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The Sirius' Cult in Ancient Greece. Aristaios and the Formation of the Attico-Cycladic Mythological Substratum

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Abstract

Pivotal figure of Sirius' myth among the inhabitants of Late Bronze Age Greece (ca. 1600 - 1100 B.C.) is Aristaios (<aristos = the most excellent or useful, or astraios= the starry one), protector of shepherds and hunters, teacher of cheese-making and the art of hunting, of oil-making and bee-keeping, honey & honey-mead, god of medicinal herbs and the cooling Etesian winds of mid-summer.

The aim of this paper is to detect: a) the inventors of Sirius' astromyth within the boundaries of prehistoric Greek maritime Civilization (the Pelasgian substratum), b) the geographical distribution of this myth via its main divine figure (colonization of Western Mediterranean & the prehistoric trade of silphium with the North African Coast, Kadmos & cultural relationships with Eastern Mediterranean, connection with Thessaly, Northern Greece, Arcadia & Argos, Attica, Minoan Crete & Cyclades, N.W. Greece), c)the elements of Sirius' cult worshipped by the insular population of the Aegean (peak sanctuaries, priesthood of the winds), d) the historical pathway of this astromyth and its survival to the later periods of Cycladic history (Keian coins, Keian traditions, modern Keian names & localities), e) the migration of its symbols (the hunting lion, the motif of the dogs, deities with fertilizing and creative properties) and f) the environmental setting which gave birth to this astromyth (disturbance of wind patterns, teleconnections with Indian monsoons & NAO, climatic oscillations, pestilence in Eastern Mediterranean).

Keywords: *peak sanctuaries, wind patterns, Keos, pestilence in LBA Mediterranean, Astromythology, Astrometeorology, Island Archaeology.*

1. Introduction: The Keian Astromyth

The Keian tradition of Aristaios and his implication in Sirius' cult within the Aegean is a very interesting version of the astromyth. Formerly, the Cycladic island of Keos - modern Tzia (fig. 1) was called Meropis and 'Hydroussa' (land full of water) and it was Nymphs' favorite homeland (Ovidius, Epistulae Heroidum k 221). The Nymphs, spirits related to water (in the form of ocean, spring, lake or river), dwelled in the woods. Despite the fact that a tiny part of this oak forest has survived, nowadays, in the inner part of the island, during prehistoric times the Eastern coasts of Attica and Keos were characterized by the abundance of a specific species of oaktree (see Plinius HN, IV.5.xviii; Hesychius s.v. 'saronidas drys'; Schol. ad. Callimachum, Jov. 22). This type of vegetation refers to wetter and colder weather conditions, previous to historical periods.

But, unfortunately, the Gods kept a jealous eye on island's prosperity, so they sent a ferocious lion to chase the Nymphs out of it. So, the prehistoric population of Keos was a witness to another environmental change. Deadly heat, drought and severe plague caused much suffering around the 'islands of Minos'.

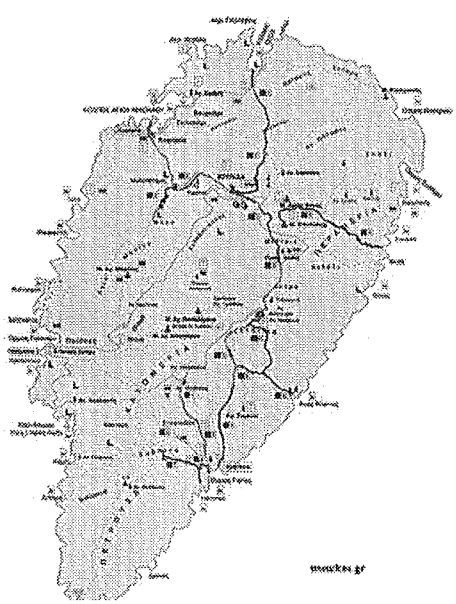

Fig. 1: *Map of Keos*

Delphic prophecy counselled Aristaeus to sail to Keos, where he would be greatly honored. The hero came to the island and sacrificed to Sirius and Zeus Ikmaios (Lord of Moisture) on the highest peak (its modern name is Prophetis Helias), on behalf of all the Greeks. Zeus listened to his prayers and sent the etesian winds blowing for forty (40) days after the heliacal rising of Sirius during summer (Aristotle fr. 511; Theophrastos On Winds, 14; Diodorus, 4.81.1; Hyginus, Astronomica 2.4; Nonnos 13.253). Since that time, the priesthood of the island(Callimachus, Aitia Fr. 3.1 -from Oxyrhynchus Papyri 7) established an annual celebration to honor Sirius the day of its heliacal rising, during which they used to invoke for help and protection (Apollonius, 2.498 - 527).

