirius Dogs in the Zodiac system. As mentioned when we started out, this roughly 27,000-year long era thus encompasses the entire gamut of all World Ages. This is why the Palm tree as well (*Phoinix*) is an ancient symbol both for the Polar Axis at the centre of the stars and planets, and of Precession – and often depicted next to a lion (or even the lion-bull attack) – due to the homophony of the word. The Phoenix *bird* in Egyptian imagery stood for that entire precessional cycle too (hence its name), as also for the idea of the Great Return and the renewed Solar Grand Cycle – which is why the phoenix is equated to the Sun and described as reborn from the ashes of former Aeons devoured by Time. It seems quite possible the story came from Central Asia/the Indus via the Mitanni in the first place, given how they and the Mycenaeans used the peacock griffin in their imagery (we have mentioned in the *Art History Section* Mitanni intermarriage with no less than three Pharaohs' daughters, and referred to the many gifts they sent to the Egyptian court as listed in the Amarna letters).



(Top) The Pylos gold winged griffin pendant seal, Tholos IV; (Lower left) agate amygdaloid seal from Acharnes, Menidi Tholos; (lower right) the Megiddo ivory griffin

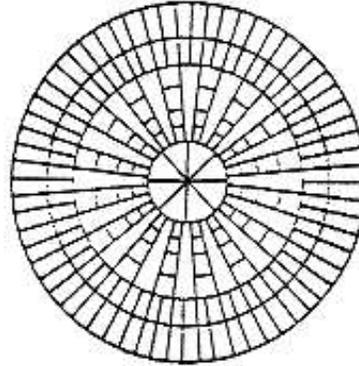
All this is by way of saying - as hinted at throughout the Catalogue - that the griffin is a hybrid beast referring to the challenge of Precession that 2M state calendar government had to gain mastery over and deal with. Parpola's descriptions of the iconography and importance of the Peacock God in the Indus context through his analysis of certain Indus seals induces us to adopt a perspective on the youthful, smiling boy-God Murugan as literally embodying the birth of the new Ashvin/Aries era, with the peacock tail pretty much a diagram of the fine detail of the entire *nakṣatra* cycle starting at the previous *Kṛttikā nakṣatra*. It means the peacock griffin is a precise fusion conveying the idea that its lion body alludes to the Leo/Regulus solar cycle, in tandem with the Moon's *nakṣatra* cycle represented by the peacock forepart - parallel to the way, in miniature, the Bears are yoked to *Regulus* in the *nakṣatra* system and represented by the Winged Standard.

THE NAKṢATRAS, VEDIC FIRE ALTARS AND THE JYOTISHA-MANDALA/HORSE SACRIFICE

Parpola sees the gifts of the Indus region to the R̥gvedic Āryans on entry into North India as:

- **THE ABSORPTION OF THE DĀSA GOD, VARUṆA**, into their own pantheon partnered with their own Weather God Indra (*Varuṇa* the All-Encompassing Sky becomes *Uruvna* at Hattusas and *Ouranos* in Greece - tellingly, where the *R̥gveda* states, 'Firm is the seat of *Varuṇa*', Hesiod describes *Ouranos* as 'the firm seat of the Gods').

- A **NAKṢATRA STAR CALENDAR** based on the Moon which becomes the foundation of traditional Vedic astronomy.
- **THE FIRE SACRIFICE RITE REGULARLY ENACTED ON BRICK ALTARS** used for the mathematical recording of astronomical behaviour (the 7 altars at Kalibangan are taken to be the earliest - see the view below left⁵⁴⁷).

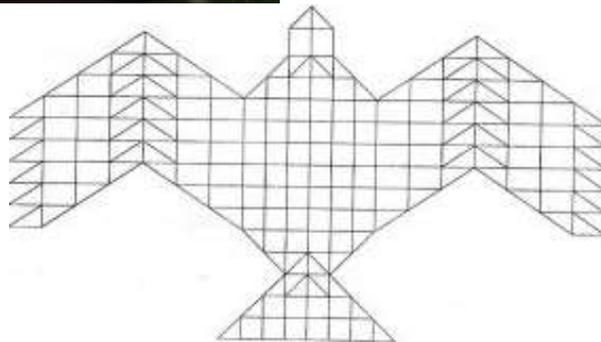
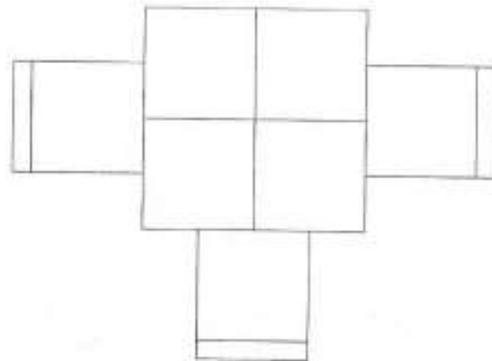


Circular brick fire altar from Kak⁵⁴⁸, fig. 4.3a

Specifically in the Indus territory fire altars were made in four different layouts – in a designated number of layers

- sometimes needing bricks of specially made shapes in order to fit them together:

- ◇ Square (representing the Sun);
- ◇ Round (representing the Moon and the nakṣatras, illustrated above right);
- ◇ Turtle-shaped (representing *Viṣṇu*);
- ◇ Bird-shaped (representing the Sky/*Dyaus-Varuṇa*, shown below).



(Top left) The Fire Sacrifice; (top right) basic layout of the bird fire altar - from Kak⁵⁴⁹, fig. 3; (below) the eagle variation of the bird fire altar using triangular bricks as well as square ones - from Kak 1984, fig. 3

- The rite of the **HORSE SACRIFICE** – bringing together all three of the above, discussed next.

⁵⁴⁷ From M Bala 'Kalibangan, its Periods and Antiquities' in D K Chakrabarti (ed.) *Indus Civilization Sites in India: New Discoveries* Mumbai 2004 34-43, ig.15

⁵⁴⁸ S Kak *Astronomical Code of the Rgveda* New Delhi 1984

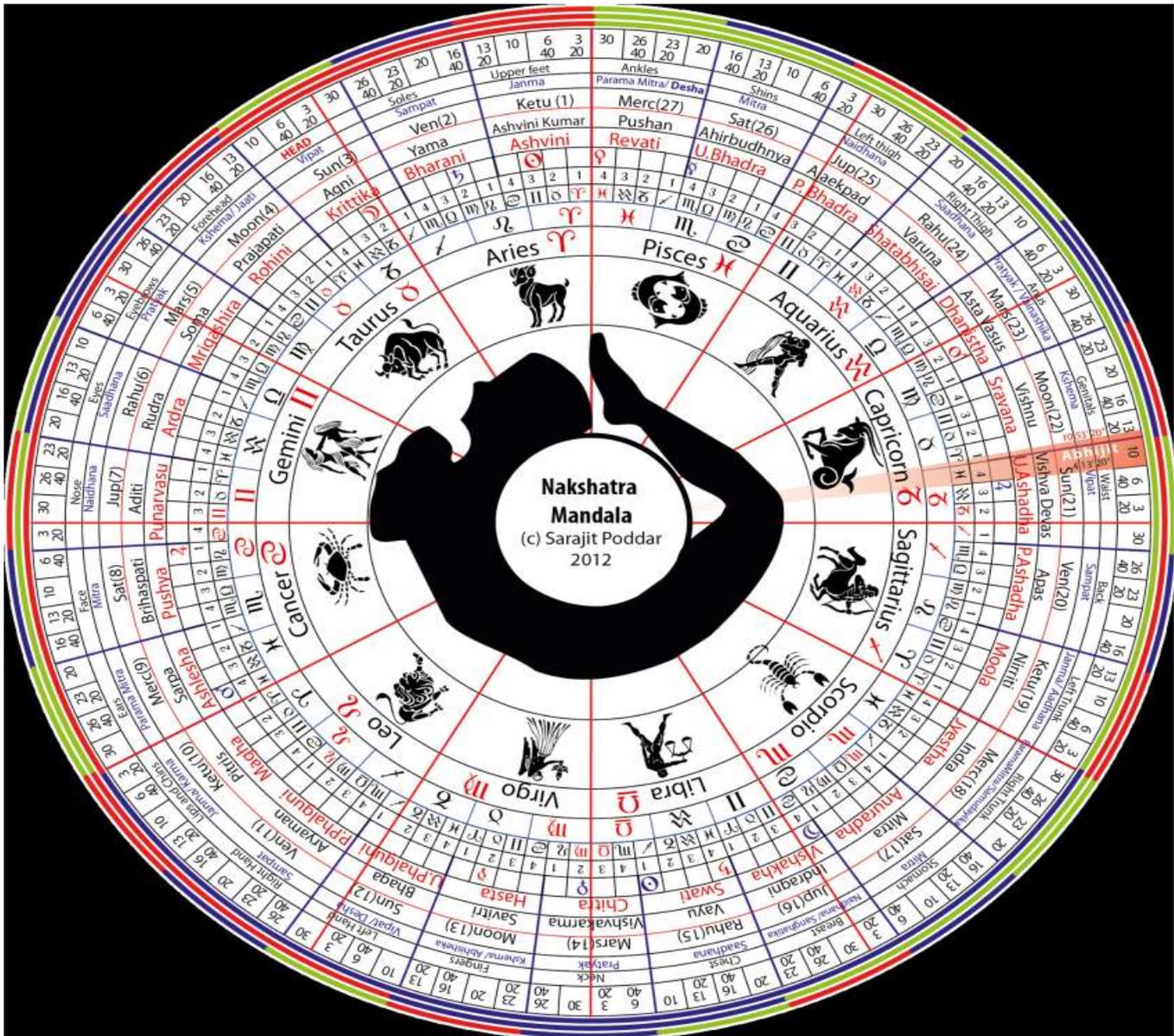
⁵⁴⁹ S Kak *The Aśvamedha: The Rite and its Logic* New Delhi 2002

THE FIRE AND HORSE SACRIFICES

Through the idea of *Kāla-Puruṣa* (the UNIVERSE AS A PERSON dovetailed to the Nakṣatras as show below) - often replaced by the model of TIME AS A HORSE - we next look more closely at how these four Indus contributions come together in the Fire and Horse Sacrifices, putting us in a position to then fully make sense of Parpola's reading of a key Indus seal.

