III.—*On Bird and Beast in Ancient Symbolism.* By Professor D'ARCY
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(Read 4th June 1894.)

The following essay, except for one or two slight corrections and additions which I have since interpolated, was read before the Royal Society of Edinburgh in June 1894. Very shortly thereafter, M. JEAN SVORONOS published in the *Bulletin de Correspondance Hellénique* (Janv.—Juillet, 1894) a learned paper "*Sur la signification des types monétaires des anciens*," in which he demonstrated with an elaborate wealth of illustration the astronomic significance of many coin-types, the precise point that the greater part of this essay of mine was written to prove. Beginning with coins on which a beast- or bird-emblem is figured together with the symbol of a star, and passing on to others where the star-symbol is omitted, M. SVORONOS shows clearly that in a very varied series of coin-types, the Lion, the Bull, the Eagle, the Horse, and so forth, represent not merely these creatures themselves, but their stellar namesakes: in short, that, in more or less obscure and occult shapes, astronomic emblems are imprinted on a vast range of ancient coins, just as in open and acknowledged forms they are visible, for instance, on the coins of Antoninus Pius. So clearly is all this put forward by M. SVORONOS that my paper might well have remained unpublished were it not that I think I take the case somewhat further than he does. For, whereas M. SVORONOS is content to demonstrate the symbols of individual constellations, I have attempted also in certain cases to show that the associated emblems correspond to the positions relative to one another of the heavenly bodies, in some cases to the configuration of the sky at critical periods of the year or at the festival seasons of the cities to which the coins belong. In some other respects, also, I have attempted to carry to a further issue the general considerations suggested by the astronomic hypothesis.

In a *Glossary of Greek Birds* now passing through the press, I have indicated, so far as the scope of the work and the size of the book permit me, certain astronomical phenomena which seem to me to be veiled or symbolised in art and in literature in connection with certain bird-names. The present essay deals with the same hypothesis in greater detail, and adduces a somewhat different set of illustrations in support of it.

In Miss J. E. HARRISON's book on *The Mythology of Ancient Athens* there is to be found a learned, but, to my thinking, a mistaken explanation of the great relief of Cybele in the Hermitage Museum at St Petersburg. This monument seems to me to be capable of a far simpler and far more interesting explanation. The two annular symbols on either side of the central figure are not, to my mind, mere adjuncts of the picture, *φίλαι*, or votive gifts offered to the goddess; they are the ancient symbols of the sun, as we still find them to this day in astronomical and astrological works. The figure

FIG. 1.—Cybele Relief (Hermitage Museum, St Petersburg).*

to the right of the group, with the water-jar on his shoulder, is no mere *πρόσπολος* or temple-server, but the Water-bearer himself; nor is the Lion "a mere lap-dog," or symbol of the dominion of the goddess. The group represents, in short, *the Sun in Leo* and *the Sun in Aquarius*.

The statement that this great monument displays two zodiacal signs would scarcely deserve credence, and the fact, if admitted, would be of comparatively small interest,

* I am indebted for the loan of this engraving to Messrs Macmillan & Co., and for that of the Lion and Bull on p. 182 to Mr John Murray; the other engravings are all the gift and handiwork of Mrs W. R. H. Valentine, Dundee.

could we not show that these two signs were in some way related to one another, and had a definite meaning in their conjunction. Now, in the first place, Leo and Aquarius are just six signs or six months apart; and, in the second place, they were, in the epoch immediately preceding that of classical astronomy, *the tropical or solstitial signs*. The sun, which had its summer and winter solstices in Cancer and Capricorn in classical times, stood in Leo and Aquarius at the corresponding seasons in the immediately preceding age; and just as we still speak of the tropics of Cancer and Capricorn, though the sun in its precessional course has now moved into Gemini and Sagittarius, so the yet older signs of Leo and Aquarius held their place in Hellenic speech and symbol when Cancer and Capricorn had superseded them in scientific astronomy and in actual fact. In a word, the monument was emblematic of the midsummer solstice, when the sun was rising in Leo and Aquarius was setting in the west; and the heavenly signs are shown circling round the head of the Earth-Mother.

While this is the simplest explanation, and the one which first occurred to me of the conjunction of the two signs, there is yet another very closely akin, which I offer as a perhaps preferable alternative. When the sun is in Leo, that is to say (at the epoch of which I speak) in the month of the summer solstice, the full moon of that month is situated in the opposite sign of Aquarius; and it is therefore conceivable, and even probable, that the monument represents the sun and moon in opposition at midsummer, that is to say, the season of the full moon in the month of Leo.

