unter rhodischer Oberhoheit zu bleiben habe. Gegen Ende des Jahrzehnts
haben die Kaunier ihr Ziel aber dennoch erreicht und ihre Libertas zurück-
gewonnen (s.o.).

Insoweit ihnen die Ehrungen für mächtige Römer dabei von entschei-
dendem Vorteil waren, wissen wir nicht, solange unbekannt ist, unter welchen
Umständen Kaunos wieder civitas libera wurde. Auch nach der Wiedergewin-
nung der Freiheit für Kaunos fort, einflussreichen Römern durch Ehren-
statuen zu schenken 23. Je mehr dies zur routinemäßigen Pflicht wurde 24,
desto weniger politische Bedeutung muss den Ehrungen zugekommen sein.
Die Ehrung des Murena aber war für die Kaunier der Anfang zäher Bemüh-
ungen gewesen, die schließlich zum Erfolg führten.

23 G. E. Bean, a. O., Nr. 26.27.28.29.
24 Dion von Prusa, or. 34, 165; Die Rhodier sagen, sie müssen alle Statthalter ehren.
Bundar, muhtemelen himnegorasım bir kenara teşkil eden yerde, şimdii bir çeşme anı (Nymphaeum) olarak kabul edilen ve üzerinde bir gümrük nizamnamesi yazılı bulunan yapılı büyük şofa arastırdı bir anılar grubunun yanında bulunmaktadır 2 (Lev. II, 1). G. Muren'un yuvuralık kaidesi (No. 2), buhar daha küçükm olmak üzere, büyük ahl askikeyli kaidesin öte tarafında, aşım yarımı aytı uzaklaştırı, yazılı üst kişünü kaybolsun, başka kai kide ile benzerlik göstermektedir 3. Böylece bunlar üç keylodan müteşekkir simetrik bir grup teşkil eder (aşım h) Bu garabun günümüzde, çok yakından Kaunos'un ileri gelen bir ailesi gerçek dikkini, üzerinde yazarlar gözünü bir erdöda, kuyüz baktırsada hem yuvuralık kaidenin bitinişi daha sonraki deşirde inşa edilmiş bir cömlekli fırın vardır. Bu anı grubunun çevresi, öinem muhtemeler daha gece de yapılma bir başka heykel kaidesi ile daşaltılmıştır (Lev. II, 2).


3 G. Muren’un yuvuralık kaidesinin temeli altı cm, kide 93 cm, üstü yuvarlı, kide 93 cm, üstü yuvarlı 100 ve 92 cm, yükseklikleri 26 ve 27 cm. ona kaş kilgi kadehken iki dikkıldan birinin hepsi kadehken iki dikkıldennin hepsi 198 cm, 93, 78 ve 80 cm. ve yükseklikleri 24 ve 27,5 cm. G. Muren’sununun üst kademle üzerinde yuvuralık kadehkeri gövdesi için yuvuralık bir oyma yapmıştır, biraz tartılı altta cm 66. cm. yükseklikleri kadehken birinin hepsi kadehken iki dikkıldan temele ostensiblytir ve üç zıva ile tutulmuştur. Ölçüleri clerklerde göz pek farklıldındayacak kadar azdır. Bundu da bir illetik hırsızlarla bulunmak istedidir 1, 6.


Kaunos’taki yazıtta ἴππος unvanını kullanmasının anlayışı sebebinin Rodos ve Messene'deki yaztların ağız bir şekilde anlattıktadır. Yunanlar latinçe ve yunanca deimler arasında bir farklı göpmektedir ve her ikilideki kelimelerin birini arzularına göre diligence’sini 6. dair örnek gösterilirse de bu durum Kaunos yazıtına şu şekilde 1, 6.

