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## PREHISTORIC MAN IN THE EASTERN MEDITERRANEAN.

THE purpose of these notes is to summarise the results of recent research among the prehistoric peoples and civilisation of the Eastern Mediterranean ; especially in so far as these prepare the environment for the first great civilisation of Europe, namely, that of Greece, and fill the chronological gap, and explain such communication as existed, between this and the equally "historic" but far earlier civilisations of the Euphrates and Nile Valleys.

A strictly "Historic" Age on the shores of the Ægean Sea, or in fact in the Eastern Mediterranean at all, cannot be said to begin before the seventh or at earliest the end of the eighth century B.C. ; and everything before this point would certainly have been classed as "Prehistoric," but for the fact that, until quite lately, the preceding centuries have been interpreted wholly in the light of a voluminous Greek tradition, which is still accepted in many quarters as fundamentally historical ; though now with wide reservations everywhere. Consequently prehistoric archæology and ethnology have here come into existence as accessory and supplementary studies, and the data of the literary tradition have been used, as was inevitable, as a working hypothesis ; which, it is only fair to say, has served its purpose fully as well as there was every reason to expect. Consequently again, any account of the more recent and more

strictly anthropological work in this field must stand, if it is to be intelligible, in close relation with the data and assumptions, which have so mainly determined its course.

#### ANCIENT TRADITIONS AND MODERN INTERPRETATIONS.

1. The data upon which Greeks of the sixth and early fifth centuries relied for the reconstruction of their own history consisted wholly of traditional anecdotes, appended to traditional genealogies, or grouped, in more or less organic connection, round equally traditional events, such as an invasion of the Troad, or an exploration of the Euxine, or the adventures of a typical navigator like Odysseus. Many of the lays in which these anecdotes were preserved can be traced with some probability to their places of origin, which range from Cyprus to the islands off the west coast of Greece, and from Thessaly and the Troad to Crete. All profess to represent the civilisation of the Ægean area at a period removed by several centuries from the point at which the Hellenic world emerges into history; and the traditional chronology of historical Hellas went up to an era which is slightly later, but approximately contemporary with the latest episodes of the Epic poems. Now though the lays which display the greater literary skill and the maturer idiom give a less vivid and more conventional picture; and though occasional allusions occur to customs and beliefs which are characteristic of Hellenic culture, those others which Greek tradition reckons primary, namely, the *Iliad* and the *Odyssey*, are obviously at close quarters with their subject; and if there is one thing certain about the civilisation of the "Homeric Age" thus described, it is that it differs in nearly every important feature from that of the "Hellenic Age" of historical Greece.

2. The Greeks, in fact, themselves regarded their earliest literature as antedating the chronological limits of their history, and already perceived that they belonged to a different order of things. In particular, the ethnography of the Ægean, preserved in an admittedly late and degenerate lay, differs uniformly from that of historic Hellas as far back as it can be traced, and those names are almost

absent by which the Greek race was denoted historically ; by its western neighbours as Ἕλληνες, by its eastern neighbours as Ἰάονες (Javan). This inconsistency was attributed by the Greeks themselves to a period of invasion and migration analogous to that which broke up the Græco-Roman civilisation of the Mediterranean. Dorian, Thessalian and Bœotian mountaineers were represented as forcing the barrier, or descending from the highlands, of the Balkans, bringing the old established " Achæan " civilisation to an abrupt close, and reducing the Ægean, and mainland Greece in particular, to a chaotic and barbarous state, the recovery from which is the dawn of the historical Hellenic genius.

3. Some facts within their own experience went to confirm this view. Here and there tribes retained the names and the mode of life of the earlier age ; or a noble family professed to trace its descent beyond the limits of current genealogy, and to identify itself with a Royal house of Achæan princes ; and here and there ruined fortresses remained, or ancient tombs had been disturbed, which seemed to confirm the description of Achæan splendour in the ballads.

4. Thus much had been established from the beginning of Greek History onwards, and had not been seriously shaken by successive attempts to discredit the traditional view. The theories that the lays are comparatively late compositions, and that they stand in no close relation to a pre-Hellenic age ; that the Achæan Age is an invention, and the Period of the Migrations a hypothesis to explain its inconsistency with the facts of historical geography, all prove too much, and may be met with *argumenta ad hominem* from the same traditional data. No literary critic of the Epic has yet purged himself of a sediment of traditional preconception ; and, in proportion as one or another has attempted to do so, he has been reduced to a merely agnostic position.

5. Further, until very recent years, every attempt which was made to elucidate the civilisation of the Homeric Age by the monuments of early Greek civilisation rested upon

the assumption that the representations of dress, armour, etc., of the sixth, fifth and fourth centuries B.C., were valid illustrations of poems which at the latest belonged to the seventh, and on an average were assigned to the ninth or tenth century. The reason of this was that Homeric subjects in Greek art are uniformly furnished with accessories of the age of the artist, and that until the study of Classical Antiquities began to be infected with the "evolutionary notions" which had already long been current in all other departments of Ethnography, the attention of students of Greek art and culture was strictly confined to mature and decadent art; everything which could not be assigned to a century subsequent to the fifth was either dismissed as barbaric, or discounted as a "Phœnician importation"; the part which "Phœnician" fables, ancient and modern, have played in the historical study of the Mediterranean area will be considered briefly later on. Such, for example, was the received opinion—so far as there was one—of such discoveries of pre-Hellenic culture as those of M. Fouqué's expedition to the Island of Santorin (Thera, 1862), where, in the course of a geological investigation, a primitive settlement was found under a thick bed of volcanic debris, or those of MM. Salzman and Biliotti (1868-71), who in searching for antiquities in Rhodes found at Ialysos, for the British Museum, a magnificent collection of early vases which are now known to be Mykenæan, and second only in quality and variety to those from Mykenæ itself. The Santorin settlement was simply taken to confirm the legend of the Phœnician colony of Kadmos (Hdt. iv., 147), and the vases from Ialysos were explained as the barbarous but immediate predecessors of those from Kamiros, were classed with them as "Græco-Phœnician," and were referred to the seventh century, in spite of the absence of Egyptian objects of the twenty-sixth Dynasty, and the presence of objects of the eighteenth: a view which in certain quarters is not yet quite extinct.