BRICK FIRE ALTARS AS ASTRONOMICAL CALCULATORS

Without going into the minutiae - given in full in both Subhash Kak's admirable books cited above (and in briefer form in Jeyakumara⁵⁵⁰) - the simple idea behind the brick altars was that both the geometrical layout and gradual build-up of brick layers should serve as mnemonic devices to record and compute Sun, Moon and *nakṣatra* behavior, thus keeping track of the passing of the Years - said also to be reflected in the number of syllables in the *R̥gveda*. We can visualise what was involved in the Fire and



Modern rendition of nakṣatra correspondences to the zodiac in relation to *Kāla Puruṣa* (Time as the body of a-Man), which could be replaced by *Kālāśva* (Time as the body of a-Horse)

⁵⁵⁰ See his *New Interpretations on Indus Valley Civilization* at https://archive.org/stream/NewInterpretationsOnIndusValleyCivilization/EntireBookinPDF_djvu.txt

Horse sacrifices from current priestly tradition backed up by sporadic mentions in the Vedic literature (the references are given throughout in Kak), with the whole of **Kaṇḍa 13** of the **Śatapatha Brāhmaṇa** devoted to a full description of the horse sacrifice. The efficacy of the rituals relies on the idea of correspondences between levels of reality⁵⁵¹ whereby the recitation of hymns, the layout of the bricks of the altar, or the parts of the body of a prime living creature (notably a man or a horse but involving other animals, notably goats) stand for the whole and the sum of its parts on other levels of creation, especially in relation to Sun, Moon and Sky. They very rarely involved the actual death of the symbolic creature. The priest himself is *Digambara*, wearing a robe standing for the Sky⁵⁵² and thus identifying himself with *Śiva-Prajāpati*. The idea of sacrifice - of one level of reality identified with a higher order - applies equally to the pressing of Soma juice or the grinding of the grain, so that the idea of 'self-giving/self-identification' overrides the passing cessation of life. Jeyakumara provocatively suggests 'Indus seals generally depict the date and month in which a person died: some other seals show the date and month in which an important sacrifice or ritual was carried out' (an idea deserving further enquiry), while Ashfaque⁵⁵³ made a brave attempt to equate simple Indus Seal images to Old World Constellations - but Parpola's seal-by-seal approach holds more water.

RITUAL SIGNIFICANCE OF THE HORSE SACRIFICE

The horse in Indian mythology stands for the Sun - and Time itself - and the sea is its birthplace and stable where it is quartered, no doubt referring to the primal waters conceived of as surrounding the earth's horizon (exactly coinciding with the Mycenaean concept of their Horse-God, Poseidon). In essence the horse sacrifice celebrated the renewal of the Sun's cycle at New Year, but also held undertones, not only of reasserting of the king's authority in his kingdom (in the **Mahābhārata** the 14th Parvan is devoted to the performance of the Aśvamedha by King Yudhiṣṭhira at full Moon in the *Citra* month), but also of his command over the Calendar. Kak gives a wonderful quotation from the **Taittirīya Saṃhitā** that describes what the horse really refers to in the Aśvamedha (with slight tweaks of the English - and question marks - by me):

The head of the sacrificial horse is the dawn; its eyes the Sun, its breath the Wind, its ears the Moon, its hooves the Quarters, its ribs the intermediate zones, its blinking Day and Night, its [short] joints [bones] the half-months, the [long] joints the Months, its limbs the Seasons, the torso the Year, the mane the rays [of the Sun], the whole creature the Nakṣatras, the bones the Stars, the flesh the Cloud, the pelt Plants, the tail hairs the tress (?), the mouth Agni, the open mouth (?nostrils) Vaiśvanāra, the belly the Sea, the anus the Atmosphere, the testicles the Sky and the Earth, the penis the Pressing-stone, its seed the Soma (TS 7.5.25)

In the ceremony an actual horse would stand for the sacrificial horse for some of the time, but at other points other items were substituted - such as the Fire/Agni itself (e.g. 'the logs are the bones and the ghee poured on it the flesh').

We have gathered enough background material now to fully appreciate the interpretation by Parpola of one more Indus seal.

PARPOLA'S ASTRONOMICAL READING OF AN INDUS VALLEY SEAL

Leaning on Sanskr̥t and Dravidian texts, in a further paper Parpola applied his three interpretations of the Indus signs relating to Karttikeya just described to an unusual Mohenjodaro sealing (below left), deciphering it in terms of an astromythical cult scene. To begin with an itemised description first, at top left is a fig tree (already seen as often associated with the bangles of Karttikeya) inhabited by its divine spirit in the form of a woman with fig-branch headdress sometimes called *Shaṣṭī* (Sixness, female counterpart

⁵⁵¹ Fully explained in my **Book 7A** on the **Theory of Correspondences** (first attested in the Ancient Near East) at www.cosmokrator.com

⁵⁵² A Parpola 'The Harappan Priest-King's Robe and the Vedic Tārpya Garment' in J Schotsmans et al. (eds) **South Asian Archaeology 1983** Naples 1983 385-403

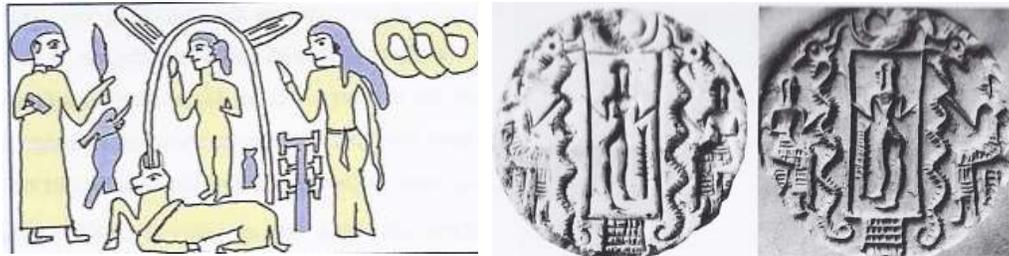
⁵⁵³ S M Ashfaque 'Constellations in the Harappan Seals' **Pakistan Archaeology 10-22 [in one volume]** 1974-86 Karachi 135-67 fig. 36

to Karttikeya, and embodiment of the fertile fig tree). It is worshipped by a kneeling figure wearing the same kind of fig-branch headdress, with a human-visaged markhor goat standing behind as sacrificial animal. In front of the kneeling figure Parpola⁵⁵⁴ discerns a decapitated male warrior head on a low table, his hair done up in a double-bun (much like the Meskalamdug helmet from Ur (c.f. also the Al-Gol seal references) – indicating the human sacrifice that has been made to the deity of the tree. Underneath is a procession of the high-crested figures of seven women with long pigtails whom Parpola identifies as the Mothers of Karttikeya – the 7/6 Pleiades. Given he had already identified the fish sign as homophonically representing the word *mīn* for ‘star’ – and had identified modifications of the fish by colour adjectives, he speculates on the possible deity referred to in Indus script along the top which includes a fish with a melted dot in it. This sign happens also to occur on Mackay Mohenjodaro seal 222 (shown above top right) in the text over the seated figure of Prajāpati, but when we note the double face looking both left and right wearing an



(Left) Seal DK 6847 from Mohenjodaro, first shown in Mackay *ibid.*, his seal 430; (top right) Mohenjodaro DK12050/Mackay seal 222; (bottom right) Mycenaean Goddess wearing ‘snake-frame’ flanked by griffins first illustrated in *Ill. 9-180* – (CMS V-SIA-181

elaborate horned crown⁵⁵⁵ and fig tree branch crest – and that the arms are covered in bangles, we start to agree with Dhavalikar et al.⁵⁵⁶ that this figure is not necessarily male, but could be female - certainly on this particular seal drooping breasts are apparent and



(Left) drawing of Syrian seal showing the Goddess inside an arbour, standing on a bull – Jeyakumar/Hemtun fig. 22; (right) Dilmun seal originally illustrated under *Ill. 9-108*

there is no sign of ithyphallism. They interpret the fig-tree seal along a less fruitful tack than Parpola (which I will leave out), but it is worth contrasting the divinity in the tree not only with Hathor in the sycamore tree, well known in Egyptian art, but also the Syrian

⁵⁵⁴ A Parpola ‘The “Fig Deity” Seal from Mohenjo-daro: its Iconography and Inscription’ in C Jarrige (ed.) *South Asian Archaeology 1989* Madison 1992 227-236

⁵⁵⁵ Compare it to the headdress of the Mycenaean Goddess with snake-frame flanked by griffins illustrated in *Ill. 9-180* – (CMS V-SIA-181)