Whichever of these two closely allied interpretations of the monument we prefer, we should, in either case, expect to find the same subject repeated in other monuments and works of art, were it a type so ancient and so important as I take it to be. On the very next preceding page of Miss HARRISON's book we find it again: the Lion sits at Cybele's feet on the left, and on the right we see the Watering-pot and hand of Aquarius, whose retreating figure has been broken away. In another of Miss HARRISON's figures we have one-half of the same subject, the Lion lying in Cybele's lap, symbolising equally well the midsummer season. And yet again, we meet with the whole group in a certain very ancient Mithraic monument.

The frieze sculptured along the base of the St Petersburg monument is eminently corroborative of my hypothesis. It represents the ancient and widespread device of the Bull and Lion in combat, the Bull kneeling with lowered head to the left, the Lion on the right in attitude of attack. In the same epoch when Leo and Aquarius occupied the place of the solstices, the Bull marked the spring equinox, the ancient opening of the year:—"Candidus auratis aperit cum cornubus annum Taurus."

The Bull and the Lion, then, if we follow the same line of argument as we have taken in regard to the major group, represent spring and summer, spring giving way before the heats of summer; or, restricting ourselves to the face of the sky as revealed at one particular date or moment, we may interpret the victorious Lion as Leo standing in mid-heaven precisely when Taurus is setting in the west.

The conjunction of the Bull and Lion is extraordinarily frequent in art, and their combat

is an ancient simile in literature. It is hard, indeed, to believe that these allusions and representations refer to actual combat of the two animals, or to depredations on the part of the lion upon the peasant's kine. The allusion is far more subtle and more mystical. *Pace* HERODOTUS, it is hard to believe that there is the smallest proof of the existence of lions in Greece within historic times: the bull would, in any circumstances, be an animal seldom attacked by the lion; it would never be found near the haunts of the lion in Africa, and probably not very often in Assyria; and the conventional picture of the combat is stereotyped and unnatural. The stories of the Eagle attacking the Bull are scarcely more untrue to nature, and are equally mystical in their interpretation.

The following sketch, taken from a shield found at Amathus in Cyprus (CESNOLA, Cyprus, pl. xx.), where certainly lions never occurred, represents the conventional picture, which we find repeated over and over again. The Bull is to the left of the Lion; its

FIG. 2.—Lion and Bull in Combat, from a Cyprian Shield.

attitude is that of the constellation Taurus, and we note in particular its bent knee as ARATUS describes it (Phaen. 517):—

Τάυρου δὲ σκελέων ὅσση περιφαίνεται ὀκλάξ,

or in CICERO's translation:—"Atque genu flexo Taurus connititur ingens."

If we pass to the great and much-neglected store of ancient symbolism in coins and gems, we find the same subject again and again. And here, though it is not my purpose in this short essay to deal fully in argument with other views, I must make one brief digression. Professor RIDGEWAY's now widely accepted views on the patterns of ancient coinage would, as it seems to me, give a meaning to coin-types where numismatists had none to offer before, but it is a meaning foreign to all we know of ancient symbolism. His theory that not merely the ox, but the tortoise, the fish, the silphium plant, the ear of corn, and so forth, represent articles of general or local commerce whose barter the coins replaced, is to give to the nations of antiquity a *numismatique boutiquière*, which might be paralleled in modern times were the people of Gushetneuk to stamp a red

herring on their groats. Mr RIDGEWAY's theory is of a piece with the speculations of those who, running folk-lore to the death, seek to read antiquity in the light of savagery ; who see the childhood of the world in a culminating age of astronomic science, symbolic art, and mystical religion, and who arrive at what I unhesitatingly regard as misconception by the double blunder of unduly depreciating the complexity of initial or archaic Greek thought, and unduly exalting the importance and too freely correlating the results of their own study of incipient or semibarbarous civilisations. We must see fallacy in any theory which treats as nascent and primitive the civilisation of a period of exalted poetry, the offspring of ages of antecedent culture ; which sees but a small advance on recent barbarism in ways of life simple in some respects but rich in developed art and stored with refined tradition ; that looks only for the ways and habits and thoughts of primitive man in races supported by a background of philosophical and scientific culture of an unfathomed, and maybe unfathomable, antiquity. Behind early Hellenic civilisation was all the wisdom of Egypt and the East, and the first Greeks of whom we have knowledge looked upon the old Heaven and the old Earth not with the half-open, wondering eyes of wakening intelligence, but with perceptions trained in an ancient inheritance of accumulated learning.

On gold coins of Croesus we find our two symbols of the Lion and the Bull, sometimes facing one another, sometimes joined by their necks. Whatever may be precisely signified in the latter case, it seems to me plain enough that the collocation of the two animals here, together with the presence of the Lion alone, or of the Lion with other animals, on coins of the same place and period, should make us hesitate to see in this Ox-type the emblem and memento of a primitive trade : apart even from the inherent improbability involved in supposing that the Ox was the great staple of commerce and fixed standard of value over mainland and islands, through regions inland and maritime, among people peaceful or warlike, stationary or nomadic, pastoral or mercantile ; while any argument that, in this particular case, we had the old trade-symbol of the Ox coupled with the Lion as a personal or dynastic crest is negatived by the frequency and wide distribution of the same two figures in conjunction.

