'SUBMINOAN CRETE' -

THE FIRST POST MINOAN PERIOD.

A GAZETTEER AND SURVEY OF SITES AND FINDS IN CRETE

CA. 1100 - 1000 B.C

M.A. Thesis

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DEDICATION

To my two Supervisors -

William Culican who helped me start my thesis,
and Michael Osborne who helped me finish it.
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<td>CAH</td>
<td>Cambridge Ancient History.</td>
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<td>PGP</td>
<td>Desborough, V.R. d'A. Protogeometric Pottery. Oxford (1952)</td>
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<td>PM</td>
<td>Evans, A. The Palace of Minos at Knossos. (1921-36).</td>
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**ABBREVIATIONS - PERIODICALS.**

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<td>AA</td>
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<td>AAA</td>
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<td>AM</td>
<td>Mitteilungen des deutschen archaologischen Instituts; athenische Abteilung</td>
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<td>Ant. Cret.</td>
<td>Antichita Cretesi</td>
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<td>AR</td>
<td>Archaeological Reports (by the Society for the Promotion of Hellenic Studies in conjunction with the British School at Athens)</td>
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<td>Ann.</td>
<td>Annuario della Scuola Archeologica di Atene</td>
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<td>K Chr.</td>
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<td>MA</td>
<td>Monumenti Antichi pubblicati per Cura della Accademia Nazionale dei Lincei, Milan</td>
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<td>PAE</td>
<td>Praktika tis Archaeologikis Etairias</td>
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<tr>
<td>PPS</td>
<td>Proceedings of the Prehistoric Society, (Cambridge)</td>
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<td>Prah. Br.</td>
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CHAPTER 1

INTRODUCTION
MAP 1: THE SUBMINOAN FINDSITES
CHAPTER 1

INTRODUCTION

This is a study of the Subminoan period. In the absence of detailed evidence, this phase, which covers approximately the eleventh century B.C., and initiates a so-called "Dark Age", has been considered obscure and of little importance. More recent evidence suggests otherwise, and provokes the need for a systematic presentation of available evidence of the period. The present work includes a comprehensive and up-to-date gazetteer of the sites where evidence for Subminoan occupation has been reported, and an account of finds therefrom. Through an examination of this material I attempt to assess the validity of some commonly held conceptions of the period.

A brief account of the preceding period is necessary. Kanta's recently published study The Late Minoan III Period in Crete. A Survey of Sites, Pottery and their Distribution (1980) provides us with the best recent summary of the evidence.

Following the destruction of the last palace at Knossos in LMIIIA2, probably about 1390-1375 B.C.¹, decentralization and regionalism developed in Crete². The regions of Crete, however, despite individual developments, shared common tastes and knowledge through frequent communication³. Towards the end of LMIIIB some sort of threat led to the desertion of some settlements (including Gournia, Palaikastro, Knossos and Mallia) as well as several cemeteries. These coincide and were probably associated with disturbances elsewhere in the Mediterranean, indicated by preparations for siege and defence, the destruction of several centres in Greece and of towns in Cyprus, the overrunning of Syria and Palestine, and attacks on Egypt⁴. During the course of LMIIIC one or two waves of Mainland incomers are indicated by the pottery.
The pottery also shows that there were Mycenaean among the occupants of new settlements established in the twelfth century at sites previously unoccupied (e.g. Kastri, Vrokastro, Erganos and Mouliana). Popham connects the influx into Crete of Mycenaeans with the arrival at Tarsus and at Enkomi, Sinda and other sites in Cyprus of settlers using pottery of subLMIIIB-early IIIC style [closely resembling Philistine pottery]. These Mycenaeans had fled from the Greek Mainland as a result of disasters occurring there just before 1200 B.C. They appear to have blended peacefully with the Minoans, whose population had, in any case, included some Mycenaeans since LM IIIA or earlier, and whose burial and votive and other customs were unchanged.