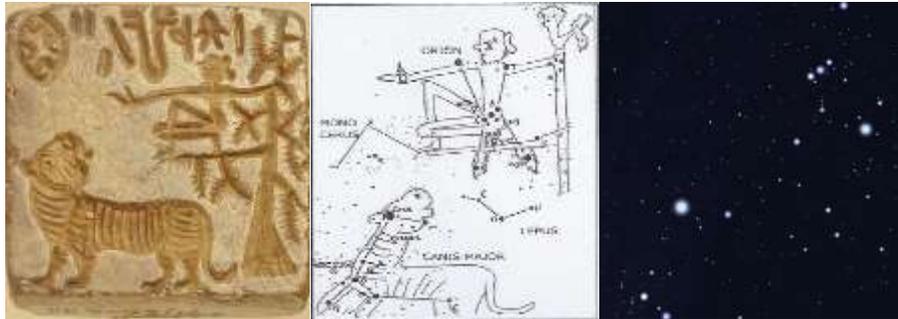
⁵⁵⁶ M K Dhavalikar et al. ‘The Fire Cult and Virgin Sacrifice: Some Harappan Rituals’ in J M Kenoyer (ed.) *Old Problems and New Perspectives in the Archaeology of South Asia* Wisconsin 1989 193-205 The authors also discuss the significance of the ‘unicorns’ on Indus seals – which are surely just bulls in profile!

seal (above left) suggested for comparison by Jeyakumar *ibid.* – as also the Falaika seal (*III. 9-108*) shown again above right which in turn could be set against the figure holding two snakes in the Elamite seal showing the entire Pantheon given by Rogers earlier. The interesting thing is that Jeyakumara equates the Goddess standing in the tree with a further Indus seal that combines the Pipal tree with two bull-heads - rather awkwardly fitted onto the general frame of a woman (rather in the same way as the vase decoration in *III. 9-180* or even the breast-like allusions on the Pylos griffin above), and as he gives no references I will simply quote his words:

This Indus seal depicts a pole of Ficus religiosa (Pipal Tree), on which some cloth is tied around. The cloth round up is something like women tying a sari. This pole is identified with the goddess Inanna and thereby the Auriga constellation. The square with the wheel in the right side lower corner is the symbol of sun calendar (as per Benght Hemtun). Over all this seal depicted the beginning of the year as well as planting season.... That tree is symbolically planted during the marriage ceremony of the agricultural communities even now in India. This shows the importance given to this constellation because it signalled the arrival of monsoon season and starting of agricultural season... .



Going back to the previous two seals, in fact the framework surrounding the Goddess is very much the outline of Auriga. Indeed, Jeyakumar brings in another Indus seal with female figure in the branches that he tries to associate with Orion (below) which is not quite so convincing since the tiger is usually linked with Durgā, the warrior aspect of Venus – discussed further later. Indeed in the photograph below of Bengal tiger and mugger crocodile we are reminded Venus is said to be exalted in the Bears (see **Chapter 19**).



(Left) Mohenjo Daro seal D392; (centreleft) Jeyakumar/Hemtun fig. 21; (centre right) Orion and Canis Major as photographed; (right) photo of a Bengal tiger and mugger crocodile in East India, perhaps a reminder that according to some, Venus is exalted in the Bears

With all these possibilities in mind, we now give our attention to Parpola's full interpretation.

PARPOLA'S INTERPRETATION OF THE FIG-TREE SEAL

Jain, Buddhist and Hindu texts (including the *Mahābhārata*) all reveal that in the earliest times offerings were made to the Pipal (Fig) tree by means of human sacrifice, partly to seek offspring, but also to assert kingship since the tree itself signified kingship. The Banyan tree is associated with Varuṇa, specifically propitiated to cause the birth of a male son⁵⁵⁷. Part of the ritual could include a 'sacred marriage' rite just preceding the beheading of the male - though at a certain period a horse was sacrificed instead, the bride in certain extreme instances herself first lying with the potent horse. The tree was sometimes called *aśvattha* – horse station - and in Vedic texts the sacrificial horse is said to have been given a stable made of fig wood in the year leading up to the ritual. Bound up with the *aśvamedha* was the Fire, kept burning with fig wood, in which the God Agni was dormant like an embryo, the igniting of the fire being likened to the sexual intercourse of the humans and/or animals involved. Indeed, some Vedic descriptions see the sacrificial horse as conveniently personifying the sacred Fire (Agni), the sacrificing king and the Creator God Prajāpati all in one. On the seal this sacrifice is expressed in the form of the head of the warrior offered to the Tree - propitiated to such lengths because both Skanda and his consort *Shaṣṭī* were ambivalent towards babies - sometimes granting them but at other times destroying them –reflecting the precariousness of a new-born just after birth when on the borderline between life and death. Parpola writes, 'in ancient South India brave warriors [sought] the favour of Durga by cutting off their own heads', though in the north in earliest times it was often the horse's head that was cut off.

Variant divinities and stories have in common the idea that monsters and evil spirits (*asuras*) when killed would be deposited under the banyan/fig tree, and that the horse-head or human head was the personifications of Skanda-Kumāra in terms of a Tammūz-Adonis type of divinity, continually dying and resurrecting as cycles repeat. Parpola sees the human-faced markhor goat as a Harappan predecessor of a later goat-faced variant of Skanda, also with six heads – clearly an animal associated with virility – especially since in the texts he is described, Parpola says,

As accompanied by the dread goddesses of destruction and illness, called "mothers", usually seven in number. These sapta mātarah, 'seven mothers', are the wives of the Seven Sages (the asterism of the Great Bear). Six of them, the stars of the Pleiades, are the mothers or wet nurses of the war-god Rudra/Skanda in the Vedic as well as the Hindu religions ...

Interestingly, Jeyakumara reads the markhor goat as standing for Aries, given the vehicle for Agni/Aries is a goat.

Because of their long plaits Parpola thus reads the seven figures processing along the bottom field of the seal as *Kṛttikā*/Pleiades.

Then when it comes to the inscription across the top, he takes it as pointing to the owner of the seal which 'probably belonged to the high priest of the goddess', with the fish with elongated dot inside it as referring to Her destructive aspect - a proto-Durgā – the equivalent of Venus in her Morning Star form as Warrior Goddess and Goddess of Victory':... until 1835, before the British stopped the practice, a boy was sacrificed to the goddess in the principal Kālī temple of Calcutta every Friday' (Friday being Venus' day). On the other hand (having already assigned the fish with two bars to Venus he is more certain the fish with dripping dot inside refers to the *nakṣatra Rohinī*, representing the red star Aldebaran, also treated as the Morning Star dispelling the dark at dawn and the first asterism of the *Nakṣatras* preceding *Kṛttikā* from c.3054BC. He believes the deity in the tree must therefore be *Rohinī*, described in Kālidāsa's *Rātrī-lagna-nirūpaṇa* as in fact represented by the red *śakula* fish, while according to the *Aitareya-Brāhmaṇa* *Rohinī* is the daughter of Prajāpati (the seal top right also uses the fish symbol on a version of Prajāpati who looks more female than male).

⁵⁵⁷ As on many of the Mycenaean mythological seals, the tree is often depicted inside a fenced enclosure on Indus seals too.

The red mark placed on the forehead of Davidian women along with a crescent is said to be a reference to the menses of *Rohinī* and all that redness means in terms of birth, life and death – the crescent referring to the fact she was ‘the favourite wife of the Moon’. From other scriptures and sculptures we know Dūrgā herself wears an upside down crescent over her tilak and ‘in the Hindu pantheon it is above all the Goddess of Victory to whom the red spot on the forehead is sacred’, daubed by warriors on their forehead with the blood of their enemies. Parpola’s final conclusion, therefore, is that the fish/*mīn* with dot inside represents *Rohinī*, and that she specifically is the deity standing in the fig tree as part of the celebration of a Harappan New Year ritual as ancient War Goddess counterpart to War God Skanda-Karttikeya. We again come full circle back to the Peacock God! But with all the alternatives explored, I think we can fine-tune the story behind this seal: I prefer the idea that she represents Durgā – or Venus in her victorious aspect – because if she is being associated with the constellation Auriga in this scene - with the *markhor* standing for Aries – and the decapitated head of the warrior even present to represent Al-Gol, then what we are presented with is an even more dramatic scene celebrating that momentous changeover from the Pleiades/*Kṛttikā* to *Bharānī-Aśvinī*, enabled partly thanks to the role played by the synodic cycle of Venus in measuring Precession, as she sits in the Fig Tree of the Sky!



(Left) Karttikeya as Skanda-Kumara the War God; (right) Night Journey of Muḥammad on Burāq as peacock hybrid (Persian miniature)

INTERPRETATIONS OF THE FIG-TREE SEAL BY VAHIA & MENON, MAULA AND DURING-CASPERS

Vahia and Menon have put forward their own interpretation of the Fig Tree seal, mentioning previous work by Maula⁵⁵⁸ and During-Caspers⁵⁵⁹, being technically well-versed enough in their own Indian tradition able to offer a different reading. In the illustration below each circled zone on their star map (earlier shown for the positioning of Ursa Major at the time of the Monsoon) they see as corresponding to a circled zone on the fig tree seal. Thus the seven figures processing at the bottom are taken to represent the *Saptarṣi*; the Goddess in the tree - though none of the other matches they try to make correspond satisfactorily.