2. Who created the myth? The Pelasgian substratum

The strongest unbroken link with Pelasgians and Sirius' prehistoric cult is provided by a series of evidence found in ancient Keian tradition. A corpus of various data, concealed in poetic images or hidden under the veil of allegory, may function as a pool of inexhaustible sources of information. Evidence has showed that Sirius was worshipped in later Greece, specifically in Keos, near Attica.

The groups of Pelasgians were related to Keos and other Cycladic islands, to Minoan Crete (beekeeping and the semiology of the bee in ritual and religion was prominent in Minoan Crete), to Attica (especially prehistoric Athens, the eastern slopes of mountain Hymettos and the area of Mesogaia), Thessaly and Arcadia. These areas were also related to specific agricultural and pastoral activities.

Furthermore, Homer (Odyssey, xix 172-178) calls Crete a land of many peoples, reporting that".. therein are many men, past counting, and ninety cities. They have not all the same speech, but their tongues are mixed. There dwell Achaeans, there great-hearted native Cretans, there Kydonians, and Dorians of waving plumes, and goodly Pelasgians". Although the general trend of archaeological

research shows that Keos underwent significant Minoan influence in early times, as well as Athenians themselves (see the heavy toll to Minoans and Theseus' trip to Crete), this paper suggests that evidence indicates fundamental continuity between a specific nucleus of prehistoric population found in Crete also, the Pelasgians.

The pivotal figure of Aristaios is detected, directly or indirectly, wherever a Pelasgic substratum exists all over the Mediterranean.

3. The geographical distribution of Aristaios' figure

Aristaios' case proves an ancient Greek saying that 'many names correspond to one figure', as this mythological cycle includes various explanatory approaches, movements of prehistoric groups in the broader Mediterranean area and the recollection of a hero / benefactor of humankind (RE 1895: 852 - 859; Larson 2001: Ch. II.5.3, 84 - 87). The formation of the mythological substrata could be studied as following:

I. The Pelasgian nucleus of Thessaly: Aristaios and his healing traits & prophecy skills (Apollonius Rhodius, *Argonautica*, 2.498, 2. 509 - 515 & 4.1128; Diodorus, *Library of History* 4.81.1; Cicero, *De Natura Deorum* 3.18; Oppian, *Cynegetica* 4.265; Nonnos, *Dionysiaca* 5.212 & 17.357; Hyginus, *Fabulae* 161; Suidas s.v. 'silphion').

II. The Pelasgian nucleus of Aegean islands: Apiculture (Rose: 321 - 322; Aristotle Keion Politeia fr. = Schol. in Theocr. id. 5,5; Apollonius, 4.1128; Diodorus, 4.81 - 82; Ovid, Fasti 1.363; Oppian, 4.265; Nonnos, 5.212; Hesychius, s.v. 'vrisai').

III. The Pelasgian nucleus of Peloponnesus: Pastoralism & Agriculture (Homeric Hymn to Hermes, V.2; Hesiod, *Theogony* 977; Pindar Odes, *Pythian* IX.59-65; Herodotus, I.146; Hellanicos Ia,4,F.4 Dio.n Halic. A RI 28; Ia,4,F.6a4 Schol. Eust [A Hom. II. G75] & Schol. A; Ia,4, F.52 Harpokr. Suid. s.v. 'tetrarchia'; Heraklides Ponticus, FHG II.215.ix.2; Pausanias, Guide to Greece 8.4.1; Apollonius, 2.498; Diodorus, 4.81.1. Immerwahr 1891: 251 - 253; Larson 2001: Ch. I.4, 40 & II.5.3, 84 - 87).

IIIa. Arcadia

During the 16th cent. B.C., Aristaios along with a group of Arcadians from Peloponnesus, Thessaly or Boeotia came to the island of Keos. According to other traditions, he left the island and moved to Arcadia, Sardenia or Thrace. Later on, during the 12th century B.C., the hero Keos, another son of Apollo, arrived to this Cycladic island, giving his name to it. Modern scholars recognized the two different aspects of Artemis Kalliste in the tradition of two Arcadian female figures of Callisto, mother of Arcas, and Cyrene, mother of Aristaios .