FIG. 3.—Coin of Croesus.

If the Lion and the Bull in combat represent zodiacal signs, we should expect them to do so in like manner when figured separately or when associated with other symbols. Numismatists have long recognised the Lion on coins of Leontini, Syracuse, Apollonia on the Euxine, &c., as a solar symbol* : it is evidently in relation to the sign Leo that it is so ; and I need scarcely remind the reader that the same sign is, in fable, the Lion of Nemea, with whose defeat the solar Hercules began the cycle of his labours.†

* Cf. HEAD, *Hist. Numorum*, pp. 131, 152, 236, &c.

† Cf. DUPUIS, *Origine de tous les cultes*, i. p. 191, &c. From this learned and original work, oftener quoted, as CREUZER says (*Symb.*, iv. p. 696), than acknowledged, I have got great help, not in the inception but in the elaboration of my theory.

Let us defer for the present the consideration of planetary signs in conjunction with zodiacal ones, but let us pause to consider a few more representations of the zodiacal emblems when displayed alone. In perusing a series of figures of coins or gems, we often meet with the same animal in duplicate, forming a pair of symmetrical and identical but opposed figures; and the pair of figures, or in some cases three placed triradially, are sometimes set in a figure of revolution. It seems to me that I find such figures mainly in connection with the tropical or solstitial signs, and sometimes also with the equinoctial ones. Taking the former case, we have to deal with the ancient tropics of Leo and Aquarius and the later ones of Cancer and Capricorn; while our corresponding equinoctial signs are, more anciently, Taurus and Scorpio, and in the later epoch Aries and Libra or, as an equivalent to the latter, the Chelæ of the Scorpion. Of these, the Crab, the Balance or its substitute the Claws are in themselves marked by a bilateral symmetry so conspicuous that we need not seek for further reduplication. In the case of Aquarius I have not found such a symmetrical reduplication, unless the bilateral form of the two-handed Jar be in itself its equivalent. But in all the other cases I find it.

FIG. 4.—Coin of Amphipolis.

FIG. 5.—Coin of Delphi.

FIG. 6.—Archaic Gem
(I. B. and K., pl. xix. 1).

An archaic bracelet, reproduced and familiarised by Castellani, consists of a split ring, whose two ends are fashioned into the semblance of Rams' heads; the whole ornament is, to my thinking, a symbol of the year, from Aries to Aries. We have a similar notion expressed in the annexed figures of the two Goats or in the corresponding one of the two Rams; these I take to be emblematic of the dividing line of the solstice or equinox, as the succeeding figure illustrates the pivot-point of the equinox in Taurus, with the Moon in conjunction. And turning from glyptic or numismatic to monumental art, we think at once of the twin Lions guarding their central column on the Lion-gate at Mycenæ: that column I take to be the Lion-guarded pillar of the solstice; I fancy it was once crowned with a solar globe; and I furthermore venture to prophecy that that temple-gate will be found in some manner oriented to the midsummer sun, as is the great avenue of our own astronomical temple of Stonehenge.

From a study of the Lion and the Bull we are led, somewhat unexpectedly, to a consideration of the Pleiades. This notable constellation occupies a remarkable position: it is set in the sign of the Bull, and very nearly at the intersection of the ancient equator and the ecliptic. In astronomical descriptions the place of the constellation

varies somewhat in relation to the imaginary and variable figure of the Bull. HIPPARCHUS set it near the Bull's thigh, but it is more usually and more anciently placed, as by ARATUS, on the Bull's back. In many languages the Pleiades are mixed up with the names or images of birds. Besides the well-known and ancient belief that πλειάδες was originally πελειάδες, we have the fact that the Chinese still picture the constellation as a bird, and the existence of the old English name "the Hen and Chickens," to which correspond the French *Poussinière*, the *Pillalou codi* of the Indians, the *Succoth Benoth* of the Hebrews, and many similar names. Add to these the names of the individual stars themselves, or so many of them as we can understand. The first Pleiad is Ἀλκυόνη, the Halcyon, and the second is Μερόπη, which is connected not only with μέροψ but with the remarkable word μεροῦπας, which Mr BENT found used in Syra in the Cyclades to mean simply a bird, ὄρνις. I think from all these analogies I am justified in taking the bird figured on the Bull's back in coins of Eretria, Thurium, &c., and on Egyptian representations of the Sacred Bull, to be nothing more nor less than the associated constellation of the Pleiades.