1 Murena’nın ordu tarafından imperator ilan edilmesi Cic. pro. 5, 12; De imp. Ca. Pomp. 8, 11
2 IG XII 1, 41 ve Dessen 8768; bunun için bk. F. Münzer, Cornelius 194, RE IV 1, 1960, 1369 v.a.
3 Dessen 8771 ve A. Plassart, BCH 50 (1926), 437.
6 R. Combé’yi h. (s. 114) Doğru Yunan’daki Sulla’nın yazıtlarındaki örnekler her iki kelimeler arasında bunun, istedidir fark böylece doğru sayılmacasıdır.

1 S. Acace, Il dominio romano in Grecia dalla guerra aciea ad Augusto, Rom 1946, 129.

Babasınınatheyeklilyazımındanbeykelişbulanınöğebeklenmesinde,Murena'nunAsia seferindeki orduşundababasınınkomsutasındaolsun19, komutasını büyük öğüt Lucas değil, onun Gallia Transalpina'da 1.0. 64/63

8 App. Mith. 23, 89.
9 Bu, cic. ad Quint. fr. 1, 1, 30 (1. O. 60) da kaydölmektedir.
11 Kaunos bağımsız bir şehir olarak ilk defa Plin. n.b. 5, 104 to bildirilmektedir.
12 F. Münnzer, L. Licinius Murena 123) RE XIII 1, 1926, 446.
14 F. Münnzer, L. Licinius Murena 123), RE XIII 1, 1926, 446 v.a.


Kaunos'un hanı şartrlar altında yeniden bağımsızlığına kavuştuğu bilinmediği surece, bu şeref lendirmelerinin güçlü Romalılarnın kararlarında de derece tesiri olduğunu bilemez. Bağımsızlıklarını yeniden kazandıktan sonra da Kaunoslular şeref lendirmeleri, heyekleri ile nüfuzu Romalılarmın mücadeleine gü-
mekte evet etmişlerdir. Bu şereflendirmeler gidilince rutinleşen bir görev haline gelmiş ve daha az politik önem kazanmıştır. Fakat Murena’nın şereflendirilmiş Kaunoslular için, onları sonunda başarıya götüren devamı gayretlerini başlangıçla olmuştur.

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23 G. E. Bean, s. n. S. 26.27.28.29.
24 Dion von Prusa, or. 34, 165; Rodeslular bir bütün olarak şereflendirmeleleri gerçekleştirdiği süreçler.
PREHISTORIC METALLURGY - ANOTHER LOOK

PRENTISS DE JESUS

Part I

In the early days of archaeological research in the Near East archaeologists and historians held that there were cultural centers which fostered technical advances and which later spread to other areas. It seemed inconceivable that two different cultures could invent independently the same thing. This was a theorem with which diffusionists saw the evolution of history and prehistory. Expanded research and a second look at the diffusionists’ approach has obliged archaeologists to alter somewhat the idea of diffusing centers. Independent invention and development have now become acceptable premises. Diffusionism, although still with us, now sports newer, if somewhat strange, vocabulary. The result of these modifications in method has been a reassessment of previously published archaeological material. But more importantly, standard theories have come under close scrutiny to see whether they measure up to modern archaeological views. Fortunately, many have not stood up, and we are faced with a fresher look at old problems.

Much has already been written about metallurgy in the Near East, and oddly enough, for all its abundance and literature it is the least well understood of any of ancient man's important legacies.

Regarding the history of metallurgy of the Near East, it has at last been recognized that the introduction of metal-using cultures did not come from Azerbaijan and the Caucasus, as was once held by a former generation of archaeologists. Their misinterpretations were not due to reckless guessing but rather to the one-sided and fragmentary aspect of the available archaeological material from which they had to draw conclusions. All due respects to the bonne volonté of these early pioneers in archaeology, we must regard many of their theories as non-workable. Independent invention of smelting and the use of bronze is now confirmed. We see that Southeastern European,

Near Eastern and Middle Eastern cultures often went their own way in many activities as well as metallurgy and despite similarities and contacts with their neighbors. We are hence obliged to look at the development of metallurgy within a smaller sphere.