IIIb. Argolid

The rescued fragments of Hellanicos' works often refer to the migrations of Pelasgians during prehistoric times and the strong bonds among them, from Argolid to Thessaly, the Ionian Coasts, Magna Grecia and Sicily.

IV. The Pelasgian nucleus of Eastern Mediterranean and beyond: Kadmos & Dionysos (Hesiod, *Theogony* 975; Apollodorus, *The Library* 3.25 & 3.30-31; Hyginus, *Astronomica* 2.4 and *Fabulae* 181; Oppian , IV.265 - 272; Diodorus, 4.81.1; Nonnos, 5.212, 13.253, 19.225, 24.77& 29.179).

The Boeotian king Kadmos, father-in- law of Aristaios, was also father of Semele, mother of god Dionysos. According to several traditions, the hero belonged to the secret custody of this god, and could be traced in the area of Thrace, where he finally disappeared on the mountain Haimos . Autonoe, daughter of Kadmos, married to the hero and gave birth to a son, Actaion, whose destiny meant to be rather cruel for he died later by goddess Artemis and his own hounds in the Boeotian mountain Kithairon (see

Ch. 6: The migration of symbols, the motif of the dogs).

Moreover, the figure of Aristaios is also present in the local traditions of the Euboean cities of Eretria and Karystos, which was built across the northern coasts of Keos. Aristaios traveled also to India, in the Indian River Hydaspes.

V. The Pelasgian nucleus of Attica: Viticulture (Homeric Hymn to Demeter, 154 & 476; Herodotus, VI.137; Aristotle, *The Athenian Constitution* XXXIX.2; Pausanias, 1. 38.3; Plutarch, On Exile 607b; Apollodorus, 2. 5.12; Kearns 1989).

In ancient Athenian tradition, the native Pelasgians were expelled from Attica by the Athenians, when the former cultivated successfully the land at the foot of mountain Hymettos, given to them as exchange gift for the erection of the 'Cyclopian' Walls. In after centuries, the Athenian calendar began at Sirius's rising. Although Aristaios holds a primal position in the local tradition of ancient Keians, their neighbours, the Athenians, attributed the sacred knowledge of viticulture to god Dionysos, relating it to the tragic story of Icarius and her daughter Erigone (see Ch. 6: The migration of symbols, the motif of the dogs).

VI. The Pelasgian nucleus of Western Mediterranean: the colonization & the silphium trade (Hesiod The Catalogues of Women, fr. 93 [from Servius on Vergil, Georgics 1.14]; Pausanias, 10.17.3; Diodorus, 4.81.1; Nonnos, 13.253)

The figure of Aristaios is also present in the local traditions of ancient Corfu and Sicily, the coasts of N. Africa and Sardenia.

4. Worship of Sirius among insular population of Bronze Age Greece

Sirius A (Canicula Constellation / Orion's Family: alpha Canis Major, alpha CMa) is the brightest star in the night-time sky, with a visual apparent magnitude of -1.47. This binary star system consists of a blue-white main sequence dwarf star and a faint white dwarf companion (Benest & Duvent 1995). It is located in the constellation Canis Major. Sirius A can be seen from almost every inhabited region of the Earth's surface (those living north of 73.284 degrees can't see it) and, in the Northern Hemisphere, is known as a vertex of the Winter Triangle (Gatewood 1978; Henshaw 1984).

Sirius A is one of the main stars by which maritime navigation is quarried out. On the other hand, wind patterns with their regularity and intensity , along with oceanographic characteristics, controlled the seafaring operations of Mediterranean since the prehistoric times (Davis 1979; Barber 1987; Morgan 1990; Cline 1994).

In the Odyssey, Aeolos ties up adverse winds in a leather bag which he gives to Odysseus to assure a safe home-voyage. Later myths refer to him as controller or king of the winds, in which role he persists through the ages (Odyssey, x. 1 – 76; Apollodorus E 7.10; Hyginus, 125; Ovidius Metamorphoses 14.223-232). Magical control of the winds only becomes important when seafaring is an critical part of a nation's life. So, he is pivotal in some major trade routes, as he may symbolize the priest who performs wind-magic or the prehistoric king who has the power to manipulate naval trade routes, being possibly less a mythic symbol than a real figure in the historical record (Laoupi et al. 2006b).