FIG. 7.—Archaic Gem, probably Parthian.
(Imhoof-Blumer and Keller, pl. xxi.
14).

FIG. 8.—Tetradrachm of Eretria.

Not to be dissevered from this connection is the story of the Dove of the Argonauts, which flew between the clashing rocks in the passage of the Hellespont. Was not that Βόσπορος a transit through the Heavenly Bull, and is it going too far into the regions of hazard to see in the *Sym-Plegades* a name (corrupt by popular misunderstanding) akin to *Plejades*?

In considering the relative positions, at critical periods, of the Sun and the Pleiades, we seem to light on an explanation of the great myth of the Halcyon's Nest. On the day of the winter solstice, mid-winter's day, the Pleiades occupied at sun-set the mid-point of the heavens:—

νύξ μακρὴ καὶ χεῖμα μέσσην δ' ἐπὶ Πλειάδα δύνει,

"The Pleiad is in mid-heaven as the long(est) winter night sets in." It was precisely at this period that the Halcyon was said to lay her egg, when the turning sun rose to renovate the year. What is the meaning of the line following that which I have just quoted:—

νύξ μακρὴ καὶ χεῖμα μέσσην δ' ἐπὶ Πλειάδα δύνει,
κ' ἄγὼ παρ' προθύροις νείσσομαι ὑόμενος,

"I stand in the door-way dripping from my bath." That is what the Sun says as he emerges from Oceanus.

A consideration of the account given in ARISTOTLE (*H.A.*, bk. v. 8, 542 b) and of the citations made there from SIMONIDES, compel us to interpret the phenomenon as astronomical :

ἡ δ' ἄλκων τίκτει περὶ τροπὰς τὰς χειμερινάς, διὸ καὶ καλοῦνται ὅταν εὐδιδεῖν αἱ τροπαί, ἄλκωνίδες ἡμέραι, ἐπτά μὲν πρὸ τροπῶν, ἐπτά δὲ μετὰ τροπᾶς, καθάπερ καὶ Σιμωνίδης ἐποίησεν, Ὡς ὁπόταν χειμέριον κατὰ μῆνα πινύσκη Ζεὺς ἥματα τεσσαρακαίδεκα, λαθάνεμόν τέ μιν ὄραν καλέονσιν ἐπιχθόνιοι, ἱερὰν παιδοτρόφον ποικίλας ἄλκωνος. Γίνονται δ' εὐδιδεῖν αἱ, ὅταν συμβῇ νοτίους γίνεσθαι τὰς τροπᾶς, τῆς Πλειάδος βορείου γενομένης.

We may render the last lines of this passage as follows :—"And the fine weather is to be met with when the sun turns in his southern tropic, and when at the same time the Pleiades are found in their highest (northern) elevation." *

The Pleiades had also an intimate relation with the season of spring. In the ancient epoch of which we speak, when Taurus was the equinoctial sign, the sun rose associated with the Pleiades at the Vernal Equinox, in what was the opening of the ancient year ; for this reason the Pleiades were the stars of spring, the *Vergiliæ* of the Latins. And the *Halcyon* is the same as the

ἀλιπύρφορος εἶαρος ὄρνις,

a verse which admits, syllable for syllable, of literal translation, not merely "the sea-blue bird of March," but "the bird of spring that brings up the sun from the sea."

M. SVORONOS has pointed out that the numismatic emblem of a bunch of grapes is to be looked upon as another representation of the constellation of the Pleiad. An Homeric Scholiast† tells us that *Βότρυς* was actually a name given to that constellation ; and M. SVORONOS figures a very remarkable coin of Mallos in Cilicia, where doves are represented whose bodies are formed of bunches of grapes, the dove-emblem and the grape-emblem of the Pleiad being here united or intermixed. The case is a very interesting one, because it seems to give an example not only of the influence of foreign symbolism, but of the direct influence of *loan-words* from foreign sources. I take the grape-symbol to be due to a substitution of the notion of *οἶνος* for *οἰνός*, a rare pigeon-name ; and the latter to be nothing more than the Semitic *יֹנָת*, *Jonah*, a dove.

Having started our discussion with the Lord of Beasts, let us glance at the symbolic attributes of the King of Birds ; but of these symbolic attributes, which are innumerable, we may be content with a very brief discussion. The Eagle is depicted in Greek Art and Literature as hostile to various creatures, of which the chief and the most frequently mentioned are the Swan and the Hare. I find nothing of zoological significance in these relations. The eagle does not prey upon swans ; and though it may catch here and there a leveret, the hare is certainly not one of its main objects of attack.

* For further remarks on this obscure and difficult myth, see my *Glossary of Greek Birds*, pp. 31, 32.