6. It was not till 1871 that Dr. Heinrich Schliemann was enabled to execute his lifelong ambition of testing with the spade the Greek tradition that the site of the Græco-

Roman town of Ilium was also the site of Homer's Troy. The tradition had indeed been sorely handled by Demetrios of Skepsis, a local antiquary of the second century B.C., on the geological ground that the Plain of Troy is of recent alluvial formation; and by other critics on the score of inconsistency with the Homeric narrative. But the Bali Dagh, the site suggested by Demetrios, and in fact the only alternative, is far more inconsistent, and is put absolutely out of question by Dr. Schliemann's discoveries. In successive seasons (1871-3, 1876-82) he laid bare not one, but six cities, built one after another on the same site, and forming an accumulation of walls and debris some thirty feet deep; and, among these, two additional layers have been distinguished in the confirmatory excavations of Dr. Dörpfeld, 1892-94. The latter, however, indicate that Dr. Schliemann's earlier work was not, from the circumstances of the case, sufficiently closely watched throughout, and that in some cases objects were probably picked up at lower levels than those to which they properly belong. In particular, it is not clear that the *cache* of jewellery and plate known as the "Great Treasure of Priam" was *not* hidden originally in a shaft of some depth.

7. Dr. Schliemann claimed as the Homeric Troy the Second Town from the bottom, which had perished by fire, and in which the "Great Treasure" was found. But the Sixth Town, which Dr. Schliemann described as Lydian, was shown by Dr. Dörpfeld in 1892-93 to be larger and more important than was at first supposed, and to correspond closely with the remains found subsequently at Mykenæ and elsewhere.

8. With the same purpose in view of testing the Homeric tradition, Dr. Schliemann proceeded in 1875-6 to excavate the citadel of Mykenæ, in the Peloponnese, the traditional centre of the Achaian feudal confederacy. Here the results were equally unexpected, but no less confirmatory of the legend. A civilisation was brought to light wholly un-Hellenic, but far from barbarous; greatly in advance of all but the latest layers of Hissarlik, and presenting already the marks of decadence after a protracted

career. The pottery, the personal ornaments, and in fact the whole cycle of the art, were at once recognised as identical with those of Ialysos, while the stone-fenced burial-place discovered just within the "Lion Gate" of the citadel, with its six "shaft graves" and their enormous wealth of gold vessels and ornaments, seemed ample confirmation of the legendary wealth of "golden Mykenæ," and was proclaimed, in the first enthusiasm of the discovery, as the tomb of Agamemnon himself. The further researches which have been made almost continuously from 1886 onwards by M. Tsountas for the Greek Archæological Society have confirmed in all essential points the first general impression, but the discovery of later tombs in the lower quarters of the town has made it possible to trace an order of progress and to extend the limits of the period.

9. Subsequent excavations at Tiryns and Orchomenos by Dr. Schliemann, and on a number of other sites in Greece and the Ægean Islands by the Greek Archæological Society and the foreign Institutes in Athens, have demonstrated that this civilisation, which has acquired the provisional name of Mykenæan, is widely represented in the Ægean area and especially in its southern part; that its influence extended over the Central and Eastern Mediterranean from Sicily to Cyprus; that it penetrated, intermittently at all events, into Egypt, where its apparition can be approximately dated, and whence it imported much, and borrowed somewhat, but without losing its own individuality; and, most striking of all, that, after a long period of apparently continuous maturity, it falls into a sudden decadence; leaving, to all appearance, just the same gap between itself and the first traces of Hellenic Art, as we have noted already, on the literary side, between the Homeric Age and the beginning of Hellenic History. It should be further noted, however, that in the last few years many facts have come to light, especially in Attica, in Crete, and, most of all, in Cyprus, which seem to indicate how that gap may eventually be filled. It is from the pottery, almost without exception, that the leading indications have been derived. Fragments of baked clay

are practically indestructible, even though the vessels which they composed have been shattered. Moreover, all the unrefined varieties of clay, and many even of the best levigated, present features by which their place of origin may be recognised. Consequently, in this material, modelling and decoration can be perpetuated as in no other way; and, what is more important, the intrinsic worthlessness of earthenware has often preserved it from the displacement and destruction which almost inevitably overtake objects of gold, bronze, and marble. The resulting preponderance of ceramographic references in the bibliography which follows these notes must therefore be taken as indicating the character of the evidence which is most accessible, and of the method which has actually proved most fruitful: not that the pottery really took so large a place in primitive art as might be inferred from its actual abundance, and its scientific importance.

10. Consequently the study of Early Man in the Ægean has entered within a few years on a new phase, and presents the following problems: (1) To reconstruct in detail the history of the Mykenæan civilisation; its origin, its character, range and influence, and its decline; (2) to investigate the causes of that relapse into barbarism, which both literature and archæology attest; (3) to determine the ethnological position of the race, or races, who originated, maintained, and overthrew it, and their relationship with the historic inhabitants of the same area; and (4) as a special study, to determine the relation in which the Hellenic traditions of the Achæan Age, and the lays in which they were preserved, stand to the civilisation which they certainly seem to commemorate, and which owes its discovery simply to the application to them of a new method of criticism.

(1) THE FIRST KNOWN CULTURE OF THE EASTERN  
MEDITERRANEAN.

11. Palæolithic Man seems to have left no traces in the Levant comparable with those in North Europe, or with the plateau and upper-gravel flints of the Nile Valley. But the scarcity of evidence is partly due to the indifference of

the natives to such objects, and to the almost complete diversion of trained research into more obvious and attractive departments; partly also to the comparative rarity, except in Egypt, both of workable flints and of the high-level gravels in which they are usually preserved. From Greece itself only one palæolithic implement is recorded hitherto; a flint celt from Megalopolis in Arkadia (*Rev. Arch.*, xv., 16 ff.).