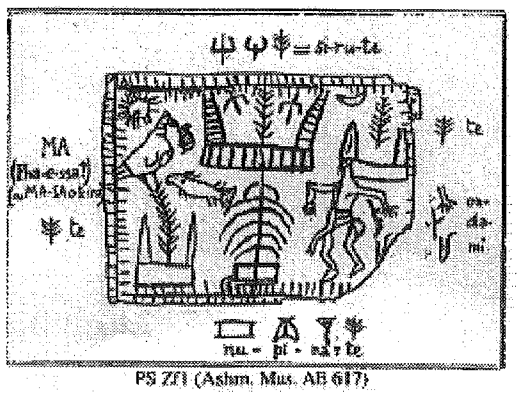

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Fig. 2: *The name of Sirius in Minoan religion (Faure 2002).*

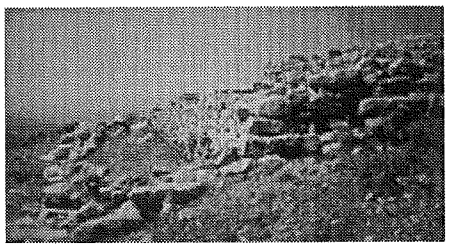

Fig. 3: *Yuktas peak sanctuary. Source: http://ourworld.compuserve.com/homepages/GJA_Frndz/ph_youss.htm.*

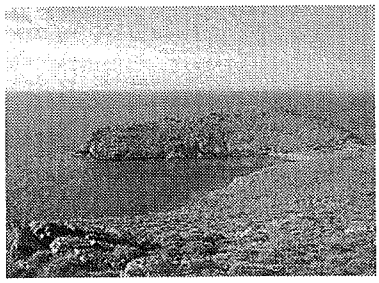

Fig. 4: *Keos: Lion's peninsula.*

P. Faure, having assumed that any sign from Hieroglyphic or Linear A that was identical to one known in both Linear B and the related Cypriot syllabary, had the same meaning as the Linear B-Cypriot one, analyzed inscriptions on offerings found at ten (10) caves or underground caverns in Crete, well known centers of Minoan cult. In fact, a couple of these were associated with peak sanctuaries. Comparing the inscriptions piece by piece to very early Greek, Faure came to some intriguing conclusions. Among the Minoan deities' names identified by Faure and found across the island of Crete, at Petsopha, Juktas, Apodoulou, Mt. Vryssinas, Psychro, Kato Symi and Arkalochori, the name Si-ru or Se-ri-o also appears (fig. 2). But not alone. Apart from Siru or Serio, who represents a sun go, there is a lunar / solar trinity including Nopina (in later Greek = Nymph or Maiden), who represents a new-moon goddess, and Ma (in later Greek = Mother), who represents a full-moon goddess. Figures of the sun and moon occur frequently in Minoan iconography (Morgan 1990 ; Faure 2002).

At Knossos divinities are mentioned in contexts dealing with offerings made to them. Among the cult personnel, the priestess of the Winds (A-NE-MO I-JE-RE-JA = hiereia anemon)is most often mentioned. She receives honey on behalf of the powers which she serves. But in contrast to Knossos, where only this Priestess is certainly identified as a human cult personage, Pylos tablets mention a large number of priests and priestesses (Palmer 1963; Chadwik 1987). Consequently, each prominent maritime civilization all over the world should have an apt knowledge of climatic / meteorological / astronomical phenomena, in order to perform successful open sea voyages in a steady base. Furthermore, it should built a symbolic system within social network, in order to insure the proper elaboration of its continuity.

Moreover, the triptych of fire / light - winds - rainfall / dew is clearly recognised in the structure of Aristaios' myth. Aristaios was one of the prime hierophants in Sirius' cult initially performed in peak sanctuaries (fig. 3). The ancient traditions wanted Aristaios to be the first observer of Sirius' heliacal rising in the island of Keos (Justin's Epitome of the History of Pompeius Trogus, XIII.vii).