In the unsettled conditions of the twelfth century a number of so-called sites of refuge were built on heights, including Vrokastro, Kavousi, Karphi, Prinias, Lato and Axos. Nevertheless, there was continued occupation of sites on the plains in many centres - including Tylisos, Knossos, Phaestos, and Hagia Triadha. Kanta suggests that there was still some prosperity and enterprise, demonstrated by the pottery from the cemeteries, and concludes that Crete remained a major cultural force throughout the Late Minoan III period, actively trading and communicating with the Mainland and with Cyprus. Influence from Crete to Cyprus in IIIC was particularly strong, though there are few actual imports to show. There was a traditional link between Cyprus as the supplier of raw copper and Crete as a leading metal manufacturer through LMIII, and both countries demonstrated a close association between cult and metallurgy from early times. Iron first appeared in Crete in LMIIC (at Katsampas, Mouliana and Karphi), probably imported from Cyprus. At about the end of LMIIC, ca. 1100 B.C., a contingent of Cretans, possibly fleeing from the disturbances, went to Cyprus, where their presence was reflected in pottery and cult objects.

Before embarking on this study of conditions in Subminoan, we must analyse what the name implies. What is Subminoan? Subminoan is, first and foremost, the name given to a style of pottery, and not to a period, though the style of pottery is taken to cover a
certain period following immediately after the Minoan era. In broad terms, it is a period of transition between old Minoan ceramic forms and new Protogeometric ones. We must ask, firstly, whether it can, in fact, be isolated as a distinct chronological and cultural phase? It will be argued here that it can, despite the fact that some elect to ignore it as a separate entity, and to include it as a late manifestation of LMIIIC\textsuperscript{13}.

The failure to consider Subminoan as a separate style and/or phase is not altogether surprising, for Subminoan pottery continued tendencies from the previous period, both Minoan and Mycenaean, merging them into its own in a gradual process of change which has been described as one of "harmonious and uninterrupted evolution"\textsuperscript{14}. Subminoan not only continued the Minoan tradition to a large extent, it also survived strongly into the subsequent Protogeometric style which has been called at best a half-hearted style\textsuperscript{15}. In some places (such as Knossos and Vrokastro) vases display characteristics of both periods, and cannot readily be ascribed to either period alone. Some earlier scholars did not distinguish between Subminoan and Protogeometric, but rather classed them together as an intermediate period between LMIII and Geometric\textsuperscript{16}. Moreover, definition of a Subminoan period which applies for all Crete is difficult, since there are extensive regional variations in the length of its occurrence. In some regions (particularly in the East) Subminoan pottery remained in use at a time when in others (especially the Central region) Protogeometric had well begun. Subminoan and Protogeometric may have co-existed for a century or even longer\textsuperscript{17}. Among the wide range of vase types produced in Subminoan, many of those from East Crete appeared to be distinct from those found in East Central Crete.

The difficulties in distinguishing what was Subminoan are not, however, as serious as are those for "Submycenaean". Desborough has called "Submycenaean" a term with no separate chronological entity, which only represents a geographical variant, a mere degeneration of Late Mycenaean\textsuperscript{18}. Rutter has made a plea for the abandonment of the term\textsuperscript{19}. With Subminoan pottery, on the other hand, there were no tight geographical
limits on its extent. It was found, as will be indicated, spread widely, if thinly at times, all over Crete. Snodgrass remarks that it is a particularly suitable name for a time when the Minoan way of life continued to dominate alongside some outside influences\textsuperscript{20}.