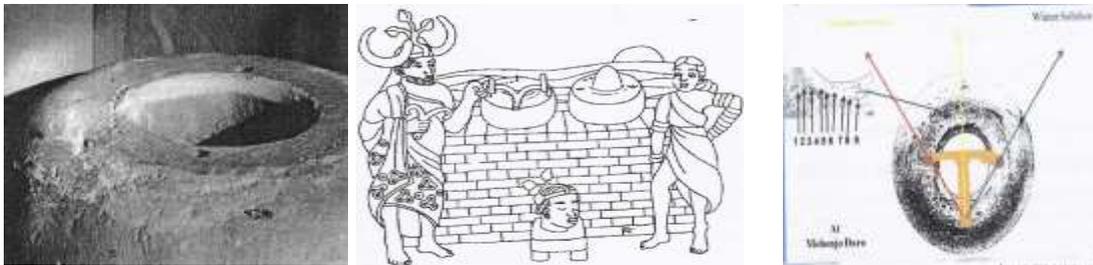
⁵⁵⁸ E Maula *The Calendar Stones from Moenjo-daro* in M. Jansen et al. (eds) *Reports on Fieldwork carried out at Moenjo-daro, Pakistan 1982-1983* Aachen-Rome 1984 159-170

⁵⁵⁹ E During Caspers ‘The “Calendar Stones” from Moenjo-daro Reconsidered’ in C. Jarrige et al. (eds) *South Asian Archaeology 1989* Madison 1992 83-95



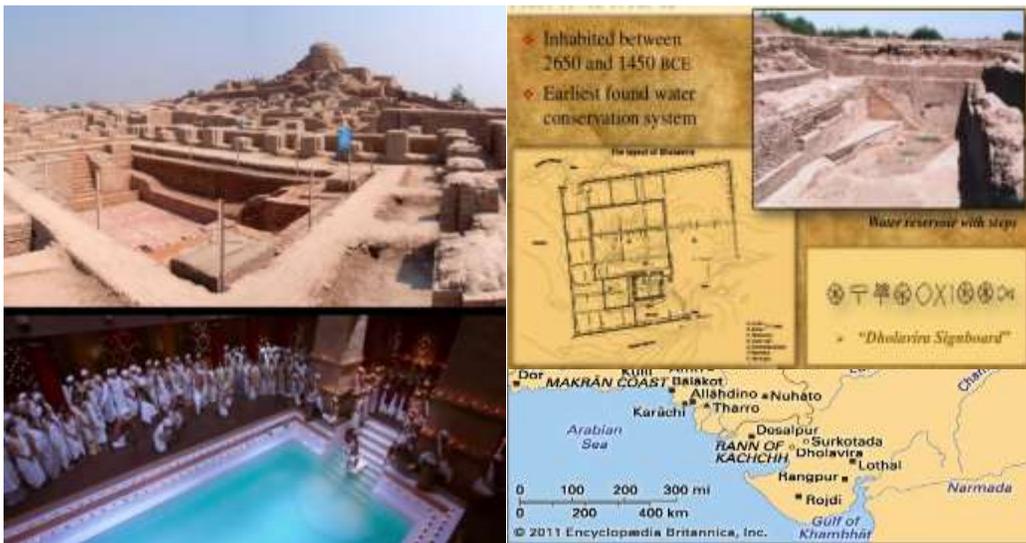
OBSERVATIONAL PRACTICALITIES I: INDUS ORIENTATION STONES AND REFLECTIVE POOLS

The Turanians and Minoans appear to have used mountain observatories in combination with sighting horns, where the Harappans may have relied more on using flat pools in combination with low-level acropoli or ziggurats on the river plains. In other words, it is likely the two traditions grew out of differing observational conditions – the proto-Zoroastrians focusing on solar movement against mountain dips and peaks in contrast to proto-Vedic astronomy practised on featureless river plains and thus requiring flat expanses of water in which to mirror the sky instead of building ziggurats.



(Left) Photo in During-Caspers showing the Mohenjodaro stone with two large holes on its diameter and 9 small ones at right-angles to it; (centre) Maula's reconstruction of how such stones would be set up for use to observe sunrise or sunset; (right) Vahia & Menon's diagram indicating how the stone's large holes could have been aligned to calculate the Sun's extreme positions at the Solstices

The issue of 'calendar stones' found in the large numbers at Harappan sites cited by During Caspers and taken up by Vahia and Menon seems straightforward (see illustrations above). One other device appears to have been the use of reflective pools, which are



significantly widespread from Indus to Aegean during the 2M, beginning with the Great Bath at Mohenjo-Daro (above left), while Dholavira also stands out (above right/below left), as well as Lothal a little further south (below right - (Chakrabarti *ibid.* Intro fig.6). (According to Jansen⁵⁶⁰ Indus cities were laid out almost precisely N-S/E-W though Dholavira appears to be an exception.)

SACRED POOLS IN THE SECOND HALF OF THE 2M

Particularly notable is the way in the Dholavira pool (below left) there is a correction of orientation in the subpool at the bottom: I also came across a paper by Gropp⁵⁶¹ that started off praising the amazing Great Bath of Mohenjodaro but going on to say 'Some time ago I was astonished to observe a comparable building in Elam' (now damaged, but indicated by the Kurangun Relief (his fig. 14.2).



Taken together, these pools seem to be more than provision for bathing, especially since often built within a few yards of a river for bathing – or even the sea, as at Motya. They are considered to have been used as mirrors to reflect the sky above, to make observation easier – and one is reminded of the custom in England still today that to watch an eclipse one looks at it reflected in a bucket of water in order to avoid eye damage. We think the pools were standard in the Indus and copied at strategic sites as far west as the small island of Motya, off Sicily where, in fact, huge quantities of Mycenaean pottery were found surrounding the Kothon.

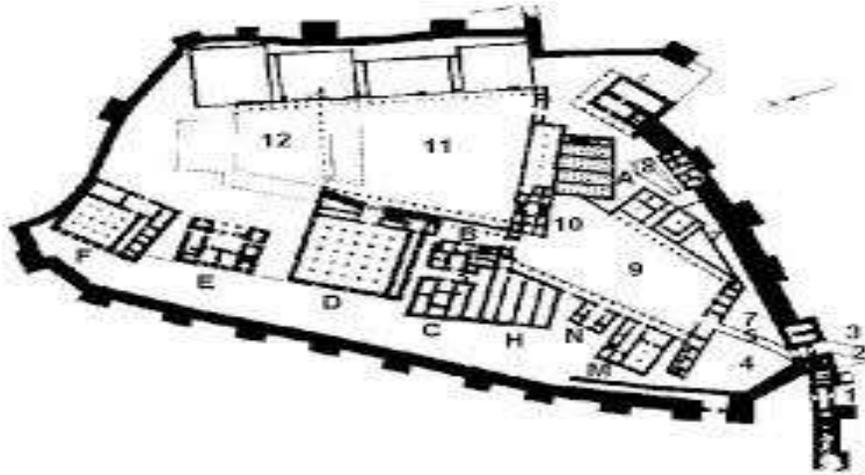
Moving into the BMAC/Turan, reconstruction of the Gonur Citadel also takes into account the remains of a large lake (below left), whilst Zabol is in a valley close to what used to be a large cluster of lakes:



It is not clear looking at the ground plan of Hattusas below whether it had a similar arrangement, but area 9 below is captioned as a pool.

⁵⁶⁰ M Jansen 'Architectural Measurements in the Indus Cities' in I Morley and C Renfrew (eds) *The Archaeology of Measurement* Cambridge 2010 125-9, fig.10.1

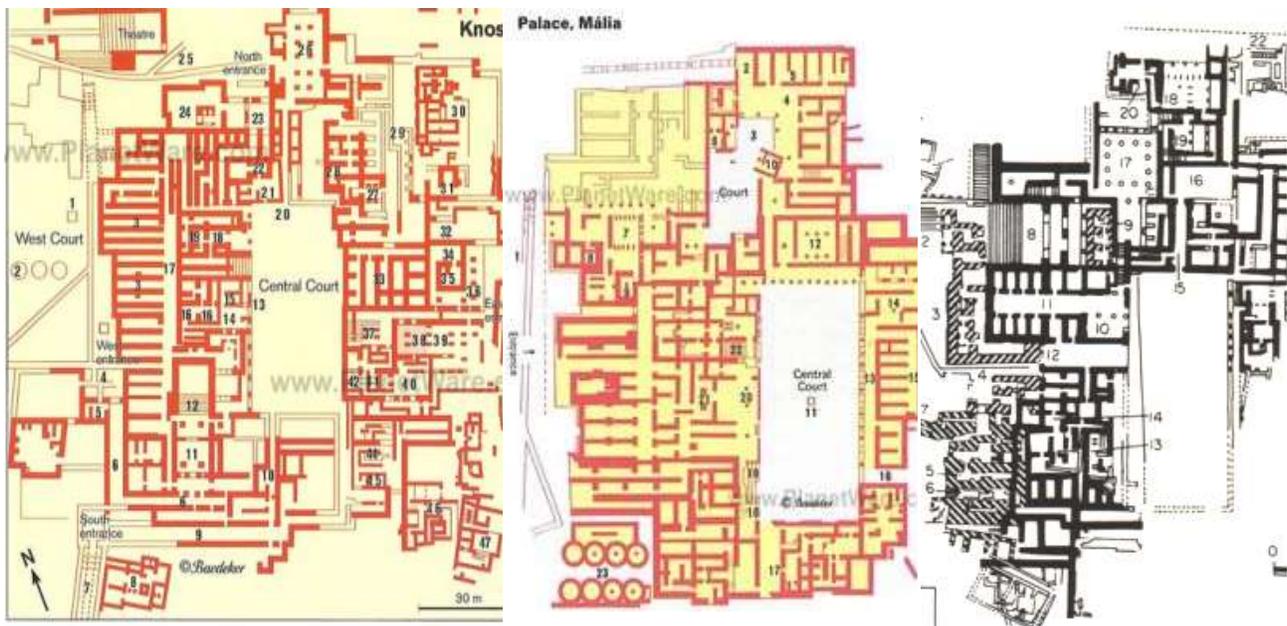
⁵⁶¹ G Gropp 'A "Great Bath" in Elam' in C Jarrige (ed.) *South Asian Archaeology 1989* Madison Wisconsin 1992 113-118



We should also take into account not only the sacred pool built in the time of Hatshepsut at the great Temple of Amun at Karnak,



but also the oblong courtyards of Knossos, Mallia and Phaestos which could be flooded when needed for astronomical observation:



As mentioned earlier, Negro *ibid.* himself suggests the Kothon at Motya (below) was specifically constructed alongside the temple for the observation of stars on its reflective surface, and orientated to enable optimum observation of Auriga overhead in winter:



Even as far north as Hyperborea, we may need to assess the flat water either side of the isthmus of the Ness of Brodgar in this light:



OBSERVATIONAL PRACTICALITIES II: THE ECLIPSE AS REGULATORY MECHANISM

The mechanism for adjustment of the Vernal Point relied on eclipse observation: Parpola states the obvious:

When the Moon is full, it is exactly opposite the Sun. Calender asterisms were chosen so that they form opposing pairs...