This strong bond between winds and rainfall patterns is also detected on mountain Hymettos (Young 1940 : 1 - 9; Langdon 1976 : 7 - 8, 78 - 80 & 96 - 97; et al.), where ancient Athenians worshipped Zeus, as god of rainfall, and Apollo, as god both of fire and dew (Pausanias, 1.32.2; Hesychius, s.v. ' hymettios'). So, the primordial Cycladic ceremonies that honoured Sirius and other deities of moisture and winds had later been transformed into another ceremonial framework (Caskey 1971 & 1986; Rutkowski 1986; Peatfield 1987; Rutkowski 1988; Peatfield 1989, 1990 & 1995; Watrous 1995 & 1996; Sakellarakis 1996).

We strongly hope that future archaeological investigation in the peaks of Keos' mountains will reveal the truth of the secrets concerning the worship of Sirius among the insular population of LBA Mediterranean.

5. Historical pathways of myth's survival

5.1 Lion Peninsula (N.W. Kea)

The notorious beast that hunted the Nymphs of Keos gave its name to a northern Keian promontory, later known as ' the peninsula of Kephala', where a neolithic settlement and cemetery have been already excavated. In plan, the promontory is shaped like a horse's or dog's head (fig. 4).

Apart from the strong parallels between the cycladic islands, general parallels between Kephala and Thessaly are found in the form of cultural items (e.g. terracotta figurines) and architectural features. Moreover, a connection between Kephala and Late

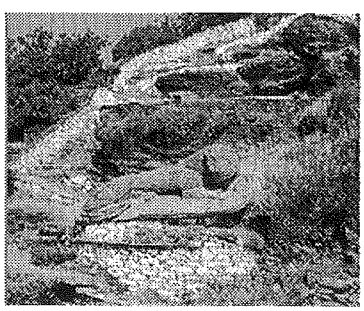

Fig. 5: *Keos: the Archaic statue of Liontas.*

Neolithic mainland of the South (Argolid and Attica) is detected by researchers (Coleman 1967: 1, 172 - 173 and 1977).

5.2 The Archaic statue of Liontas (inland Kea)

On the other side of the island, inland,S.E. of the ancient capital Ioulis, lays the statue of an enigmatically smiling Lion (fig. 5), known as ' Liontas' by local people(Welter 1954: 78 - 86 = connection of the statue with the prehistoric tradition of Nymphs' pursuit). The archaic statue 6.40 m. long, dated c. to ,600 B.C., is carved on hard granite (Chartophylakides 1962: 11= referred also by Goethe in his diary where the writer comments on P.O.Bröndsted related monograph). Nearby, at Ioulis, the temples of Apollo, Aristaios' father, Artemis and Dionysos were built during the historic period (Mendoni 1991).

5.3. The Hellenistic coins of Kea

Later on, the symbols of Aristaios were depicted on the bronze coins of the ancient cities of Keos dated to the 2nd and 1st cent. B.C. (fig. 6) : a. the head of a young or grown man with beard, b. a star with rays emanated from it, c. the front part of a dog surrounded by rays, d. the head of Apollo or bees / grapes surrounded by these rays (Manthos 1877 in Mendoni

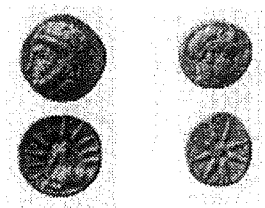

Fig. 6: *Sirius (?) on Keian coins. Source: Poole 1886:89, No 7, Pl. XXI.3: CEOS in genere. 2nd & 1st cent. B.C. Bronze. Poole 1886:93, No 46, Pl. XXI.25:CARTHAEA. 2nd & 1st cent. B.C. Bronze.*

1991: 105; Poole 1886 : 89 - 90 & 92 - 95, nos 1 - 13 / 39 - 42 / 44 / 57 / 66 / 84; Psyllas 1921: plates a & b).

This early 20th's cent. interpretation connecting the figures / symbols of Keian coins to the prehistoric tradition of Aristaios & Sirius' cult, seems to have been waiting for so long before being re- approached and further investigated within the methodological framework of Environmental / Disaster Mythology. Nevertheless, the 'forgotten' - by the majority of modern scholars, who certainly have advanced Sirius topics toward new intriguing astronomical pathways (see the issue on 'Red Sirius' mystery, that is beyond the scope of this paper) - legend of a Cycladic island provides a strong multidimensional tool for the archaeoenvironmental anasynthesis of the LBA Mediterranean.