12. Neolithic Man, however, can be traced over the whole area. Masses of hard crystalline rock are frequent and accessible, and furnished implements of characteristic types; short full-bodied celts, more or less markedly conical behind, and ground to a rather obtuse edge. Obsidian was largely exported from Melos and Thera to the neighbouring islands, and to the mainland of Greece, and was worked up at Korinth and on several sites in Attica. Jade of good quality was sent from Asia Minor outwards across the Ægean; but it is not yet clear whether the source of the common green variety is in Asia Minor itself or further east: the jade implements become commoner eastwards, and the finest collection from any single neighbourhood is that brought by Mr. D. G. Hogarth in 1894 from Aintab in N. Syria (*Ashm. Mus.*, Oxford).

13. Tombs of this stage of culture have not been found—or sought—in sufficient numbers to justify discussion or to contribute any facts of importance. The necropolis of Psemmetisméno in Cyprus, for example, contains besides typical early Bronze Age tombs a still more primitive class, in which the pottery is exceedingly rude, and the characteristic red-polished ware of the early Bronze Age is wanting; but though bronze is absent, no stone implements are present. On the other hand the few tombs recorded as containing stone implements are brought down by their general character well within the Bronze Age.

14. Exception must however be made in favour of the Nile Valley, for Professor Flinders Petrie in 1895 found, at Ballas and Nagada, both tombs and villages of an invading race, apparently Libyan, which had brought the art of flint working to unequalled proficiency, and remained



almost ignorant of the copper which was already in fairly common use under the Sixth Dynasty, which immediately preceded their irruption into Egypt. But the significance of this discovery and of our very limited knowledge of the Libyan people and their civilisation will be better discussed at a later stage.

15. On the other hand, several Settlements of the Neolithic Age have been examined. Typical is the lowest town of Hissarlik, though it has actually yielded a few simple copper weapons. The implements are of local flint and imported obsidian, of green-stone and allied rocks from the interior of the Troad, and of jade; some of the common green Anatolian, others of finer yellowish kinds (*cf.* the specimen in Ashm. Mus. attributed to Melos), and one small celt of the pure white variety which is not known to exist native except in China.

16. The fortifications and house walls of the "First City" are of very rough unhewn rubble; its pottery is of local fabric, made wholly without the use of the potter's wheel, and almost uniformly tinted black by a carbonaceous pigment, intentionally applied and accentuated in the burning; many of the forms are closely allied to those of the neolithic and early bronze ages in Central Europe, and of the corresponding deposits of Greece and Cyprus. This lowest settlement is separated from the rest by a layer of natural soil, which represents an interval during which the site lay desolate; it is therefore distinctly older than the succeeding cities. But the advanced and special technique of the Pottery of the First City, and the fact that, on Schliemann's authority, copper implements already occur, indicate the end rather than the beginning of the Neolithic stage; and the Neolithic evidence from elsewhere is best summarised here, before going further in the series at Hissarlik.

17. Settlements of similar character, but each with its own local peculiarities, occur (1) on an unexcavated site, commanding the Bosphorus as Hissarlik commands the Dardanelles. (2) On the "Kastri" near Achmet-aga in Eubœa, a low hill fortified with earthworks and approached by a hollow way, like the hill camps of the south of England.

(3) Beside Dombrena near Thebes in Central Greece : the site has not been described, but neolithic implements are very frequent : among them is a potter's burnisher of white quartzite (Finlay Coll., 280. Athens). (4) On the Acropolis of Athens many implements and vases were-entirely confused by the levelling of the summit in the fifth century B.C. ; on the south side (in the space afterwards known as the *Πελαργικόν*) is a layer of neolithic pottery with obsidian flakes and a potter's burnisher, almost wholly destroyed by the recent excavations, and only preserved where it is left to support the fragmentary walls of the Mykenæan settlement. The material of the pottery is Ilissos mud, not the Kerameikos clay of the Kephissos valley. (5) Beyond the Ilissos, between Hymettos and the sea, the exact site is unknown, potsherds are common on the surface. The many stone heaps in this district seem to have been accumulated from off the fields on to barren spots ; two, opened south-east of Kara in 1895, were quite barren ; a tumulus north-east of Kara, surreptitiously opened, contained a Mykenæan interment (Ashm. Mus.). (6) Primitive pottery is common on the west end of the cliff which runs along the coast from New Corinth nearly to the site of Lechaion.

18. The "Second City" of Hissarlik has marked points of similarity with the first, but represents a decided advance, and has notable characteristics of its own. The walls, great and small, are of better masonry below, and of sun-dried brick above, with bonding courses and terminal uprights (*antæ*) of timber ; the centre of the fortress is occupied by a "chief's house," consisting of three oblong buildings with portico entrances at one end in a courtyard entered by a covered gateway. The pottery is still of unlevigated clay, and mostly hand-made ; it is no longer blackened as before, but either left as it is, or covered with a red slip, which continues to occur in the layers above ; new and characteristic forms appear, some peculiar, others again common to Central Europe, to the Greek islands or to Cyprus. Stone implements are still in common use, but copper and bronze begin to be frequent though they are still of simple

types. But the pre-eminent feature of the Second Town is the discovery of more than one buried "Treasure" of gold and silver jewellery and vessels, the latter certainly of local manufacture, for the forms closely correspond with characteristic types of the pottery.

19. The Second Town perished in a general conflagration, and the Third, Fourth and Fifth Towns above it never attained to anything like its magnificence. They mark, however, a gradual advance of civilisation and form a transition, more and more rapid as it proceeds, towards the Sixth Town, a quite distinct and well-marked settlement of "Mykenæan" invaders, in which imported pottery, and native imitations of this, occur alongside of fully developed indigenous forms, which again recall in characteristic details many Central European types. This Sixth Town is the only one which can be even approximately dated chronologically; it is certainly prior to 1000 B.C., and need not be later than 1300; the Fifth and lower settlements must of course necessarily be older than this.

20. It has been already hinted that the "Treasure of Priam" *may* belong to a period somewhat later than the Second Town, though not so late as the sixth or "Mykenæan" Town. Whether this be so or not, we have in the jewellery an early example, perhaps a prototype, of the characteristic gold work of the Mykenæan Age; but if the "Treasure" is contemporary with the layer in which it was found, the time limit for the whole series at Hissarlik must probably be contracted downwards. In any case we must believe that the earliest civilisation of Hissarlik was not so wholly barbarous as appears at first sight.