What then, are the characteristic features of Subminoan? The general cultural features of the period will be described in chapters 2-4 of the thesis. They include the sites which were occupied - including the popular "kastro" sites - and their locations, the architecture, worship places and tombs employed, methods of burial (especially the growing use of cremation), the distinctive iron objects, and pins and arched fibulae of bronze, and, most important of all, the pottery. The pottery provides a chronological framework and shows regional differences, and allows some social and economic inferences. Nevertheless one must beware of using pottery divisions as cultural era divisions. It has been pointed out that it is not possible entirely to separate questions of cultural character from those of chronology. The main reason for this is that pottery is both the most satisfactory chronological indicator and, at the same time, a primary feature of cultural identity. The identification of a "culture" is never so simple a process as Childe's often-quoted phrase "a constantly recurring assemblage of artifacts" might superficially suggest\textsuperscript{21}. When classifying pottery, or settlement type and location, graves and burial customs, into an assemblage in a cultural group it is difficult to reach agreement, "as to how much similarity in how many classes is enough to set one assemblage clearly within a cultural group, or how much divergence is necessary to divorce it"\textsuperscript{22}. We shall attempt to distinguish a distinct cultural group as far as possible within the relative chronological divisions suggested below.

To understand better the nature of the Subminoan pottery we must consider the pottery of the periods which preceded and succeeded it. Despite the complexities mentioned above, it is the pottery which must be the major cultural definer and most satisfactory chronological indicator. In Greek archaeology Subminoan (like Submycenaean)
indicates "a specific class of pottery forming a transitional series between the Late Minoan (and Mycenaean) and Protogeometric classes".23.

The characteristic pottery of LMIIC consisted of an Open Style - a Cretanized combination of Mycenaean ware from early LHIIIIC with tradional Minoan ware - and a Fringed Style - a local version of the LHIIIIC Argolid Close Style24. This Fringed Style, based on earlier Cretan developments, and influenced by current Central Aegean ware, was both elaborate and curvaceous25. It employed not only fringe-like decorations, but free-flowing octopus and flamboyant panelled patterns, particularly on such suitable shapes as pyxides, tankards and kraters. It was found over many parts of East Central and Eastern Crete26. Both these pottery styles reflect a continuation of the conventionalization and formalization of motifs which had been occurring throughout the Late Minoan III period, as they had in Greece and the central Aegean. The considerable influence of Mycenaean pottery on Minoan during the final stages of the Mycenaean period is noteworthy27.

Appendix 1 sets out the pottery shapes of the LMIIC period. If we compare the list of Protogeometric shapes in Appendix 2 with that of LMIIC, it becomes apparent that there has been a distinct change. Only about one-third of the shapes current in Protogeometric were present in IIIC, while the rest are new, including the most common Protogeometric shape - the bell krater. The Protogeometric character in pottery consisted in the renovation and improvement in shape of local vases, the introduction of new shapes (some of Attic influence), and of new schemes of decoration28. The Protogeometric vases were a well-defined group, especially in the later stages, easily recognizable in nearly all cases by the dual criteria of technique and style. Between LMIIC and Protogeometric there had been a gradual disappearance of the rather elaborate curvilinear design of the Minoan tradition, which led to an increased orderliness and reticence. In Protogeometric this was reflected in such motives as the triangular shoulder decoration of stirrup vases, now straighter and tighter, and in the
common use of concentric circles and semi-circles, of panelled motifs (particularly on the shoulders of neck-handled amphorae) with cross-hatched and chequered diamonds. In feeling Protogeometric is distinctly un-Minoan. Its precise geometric designs - achieved through the use of ruler, compass and brush - demonstrated that the old Bronze Age styles were now almost completely submerged, while the employment of the faster wheel produced more disciplined shapes, and shape and pattern related better to each other.

The changes between Late Minoan III and Protogeometric took place in the Subminoan period which lay between them, a time which has been called the great point of change from Bronze Age Mycenaean and Minoan to Iron Age Protogeometric\textsuperscript{29}. The changes which occurred in Subminoan, and the catalysts to the change, will be examined in this thesis. While Subminoan has been regarded by some as a depressed, ill-attested phase of LMIIIC, or by others as no more than an archaeological convention to bridge a gap between LMIIIC and Protogeometric, I will seek to establish that it has an entity which is distinct from both LMIIIC and Protogeometric.