Anatolia’s earliest known metal artifacts come from Çayönü Tepesi in South East Turkey, generally dated around the end of the VIIIth Millennium B.C. The metal is native copper which has been worked into simple tools. Malachite ore from this site is also reported, but it is not yet obvious whether ore was smelted by the inhabitants of Çayönü. There seems to have been some early attraction to malachite stone, probably as ornament. Professor Ralph Solecki found a small malachite bead at Shanidar, Iraq, dated to some 10,000 years ago. Trade with ore-rich Anatolia, even at that time, is suggested.

Dated slightly later than the Çayönü finds is a small hammered head of native copper from Ali Kosh, Iran. This artifact probably has no relation to Anatolia, since native copper and copper ores are known in Central and Western Iran. In fact, the metallurgy which seems to develop in Western and North Western Iran in the VIth and IIVth Millennia B.C. may bear only distant relationships with metallurgical advances witnessed in the North West.

Copper and lead beads were reported at Çatal Hüyük as early as level

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2 The date of these objects varies, according to interpretation, from 6000 B.C. to 7000 B.C., Radiocarbon 10, 1968, pp. 104, P. J. Watson, Chronology in Old World Archaeology, pp. 61-106; A. C. Wehrwein, New York Times, Oct. 22, 1944.
3 R. Solecki, Antiquity XXIII, 1969, pp. 311-314.
4 The materials links are also borne out by the presence of obsidian at Shanidar. G. Solecki ibid., pp. 312-314 and map, p. 313.
for it is now that we have the appearance of one of the most important artifacts of the Chalcolithic Period - the Can Hasan macehead from level IIIb. Now displayed in the Ankara Museum, this macehead is a considerably large piece of native copper weighing on the order of 200 grams and roughly in the form of a bull. The significance of this piece lies not in its size but in its workmanship. Through the center of the macehead is a shaft-hole, roughly 2 centimeters in diameter. It seems likely that this hole was formed during casting and not drilled afterwards. Shaft-hole casting in Anatolia is hence known here for the first time. Other contemporary examples may be examined later, but the Can Hasan macehead is no doubt a milestone in metallurgical history.

Attention now should be brought to Mersin, as it is this coastal site that will bear us the best indication of technical advances in metallurgy. In level XVII (ca. 4300 B.C.) a large copper chisel was found, and a seal attributed to level XVI, almost contemporary with the latter, was analyzed by Professor Ufuk Evin who found it to be definitely bronze. This seal containing 2.6% tin could be no other than an intentional bronze using smelted copper and smelted tin. Hence, somewhere around 4300 B.C. this charming little seal ushered in de facto the Bronze Age in Anatolia.

An adze and chisels also occurred in level XVI along with six roll-headed pins. As it to suggest that smelting was performed on the site, a piece of copper ore, also from level XVI, was found in courtyard.

Beycesultan is the only site to date which produced metal finds of any note comparable to those of Mersin. Although the date of Beycesultan's metalwork and early periods may be doubted by some, there is good indication still that the excavator's dates are high enough to fall somewhere in the middle of the 3rd millennium. In level XXXVIII a lunette-shaped piece of copper with

triangular section was found. Succeeding levels gave an array of artifacts, none of which is bronze.

Mersin, however, still continues to give us bronze artifacts in the Late Chalcolithic Period. An unpublished toggle pin from either level XIV or XIII (i.e. ca. 4000 B.C.) was found by Professor Evin to contain 1.3% tin. Hence, most likely an intentional bronze. A second artifact, a point or borer, from level XIV contained 2.1% tin, another intentional bronze.

The advent of tin at Mersin, a coastal site, raises certain questions. Why did it occur first there? Was the presence of this tin due to maritime trade or to land-based trade? In levels XXI-XVI a strong Halafian influence is felt, and Professor Garstang appropriately described the extent of this influence as "the Halafian impact." He seemed to want to suggest that not only was this due to trade but to the influx of some Halafian people.