† *Schol. Il.*, xviii. 486 ; IDELER, *Sternnamen*, p. 317.

Reading the statements in the light of astronomical symbolism, we are at once struck by the following circumstances. The constellation Aquila is adjacent to the constellation Cygnus; the former rises immediately after and as it were in pursuit of the latter, but the Swan, lying further to the north, has a longer course to make above the horizon, and accordingly is still visible for a while after Aquila has set. ARISTOTLE tells us, in a passage of hitherto unquestioned zoological import, that the Eagle attacks the Swan, but is in turn defeated by it. I can find no zoological truth in the statement, but the astronomical coincidences here related accurately correspond to it. As regards the Hare, we note that the constellation Lepus is on the eastern horizon when Aquila is precisely on the western. Not far from Aquila stands the constellation Vultur; and Aquila and Vultur are frequently associated together, both by classical writers and by the Arabs, as Aquila or Vultur cadens and volans, or γυψ καθήμενος and πετόμενος, nesr-el-wâki and nesr-el-tâir, whence our modern names Vega and Altair applied to their two principal stars. These, then, are the two eagles that devour the Hare on the famous decadrachm of Agrigentum and in the great simile of the Agamemnon, οἰωνῶν βασιλεὺς βασιλεῦσι νεῶν, ὁ κελαινός, ὃ τ' ἔξοπιν ἀργᾶς, . . . βοσκόμενοι λαγίναν.

FIG. 9.—Decadrachm of Agrigentum.

It remains to be seen whether we can discover any reason for these particular phenomena of the heavens attracting particular attention and being especially selected for representation. The Hare rises, and the Eagle, pursued by the Swan, sets just as Cancer has risen. The Crab is in like manner a frequent subject on coins, and in some very beautiful coins of the same city of Agrigentum we have the Crab on one side and the Eagle on the other. The whole symbolism probably, therefore, has reference to the tropic of Cancer, and to the midsummer rising of the sun in that sign in the classical epoch as in the older days it was at the same season of the year associated with Leo.

The multitudinous numismatic representations of the Dolphin (on coins inland as well as maritime) provide us with a severe test of the validity of the astronomic hypothesis. The constellation of the Dolphin set very nearly as the Lion, the Hydra, the Hare, and the Dog-star rose; it is associated with the Lion on coins of Syracuse, Tarentum, Velia, and Nacona, with the Serpent on coins of Priansus, Motya and Messene, with the Hare on those of Messene, and with the Dog on those of Phocaea.* With the circumstance that it stood directly opposite to the Lion, setting as the latter rose, we may correlate its title of King of Fishes under which it ruled side by side with the King of Beasts, reigning over Oceanus while the Lion was Lord of the visible sky. It stood, with Capricorn, in mid-heaven at the rising of Aries, and is associated with the Goat and Ram on coins of Delphi and with the former animal on those of Paros. It rose as Argo and Gemini set, and is figured with a ship on coins of Megara

* As well as on a gem figured by IMHOOF-BLUMER and KELLER, pl. xx. fig. 18.

and with the Dioscuri on coins of Tarentum. It rose with Sagittarius, and together with it on coins of Tarentum we have Taras(?) armed with a bow and arrow. In its place in the heavens it is closely encircled by Pegasus, Cygnus and Aquila; the Eagle is found with it on coins of Messene, Istrus, Motya and Sinope, and the Swan on those of Argolis; while Pegasus is associated with it on coins of Corinth, and is probably also to be understood in the Horse of Rhaucus and the Horse and Rider of Tarentum.

The statement in ARISTOTLE (*H. A.* vi. 12, 566b) that the Dolphin disappears for a month in summer, *συμβαίνει δὲ καὶ ἀφανίζεσθαι αὐτὸν ὑπὸ κύνα περὶ τριάκονθ' ἡμέρας* (regarding which statement AUBERT and WIMMER naively say, "über diese Verhältnisse scheinen aus neuer Zeit gar keine Beobachtungen zu existiren") is simply an astronomical fact concerning the constellation, interpolated into a passage in the main zoological. It was probably the same constellation under another guise that Apollo had to overcome ere he mounted to the sky: *Δελφίνην δ' ἐδάμασσαν, καὶ αἰθέρα ναῖεν Ἀπόλλων*, NONN. *Dionys.*, xiii. 28. And, passing over a hundred fables all bearing kindred astronomic reference, let me cite one more circumstance in point. We are told by PAUSANIAS (vi. 20, 7) that a brazen Eagle and Dolphin guarded the ἄφesis at Olympia*; and when we bear in mind that in the heavens Aquila and Delphinus stand opposite to Leo, does it not seem fit and proper that the Eagle and Dolphin should mark the end of the Olympian chariot-course, where the fabled Slayer of the Lion laid down the mimic race-course of the Sun?