21. Imported objects found at Hissarlik indicate a wide range of foreign connections. The fragments of porcelain point to Egypt; the lapis lazuli axe from a neighbouring site, to Turkestan; the silver vases probably to the eastern half of Asia Minor; the types of the bronze implements alike to Cyprus and to the Danube Valley; and the amber to the shores of the Baltic. This wide commerce does not, of course, imply direct intercourse, but, from its geographical

position on the Hellespont, Hissarlik must have been a point of convergence for any trade between the East and Europe, and the catalogue of the allies of the Trojans in Iliad II., though it refers to a later period, ranges them (1) up the Hebros Valley into the Balkans, and along (2) the North and (3) the West coast of Asia Minor; *i.e.*, along three well-known routes of early trade.

22. The metallic objects of Hissarlik are of particular value as links between two principal copper-working areas, Cyprus and Central Europe. The latter really falls beyond our present view, but must be noted—mainly to be rejected—as a possible source of the early Mediterranean Bronze.

23. The use of copper in Cyprus goes back far beyond the point where it can be dated with any certainty, and everything goes to show that, while southwards, namely, in Egypt under the Fourth Dynasty, Cypriote types appear from the first side by side with others which are probably Sinaitic, northward the same types extend, past Hissarlik, into the Danube Valley, and are imitated and amplified into derivative forms throughout Central Europe; returning, almost unrecognisable, into the Mediterranean area in the series from Spain, which is clearly not directly derivative, and may be of comparatively late origin.

24. The obvious suggestion that Central Europe may have worked copper independently is met (1) by the comparison of the secondary forms,—*e.g.*, only in Cyprus can the actual synthesis of double-bladed axe heads, by welding two simple ones, be observed; (2) by the fact that, along with the characteristic and indigenous metallurgy, the ceramic technique of Cyprus, with red hand-polished surface and incised ornament filled with white earth, can be traced across Asia Minor and into South-eastern Europe; the red slip as far as Brus in Transylvania; the ornament into the Mondsee of Lower Austria, and the pile-dwellings of Switzerland, becoming ever more mongrel and degenerate as it proceeds.

25. It is important to note that at Hissarlik a return current is already evident; the pottery and the metal im-

plements reproduce European types as well as Cypriote, and this is confirmed, not only by traditional and ethnological considerations, but also by the occurrence, somewhat later, in the Ægean area, not only of frequent ambèr, but of characteristically Danubian types of bronze implements.

26. The Bronze Age civilisation of Cyprus is, thanks to repeated researches, far more continuously and completely known than any other part of the area. It was undoubtedly of very long duration, and certainly follows that of the Stone Age without change or break; and it is no exaggeration to say that, until a period between the twelfth and the eighteenth Egyptian Dynasty, Cyprus was in all essential respects in advance, not only of the coasts of Asia Minor and the Ægean, but even of the coast of Syria and Palestine.

27. All the earliest weapons, whether in Cyprus or elsewhere, in Egypt, or the Levant, are of almost pure copper. Tempering is effected, not by alloying with zinc or tin, or, as in the Caucasus, with antimony from the natural double-sulphide ore, but by "under-poling" the copper so as to leave it hard and even brittle from the presence of copper oxide. The same applies to the Egyptian copper weapons of the fourth, fifth, and even sixth Dynasty; but Egypt, though later on it has important connections with Cyprus, obtained its first copper from the mines of Sinai, and has a set of typical forms peculiar to itself. Cyprus, however, supplied the Syrian coast with copper weapons down at all events to the time of the eighteenth Dynasty. Stone implements are very rarely found in Cyprus, and it is possible that either the island was not reached much before the beginning of the Bronze Age, or that its wealth of copper was discovered at once, and superseded the stone age prematurely. In its earlier stages metallic implements are rare, and the pottery—always made by hand—is covered with a bright red glaze which was polished with a stone or bone rubber (horse teeth were commonly used), and ornamented, if at all, either by incised lines or by pellets of clay rudely modelled after plants, snakes and

horned animals. In its earlier part, therefore, the civilisation, so far as it is known, is peculiarly uniform in character, and displays no trace of foreign influence; except only that the characteristic red-polished glaze of the pottery, already mentioned, is almost identical with that of the Neolithic Libyan people of Ballas-Nagada, and of their "Amorite" kinsfolk in South Palestine. Even here, however, there is no evidence at present of imitation on either side. The strong influence which Cyprus exercised, through its copper trade, over the neighbouring coastland is best illustrated by the discoveries of Dr. Bliss at Tell-el-Hesy, on the coast plain of Palestine (Philistia), some sixteen miles from Gaza. The site consists of an acropolis with eight "Cities" superimposed as at Hissarlik. The mass of the remains represent an indigenous "Amorite" civilisation of low type, related, according to Professor Flinders Petrie, to that of the Libyan invaders of Ballas-Nagada. But bronze appears from the bottom of the series upwards, and iron already in City Four, which with City Three appears to be contemporary with the eighteenth Dynasty and the Mykenæan Age. The bronze types are derivative, partly from Cyprus, partly from Egypt; and Cypriote importations of the later painted fabrics occur in Cities Two and Three together with native imitations. The red-polished pot fabric of Tell-el-Hesy, however, belongs to the Amorite civilisation, and is not necessarily borrowed from that of Cyprus.

28. In the latter half of the Bronze Age, Cyprus with characteristic conservatism fell for a while slightly behind its neighbours, and began to import ornaments and articles of luxury from Egypt and the Syrian and Cilician coasts. In this stage the red-polished ware tends to deteriorate in colour and finish; the bronze weapons become more numerous, and contain a higher percentage of tin, and occasionally jewellery of coarse silver-lead, all of native make, is found in the more richly furnished tombs. Babylonian cylinders occur rarely as imports, with a multitude of characteristic native cylinders. Egyptian scarabs and porcelain beads are also found rarely; and with these again a very common variety of coarse crumbly porcelain badly glazed

with a very faint blue : the pigment was evidently difficult to obtain, and was used but sparingly by the native artist. But meanwhile the discovery of the art of ornamenting the natural surface of clay vessels with an encaustic umber pigment, wherever it may have originated, seems to appear in Cyprus (where umber is extensively worked) at least as early as anywhere else ; first in company with, but later almost wholly superseding, the older mode of incising linear ornaments on a prepared and polished surface.