The basic types of Subminoan pottery shapes and decorations are listed in Appendix 3 and illustrated in plates 3, 4, 5 and plate 1. They have been described in detail by Desborough\textsuperscript{30}. There are about thirty main types. Despite its fairly wide range of types and variations the Subminoan style was a conservative one. The repertoire included many shapes and decorations surviving from Late Minoan times including most of the Late Minoan IIIC shapes. Stirrup jars, amphoras, amorphiskoi, jars, flasks, kalathoi, some cups, small pithoi, tankards or mugs, and some bowls, continue earlier traditions (see pls. 3, 4, 5). Nevertheless there are often modifications in detail and size and type. For example, there is a new smaller kylix (pl.4:16), now regularly with stem bulge and offset rim, and a new shaped bowl (pl.4:14) - deeper, with gently curving profile, which, with the amorphiskos (pl.3:3), eventually developed into the Protogeometric and Geometric miniature bell krater (pl.9:8)\textsuperscript{31}. It has rather wide
1. Neck-handled amphora
   *BSA*, fig.28, VIA.4.

2. Belly-handled amphora
   *BSA*, pl.53a

3. Amphoriskos
   *Fortetsa*, pl.3, 3

4. Stirrup jar
   *BSA* 53-4, fig.28, VIA 2

5. One-handled jug
   *Et. Cret. VIII* (1948) Pl.13, D16

6. Two-handled jug
   *BSA* 55, 13, fig. 8, 1

7. Amorphoid krater (Kantharos)
   *BSA* 55, pl.11, B:3

9. Bottle-shaped vase
   *BSA* 55, pl.11, b
   (upper row, far right)

10. Krateriskos
    *Fortetsa*, pl.3:11

11. Bird vase
    *Vrokastro*, 152, fig.92:1

12. Wide, shallow bowl
    *BSA* 55, 21, fig.14:9
13. Kalathos
   *Forietsa*, pl.3:1

14. Deep bowl/Skyphos
    *BSA 55*, 21, fig.14:9

15. Krater
    *BSA 55*, pl.9

16. Kylix
    *Vrokastro*, 150, fig.89, A

17. Shallow cup with straight sides
    *BSA 55*, 21, fig.14:1

18. Shallow cup with curved profile
    *BSA 55*, 21, fig.14:2

19. Deep cup
    *Forietsa*, pl.3:10

20. Feeding cup
    *Vrokastro*, fig.89, D, 150

21. Two-handed jar (pithos)
    *BSA 55*, 6, fig.3:10

22. 3-handled jar
    *BSA 55*, 6, fig.3:10

23. Pyxis
    *BSA 55*, pl.7, K115.

24. Side-spouted jug/feeding bottle
    *BSA 55*, 16, fig.10:2
25. Tankard
BSA 55, pl.8

26. Stand
Et.Cret. VIII (1948) pl.XLIV, D6

27. Flask
Hesp. (1983) 397, fig.4:2

28. Askos
Hesp. (1983) 397, fig.4:2

29. Dipper
Vrokastro, 150, fig.89, D
proportions, and is characterized by an interior reserved band and interior disk. The stirrup jar (pl.3:4) now exhibits a knob on top of the disk and an air hole in the upper shoulder. Other Late Minoan types are abandoned, and there are "radical changes and innovations"32. Among new (non-Minoan) shapes are new types of krater (pl.3:7), cup (pl.4:19) and kalathos (pl.4:13), and duck vases (pl.3:11), belly-handled amphorae (pl.3:2), amphoriskoi (pl3:13), kantharoi (pl.3:7) and feeding bottles (pl.4:24)33.

Most of the decorative motifs of the earlier "open" style have been forgotten, and the Fringed Style fades, and instead we find simplification and geometricization, and the use of more abstract designs. These are also characteristic elements of Submycenaean and Late Cypriot IIIB. There is a tendency to more rectilinear than curvilinear motives of decoration, while many vases have only a little ornament, or may have the lower body and foot left unpainted. Some of the typical subminoan decorative motives are illustrated in Plate 1. They include the very popular elaborate triangle decorations on the shoulder of stirrup jars, the wavy line, zig-zags, cross-hatched triangles and diamonds, the horizontal 'S', parallel vertical lines, and, on flasks, concentric circles. Technically, the standard of Subminoan pottery is not high. The fabric is soft, the glazing poor, the paint flaky, and the potter’s wheel inexactly used.