5.4. A linguistic observation

A final observation, which may also enlight the survival of the myth within the local societies of the island during the last 3.500 years, has to be made. Even today the parents give their children names which remind of the ancient hero and benefactor (see the feminine name Aristea).

6. The migration of symbols

6.1 Deities with fertilizing & creative properties and the idea of beginning

In worldwide mythology, Sirius A, the most brilliant star in the heavens, had always played an important role. Its popular Graeco-Egyptian name was "the Brightly Radiating One".

The Egyptian calendar was simple, without being either a lunar or a solar calendar. Months do not correspond to lunar months, and years do not correspond to solar years. The Egyptians calculated their seasonal year by the stars, to be the time between successive heliacal risings of the star Sirius (which the Egyptians called Sothis). So, ancient Egyptians greatly celebrated their New Year's Day (Peret Septed), which coincided with the reappearance of Sothis (heliacal rising) after a 70 days of invisibility (the solemn ceremonies of mummification lasted for 70 days also) and the beneficent annual flooding of river Nile. This recurring pattern actually functions as the basis of Egyptian chronology (ascensions of pharaohs) and is the only method that allows modern scientists to date ancient events down to the year.

Moreover, the duality of the global climatic phenomenon (oscillations of NAO & monsoon patterns) which teleconnects the intensity of the monsoons in Indian Ocean, the rainfalls in central Africa, the Sahel boundary and the annual flooding of the Nile with the summer winds in Eastern Mediterranean is reversely detected in prehistoric and historic Greek tradition. In Homeric Iliad (X, 29 - 31 & XXII, 30 - 31), Sirius is characterized not only as the brightest star of the night sky, but also as a malignant symbol that causes suffering to mortals.

The name of this star comes from the Greek epithet 'Seirios', meaning glowing or scorcher. In Orphica (Argonautica, 120), the Greek word sirius (seirios) was firstly used as an adjective for the sun's glow (see also Hesiod, *Works and Days* 417; Hesychios and Suidas, s.v. ' seirios') .

6.2 The motif of the dogs

Another striking evidence connecting the summer heat to dog's cult within the Pelasgain substratum is a not widely known aspect of the mythological cycles of Argolid. Linos (Homer Iliad XVIII, 570), perhaps an archaic personification of the young vegetation that withers up by intense summer heat (Aeschylos, *Agamemnon*, 115 / 131 & 148 ; Sophocles, *Ajax*, 627; Euripides, *Phoenissai*, 1535), was the son of Apollo, too. When born, he was abandoned by his mother in a mountain of Argos, where a shepherd found him.His tragic death - he was also devoured by dogs, like Actaion (see also dog sacrifices to Hecate = Pausanias, 3.14.9; Lyons 1996) - was memorized in a local annual celebration. Each year, during dog-days, the inhabitants of Argolid were sacrificing lambs and were killing the wandering dogs, because they believed that summer heat was responsable for various diseases spred among plants, dogs and kids (see also the mourning song and other ancient traditions = Herodotus, 2.79; Pausanias, 9.29.6-9; RE [XIII.1] 1926: 715 - 717).

In Attica, the tragic story of Icarius and her daughter Erigone (Kearns 1989) contains the elements of prehistoric Sirius' cult, as the girl's dog, Maera, which itself means 'Shining', refers to Sirius, her mistress Erigone is transformed into Virgo, and her master Icarius into Boötes (Hyginus, *Astronomica* 2.4).

Finally, the Boeotian cycle includes the devouring of Actaion (Aristaios' son) by the dogs of Artemis (moon goddess) with strong hints for the sacred number of 50 (see Period (P) of Sirius: 50.09 years).

6.3 The motif of the hunting lion

The motif of the hunting lion shows three main versions in ancient Greece.

I. Kea (see Ch. 1)

II. Hymettos - Attica

Since former times, people of Attica kwnew about the existence of a cave near the area of Spata, on the N.E. slopes of mountain Hymettos, the name of which was 'Lion Cave'. Apart from the intense use of its space by shepherds and the later cult of god Pan and the Nymphs (cave sanctuary), the local traditions (Wordsworth 18362 / 2004: 126 & 212 / note

3; Scully 1962: 220 / note 19; Goette, 2001: 191 -2) date back to prehistoric times (Karali, Mavrides and Kormazopoulou 2005). According to these traditions, a fierce lion having its den in the cave, used to terrorize the local population of the Mesogaia plain (the slopes of Hymettos and the areas of E. Attica were the nuclei of Pelasgian settlements).