29. The simply painted pottery is followed, though not immediately, by several other fabrics which, though probably native to Cyprus, are represented in some quantity on Egyptian sites of the twelfth Dynasty and later dates, and also in equivalent layers in the stratified mound of Tell-el-Hesy, in the "Hittite" Sinjirli, and sporadically elsewhere ; one very characteristic variety, with dark body, white chalky slip, and black almost glossy paint, has been found even so far afield as the Island of Thera, the Acropolis of Athens, and the "Sixth City" of Hissarlik.

30. The specimen from Thera was found in company with vases of a distinct and local style ; some still with coloured surface and incised ornament, others with simple painted patterns. The forms, however, and the whole fabric, are quite distinct from those of Cyprus, and show a graceful freedom which is quite new ; though they are clearly derivative from a ceramic of the Hissarlik type. Most important of all, the wholly geometrical and mainly linear ornament which has been hitherto universal is combined with or replaced by a thoroughly and vigorously naturalistic study of animal and vegetable forms, and, in combination with the latter, spiral motives appear, hitherto unknown but destined to a long and eventful career. These naturalistic and curvilinear designs are not only represented on the pottery, but are also frescoed upon the plastered walls of the houses ; they may consequently be taken to be locally characteristic. The settlement at Thera was found beneath a thick bed of volcanic debris, and had evidently been suddenly abandoned ; metallic objects are rare, but this may well be due, as M. Tsountas suggests, to the flight of the inhabitants—for no

skeletons were found; and a few copper implements and gold ornaments remained to confirm the inference from the pottery as to its position in the series.

· 31. Settlements and tombs of the same character have since been noted in many islands of the Archipelago, especially in Syros, Melos, Antiparos and Amorgos; and this "Cycladic" type of ornament and general civilisation is not only closely paralleled by the earliest remains at Mykenæ, Tiryns, Athens and elsewhere, but is connected by an almost continuous series with the fully developed art and civilisation of the Mykenæan Age itself.

32. It should be noted that though Cyprus appears to have exported its own manufactures to the Ægean during this period, it was not in a position to influence or direct the Cycladic culture. But still less is there any trace that the younger and more vivacious school reacted at all upon the elder; this was reserved for the full-grown culture of Mykenæ.

33. It is at this period that the Cretan evidence, though as yet miserably incomplete, becomes of crucial importance. Crete shares, to begin with, the early bronze age civilisation of Hissarlik and Cyprus, resembling the latter more closely; but it is not till the Cycladic stage is reached that we have more than the most fragmentary evidence. In the Cycladic period and in the succeeding age Crete was almost literally *ἑκατόμηποις*, the "island of an hundred cities," and certainly exercised a vigorous and continuous, perhaps even a predominant influence upon Ægean civilisation. At this point the wealth and variety of Cretan decorative art become conspicuous, and a chronological point of the very first importance and a clue to the origin of some characteristic motives are given by the recent demonstration of a frequent and fertile intercourse with Egypt in the time of the twelfth Dynasty. On the one hand, a very peculiar and local fabric of pottery from Kamárais in Crete has been found in twelfth Dynasty layers at Kahun; on the other, the Cretan types of bronze implements are typically Egyptian, and twelfth Dynasty scarabs were not only frequently imported, but commonly imitated. In fact it is very probably from this



quarter that the spiral motives, which are dominant in the Egyptian Art of the twelfth Dynasty, were introduced into the decorative repertory of Ægean art.

34. The seal-stones engraved with Egyptian and derivative spirals are closely associated in Crete with others bearing groups of symbols, more than eighty of which have been recorded, and shown to be hieroglyphic, by Mr. A. J. Evans. They exist in two series, of which the earlier is fully pictorial and naturalistic, the later conventionally abbreviated into linear forms. Some of the former are closely analogous to certain Egyptian, others to certain "Hittite" hieroglyphs from Kappadokian monuments; many of the latter are identical with *graffiti* on twelfth-eighteenth Dynasty pottery from Kahun, Tell-el-Hesy and elsewhere, and some are probably prototypes of symbols which persisted in the Phœnician, Greek and Lykian alphabets, and in the Cypriote syllabary. This hieroglyphic system is not confined to Crete, though it is far best represented there as yet; the pictorial seal-stones are distributed over the Cycladic area; and two inscriptions in the linear character have been found on vases at Mykenæ. Dr. Kluge, of Magdeburg, believes that he can translate these hieroglyphic inscriptions into a dialect of Greek.

35. We now come to what is, even literally, the Golden Age of the early Mediterranean cycle. "Mykenæan" Art is still best and most completely illustrated by the long series of discoveries in the plain of Argos, which at once revealed its existence, and have given to it a name. The monuments and the civilisation of Mykenæ and Tiryns have been repeatedly, though never yet really adequately, described, and have given rise to the most divergent theories as to their date, their origin, and their relations with what precedes and follows them. The following points are those which are chiefly made clear by the most recent researches.