It has been stated that there was an intrusive culture from the Central Anatolian Plateau in level XVI. Yet, one feels that the Halafian impact is still being felt but now with a distinctive Ubaidian flavor. The superior technique of Halafian pottery found at Mersin could have developed concurrently with the introduction of bronze into the area. Were it not for the preponderant Halafian element at Mersin one may feel free to suspect that bronze was discovered at Mersin itself. Could bronze technology, then, have come from the East? If the Halafians are, indeed, responsible for the introduction of bronze into Anatolia, we may be getting closer to the inventors of bronze itself. The more typically Halafian site of Tell Arpachiya yielded the first metal in Northern Mesopotamia. Although it is not known whether these pieces are of copper or bronze, they date to approximately the same time as the bronze seal at Mersin. Moreover, the stamp-seals from Arpachiya are not totally unlike the Mersin example.

It may be a weak argument to say that bronze-working came from a culture whose metal artifacts have not yet been shown to be particularly outstanding.

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20 J. Garstang, J. Proc. pren. n. 17) 108 and fig. 80 b, p. 132.
21 Ibid., p. 139, fig. 85 and pp. 137-40. For analyses, of axes, U. Evin (supra n. 18) 144-5, nos. 17873, 17874; of pin, ibid., p. 144, nos. 17875, 17876, 17877, 17878, 17879; for a chisel, ibid., p. 144, no. 17872.
22 J. Garstang, J. Proc. pren. n. 17) 137.
26 Ibid., p. 145, no. 17882.
29 J. Garstang, J. Proc. pren. n. 17) 146, fig. 92 and p. 143.
30 Consisting of a few pins and a chisel, M. E. L. Mallowan and J. Crollshank, Iraq 11, pt. 1, 19.33, p. 104 and Plate X.
31 Ibid., p. 95, fig. 50 and Plate VII.
ding, apart from their antiquity, but it must be pointed out that of the small number of metal artifacts of Halaian date none has been analyzed. It must also be stressed that few Halaian sites are well-known and even fewer have been excavated. We are also obliged to admit that due to abundant Halaian finds in the ore-bearing regions of South East Turkey33 and the excellent quality of their handcrafts that the people of Halaian culture were certainly capable of practicing bronze metallurgy34.

That Anatolian cultures had been using and smelting copper before the middle of the Vth millennium B.C. has been described above, but it is quite possible that the secret of bronze-working (and especially the supply of tin) had eluded them until contact with the Halaian culture. At that time the Anatolian copper-smith met his more technically advanced counterpart from the East and was quick to comprehend the advantages of bronze over copper. If we have not resolved the important problem of tin supply, a closer look at the Halaian legacy in Anatoia adds a new dimension to the development of metallurgy in the Near East. Consequently, we may have to refrain from trying to fit Chalcolithic (i.e. Halaian) Gilicia into a Central and Western Anatolian complex, as its affinities seem oriented towards the East and fall into the Halaian galaxy.

Part II

The evidence for the understanding of metal-producing techniques becomes somewhat clearer during the first half of the Third Millennium B.C. However, if we can see a definite evolution in different areas of Anatolia, correlation between these areas is difficult, as much for metallurgy as for other archaeological material35. The nature of the evidence so far suggests little sharing of wealth between Central Anatolia and the North West. In other words, there seems to have been little contact between the two areas. This

32 M.E.L. Mallowan and J. Culliford, (supra n. 30) 104.

tells us that they evolved separately, each drawing on its own sources of livelihood. On this premise and in front of the evidence discussed below, we may assume that the metallurgy of the Central Anatolian Plateau is unrelated to that of the Anatolian North West.

Troy I does not produce a massive array of metalwork but suggests a slow and definite use of copper for a variety of objects. Blegen as well as Schliemann found metal artifacts at Troy 36, and of those analyzed only one is a tin bronze37. The piece is an unidentifiable fragment having a content of 10.18% tin. There are other objects of relatively pure copper and still others which have a high content of arsenic.

At EB I Thermi, Town I, awls, pins and drills were found, one of which is bronze38, and curiously, a tin bracelet of this same period was also uncovered.