The Owl on Athenian coinage is an emblem of great interest, but involved in not a little difficulty. SVORONOS takes it, with some hesitation, to correspond to the constellation simply known as Ὀρνις; but that "bird"-constellation is, in all cases that I am acquainted with, identical with Cygnus the Swan. Although the Owl on Athenian coins is sometimes associated with a lunar crescent, I am, for my part, inclined to look upon it as itself a lunar emblem. We may call to mind, in support of this view, the Euripidean fragment,

γλαυκῶπις στρέφεται μῆνη,

And remembering that Athene in HOMER is always nocturnal, and is even definitely stated by PORPHYRY (*Euseb., Pr. Ev.* iii. 11) to have been a Moon-Goddess, we find not a little to support the hypothesis. In the light of this conjecture, the common association of the Owl with an Amphora on Athenian coins becomes interesting; for it may be that the Amphora is the symbol of Aquarius, and the relation of Aquarius to the Moon has been discussed already.† When Athene in the *Iliad* appears in the shape of a

* As also in the Circus Maximus at Rome; cf. JUV. vi. 590, DION. CASS. xlix. 43.

† The study of what I take to be the lunar symbolism of the exclusively silver coinage of Attica, and other considerations of a like nature, have led me to the discovery of a singular and suggestive coincidence. We are told by HERODOTUS (iii. 89) that the values of gold and silver in ancient currency stood to one another in the ratio of 13 : 1; but MOMMSEN (*Hist. Mon. Rom.*, ed. BLACAS, i. p. 407; cf. HEAD, *Hist. Numorum*, p. xxxv.) and others have shown that this statement is only approximately correct, and that the true ratio was 13·3 : 1. There is no evidence that there were the same fluctuations between the relative values of the two metals which are now so common (HEAD, *l.c.*). Two problems are here presented to us for solution: first, How was this ratio kept steady and unchanged during many

swallow, there again the lunar crescent of the swallow's wings is at once suggested to me; and the similitude to the swallow of Ulysses' bow is of the same nature: no twittering swallow's note was ever like to the twang of the great bow, but the bow was bent like the crescent wings of the bird, *ἡελιδόνη εἰκέλη ἄντην*.

To draw yet another illustration from the mystical Kingdom of Birds, what was the pitiful lay of *ἄδωνις*, *ἄδωνίς*, *ἀηδονίς*, or *ἀηδών*, that fills line upon line of Attic chorus and Dorian and Ionian hymn with obtrusive melancholy? Was it not simply the old dirge of *Adonis*, the Dead March of the year, the keening song over the grave of the Sun, whom the sorrowing East bewailed when women wept for *Tammuz*? Was it not merely a disciple of another sect who said he preferred the swan's song to the nightingale's?

Whether this or some other be the true explanation of the legend of the nightingale's song, it is quite plain from the frequent hints of many writers that some esoteric meaning was associated with the songs of Halcyon, Nightingale and Swan. LUCIAN, for instance, gives us such a hint and a very notable one, though even he only points, with sealed lips, to the immemorial riddle whose solution he cannot or must not tell: *οὐκ ἂν ἔχοιμεν εἰπεῖν βεβαίως οὔτ' Ἀλκυνόνων πέρι, οὔτ' Ἀηδόνων κλέος δὲ μύθων, οἷον παρέδσαν πατέρες, τοιοῦτο καὶ παισὶν ἐμοῖς, ὃ ὄρνι θρήνων μελωδέ, παραδώσω τῶν σῶν ὕμνων πέρι, καὶ σου τὸν εὐσεβῆ καὶ φίλανδρον ἔρωτα πολλάκις ὕμνήσω*.—LUCIAN, *Halc.*

In a certain small number of coins and gems the representation of astronomic phenomena is set forth in clear and concrete fashion, with no riddle of esoteric symbolism. The annexed figure of a gem (from Asia Minor) represents in this obvious way the constellations of the Dragon and the two Bears:

Maximus hic flexu sinuoso elabitur Anguis
Circum perque duas in morem fluminis Arctos.—VIRG., *G.*, i. 244.

centuries of antiquity; and, second, how or why was it chosen and established in the first instance? Now, it seems to me more than a mere coincidence that $13.3 : 1 :: 365 : 27.4$, the last number being precisely the period in days of the Moon's revolution round the earth. In short, the ratio of gold to silver, established and maintained, I fancy, by astronomic science and astrological superstition, was simply and precisely the ratio of the solar year to the lunar month, the natural relation of the metal of the Sun to the metal of the Moon.