It is apparent that in Subminoan there were clear changes, and what could be called stylistic developments, from the preceding Late Minoan III C pottery style, as well as a weakening of links with the Minoan pottery of the thirteenth century. Subminoan can also be shown to be distinct from the Protogeometric style that followed it. The Protogeometric repertoire, though in many ways a development from the Subminoan, was marked by an improvement in fabric and technique and more expert use of the now faster potter’s wheel, and employing compasses and multiple brush, which led to firmer and cleaner lines. Improvements in the shape of local vases took place, and new shapes and new schemes of decoration were introduced, along with much better
adaptation of decorative motive to shape. The main Protogeometric vase shapes are listed and typical patterns of decoration are shown in Appendix 2 and Plate 2. While stirrup jars and bowls were the most common vases in Subminoan, in Protogeometric the miniature bell-krater becomes the most popular shape, and stirrup jars begin to fade out of use, along with other popular Subminoan shapes like bird vases, feeding bottles, spouted cups and pyxides. The Protogeometric vase shapes become increasingly elongated, as in the stirrup jar which is more ovoid and has higher and more conical feet. Desborough in Protogeometric Pottery traces the changes from, and contrasts with, Subminoan, of Protogeometric pottery in more detail than is possible here.\textsuperscript{34}

Despite these above-mentioned contrasts many Subminoan shapes and decorations persisted into Protogeometric,\textsuperscript{35} and Subminoan played some part in the developments of Protogeometric. An important illustration of this is the bell krater which began its evolution in Subminoan. The Protogeometric bell krater is clearly distinguishable from examples of the preceding Subminoan period by not only its deeper shape, now less globular and more tautly ovoid, but by its lack of the distinctive Subminoan internal reserved band and disk. The development of this type can be illustrated clearly by a number of examples found in different phases of the recently reported excavation of the well-stratified Stratigraphical Museum site at Knossos, which will be described in the body of the thesis (see pp. 226-8 and pl.9).

The three pottery styles - Subminoan, Submycenaean and Late Cypriot IIIB - will be shown to be at least partly concurrent. Desborough's analysis indicates that Subminoan pottery had little directly in common with that of Mainland Greece's Submycenaean that was not through common ancestry and cross-fertilization.\textsuperscript{36} Subminoan pottery had a wider range of shapes and decorations, was current for a longer period, and more faithfully preserved the older elements of Mycenaean origin. The distinction between the two can be illustrated by the different systems of decoration each employed on stirrup jars, and, as will be discussed later, by the distinct types of
duck vases found in each area. Near the end of Subminoan some Attic Protogeometric influence on Cretan pottery probably took place.\footnote{37}

Clear connections with Cyprus can be observed in a number of vases typical of Cyprus at this time of transition from LCIII- Cypro-Geometric I. These include the askos (pl.5:28), bird vase (pl.3:11), feeding-bottle (pl.4:24), the straightsided bottle (pl.3:9), the amphoriskos with false spout by one handle (pl.3:3), the pyxis with high handles (pl.4:23), the flask (pl.5:27), the kantharos (pl.3.7) and altar stand (pl.5:26). Among a number of decorative connections, the most notable is the triangle enclosing a semicircle, and the linear, geometricized nature of the decorations in general. Most of these are new in Subminoan. The innovations of the Subminoan period in pottery shapes and decorations gradually transformed the existing Minoan style in which they dominated.\footnote{38}