The Sun's stellar position could then be seen easily from the full Moon's conjunction with the opposing star.

The timing of an eclipse helped gain precision – and a temporary view of the stars in the sky during the day (just the scenario for the eclipse described in the Trojan War by Homer). Thence it was possible to work out where to insert the 28th *nakṣatra*, *Abhijit*, to line up with Sirius, and how also the alignment between Regulus and the *Saptarṣi* could help reconcile the *nakṣatra* sectors against the Solar Year and Solar Precession. As explained elsewhere (see the earlier references), renewal of the Sothic Period dovetailed to the Grand Synodic cycle of Venus also played its part in securing finer accuracy every 1500 years. I think these were all issues mastered in Second Millennium astronomy that can ultimately be traced to the BMAC/Indus Civilisation's mastery over such matters.

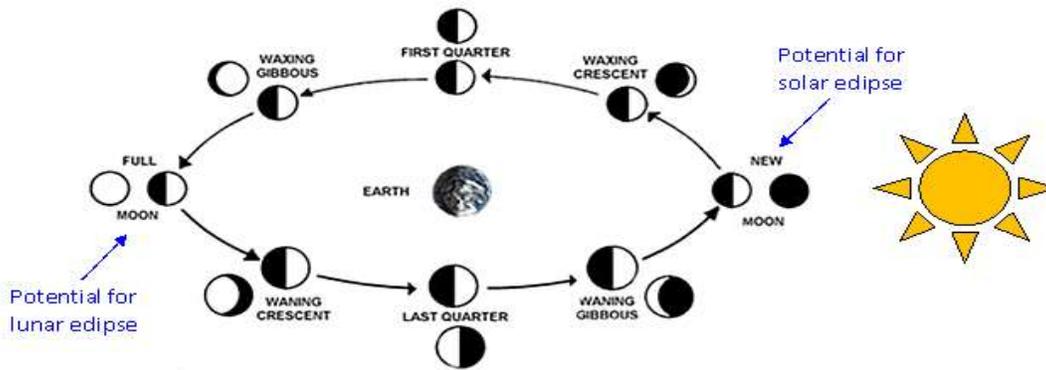
See the quotation from Parpola under the last picture on the previous page explaining why eclipses are so useful for calendar adjustment. Intercalation of *Abhijit*, the 28th *naksatra*, lining up with Sirius (as explained under the Indus Tradition Section) may well have been a mechanism copied by the Greek world for the insertion of the new Aries-Libra opposition. It also explains the key role the Two Dogs played in their iconography.

A changeover in asterism is dramatized in the *Mahābhārata* - in the story of *Kārttikeya*. Quoting from Sidharth⁵⁶²:

⁵⁶² While appreciating observations such as this, I omit Sidharth's chronological assignments in my calculations.

Indra as the deity of the asterism Rohiṇī (Aldebaran) yields his place as head of the gods to Kārttikeya or the Pleiades... In fact, in the *Mahābhārata* story there is a terrible battle and Kārttikeya (literally 'born of Krttikā') is split asunder, the second part becoming the diametrically opposite Viśākha (in Libra) - Viśākha literally means 'split'...

We should note that Indra (in the *R̥gveda* over 250 hymns are dedicated to this God) was also associated with the *nakṣatra* Jyeṣṭhā/Antares, exactly opposite Aldebaran as well as Orion. What is crucial is that I believe we have a hint here – even if for a previous age – that the precedent for inserting a new pair of star oppositions could have been introduced to the Mycenaean and Levantine world from the Indus example indirectly through the Mitanni. The description of a solar eclipse as a central event in both the Trojan War and the Battle at Kurukṣetra is a significant parallel (akin to the Milk Ocean Churning on the earthly plane) since the latter – through one incident - more overtly conveys the idea that it took place at the *barzakh*/interstice between the end of one Age and the beginning of the next (the Kali-Yuga). This was when General Bhīshma commands the Kaurava army for ten days at a time when the Sun was approaching the Summer Solstice point and almost seemed at a standstill. At the end of the tenth day, Sun-like, Bhīshma falls but - since the Sun itself has now started its downward path (which means his soul will go to the Moon, rather than join the stars) – he does now allow himself to die until the Sun begins its northward path (*Uttarāyana*) once more. As we mentioned earlier, there was a solar eclipse just after the Summer Solstice on June 14 1311BC valid for the area around Kabul/Peshawar, and overall we could be bold enough to suggest that the parallel with the death of Patroclus during a solar eclipse in the Trojan War may also have been intended to suggest that hiatus between astronomical ages underlined in the Great War of the *Mahābhārata* ! Indeed, it could even have been a literary conceit adopted by Homer from further east.



In the well-known Assyrian seal design above featuring a worshipper before Ishtar-Venus on her lioness, we have behind her a palm tree, often a symbol for the Solar cycle (and sometimes also for Baal-Jupiter). The name for palm tree is *phoenix*, and it is quite

possible (in the absence of the griffin) that stands in particular for Solar Precession. I believe the incomplete ring in the air next to it with three jutting nodes could be a way of expressing the extremes of the Moon cycle – with the gap in it corresponding to the dark days of the invisible Moon – in a position to obliterate the Sun to form an eclipse when at the right angle. Finally the crossed goats surely refer to the rising and falling colures of the Sun's journey through the Year. In other words, the seal shows the Sun-Moon-Venus triad in a different way from the kudurru stones (*III. 9-176*).

IMPLICATIONS OF ASTRONOMICAL ICONOGRAPHY IN THE CATALOGUE E ENTRIES FOR THE MYCENAEANS

For the time being, having established some secure handholds on Central Asian iconography and its astronomical implications, we are in a position to end with at least some general conclusions about the implications of the *Chronological Focus* items handled in this Catalogue in terms of our study of the *Forward Attack motif*. From the preparatory clues and lines of enquiry laid down in the Catalogue, the conclusions that follow are the most immediately obvious. However, as I have found with previous Catalogues, in the light of later work I have gone back to them and refined their content. It is very likely that after dealing with the material in **Catalogue F** which focuses on the Bilateral Attack in relation to the practice of Greek astronomy in Archaic and Classical times, and once a fuller survey of Second Millennium astronomy has been given in **Chapter 20**, that I will come back to this Catalogue and revise it, perhaps drawing more conclusions and correcting errors. This final section is therefore still work in progress.

When starting the Catalogue it was pretty well established by now from **Catalogues A-D** that the lion-prey group had astronomical significance, and this is no less true of the instances of the *Forward Attack* gathered together here. But on entering the *Chronological Focus* period, in some cases – especially when the griffin is substituted for the lion as the predator - the *symplegma* seemed to imply an added level involving mastery of the understanding of Precession (see our discussion of the peacock griffin and the Phoenix earlier). We have already shown in Catalogue D how the Minoans appear to have used the keynotes of the CANEA, and used the rudiments of observational astronomy in the orientation of Knossos and other palaces in order to begin to run their own calendar. We believe the Mycenaeans were able to move on a step or two from these early beginnings and start to set up a land-sea zodiac with certain key geographical points as anchors (see the illustration of the Lion of Kea on p.489 and the map showing its orientation on p.329). We have gathered clues as we dealt with the evidence that overwhelmingly point to knowledge transfer coming in to the Mycenaean world from the Indus, the Turan area and even the BMAC. That groundwork established, we can summarise the evidence very simply:

- 1 The Mycenaeans borrowed griffin iconography to refer to mastery over the shifting Vernal Point due to Precession;
- 2 They used water (sea or reflective pools) not simply to observe stars, but also especially to observe eclipses;
- 3 Eclipses were used as a mechanism for pinpointing the new 0° meridian, anchored by the Sirius-Vega line;
- 4 We deduce reliance on the Ursa Major-Orion line as the foothold for making the transition to the Great Bear-Auriga line;
- 5 This involved changing benchmark star priorities involving the Auriga-Perseus-Cassiopeida-Andromeda-Cetus region;
- 6 Relocation of the Polar Centre via Ursa Minor may have involved knowledge transfer from the Indus.

We expand on these issues in closer detail in **Chapter 20**: suffice it here to remind ourselves briefly of the clinching evidence under each of these headings:

1 SUBSTITUTION OF THE GRIFFIN FOR THE LION IN FORWARD ATTACK GROUPS

We have looked at this in a cumulative manner, mostly through the evidence of Mycenaean and Mitanni seals - starting in earnest from the Erlenmeyer seal (under **ForAtt-24**) onwards. We have shown the origins of the griffin hybrid in the peacock iconography of the Indus especially with reference to its *Nakṣatra* System.