III. Nemea - E. Peloponnesus

Here, the lion's story is strongly related to Hercules as a mythical heroic archetype (Homeric Hymn to Hercules, XV). Hercules,a deity of Light, was considered as a solar spirit, an humanized incarnation of the Sun, an annual daemon of fertility and personification of the annual solar / lunar cycle. On the other hand, the fact that a 'lion' (that brings climatic disturbances, universal upheaval and disaster in human societies) is defeated by a 'solar' hero (e.g. Hercules, Aristaios) reminds us of the motif of a fierce 'extraterrestrial ' power (incarnated by Phaethon) which was defeated by the Sun itself. This interpretative scenario is reinforced both by the disasters of Bronze Age caused by cometary / impact phenomena (Laoupi 2006a), and the ancient Greek tradition that speaks of the Nemean Lion. According to this, the beast was the child of Typhoon and Echidna or of Zeus and Selene (moon) and was fallen from the sky onto Nemea's ground (Hesiod, Theogony 327 - 332; Plutarch Theseus, 26 - 27; Hyginus, Fabulae 30 et al.).

7. The environmental setting of the astromyth

Eastern Mediterranean's cultural centers of the Bronze Age had repeatedly suffered from severe environmental upheaval, convincingly testified by modern interdisciplinary scientific works. The primordial Aegean ceremonies that honoured Sirius echo the recollection of these past catastrophic events. The Keian astromyth speaks of two major environmental disasters, the change in wind patterns (with subsequent drought) and the pestilence. How can we detect today similar catastrophes that swept the settlements of Eastern Mediterranean? How can we organize them into coherent groups of events that changed the socio-economic and geographical conditions of the past societies ?

7.1. The pestilence

Apart from the indirect information concerning the pestilence that affected the Aegean islands during Minoan Times (see Ch. 1: Keian tradition), there are two other serious testimonies referring to Bronze Age epidemics. The 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 1350 B.C. 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 1340 B.C. Later on, the pharaoh Ramses V died of smallpox in 1157 B.C. at the age of 35(Singer, 2002. Beckman, 1999. http://www.mesas.emory.edu/anat-conf/abstracts.htm.http://www.multimania.com/hatti/texts/mursili1-8.html). Its scars have been found also on other mummies from the 18th and 20th Egyptian dynasties (New Kingdom: Dynasties 18 – 20 = 1552 – 1069 B.C.).

From there spread probably to India and the rest of the world. It was known in China as early as 1.122 B.C. and it is also mentioned in ancient Sanskrit texts of India. In the 1500s, the Spanish and Portuguese transported it to the New World, where it decimated the Aztec and Inca populations in Central and South America. Historians speculate that Smallpox (Variola major & minor) first appeared around 10.000 B.C. in the agricultural settlements of N.E. Africa. This disease was highly contagious with high fatality rates (up to 40%) and severe social side effects (Ruffer & Ferguson, 1911; Ruffer 1921; Cerny 1975; Hopkins, 1983; Fenner et al. 1988; Barquet & Domingo, 1997; Christopher et al. 1997; Alibek & Handelman, 1999).

Meteorological conditions make the spread of any contagious disease an unpredictable agent in human history.

On the other hand, the third piece of information derived from the very first verses of Homer's Iliad

(I.9 - 11) about the plague which hit the Achaeans as a mark of divine presence (Apollo's wrath) , could be used as a chronological tool of those events (Laoupi 2006a).

7.2 Climatic oscillations

Around 2.200 B.C., in S. Asia, the Indian monsoons that provide 80% of the Nile flow was deflected (Shaowu Wang et al., Abrupt climate change around 4 ka B.P. : The role of thermohaline circulation as indicated by a GCM Experiment bay, www.iap.ac.cn/html/qikan/aas/aas2004/200402/040216.pdf). Similar phenomena of extended drought are registered near the sources of Nile, Tigris and Euphrates, Indus and Yellow rivers.