If this speculation be justified, it may further throw some light on the use of electrum as a standard of currency. This metal was an alloy of gold and silver in the proportion of 73 to 27; and it has been pointed out by HULTSCH that its value according to this scale would be to silver as 10 to 1, when gold was to silver as 13.3 to 1:—that is to say, gold : electrum : silver :: 13.3 : 10 : 1. It is generally assumed by numismatists that electrum was a native alloy, coined for convenience to avoid the trouble of separating the silver from the gold. This explanation is in my opinion altogether inadequate. The very fact that the ancients knew accurately the composition of the alloy is enough to indicate that the separation of the two metals presented no serious difficulties to them: moreover, I do not believe that an alloy of so precise a composition ever existed in large quantity or widely distributed: and, lastly, though some such alloy undoubtedly did exist native, we are twice told by PLINY (*H. N.* ix. 65, xxxiii. 23) that it was made or imitated artificially. It seems probable to me that electrum was an alloy ingeniously devised and skilfully manufactured to form a new standard in simple decimal relation with silver, to take the place of the old, complex and inconvenient astronomical standard of gold. And the ingenious framing of a $\frac{10}{1}$ in place of a $\frac{13.3}{1}$ ratio and standard would form a parallel case to the splendid adaptation by which the Babylonians divided the circle into 360 degrees, thus, by a slight and simple change, co-ordinating with a sexagesimal notation, the old 365 or $365\frac{1}{4}$ degrees into which the Chinese still divide the circle, as the Sun divides the circle of the year.

IMHOOF-BLUMER and KELLER, from whose *Thierbilder* I have borrowed the figure, simply state that these three constellations are represented; but they do not state, and perhaps did not perceive, that there is a deeper astronomic interest in this gem, to wit,

FIG 10.—Draco and the Two Bears on an Asiatic Gem.

that as nearly as may be its centre coincides with the North Pole of the heavens in the epoch of classical Greece. The pole, which now lies in the Little Bear, then stood in Draco between the Two Bears, somewhat nearer to the little one; and the Two Bears are the Miltonian "Star of Arcady and Tyrian Cynosure,"

Magna minorque ferae, quarum regis altera Graias,
Altera Sidonias, utraque sicca, rates.—OVID, *Tr.*, iv. 3, 1.

The whole gem is an exquisite picture of the polar region of the sky, precisely as Aratus describes it in a famous passage copied over and over again by Latin poets:—

καί μιν πειραίνουσι δύο πόλοι ἀμφοτέρωθεν
ἀλλ' ὃ μὲν οὐκ ἐπίοπτος, ὃ δ' ἀντίος ἐκ βορέαο
ὑψόθεν ὠκεανοῖο· δύο δέ μιν ἀμφὶς ἔχουσai
Ἄρκτοι ἅμα τροχόωσι (τὸ δὴ καλέονται Ἀμαζαι).
αἱ δ' ἦτοι κεφαλὰς μὲν ἐπ' ἰξύας αἰὲν ἔχουσιν
ἀλλήλων, αἰεὶ δὲ κατωμάδια φορέονται,
ἔμπαλιν εἰς ὤμους τετραμμένοι . . .
καὶ τὴν μὲν Κυνόσουραν ἐπὶ κλησιν καλέουσιν,
τὴν δ' ἑτέραν Ἑλίκην. Ἑλίκη γε μὲν ἄνδρες Ἀχαιοὶ
εἰν ἀλὶ τεκμαίρονται ἵνα χρὴ νῆας ἀγινεῖν
τῇ δ' ἄρα Φοίνικες πίσυνοι περόωσι θάλασσαν.
ἀλλ' ἡ μὲν καθαρὴ καὶ ἐπιφράσσασθαι ἐτοίμη
πολλὴ φαινομένη Ἑλίκη πρώτης ἀπὸ νυκτός·
ἡ δ' ἑτέρα ὀλίγη μὲν, ἀτὰρ ναύτησιν ἀφείων·
μειοτέρη γὰρ πᾶσα περιστρέφεται στροφάλιγγι·
τῇ καὶ Σιδόνιοι ἰθύντατα ναυτίλλονται.
τὰς δὲ δι' ἀμφοτέρας οἷη ποταμοῖο ἀπορρώξ
εἰλεῖται μέγα θαῦμα, Δράκων, περὶ τ' ἀμφὶ τ' ἐαγὼς
μυρίος· αἱ δ' ἄρα οἱ σπείρης ἐκάτερθε φέρονται
Ἄρκτοι, κυανέου πεφυλαγμένοι ὠκεανοῖο.—ARAT., *Ph.*, 25-48.*

And now, to close my story, the conclusion that I wish, in a general way, to draw is, that to understand the solemn and sacred and cherished myths of antiquity, we must seek an interpretation in their ancient source in an ancient heaven. The one science that the civilised races of old loved and understood was astronomy.