2 THE USE OF REFLECTIVE POOLS

A key reason why the Mycenaeans would have had a practical approach to astronomy is that they were sea-farers and knew about navigation on water by the stars – a facet of their expertise which is a specialist subject on its own, deserving full attention in **Chapter 20**. In other lands, where there is no sea to provide a flat horizon, artificial pools provided a mirror for easier observation (the forerunner of mirror telescopes today). The Kothon at Motya which was built right next to the sea has been said by Negro⁵⁶³ to have been oriented towards Auriga rising – while the sea beyond could have provided coordinated tidal information in relation to the Moon’s behaviour. As far as Aegean astronomy is concerned (and its ultimate development into Classical Greek Astronomy), the Minoans and Mycenaeans in particular seem to have interacted with the Mitanni in the Levant, tailor-making the discipline to suit the Aegean territory in terms of government and the upkeep of a state calendar. Thus from what we outlined in DIVERSION 8 on measuring Solar and Sothic Precession, it appears they may even have even contributed towards astronomical cross-checking from their own unique geographical sites (both mountainous and watery) by simply comparing notes with outposts of astronomical practice from Central Asia perhaps based at *Waššukani* where I think it is possible there was cooperation with fellow-Kassites in Babylon (who also called their Gods by Indo-European names such as *Shurīash* for the Sun and *Marutash* for the Maruts).

3 THE USE OF ECLIPSES TO PINPOINT THE NEW 0° MERIDIAN

We have not so far brought in an important complication some might already have noticed about the *Nakṣatra* System, and this is the right moment to mention it. As we know well by now, it allows for a 27-day cycle of the Moon for its visible daily phases to register against the asterisms - sometimes with the insertion of a 28th.

THE THREE DARK DAYS

However, as everyone knows, every month there are just under 3 days when the Moon cannot be seen at all⁵⁶⁴, when it comes in between the Sun and the Earth, creating a syzygy (a line-up of three bodies), in some cases its angle so precisely aligned that it obliterates the Sun, causing an eclipse (demonstrated in the last pictures). If not directly obliterating the Sun, the Moon nonetheless is still not visible (below lower left) because the Sun is shining on the side facing away from Earth: it means during that time it cannot mark an asterism unless it happens to obliterate it. As every woman knows from their menstrual cycle lasting 29/30 days, one in fact add these 3 days to the 27 to make up the full lunar cycle of 29/30 days (see the diagram lower right below). It therefore appears the

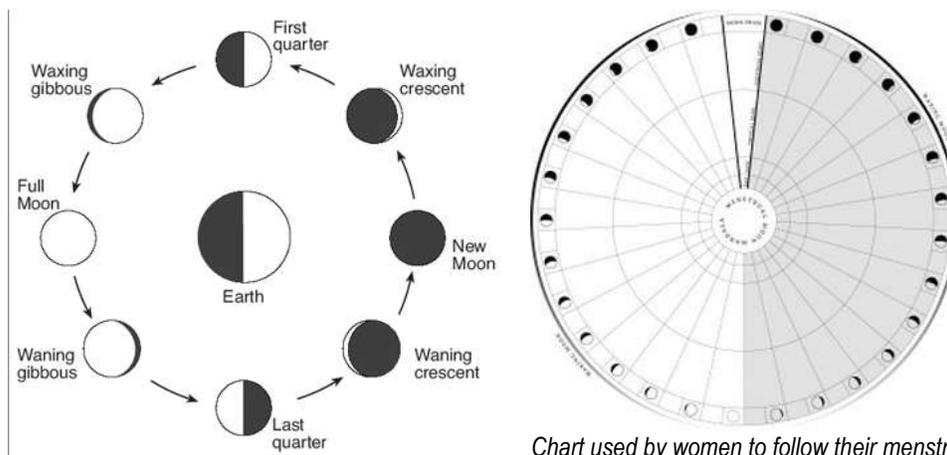


Chart used by women to follow their menstruation with 29.5 sectors

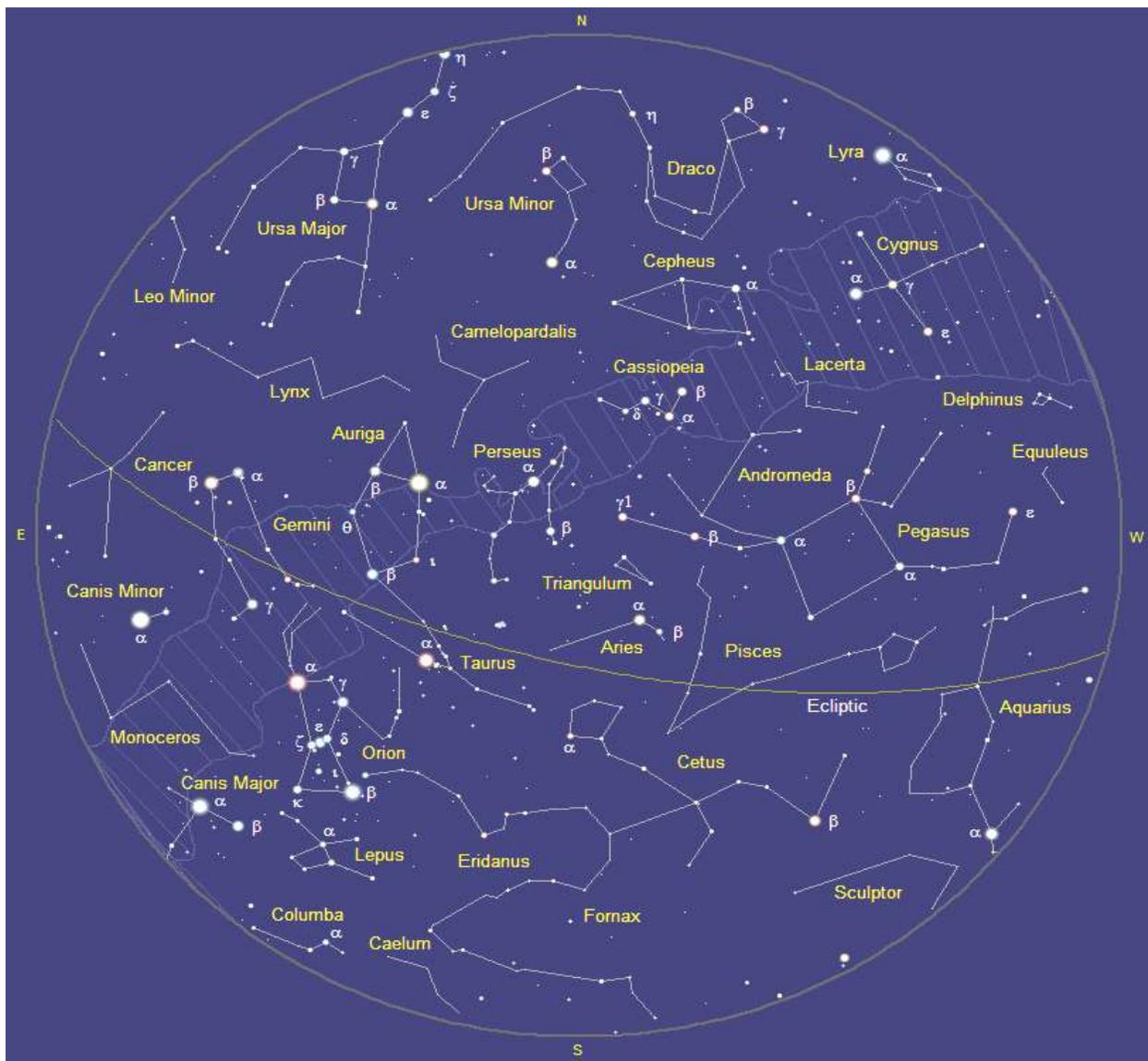
intercalary interval in the *Nakṣatra* System would cover the entire gap of 2-3 nights, varying from year to year. This is why myths of the Journey to the Underworld are aligned to this intercalary gap where in some versions of the story the journey is said to last three

⁵⁶³ See the two Negro footnote references on page 372

⁵⁶⁴ Strictly speaking the Moon is totally black for the central night: for the ones on either side only a telescope can make out the thinnest of thin line of light.

days: this is certainly true of the original 3M myth of Inanna's Journey – and in the Christian religion, Easter (Good Friday, Saturday and Easter Sunday morning) also comprises two and a half to three days (the date for the start of Easter, of course, is set by observation of the Paschal Moon the month before, practically the only example of live astronomy still required by the Christian liturgy (though even that ritual is in danger now of being abandoned) – being the same Moon that determines the start of Passover).

We observed elsewhere that the menstrual cycle of the priestesses living in the *gigparu* of Sumerian temples was probably deliberately used as a double-check on Moon observation for days when not visible (the tradition survives in the Hindu, Jewish and Islamic traditions where it is obvious when a woman is in her *menses* because on those days she cannot join in prayers). We have no proof that the *Nakṣatra* System in its Indus form was of help to Western astronomy, but we do think the insertion of the intercalary 28th *nakṣatra*, *Abhjit*, could have set a precedent for the West to insert the Aries-Libra axis (commandeering the pincers of Antares for the Scales, with Aries on the opposite side of the sky with its Fly⁵⁶⁵ and Sheep/Goat asterisms to mark Aries on the Ecliptic).



⁵⁶⁵ At the start of this Catalogue half we noted the use of the Fly in Egyptian, Minoan and Mycenaean jewellery – which may even have referred to Aries, intercalation and the Underworld Journey of death and resurrection as a badge of honour for a warrior king or queen.