Similarly, during the last centuries of Bronze Age

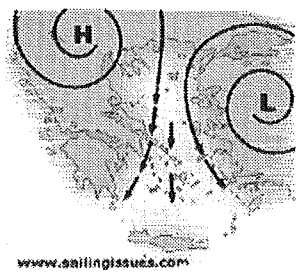

Fig. 7: *Barometric patterns producing Meltemi winds.*

(14th - 12th), major environmental and social upheaval shook the circum-Mediterranean world (Carpenter, 1966; Drews, 1992; Kobres, 1992; Pirazzoli, 1996; Peiser et al., 1998; Nur & Cline, 2000/1; de Grazia, 2005).

This turbulent period experienced climatic / geotectonic upsetting and fierce celestial (Sallares, 1991: 391, refers to many scientists who examined various natural forces as possible triggers of the societal collapse during the end of the Bronze Age, i.e. Carpenter, 1966; Parry, 1978; Weiss, 1982; Longo, 1984; Shrimpton, 1987).

The global climatic conditions are teleconnected, having as a result the fluctuations in the organization of barometric systems.

Especially the Meltemi wind , known by the old Greeks as the Etesian northern winds (RE s.v. 'Winde'; Jackson 2003), results from a high pressure system (>1025) laying over the Balkan/Hungary area and a relatively low pressure (<1010) system over Turkey (fig. 7). Although this katabatic wind can bring about harsh sailing conditions it also provides cooling, low humidity and good visibility. Furthermore, it can be characterized as one of the few Mediterranean winds that do not necessarily die out at the end of the day and can easily last more than three to six days.

Its onset happens when the monsoonal effect of the summer season that leads to the development of an intense heat trough over southern Asia, extends westward over the Anatolian plateau. Higher pressure dominates over the relatively cooler surface of the Mediterranean Sea, and settled, dry weather persists. Northerly winds prevail along the Greek coast during the winter also, but only those northerly winds occurring between May and November are considered Etesian (Pezzoli 2005).

The wave field variability patterns (inter-annual and inter-decadal) of Aegean Sea are associated with consistent sea level pressure (SLP) and surface wind field structures. The winter average significant wave height (SWH) is anti-correlated with the winter NAO (North Atlantic Oscillation) index, which shows a correspondingly increasing trend. During summer, a minor component of the wave field inter-annual variability presents a statistically significant correlation with the Indian Monsoon reflecting its influence on the meridional Mediterranean circulation (Lionello & Sanna 2005).

Furthermore, the teleconnections with Indian monsoon and Sahel rainfall transform the meteorological and marine dynamics over the Mediterranean area on an inter annual time scale (Reicich et al. 2003).

Moreover, an intensification of the Asian monsoon enhances the Etesian winds, due to the enhanced pressure gradient between the two regions (Ziv et al., 2004). On the other hand, The numerous islands of the Aegean and especially Crete (a mountainous island in the southern Aegean oriented perpendicular to the surface flow) seem to play an

important role in the modification of the wind field during the Etesians (Kotroni et al., 2001).

Finally, studies show that significant tendency is shown for both Etesians and sector boundaries of the interplanetary magnetic field (IMF) to occur on the same solar rotation days, during the main period of the Etesians effect (July -August). In addition, the solar activity seems to control the Etesians distribution (Xanthakis 1975; Wilcox et al. 1976; Metaxas 1977; Repapis 1978; Tritakis 1985).

Conclusions

The Keian astromyth of Aristaios as pivotal figure in Sirius' cult among insular populations of Eastern Mediterranean, is a LBA myth of Pelasgian origin, created in - or transmitted via - the Cycladic island of Keos, that seems to have been an prominent religious center for the maritime civilization of that time. The myth echoes : a) the importance of the 'wind symbolic system' within the ideological & socio-political framework of the Aegean maritime societies, b) disturbances in wind patterns as a broader impact of climatic oscillations (NAO, Indian monsoons, Sahel rainfall) repeatedly occurred during the Bronze Age, c) the recollection of a deadly pestilence enhanced by subsequent the environmental and social upheaval and d) movements of groups across the Mediterranean triggered by various catastrophic events. Those groups transferred with them useful knowledge (viticulture, apiculture, pastoralism, cheese and oil--making, art of weaving, astronomical observations, use of successful metrical systems such as sothic / solar/lunar calendars).

Consequently, the invocation of LBA priesthood to Sirius on peak sanctuaries just before its heliacal rising, seems to reflect, wisely, the knowledge of these teleconnections of the Etesian winds with monsoonal behaviour, rates of Sahel rainfall & Nile's flooding, solar activity and summer climatic patterns across Eastern Mediterranean.

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