In Central Anatolia, at Ali-Shar “Late Chalcolithic” (considered here to be EB I), there are three fragments which are definitely tin bronzes39. Generally speaking, the metal artifacts from Ali-Shar are more for decorative purposes than utilitarian, contrary to those of Troy40. Ali-Shar seems to have established a tin source different from that of Troy, conceivably situated somewhere near the Pontic coast41.

If it has been said that Central Anatolia was somewhat behind in cultural achievement, it was not lagging in metallurgical technology. It was at least equal to that of Troy. It is nevertheless evident that there is active trade going on in the North West along the coast. This may very well have been

36 A correction in Blegen’s catalogue is necessary here. The fragment no. 33-319 from Troy I (Blegen et al, Troy I, Princeton 1936, text p. 104, pl. 215) has been identified as a piece of ceramic.
38 W. Lamb, Thermi, Cambridge 1936, p. 215, no. 31, 64.
41 Research by the author in the field with Ergun Kurtan of the Natural History Museum of M.E.A. (Mineral Exploration Institute of Turkey) has tackled the problem of ancient mining and metal supplies. A project begun in 1973 located smelting sites in Central Anatolia. It is the feeling of the author that there are at least two sources of tin supply in Anatolia. One would be available to the Western Anatolian coastal sites and another exploitable by the Central Anatolians. Results of this and other research are forth-coming.
the case in Central Anatolia, though on a smaller scale. But since only Alishar at the moment represents the area in EB I one cannot be sure as to what extent it had interconnections with its neighbors. More published stratified material is necessary before we can really understand what is going on.

When comparing Central and North Western Anatolia we must bear two points in mind. First, the nature of the metalwork at Alishar suggests that it is not the heart of this tradition but a peripheral example of it. Sophisticated tin and copper smelting technologies are reflected in the analyses of the Alishar material. This technology was not developed to produce only pins and trinkets such as at Alishar but for a more ambitious production of bronze and copper artifacts. This tells us that the main stream of the EB I metallurgy at Alishar exists elsewhere.

The second point to bear in mind is that the metallurgical technology at Troy is closer to the impetus which pushed Trojan metalwork to its flowering.

In the North West during the second phase of the Early Bronze Age we see an evolution of what took place in EB I. The repertoire of the Trojan smith multiplies tenfold. In fact, the great array of metalwork leads us to suspect that perhaps we have missed a step in the evolution. Troy II metalwork, including jewellery, seems far too developed to be but a simple continuation of Troy I technology. In Troy I we have an artificial production of pins, hoes and utility tools, while in the succeeding period we have a variety of jewellery collected in hoards, heavy battle-axes, knives, daggers and spearheads as well pins and rings. What is lacking is evidence, somewhere, of the intermediary forms and techniques between EB I and EB II.

Decorative artifacts especially retain our attention. There is no concrete style in the repertoire of Troy II jewellery. It belies eclecticism, almost gaudiness. The gold pins are disproportionate, imposing and over-decorated, and the earrings mix forms which are not harmonious. If Trojan culture is inherent in these artifacts its specific elements are not readily discernible. The producer of these pieces seems to have drawn on other art forms and perhaps even other technologies.

It has been stated that the destruction of Troy I brought an end to the culture of that site and precipitated the flight of the people to other parts of Anatolia. This upheaval seems to have affected as well other Troy culture sites in the North West and along the Eastern Aegean coast. Hence, the destruction is on the order of an invasion.

An alternative view suggests that the destruction of Troy I was due to an internal calamity and emphasizes cultural continuity into Troy II. Schliemann, himself, had still another view, "It is impossible to ascertain from the ruins of this first settlement whether it was peacefully abandoned by its inhabitants or whether it was destroyed by the hand of an enemy, for there are no signs of either a partial or a general catastrophe." He had apparently missed the signs of conflagration which were later revealed by the University of Cincinnati excavations.