* Cf. VIRG., *G.*, i. 244 (*supra cit.*); OVID, *Met.*, iii. 44; *Id.*, *F.*, iii. 107; LUCAN, iii. 219, viii. 173, ix. 539; SENECA, *Ital.*, iii. 192, 665, xiv. 456; VAL. FL., i. 17, v. 69, vi. 40, &c.

“Their Wise Men
Were strong in that old magic that can trace
The wandering of the stars.”

The Herald in the Agamemnon was not a solitary watcher of the skies, nor did Wise Men in the East monopolise the adoration of the stars; but generations of Hellenic priests, like their fathers and their brethren in Egypt and Chaldea, had regarded the strength of Mazzaroth and the bands of Orion and the sweet influences of Pleiades.

These guardians of an esoteric knowledge divulged their store little by little, in myth and allegory, in the sacred art of sculptor and of poet, and through the mystified lips of the teller of tales and the singer of songs. The traditional belief that Perseus and Boötes, Cepheus and Heracles, were earthly heroes translated to a restful seat in the stellar firmament, is an inversion of the true order of things. The Heroes that were set in the sky had been drawn thence in the beginning: the Gorgon's head was not the creation of a poet's fancy nor the legend of an antique chronicler, before a place was found for it in the star Algol; but patient study and accurate knowledge of the Demon Star, with its mysterious flashes and its rhythmical wax and wane, preceded the allegorical conception of Medusa's snaky head.

Let us, then, forsaking traditional acceptations, admit that the Chimæra must be carried at once to the land of Chimæras; that Perseus and his Gorgon's head must not be taken to Lycia, nor Amalthæa and the two Bears to Crete, but that all of them must be raised to the sky. In all these cases earthly geography must be left aside. The Bull, the Crab, the Goat, and the Ram on silver drachma and golden daric must not be regarded as articles of trade, but must be placed in the zodiacal ring. The voyage in quest of the Golden Fleece was not through the Dardanelles, towards Colchis or the Caucasus. No dove out of a dove-cot was set free between the clashing Symplegades. Further, if to these zoological illustrations we add the number of the Achæan chiefs at Troy or of the champions on either side at the epic siege of Thebes: if we couple Helen, Queen-Goddess of beauty (the moon-faced beauty of the East), with her twin stellar brethren: if we think of the Phæacian King, whose sailors sailed from his far western island to eastern Eubœa, saw there, on the triple judgment-seat, Rhadamanthus or Ra Amenti and his brother-kings of the under-world, and returned in one day home again, we catch more than a glimpse of that stellar symbolism which veiled from vulgar eyes, even perhaps from the eyes of the tellers of the story, a splendid vista of priestly lore.

The stellar symbolism that I here advocate is, I maintain, a different thing from the sun-myths, dawn-myths, and so forth, which are now to a large extent deservedly repudiated. We cannot ascribe to the civilised nations of antiquity the puerile conceptions of nature that are congruent with a stage of awakening intelligence and with the crude results of untrained observation. Rather are we dealing with the elaborated gain of ages of scientific knowledge, with the thoughts of a people whose very temples were oriented to particular stars or to critical points in the journey of the sun; whose representations

of Art, on frieze and pediment, in tragedy and epic, were governed by what would at first appear to be a tyrannical convention : which convention, however, so far from hampering their genius, seems, under the influence of a wholesome restraint, to have moulded their art into more beautiful, more poetic, and more sanctified forms.

And we may stay a moment to remember that it is not only Art but Custom also that was fettered by conventionality and sanctified by religion. At Olympia, in the beginning of each Leap-year cycle, the noblest youth of Greece raced, round the symbolic pillars, their horses emblematic of the Horses of the Sun ; thereby glorifying a God whom they thus ignorantly worshipped. Even so, we read in the second Book of Kings how their Phœnician cousins worshipped with like ceremony the same God. And all the while, in the evening and the morning, priests and *πρόσπολοι* watched, measured, and compared the rising and setting of Sun and Stars, in temples that were astronomical observatories, to the glory of a religion whose mystery was astronomic science.

This dominant priesthood, whose domain was knowledge, holding the keys of treasured learning opened the lock with chary hand, and veiled plain speech in fantastic allegory. In such allegory Egyptian priests spoke to Greek travellers who came to them as Dervish-pilgrims or Wandelnde Studenten. It was this Sybilline knowledge that an Æschylus, an Ovid, or a Virgil, Master of Wizards, here and there half revealed. It is this dragon-guarded treasure of secret wisdom that we may yet seek to interpret, from graven emblem, from symbolic monument, from the orientation of temple-walls : from the difficult interpretation of non-Hellenic names, of hero and heroine, of Solar God and Lunar Goddess, of mysterious monster and fabled bird, of celestial river and starry hill : names that were first written in the ancient and learned language of a people wiser and more ancient than the Greeks.