36. The limits within which Mykenæan sites are distributed may now be defined with some approach to accuracy, and no less the wider area over which Mykenæan civilisation had a living influence. With the exception of

the "Sixth City" of Hissarlik no Mykenæan settlement is known on the mainland of Asia Minor. Isolated vases are reported from Pitane in Æolis, from Mylasa in Karia, and from Telmessos in Lykia, and the early necropolis of Termera (Assarlik) near Halikarnassos (Budrum), though of distinctly indigenous character, is strongly influenced, at the very end of the period, by late Mykenæan models from the neighbouring islands. Among the latter, besides the great settlement at Ialysos in Rhodes, every island appears to be represented from Rhodes southwards to Crete, and northwards as far as Patmos. Both in Melos and in Thera Mykenæan settlements are found distinctly superimposed on the Cycladic already mentioned, and others are indicated by isolated finds throughout the Archipelago. On the mainland of Greece, Lakonia is represented by two sites Kampos and Vaphio (Amyhlæ), the latter with a princely "beehive tomb" like those of Mykenæ; Argolis by Mykenæ, the Heraion temple-site, Tiryns, Nauplia, Trœzen, Epidaurus, and the islands Kalauria and Ægina; Attica by Athens, Eleusis, Acharnæ (Menidi), Aliki, Kara, Spata, and Thorikos; the rest of Central Greece by Megara, Antikyra, Thebes, Tanagra, Levadia, Orchomenos and several smaller sites in the Kopais marshes; North Greece by Pagasæ (Dimini near Volo) in Thessaly.

37. In the West there are no Mykenæan settlements known further than Kephallenia and Ithaka; but Mykenæan vases occur in domed rock tombs at Syracuse, and there is much indirect evidence of Mykenæan influence on the later Bronze Age style in Sicily and South Italy. Further than this, it is clear that on the Adriatic coast of Italy Mykenæan imports and models determined the character of the later Bronze Age, and that in the transition from Bronze to Iron at Hallstatt in the Tyrol, a definitely Mykenæan strain can be detected. But in both these cases the contact is with later and already quite decadent types, such as are represented in the Lower Town of Mykenæ; in particular fibulæ are always present, and of these the secondary and distinctly Sub-Mykenæan types are only very rarely absent.

38. Eastwards, Mykenæan imports are found frequently

in Cyprus, in the latest class of Bronze Age tombs, and give a very distinct character to the necropoleis of Episkopi (Kurion), Enkomi (Salamis), Pyla, Nikolidhes, and Laksha-tu-Riu. Native imitations increase in frequency, and eventually supersede the importations and fix the leading features of the art of the early Iron Age, *e.g.*, at Kuklia (Paphos), Lapathos and Katydata-Linu. In Egypt again, Mykenæan importations are found in great quantity, associated with the later Cypriote fabrics and stimulating copious native imitation in layers of the eighteenth Dynasty at Illahun, Gurob, Tell-el-Amarna. These last finds confirm the date already inferred from the occurrence of eighteenth Dynasty scarabs and porcelain ornaments at Ialysos and at Mykenæ, and fix the general chronology of the Mykenæan Age beyond all question. The contrary opinion, that the Mykenæan civilisation immediately precedes the Orientalising culture of the seventh-sixth centuries, and consequently itself descends as late as the eighth-seventh centuries, has been vigorously urged by a few English students, but has long been abandoned by all who have had first-hand experience of the conditions of discovery. The premature contention that the fortress of Tiryns was Byzantine deserves mention, but is obsolete.

39. It is in Egypt also, moreover, that the first notice occurs of the actual peoples who transmitted the civilisation in question, and this in a peculiarly suggestive connection. In the fifth year of Merenptah (1225) and under Rameses III. (1180-1150) the western frontier of Egypt was seriously threatened by a Mediterranean coalition, of which the Libyans were the principal members, but which included under the general description of "the peoples of the isles of the sea" a number of tribes whose names, though much distorted in the Egyptian hieroglyphic records, strongly resemble those of Achæians, Danaans, Ionians, Teucrians, Tuscans or Tyrrhenians, and perhaps Sicilians and Sardinians. Neither these names, of course, nor yet the apparent resemblance of their arms and furniture, as depicted in Egyptian paintings, can give more than a plausible presumption of identity either with historical Ægean races or

with the representatives of Mykenæan civilisation. But the analogies are on all sides so close, that the identification is usually accepted, and that as soon as even the outlines of the history and civilisation of Libya during the Bronze Age are ascertained, we shall be in a position to formulate the real relations which then existed between Libya and the Ægean, and probably also to trace more clearly to its source the very remarkable realistic instinct which distinguishes the art of the Ægean from all contemporary styles.

40. The sudden collapse of the Mykenæan civilisation, which was indicated to begin with, is roughly coincident with the first appearance of Iron in common use in the Levant, and the attempt has been made, though on no direct evidence, to connect the two tendencies. All the facts go to indicate that, so far as the Mediterranean area is concerned at all events, iron makes its appearance first on the Syrian coast, in the period which immediately succeeds the downfall of Egyptian suzerainty in that area under the nineteenth and twentieth Dynasties: *e.g.*, at Tell-el-Hesi iron occurs down to the fourth "City" (= eighteenth Dynasty). The ambiguity of the Egyptian allusions under the eighteenth and previous Dynasties makes any earlier date uncertain, and iron has not been actually *found* in Egypt before the twenty-sixth Dynasty, 650 B.C. In Cyprus, where the evidence is completest, and where abundant native ores have certainly been worked from an early period, iron suddenly becomes very common just at the point when Mykenæan vases are ceasing to be imported, but when, on the other hand, Mykenæan conventions have already begun to influence profoundly the native scheme of ornament. At Mykenæ itself iron occurs first as a "precious metal" and in the form of signet rings, at the stage where decadence begins to be rapid, but it is not put to practical uses till the moment where the series breaks off, and the same is the case in other Mykenæan sites in the Ægean; one iron sword was found in the Vaphio "bee-hive".

41. Up the Adriatic again it is with the early fibulæ and quite degenerate Mykenæan art, that iron makes its appear-

ance, at Novilara ; and at Hallstadt ; and here again, both in tradition and among the finds, there is evidence that the metal became established first as an ornamental rarity, and only subsequently as a substitute for bronze.

42. But though in its principal centres Mykenæan civilisation has all the appearance of having been suddenly and violently extinguished, this must not be taken to be universally the case. In Argolis (at Tiryns, and the Heraion), in Attica, and in Melos, for example, there is every reason to believe that the Mykenæan civilisation survives, though in very degenerate phases, into the period when Iron and the characteristic art of the early Iron Age are already well established ; and at Nauplia and the Attic Salamis, and still more in Crete, in Karia, and in Cyprus, the stages may be clearly traced by which, so far as in it lay, the Iron Age took up its inheritance from the Age of Bronze. The nature and the result of this transference are easily summarised.