If the destruction was due to outsiders from the Aegean and the Troy I settlers fled, the Troy II invaders either brought with them their metallurgical technology or maintained their contacts with others who possessed this technology. In either case it is unlikely that the tin source was different from that of Troy I. It is also probable that the copper and precious metal sources were the same.

Troy II material looks like a commercial enterprise, especially when we observe that contacts outside of Anatolia grow considerably during this period. As for the metals, of those analyzed, Troy I produced only one tin bronze, two arsenical bronzes and four copper. In Troy II, twenty-seven are tin bronzes, four are arsenical bronzes and eight are smelted or native copper. This is, of course, considering all of Troy II, including II g. This sudden spurt of wealth would seem to indicate that the Troy I people were not responsible for it, though somehow they may have had a hand in it in the beginning. The forces at work which brought about the enrichment of Troy II, and especially Troy II g + Schliemann's "Buried City," are not fully understood. Only by further excavation in the Troad as well as in Thrace will the problem become clearer.

On the Central Plateau another situation unfolded. In EB II Alishar shows no outstanding metal types. Of those pieces analyzed, there are eight.

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2. J. Mellart (supra note 35), 384.
7. J. Mellart (supra note 35), 384, has suggested Thrace.
8. The new "invaders" may conceivably be attributed to Troy II b, since new cultural additions occur at that level. J. Mellart, The Chalcolithic and Early Bronze Ages in the Near East and Anatolia, Beirut 1966, p. 140.
tin bronzes, six arsenical bronzes and seven coppers. This is a slight increase in the proportion of tin bronzes to coppers and arsenical bronzes from the previous period\[1]\, but the metal repertoire in EB II does not seem to have widened much more than to the production of trinkets and pins. Tin trade, if not tin production, has increased in this period. The smith now finds tin desirable though not necessarily indispensable, since pins of copper or bronze are produced with equal workmanship. The smith has learned to work with what he has and is, hence, always looking for ways to overcome his difficulties\[2]\, whether be shortages of metal supply or techniques in workmanship.

Around the middle of the IIIrd Millennium B.C. Alishar is clearly upstaged in the domain of metalwork by the Royal Tombs of Alaca which best represent the craft in the area. The tombs, themselves, have consistently come under revision, and although authors do not entirely agree on their stratigraphic positions the popular tendency is to place them after 2500 B.C. Professor Bittel lucidly explains the problems involved not only for the dating of the tombs but for establishing relationships between the Central Anatolian material (Hüyük and Alaca) and that of the Troad\[3]\.

It may generally be stated that that the Tombs fall into a period between 2400-2200 B.C., in other words, the latter part of EB II or the beginning of EB III in Central Anatolia\[4]\.

The exhaustive inventory need not be listed here. One might point out, however, not only the expertise of the workmanship but also the great quantity of metal in kilograms alone. Gold and silver were used freely, as if new sources of both had been discovered. Luxury goods predominate, suggesting that the people of Alaca EB II culture were not belligerent. On the contrary, they seem to have been quite religious, as implied by the many sun disks, standards, and other ritual material. They may even have enjoyed the pomp and ceremony of court-life. It is indeed surprising that a large palatial structure of some sort has not been uncovered.

Of the metal analyzed twenty-one are tin bronzes, seven are arsenical bronzes and seventeen are smelted or native copper. A net increase of the use of tin over EB I at Alishar.

The origins of the Alaca EB II culture is at present unknown, but one is able to make a calculated guess. Professor Özgüç stated in 1958 that indications point to the Pontic region, especially in the area around Tokat-Amasaya, for the heartland of the Alaca culture\[5\]. This opinion still stands, especially in the light of the later-dated Horoztepe material. Horoztepe seems at home in the North, whereas the Alaca EB II culture was definitely a new-comer to the south. The Alaca people arrived with a fully developed metallurgy which they presumably had acquired in the North. One might point out here that the area from Merzifon through Horoztepe to Erban and beyond is known to be copper ore-bearing. Ancient mines and smelting sites in this area are not only possible; they are probable.