4 THE WAIN-ORION ALIGNMENT AS Foothold FOR THE MOVE TO THE WAIN-AURIGA LINE

Quite apart from material resources the Mycenaeans may have procured from the BMAC, Turan and India in the form of metals or semi-precious stones - or the adoption of a warrior way of life based on the horse and chariot with dogs as pets to form a similar backdrop to their own art and design activities (all giving material confirmation to our cultural case), their calendar with its emphasis on Orion and his Dogs (as also references to the Minoan Genius/Crocodile) is an obvious cultural match (as it is for Egypt, a country at this time also in direct contact with the Mitanni and the Aegean). Here we think back to the Palaekastro Kouros (*III. 9-47*) as concrete evidence, explored more fully in **Chapter 20**. The star map of *III. 9-143* is repeated above as a reminder of Orion and Auriga's position, while there is much to be said for any overtones of Varuṇa and Orion as a name for one and the same Sky God. Jeyakumāra's star map on p.559 was useful in highlighting how the old alignment did not need much reorientation from Ursa Major to lead down instead via Auriga (and Capella the goat-star in particular), making the pathway from higher up in the sky down to the new Aries Vernal Point only a matter of a slight shift. From the reliance of Mycenaean art on Orion imagery, clearly the handful of initiates taking steps to establish the adjusted alignment for the 0° meridian over to the Chariot/Auriga line would have been in the minority in earlier times, but as time went on they would have been in a stronger position to take decisive steps to implement it more drastically – causing, I believe, the interim confusion and disorder of the Sea Peoples and Dark Ages episodes which the Churning of the Milk Ocean myth exemplifies. It took the concerted efforts and reorganization of 8C BC Greece with its colonization programme to finally get the new astronomical norms into place, and we have studied the extraordinary proliferation of temple and vase iconography in subsequent centuries that concentrated on the Perseus and Gorgon myth to publicise that changeover, with frequent representations also of four-horsed Auriga driven by Apollo representing the Sun at its new Spring Equinox winning post - which leads seamlessly to the next heading.

5 CHANGING STAR PRIORITIES FOR THE AGE OF ARIES

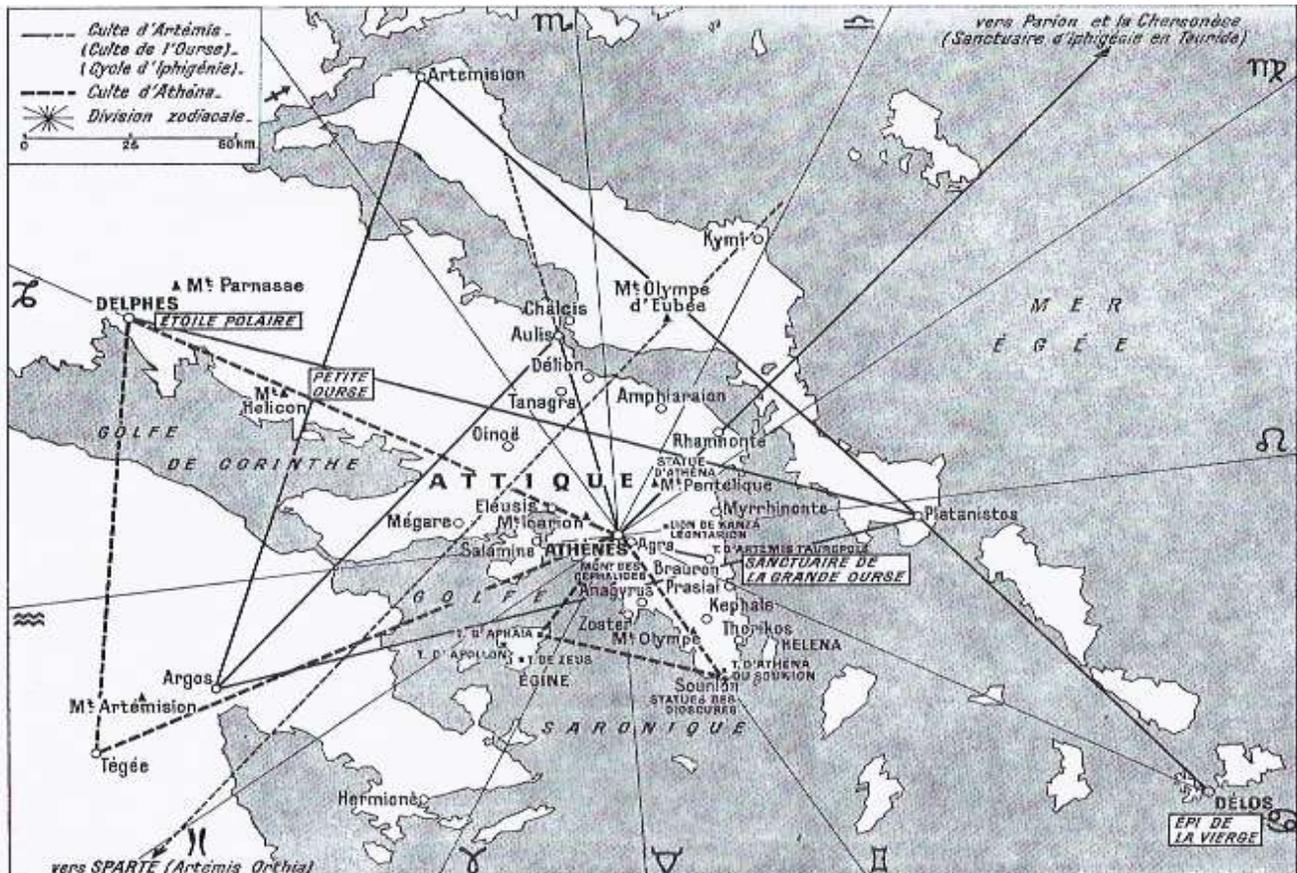
We have indicated in the Greek world the changeover to Chariot imagery projected onto the constellation of Auriga rather than the BMAC Camel or the Indus Fig Tree - as also the adoption of the winged horse image of Pegasus, so peculiarly Mitanni in character – and accompanied by the associated characters of Perseus with the Gorgon's severed head, along with Andromeda and Cetus (dealt with slightly differently in the Central Asian world as we saw from the Al-Sūfī Persian miniatures above, taken by us as evidence of local cultural continuity). As just mentioned, we believe attempts to make the new star priorities 'stick' as part of the implementation of recalibration would have initially set off a process of calendrical chaos all over the Levant in the last two centuries of the Second Millennium, explaining the demise of the Mycenaeans, Mitanni and Kassites and one reason why historians encounter chronological uncertainties in the transition to the First Millennium. Specific aspects of the 'new' astronomy came into play on considering certain seals in the Vapheio Hoard – our main argument being that in the combination of Mitanni and Mycenaean innovation we have picked up on from their seals are clues (admittedly difficult to substantiate) that indicate they and the Mitanni did play a part in trying to bring about the first stages of rectification of the former long-established 5-3rd millennium calendar of the Age of Taurus - whose methods and **CANEA** iconography had up to then primarily emanated from Mesopotamia. As immigrants on the Anatolian and Levantine scene it would have been easier for these two peoples not to be hide-bound by ancient tradition as even the Minoans were by comparison ('the new broom sweeps clean').

Again we must repeat how we see the stand-off between Troy and Mycenae as fundamentally of an underlying calendrical nature. Then at some point the Archaic Greeks realized they could only deal with the new calendar's full ramifications by setting up a land-sea zodiac across the Cyclades, with different temples specializing in the observation of different sectors of the sky and/or the

behavior of different planetary Gods or Goddesses. As Richer⁵⁶⁶'s maps on pages 328 and 335 show, that initial latitudinal apron-string between Delphi and Sardis – and the meridional link down to Crete and Libya – at least established its cardinal points across the Aegean. After the Sea Peoples and 'Dark Ages' hiatus (as we fully explore under **Catalogue F's Chronological Focus**), as historical events confirm, ultimately Greece skipped free of that intermediary supportive framework further east and south, establishing a solely mainland Greek land-zodiac (though seemingly now with outliers in Magna Graecia – notably Sicily and South Italy) that was centred squarely on the omphalos at Delphi (see Richer's map on page 432, where the Virgo line running from Delos through Athens and up to Delphi (see also his Map III below) was the first and most important zodiacal border he was able to establish, explaining the centrality of the Goddess Athena in the mythology of the time. Filling in further sectors of the zodiac was aided not only by the symbols used on different coins issued by its cities (see Richer's maps on pages 338/9), but also from the names of the Gods the temples built in each sector were dedicated to – which leads us to our final heading.

6 LOCATION OF THE BEARS AND THE POLAR CENTRE

In our outline of the Avestan and Indus astronomical traditions we have seen how important the location of the Polar Centre was, not simply to for finding the Polar Axis, but also to measure Precession. It is therefore not surprising that there was a temple site selected for the Polar Centre at Brauron dedicated to Artemis, east of Athens (see Richer's map below) where *la Grande Ourse* is clearly labelled in capitals). We mention in **Chapter 19** how the prepubescent young girls serving as acolytes on the site were called 'little bears', and had a special dance as part of their ritual, dedicated to the Virgin Goddess Artemis, also representing the Moon.