43. It has been already indicated, firstly, that throughout the Eastern Mediterranean, in fact throughout the whole range of the Mediterranean Early Bronze Culture, the indigenous system of decoration is instinctively rectilinear and geometrical ; secondly, that in the Cycladic area and in the Middle Bronze Age a quite irreconcilable and purely naturalistic and quite heterogeneous impulse appears ; and thirdly, that the fully formed Mykenæan style, when it appears, is, in spite of its far superior technical skill and elegance, already beginning to stagnate in many departments ; the gem-engraving and modelling developing last, and retaining their vigour and elasticity latest ; whereas the ceramic decoration, which appears in its noblest form at Thera and at Kamárais, is the first to exhibit the conventional and mechanical repetition of a shrinking assortment of motives. We may now add, fourthly, that this failure of originality permitted of a recrudescence of the rectilinear instinct which, though overwhelmed for the time by the naturalistic and curvilinear principles, had co-existed with them throughout ; and that both floral and spiral motives, once allowed to repeat themselves without

reference to their models, are transformed automatically into the latticed triangles and mæanders, which are the commonplaces of rectilinear design.

44. At this point the survey must close, for now, on geometrically engraved tripods, and geometrically painted vases, appear Hellenic inscriptions in alphabetic characters. Borrowed Oriental, and especially Assyrianising, motives intrude themselves into the panels of the rectilinear ornament, and attempts are made, however ineffectual, to represent first animal and then human forms. Now, in the development upward out of the "Dark Age," Hellenic history begins to reckon onward from the Trojan Era and from Olympic and kindred lists; and Hellenic art no longer forward from the eighteenth, but backward from the twenty-sixth Dynasty.

#### LEVANTINE ETHNOLOGY, AND SUMMARY (*to follow*).

#### BIBLIOGRAPHY.

*N.B.* The references which follow are grouped under the numbers of the paragraphs of the text. They only indicate the primary researches and theories, and must be compared with the fairly full references in Perrot and Chipiez, *Histoire de l'Art. VI, La Grèce Préhistorique*, 1895, and with the current notices of discoveries scattered throughout M. Salomon Reinach's invaluable "Chroniques d'Orient" published in the *Revue Archæologique*, of which the years 1883-1890 have been republished separately (Paris, Firmin Didot, 1891).

#### 6. Dr. Schliemann's Researches.

SCHLIEMANN. *Ilios*. (German and English ed.), 1881, (French ed., including "Troja"), 1885, (German and English), 1884.

*Atlas Troj. Alterthümer* (photographs), 1874.

*Mycenæ* ,, ,, 1878.

*Ithaka, etc.*, ,, ,, 1879.

*Orchomenos* ,, ,, 1881.

*Tiryns* ,, ,, 1886.

SCHUCHHARDT. *Schliemann's Excavations* (German, Leipzig, 1890); E. T. Macmillan, 1891.

11. The Stone Age. Sp. LAMBROS. *Ἱστορικὰ Μελετήματα (Historical Essays)*, ch. i.  
 DUMONT. *Materiaux pour servir à l'histoire primitive de l'homme*, 1872 (Finlay Collection). *Revue Archæologique*, xv., pp. 16-19, 356 ff., xvi., p. 359 (1867).  
 PAPPADOPOULOS. *Διθωή ἐποχή ἐν τῇ Μικρᾷ Ἀσίᾳ* (Stone Age in Asia Minor), Smyrna, 1875. Cf. *Bulletin des Correspondances Helleniques*, ii., p. 8, 1876.  
 FINLAY. *Παρατηρήσεις (Observations)*, Athens, 1869.
13. Psemmatismeno. DÜMMLER. *Athenische Mittheilungen*, xi., pp. 214-6, 1886.  
 Bronze Age Tombs with Neolithic Implements. At *Kurion* in Cyprus. *Archives des Missions*, xvii., p. 6. *Cypr. Museum Catalogue*, No. 470 (Oxford, 1896). At *Tiberiopolis* in Phrygia. J. A. R. Munro. *Journ. Roy. Geog. Soc.* (forthcoming).
14. Ballas-Nagada. *Catalogue of Exhibits, University College, London*, July, 1895; *Academy*, 20th April, 16th July, 1895 (Report forthcoming).
15. Jade. SCHLIEMANN (Maskelyne). *Ilios*. (English), p. 240.  
 FISCHER. *Nephrite u. Jadeite . . . nach ihrer Urgesch. u. Ethnogr. Bedeutung*, Stuttgart, 1875.  
 DAVIES. *Geol. Mag.*, second decade, v., 4, April, 1878.
16. Hissarlik, v. § 6, SCHLIEMANN.  
 NORMAND. *La Troie d'Homere* (popular, well illustrated).
17. Thymbra. SCHLIEMANN. *Ilios*. s. v.  
 Boz-oyuk (Phrygia). *Jahrbuch d. K. Akademie, Berlin*, xi., 1896. *Anzeiger*, p. 34.  
 Salonika. *Jahrbuch*, l.c.  
 Thessaly. *Mitth. Ath.*, p. 99 ff., 1884.
18. Bœotia. *Jahrbuch*, 1895. *Anzeiger*, p. 32.  
*J.H.S.*, pp. 54-56, figs. 10-13, 1884.  
 Attica. *Mitth. Ath.*, p. 138, fig. 31, 1893.  
*Jahrbuch*, p. 16, 1893.
- 22ff. MUCH. *Die Kupferzeit in Europa* (second edition), Jena, 1893.  
 NAUE. Die Bronzezeit auf Cypem. *Korresp. Blatt*, p. 124, 1888.  
 VIRCHOW. *Zeit. d. Deutsch. Gesellsch. d. Anthropol.*, xii., 73.
27. Copper and Early Bronze with but little Tin. J. H. GLADSTONE.  
*Proc. Brit. Ass.* (Nottingham), p. 715, 1893. *Trans. Soc. Bibl. Archæology*, xii., pp. 227-234. FLINDERS PETRIE.  
*Zeitschr. f. Ethn.*, p. [477], 1891. BLISS, l.c.  
 Tell-el-Hesy. BLISS. *A Mound of Many Cities*, 1894.
28. Cyprus. SANDWITH. *Archæologia*, 1877.  
 DÜMMLER. *Mitth. Ath.*, xi., 1886.  
 OHNEFALSCH-RICHTER. *Kypros the Bible and Homer*, 1892.