One would expect outposts to fade first when they could no longer draw stimulus or livelihood from their mother culture. Alaca may very well have been in this situation. It has been said that the Alaca Tomb culture came to an end in level 5 due to a violent earthquake. This does not agree with the geologists' view which does not place Alaca in an earthquake zone\[6]\, There are nevertheless signs of violence in level 5 which seems to have brought the fall of the ruling class.

The very promising excavations by Raci Temizer at Eskiyapar may do much in explaining what actually happened during the Royal Tomb period.

Horoztepe most definitely represents a continuation of the Alaca culture in the North. Yet here we find more daring uses of metal. For example, the bulls' horns on the standards sweep gracefully up and far away from their heads\[7\]. Such flourish and delicacy are not seen at Alaca where the standards

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1. In Alishar EB I the ratio is 3:3:1.
3. K. Bittel, "Beitrag zur Kenntnis anatolischer Metallgefäße der zweiten Hälfte des dritten Jahrtausends v. Chr." Jahrbuch des deutschen Archäologischen Instituts 74, pp. 25-31. The similarities in metal vases and jewellery of the Troad and Central Anatolia (Hüyük and Alaca) pose an interesting problem. It may be premature to try to draw conclusions on these similarities until more than just metalwork is available. Although trade may account for the parallels in metalwork, one must also remember that Çanakkale has known copper ore deposits, and precious metals and ores were accessible in the immediate vicinity of Troy. Gold deposits have been reported in North Eastern Greece and on Thassos, L. De Launay, La Géologie et les richesses minérales de l'Asie, Paris 1911, pp. 615-619; and in the Troad, C.W. Ryan, A Guide to Known Minerals in Turkey, Ankara 1966, pp. 2-3; and H. Schliemann, (supra note 40), pp. 59-60. Copper ores are known in the Anatolian North West, Türküde Bakır, Kircilmaz ve Çınko Yatakları, Ankara 1966, MTA Pub. no. 133, pp. 66, 82-86 and 88.
7. T. Özgüç, (supra note 55), pl. XVII no. 5 a-b.
have a tendency to be elegant and heavy. And unlike Alaca there is an additional war-like character to the Horoztepe repertoire. Crescented axes occur for the first time in Central Anatolia. Thrusting swords, daggers and halberds are present in abundance. This array of weaponry suggests some kind of re-grouping of the Alaca-Horoztepe people in response to an outside threat.  

What happened to the Alaca-Horoztepe culture at the close of EB III? Here the archaeological record is a blank. We know not whether the culture persisted for a few centuries afterward. We do know, however, that its influence in the greater loop of the Hulus had been entirely wiped out. We suspect that the growing economic and political power of the Cappadocians to the South far out-flanked the Alaca-Horoztepe people. Long-distance trade now seems to have established alliances with which the Alaca-Horoztepe people could not contend.

The period of the Alaca-Horoztepe culture, as we know it, was a brief blossoming of metallurgical activity. Comparable creativity and ingenuity occurred neither before nor after in all of Central Anatolia.

Central and North Western Anatolia are not the only two areas to have developed metallurgical traditions. As we have seen above there are forces early at work in Cilicia and in the South East. They continue to develop more or less independently of the rest of Anatolia until the establishment of the trading colonies.

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35 For a possible identification of this threat, J. Mellaart (supra note 35), p. 496.
36 These areas will be treated in another article by this author. In preparation. The author wishes to express his thanks to Assistant Dr. Aykut Çaraplı of the Department of Archaeology at Ankara University for having translated into Turkish the summary of this article.

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Between the collapse of Mycenaean civilization and the emergence of Archaic and Classical Greece lies a "dark age" of several centuries about which we are lamentably ignorant. Mr. Desborough has chosen to study the darkest period of all, ca. 1125-ca. 900 B.C. From over 150 sites (the annotated index is worth the price of the book), some incompletely published, others with highly contradictory evidence; and from a knowledge of details of other sites as yet unpublished, Desborough attempts a synthesis, admittedly tentative, given the unsatisfactory nature of the evidence.