Despite there being survivals from Subminoan into Protogeometric, it can be shown that the repertory of Subminoan pottery is perceptibly different from Protogeometric. Though in Protogeometric the fabric remained much the same - poor clay, dull, flaking paint, etc. - there were improvements in technique (faster wheel and compasses) and in the shapes of local vases, and some entirely new shapes appear.\footnote{39} There is, in Protogeometric, an increased orderliness of the now generally linear and geometric designs.\footnote{40}

Thus the Subminoan style, notwithstanding its mixed origins, can be shown to be a distinctive style. It forms, as a whole, a class distinguishable from the preceding and the following classes, on the criteria of technique, shape and decoration. The publication of new material, particularly from the Knossos area, makes it increasingly possible to distinguish stylistic changes over the whole course of Subminoan. It should be possible to compare examples of particular vase types from early sites with those from middle and later sites, and even to trace the development of a type through a
series of stages, at one site, where it is well stratified (see discussion Chapter 4, pp. 226-8 and pl. 9).

**Chronology**

The relative chronology of Subminoan finds can be established by means of internal evidence (find groups, typology, style), firstly from well stratified evidence, which can be cross-referenced to finds elsewhere, as well as with the aid of parallels and connections with other regions\(^1\). Within a series, stylistic changes can be distinguished in order to assign chronological limits, and comparisons made with finds from the preceding and succeeding periods. Valuable material for relative chronology is available now at a number of Subminoan sites. For example, we can relate Subminoan material from the Spring Chamber at Knossos with that of Mainland latest LHIIIIC, as we can show connections with Cyprus at the transition from LCIIB-Cyprogeometric 1A. Sites such as Fortetsa at Knossos and Kavousi-Vronda, where there is continuous occupation over a long period, and especially where there is also good stratification, are valuable for comparative purposes. Subminoan as a distinct phase is attested at the Stratigraphical Museum excavations at Knossos, where the transition from LMIIIC to Protogeometric in stratified phases is shown. Four distinct stages within the Subminoan phase can be identified, and these are marked in the pottery by the appearance of new features (though some fabrics and forms continue unchanged from the preceding period)\(^2\). (See pp. 226-8, and pl.9).

There are difficulties in attempting to determine the precise chronological limits of Subminoan - when it begins and when it ends\(^3\). The dating of Subminoan is still not completely secure, and there is considerable disagreement. It has generally been placed in the eleventh century B.C. with, some believe, overlap into the twelfth or tenth
centuries. Some scholars put its start before 1100 B.C.\textsuperscript{44}, others later than 1100 B.C.\textsuperscript{45}. Some say it finished earlier\textsuperscript{46}, most later\textsuperscript{47}.

Absolute chronology can be indicated by making cross-references between Athens, Crete and Cyprus. Furumark and others have shown that the latter part of Late Cypriot IIIB and the beginning of Cyprogeometric I were roughly contemporary with the transition in West Attica from Submycenaean to Protogeometric, to which Subminoan can also be related, though Subminoan lasts longer in some areas\textsuperscript{48}. Cyprogeometric I's start can be shown to date to ca. 1050 B.C. by a series of finds of Cypriot pottery, particularly on Palestinian sites, associated with scarabs or in levels indirectly linked with historical events, and also by Syrian finds in Cyprus\textsuperscript{49}. In Crete and Greece the curious bottle-shaped vase, and the decorative motif of semicircle within a triangle on the shoulder of the stirrup vase can be used to relate to certain groups on Cyprus of identifiable date\textsuperscript{50}.

Subminoan must have started early, suggests Snodgrass, because it has stylistic connections with the later Granary ware of Mycenaean IIICIC in the Argolid, and because of the substantial overlap with LCIIIB\textsuperscript{51}, as well as its partial equation with Western Attic Submycenaean (see Chronological Table). He concludes that it seems unlikely that the earliest Subminoan is much, if at all, later than 1100 B.C.\textsuperscript{52}. This date is also accepted by Desborough and Hope Simpson and others, and is accepted here\textsuperscript{53}.