III.9 - 207 Map showing the placing of Ursa Major, Ursa Minor and the Pole Star in relation to Delphi, Athens and Delos - Richer's Map III

⁵⁶⁶ Jean Richer *Géographie Sacrée du Monde Grec* Paris 1983

THE INDO-EUROPEAN CALENDAR AND THE ROLE OF THE MYCENAEANS IN SETTING UP AN AEGEAN ZODIAC

We give the full the background for Age of Taurus astronomy in **Chapter 19**, and for Age of Aries astronomy in **Chapter 20**. Here in our final conclusion to this Catalogue - which has dwelt on establishing the cultural 'connective tissue' provided by the Mitanni to the Mycenaeans –we must try to tie all the lines of enquiry we have pursued in this rambling Catalogue into one final knot. We have the temerity to take a thumbnail overview of the general background for Second Millennium astronomical knowledge by suggesting that the Indo-European calendar was the prime contributor towards calendar changes in the Aegean and the Levant. The starting point is to remember that the Zoroastrians were the earliest astronomers going back to at least the Neolithic Period, who under different 'cultural umbrellas' upheld astronomical observation and record-keeping for hundreds – if not thousands – of years. It is even possible the ancientness of this tradition (according with the earliest era given to the nascent stages of Zoroastrianism back to c.6,000BC and to observatory sites such as Göbekli Tepe from even earlier) is implied for the Indus tradition by the images of the the *nakṣatra* Peacock God, Murugan, holding his spear, with a lozenge shape always in the same petal form as the many stone spearheads or axes found in the Chalcolithic levels of Harappa (as below).



We intimated in the previous Catalogue that much scholarly work has recently been done to reveal the practices of Levanto-Minoan astronomy (the **III.9-105** Vienna seal is repeated below for such overtones – note in particular the peacock griffin), and starting with their takeover of Knossos, the Mycenaenas appear to have taken over the baton smoothly. We should not underestimate the foundations in calendar management laid down by the Minoans on the peak sanctuaries and in the main palaces of Crete upon which the Mycenaeans set their initial bases – indeed, in their most recently published overview Henriksson and Blomberg⁵⁶⁷ see the rebuilding of the corridor at Knossos palace to catch the Sun's equinoctial rays (described in **Catalogue D**) as undertaken by the Mycenaeans when they took over. But this was just the start - which is why the meshing we have tried to show of the Mycenaean culture with those of Anatolia, the Levant, and Central Asia via the Mitanni makes sense.



⁵⁶⁷ G Henriksson and M Blomberg 'The Élite at Knossos as Custodians of the Calendar' in M A Rappenglück et al. (eds) **Astronomy and Power: How Worlds are Structured [Proceedings of the SEAC 2010 Conference]** Oxford 2016 143-148 (compare figs 4 (Minoan) and 5 (Mycenaean)).

It is in the Mycenaean world that the zodiac sign of Aries is invented and its ruler, Ares/Mars, emerges as a distinct God, separate from fusion with Nergal/Pluto or Ninurta/Bel/Zeus even if needing a little help, not only from Mesopotamian and Egyptian friends of the Old School but also from current trends in Indian *Jyotisha*/Astronomy through the Mitanni.. It appears the Mycenaean in particular, not hidebound by age-old tradition, were able to move with the drastic changes needed and initiate a new system of astronomical calibration based on an updated astro-geography centred on the Greek islands fringed to the West by the Greek mainland and to the East by the west coast of Anatolia. This was the idea of Jean Richer, who saw the Mycenaean as laying the foundations for the fully developed First Millennium land-sea zodiac marked by temples and centred on Delphi (we have referred to several of his maps and in particular see the Lion of Iouliis and Motya as two footholds laid down in the Mycenaean era).

Throughout this Catalogue, we kept coming back to one Mitanni cylinder seal - initially shown under **ForAtt 24** – often dubbed ‘the Erlenmeyer Seal’. If we look at it again after reading through all the highways and byways of this Catalogue, I think we can take it as a statement of the Mitanni view of the sky as handed over to the Mycenaean in emphasizing just those preoccupations the cultures of the Aegean, the Levant, Mesopotamia, Central Asia, Turan and the Indus were working on – and in one way or another



cooperating on. Not only do we have the peacock-griffin of Precession substituted for the lion for the Forward Attack (referring, not just to the New Year meridian, but to the *Precessed* New Year meridian), but we also have the Sky Hero Orion holding up the upward and downward lion colures of the Solar Year - echoed in miniature by a smaller version of himself holding up the two Dogs of Canis Major and Minor, marker of the Sothic Period of 1320. The Central Asian double-headed sky-eagle is an early version of the Mitanni Winged Standard, which alludes to the Polar Axis and the Two Bears joined together by a Sun Disc.

[WIP]

ABBREVIATION	FULL TITLE
AFC/AFCCat	Art of the First Cities (Metropolitan Museum of Art exhibition catalogue) New York 2003 curated by Joan Aruz et al.
BB/BBCat	Beyond Babylon (Metropolitan Museum of Art exhibition catalogue) New York 2008 curated by Joan Aruz et al.
CPP	Cornalines et Pierres Précieuses (Louvre Symposium) Paris 1999 edited by A Caubet

SEAL CATALOGUES QUOTED

ABBREVIATION	AUTHOR/EDITOR	YEAR	PUBLICATION
AFCCat	ARUZ, J	2003	Art of the First Cities (Metropolitan Museum of Art exhibition catalogue) New York
AruzCat	ARUZ, J	2008	Marks of Distinction: Seals and Cultural Exchange Between the Aegean and the Orient (Corpus of Minoan and Mycenaean Seals CMS Beiheft 7) Mainz
AshCatI	BUCHANAN, B	1966	Catalogue of Ancient Near Eastern Seals in the Ashmolean Museum I: Cylinder Seals Oxford
AshCatII	BUCHANAN, B with P R S MOOREY	1985	Catalogue of Ancient Near Eastern Seals in the Ashmolean Museum II: the Prehistoric Stamp Seals Oxford
AshCatIII	BUCHANAN, B with P R S MOOREY	1988	Catalogue of Ancient Near Eastern Seals in the Ashmolean Museum III: The Iron Age Stamp Seals, Oxford
AtchCat	COLLON, D	1975	The Seal Impressions from Tell Atchana/ Alalakh (2 vols) AOAT XXVII Newkirchen-Vluyt
BBabCat	ARUZ, J et al.	2008	Beyond Babylon (Metropolitan Museum of Art exhibition catalogue) New York
BMPorCollCat	PORADA, E & COLLON, D	2016	Catalogue of the Western Asiatic Seals in the British Museum: Cylinder Seals IV, 2M BC Beyond Babylon London
CMS	I PINI & W MÜLLER (eds)	1964-2012 and ongoing	Corpus der Minoischen und Mykenischen Siegel (Many Vols - with Supplements - as quoted)
ClerqCat	MENANT, J	1888	Collection de Clerq (3 vols) Paris
GGFR	BOARDMAN, J	1981	Greek Gems and Finger Rings London
GMACat	AMIET, P	1961/ updated 1980	La Glyptique Mesopotamienne archaïque CNRS Paris
GenevCat	VOLLENWEIDER, M	1967, 1976/79, 1983	Catalogue raisonné des sceaux cylindres et intailles (2 vols, text and plates) Geneva Vol III added later (Kenna Collection)
GSCat	AMIET, P	1972	La Glyptique Susienne, des origines à l'époque des

			Perses Achéménides (2 vols) MDP XLIII, Paris
KülCat	ÖZGÜÇ, N	1965	The Anatolian Group of Cylinder Seal Impressions from Kültepe, Ankara
KüllCat	TEISSIER, B	1994	Catalogue of Karum Kanesh Level II Seals Istanbul -
KrzyszCat	KRZYSZKOWSKA, O	2005	Aegean Seals: An Introduction, London
MarcoCat	TEISSIER, B	1984	Ancient Near Eastern Seals from the Marcopoli Collection Berkeley
MartinCat	MARTIN, H	1972	Fara: an Archaeological Study of a Third Millennium City Chicago
MooreEisenCat	EISEN, G	1940	Ancient Oriental Cylinder and other Seals with a description of the collection of Mrs William H Moore OIP XLVII Chicago
NewellCat [superseded by YaleCat]	OSTEN, H von der	1934	Ancient Oriental Seals in the Collection of Mr Edward T Newell OIP XXII Chicago
OttoCat	OTTO, ADELHELD	2000	Die Entstehung und Entwicklung der Klassisch-Syrischen Glyptik Berlin
PierMorCat	PORADA, E	1948	Corpus of Ancient Near-Eastern Seals in North American Collections: the Collection of the Pierpoint Morgan Library (2 vols) Böllingen Series XIV Washington
RasShamCatI	SCHAEFFER-FORRER, C F A	1983	Corpus I des cylindres-sceaux de Ras Shamra-Ugarit et d'Enkomi-Alasia Paris
RasShamCatII	AMIET, P	1992	Sceaux-Cylindres en Hématite et Pierres Diverses: Corpus des Cylindres de Ras-Shamra Ougarit II - RSO IX Paris
SaljeCat	SALJE, B	1990	Der 'Common Style' der Mitanni-Glyptik und die Glyptik der Levante und Zyperns in der Späten Bronzezeit (Baghdader Forschungen XI) Mainz
SCSCat	FRANKFORT, H	1955	Stratified Cylinder Seals from the Diyala Region OIP LXXII Chicago
Stein NuziCat	STEIN, Diana	1993	<i>THE SEAL IMPRESSIONS (CATALOGUE) - Das Archiv des 𐎠𐎢𐎽𐎢𐏁 Teššub Heft 9 Wiesbaden 1993</i>
SyrPalCat	TEISSIER, B	1995	Egyptian Iconography on Syro-Palestinian Cylinder Seals of the Middle Bronze Age Göttingen
UEX	LEGRAIN, L	1951	Seal Cylinders [from Ur] UE X London and Philadelphia
WardCat	WARD, W H	1910	The Seal Cylinders of Western Asia, Washington
YaleCat	BUCHANAN, B	1981	Early Near Eastern Seals in the Yale Babylonian Collection (new edn. ed. Ulla Kasten) New Haven