- MYRES and OHNEFALSCH-RICHTER. *Cyprus Museum Catalogue*, Oxford, 1896 (in the press).
30. Thera. FOUQUÉ. *Santorin. Archives des Missions*, ser. 2, vol. iv.
31. Cyclades. DÜMLER. *Mitth. Ath.*, xi., 1886.  
Antiparos. BENT. *J. H. S.*, x., 1887.
33. Crete. A. J. EVANS. *Journ. Hellenic Studies*, xiv., pp. 276-372, 1894 (republ. "Cretan Pictographs," etc., Quaritch, 1895).
34. Ægean Hieroglyphic System. EVANS, l.c.  
KLUGE. *Magdeburger Zeitung*, 1896.
35. Mykenæan Civilisation in general. v. *Bibliogr.* in PERROT, vi., q.v.  
TSOUNTAS. *Μυκῆναι καὶ Μυκ. πολιτισμὸς* (Mykenæ and Myk. Civilisation), Athens, 1893.  
TSOUNTAS. 'Εφημερὶς Ἀρχαιολογικῆ (Journal of Gk. Arch. Soc.), 1886-1894, passim.  
PERROT and CHIPIEZ. *Histoire de l'Art*, vi. (la Grèce Préhistorique) (E. T.), 1895.  
FURTWÄNGLER u. LÆSCHKE. *Μυκ. Thongefässe*, 1879.  
FURTWÄNGLER u. LÆSCHKE. *Μυκ. Vasen*, 1886.  
POTTIER. *Vases Antiques du Louvre*, I., p. 181 ff., 1896.  
HELBIG. *La Question Mycénienne*. Paris, 1896.
36. Mykenæan Sites, Asia Minor:—  
Hissarlik, "VI." DIERPFELD. *Troja*, 1893. *Μυκενισχὲ Vasen*, p. 33. REINACH. *Rev. Arch.*, 1893, i., p. 357. *Rev. Arch.*, 1895, i., p. 113.  
Pitané (Æolis). PERROT, vi., Fig. 489-91.  
Lemnos. *Rev. Arch.*, xxvii., 1895, Nov.-Dec.; cf. Smyrna Museum.  
Telmessos. *Mitth. Ath.*, xii., pp. 228-230.  
Thessaly. WOLTERS. *Mitth. Ath.*, xiii., p. 262, Pl. viii.-xi., 1889.  
Orchomenos and neighbourhood. SCHLIEMANN, q.v. DE RIDDER. *B. C. H.*, p. 137 ff., 1895. Esp. Gha. DE RIDDER. *B. C. H.*, p. 271 ff., 1894. NOACK. *Mitth. Ath.*, xix., 1894.  
Daulis. (*Athens: National Museum*), unpublished.  
Antikyra (Phokis). Lolling. *Wolters' Mitth. Ath.*, xiii., p. 267, 1889 (identified with *Medeon*).  
Athens. TSOUNTAS. 'Εφ. Ἀρχ., 1891, p. 27 ff.  
GRÆF. *Jahrbuch*, 1892. Anzeiger, p. 16 ff.  
WIDE. 'Αθήναιον, ii., 1895, 168.  
Eleusis. PHILIOS. 'Εφ. Ἀρχ., 1889, p. 171.  
Koropi. BRÜCKNER. *Mitth. Ath.*, xvi., p. 200 ff., 18 (identified with *Pallene*).  
Salamis. (*Athens: National Museum.*)



- Ægina. EVANS. *J. H. S.*, p. 195 ff., 1892-93 (Gold-find).  
 REINACH. *Rev. Arch.*, November-December, 1895.
- Kalaureia. WIDE. *Mitth. Ath.*, xx., p. 297, 1895.
- Troezen. REINACH. *Chroniques*, p. 628.
- Epidaurus. (*Athens: National Museum.*) Ἄρχ. Δελτίον, 1888.
- Kephallenia. WOLTERS. *Mitth. Ath.*, xix., pp. 486-490.
- Crete. MILCHHOFER. *Die Anfänge d. Kunst.*, p. 122 ff.
- EVANS. *J. H. S.*, xiii., pp. 276-372, 1894 (republ. "Cretan Pictographs," Quaritch, 1895).
- FURTWÄNGLER u. LÆSCHKE. *Myk. Vasen*, pp. 22-4.
- HALBHERR and ORSI. *Museo Italiano*, II., p. 908, pl. xiii.-xiv.
- HAUSSOULLIER. *B. C. H.*, 1880, pp. 124-7.
- JOUBIN. *B. C. H.*, 1892, p. 295.
- ORSI. *Monumenti Antichi d. Accad. d. Lincei*, I., p. 201 ff., 1890.
- PERROT, vi., p. 451 ff. (bibliography).
- Sicily. ORSI. *Bulletino di Paletnologia Italiana*, xviii., pp. 193 ff., 206 ff., xx., p. 257 ff. *Necropoli Sicula*, p. 30 ff.
- Spain. GASCON DE GOLOS. *Saragoza*, i., pl. iii., p. 40.
- Chronology—For eighteenth Dynasty dates :—
- FLINDERS PETRIE. *J. H. S.*, xii., pp. 199-205, 1891.
- PERROT, vi., p. 1000 ff.
- For later dates (summary) :—
- REINACH. *Chroniques*, pp. 420, 575 ff. *Rev. Arch.*, p. 75, 1893.  
*Classical Review*, p. 462 ff., 1892. *Times*, 6th January, 1896.  
*Academy*, 11th January, cf. 1st February, 1896.
- TORR. *Memphis and Mykenæ*. 1896.
- For "Byzantine" Tiryns (summary) :—
- REINACH. *Chroniques*, p. 280 ff., *L'Anthropologie*, p. 701, 1893.

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