He identifies an Early Dark Age, ca. 1125-1075, a disjointed time marked by two phenomena. 1) A "new Sub-Mycenaean culture," characterized principally by a debased form of Mycenaean pottery distinct from and subsequent to Furumark's LH III CI, and characterized to a lesser extent by single inhumations of the dead in cist graves and the appearance of long pins and fibulae, breaks away from its Mycenaean predecessor in central mainland Greece. 2) The rest of Mycenaean civilization and many of its settlements are terminated without replacement. Causes for these changes are obscure, although possibilities include one or more of the following: internal weakness in the Mycenaean social structure, Rhys Carpenter's theory of a radical change in climate, or an invasion from the North (the traditional Heracleid return). Unfortunately, these proposed causes have not been confirmed archaeologically.

The beginning of Desborough's Late Dark Age is in the middle of the eleventh century, coincident with the invention in Athens of another pottery style, the Protogeometric. This second period is prosperous, and foreign contacts become common. Athens exports colonists to Ilonia and Protogeometric pottery in all directions. Cypriot metal and the techniques for its working are imported to Athens and Oenoanda. Inhumation starts to be replaced by cremation in pots, although exceptions and variations abound. The climax of the PG style and the LDA period comes about 950. In the half-century thereafter the rest of Greece starts to catch up with Athens. Great experimentation everywhere in pottery results ca. 900 in a new style, the Geometric, and in a general air of stability and progress, at which point Desborough terminates his Late Dark Age.
Desborough’s method of surveying each of these periods is to take up the evidence geographically in the manner of his *Protopotamic Pottery* (1932), a work which provides the skeletal structure of this book, particularly the relative and absolute chronologies. A short section on the types of material evidence attests the poverty of the data. Only a handful of sites provide evidence of construction, and only one, Karphe, has a plan, although Iolkos and Old Smyrna may have them eventually. Tombs, sanctuaries, the dress accessories noted above, armor (two helmets and seven shield-bosses), weapons, and metals receive summary treatment. Ancient literary accounts and their contradictions receive even shorter consideration: “...there were kings, there were movements of people...but that is all.” The skeleton, therefore, is more prominent than the flesh, and therein lies a major problem.

Athens, because of the excellence of its Protogeometric pottery, plays a disproportionately large role in Desborough’s account of the progress of the LDA. Thus four PG vases at Knossos, two at Kanli Kastelli, and none in the Mesara are said to confirm a north-south flow. Elsewhere, where such statistics do not fit the general picture provided by the pottery, they are discarded as irrelevant. Of the long iron dress pins with bronze globes Desborough writes: “This remarkable, and evidently artistically pleasing, combination was characteristic of Athens, so much so that it must surely have been invented there.” Is this reasoning not circular? Such an intense focus also ignores possible connections with other areas in the Mediterranean. Aside from a number of undocumented “northern influences” nothing from the outside worth discussing seems to have entered the Greek world for over two centuries.

These northern influences are a problem partly because of the layout of the book. The text is generally unfootnoted, but one can refer to the excellent plates, figures, and site index for details. Unaccountably, no such information is provided for the areas from which influence is so often said to have come. Thus one must take much on faith, for the internal evidence is shaky. If the destruction of Teichos Dyamaion turns out to be late rather than early (as suggested by the “decadent and chaotic” pottery), or if the gap at Iolkos is longer than Verdhelis first thought, or if Snodgrass is correct in his assertion that Barbarian Europe lagged three to four hundred years behind Greece in the development of iron-working (*PPS* 31 (1965) 232ff), then not much of an archaeological argument can be made for a northern invasion.

This book’s principal virtue is that an authority on the period, knowing well that the evidence which produced his conclusions may be out of date within a decade, has nevertheless put himself on record. *The Greek Dark Ages* should definitely, as Desborough hopes, stimulate others to further and deeper research.

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