According to Coldstream early Cretan Protogeometric should start about the beginning of the tenth century, and was stronger and earlier at Knossos and other central Cretan sites than elsewhere\textsuperscript{54}. It was apparently at this point that Crete first felt the Athenian Protogeometric style which had been developing in Athens for fifty years\textsuperscript{55}. He based his claim on the finding of the earliest known Attic export to Crete about 1000 B.C., together with the finding of a local vessel with compass-drawn circles in a deposit
which still contained Subminoan pottery as well as much pottery of a primitive stage of early Protogeometric. As has been noted earlier, Subminoan continues for some time later than this in parts of East Crete, and may not have been superseded entirely until Geometric times.\(^56\)

**TABLE 1** : Provisional Chronological Table for the Latest Bronze Age and Early Iron Age

<table>
<thead>
<tr>
<th></th>
<th>CRETE</th>
<th>MAINLAND (Attica)</th>
<th>CYPRUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1125 B.C.</td>
<td>LMIIC</td>
<td>Submycenaean &amp; later LHIIC</td>
<td>LCIIC</td>
</tr>
<tr>
<td>1120 B.C.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1100 B.C.</td>
<td>Subminoan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1075 B.C.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1050 B.C.</td>
<td></td>
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<tr>
<td>1025 B.C.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000 B.C.</td>
<td></td>
<td>Protogeometric</td>
<td>Cyprogeometric I</td>
</tr>
<tr>
<td>975 B.C.</td>
<td></td>
<td></td>
<td>&amp; local Dark Age</td>
</tr>
<tr>
<td>950 B.C.</td>
<td></td>
<td></td>
<td>styles</td>
</tr>
<tr>
<td>925 B.C.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>900 B.C.</td>
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</tbody>
</table>

Among recent opinions is that of Kanta who, following Brock, argues for 970 B.C. as the date of the start of the Cretan Protogeometric style. However, the examples used for her arguments could equally, if not more effectively, be used to support a start ca. 1000 B.C. She notes the co-existence at Tomb XI Fortetsa of Attic Protogeometric vases with Cypriot iron pikes (which are only used between 1050-950 B.C.). She also notes that Karphi, which was abandoned about the turn of 1000 B.C.\(^57\), also (according to its excavators) included some sherds of Protogeometric style. These could then date to c. 1000 B.C.\(^58\).
It is thus possible to suggest an approximate date of 1100-1000 B.C. for the duration of Subminoan, at least in Central Crete, and this would also suit Kanta's thesis that Subminoan in Central Crete is unlikely to have lasted more than a century. The starting point of ca. 1100 B.C. coincides with the date of the exodus to Cyprus of a contingent of Cretans, and the finishing point (or at least the start of the next pottery series, in some places) ca. 1000 B.C., with the approximate date of the descent to the plain of the inhabitants of the important Subminoan settlement at Karphi. These events may provide possible historical markers for chronology. They will be discussed more fully in the conclusion. One must always bear in mind, however, that the distinction between one period's end and the other's beginning is somewhat arbitrary on present knowledge.

It is important, then, to rely on the pottery style, assisted by other evidence, to indicate the period of occupation of a site. A site should be called Subminoan if it shows the definitive features of typical Subminoan vases as found at other sites identified (preferably by good stratification) as Subminoan, even if it contains some survivals from the previous style, or shows features which foreshadow the following period, and even if the vases are produced outside the chronological limits of Subminoan in Central Crete. Unfortunately, the grounds of evidence on which a reporter designates a site Subminoan vary in quality and quantity (and hence reliability), from a few surface discoveries to finds in fully stratified settlements. The evidence for Subminoan habitation on settlement sites is often derived mainly from surface potsherds. This is true of almost all of the smaller sites in particular (though they have probably been labelled as small owing to their meagre finds). Often there is great difficulty in diagnosing with any accuracy the date of such surface potsherds, as they are often broken or worn. Thus the identification of the exact periods during which an ancient site was occupied cannot be easily established, and the dates assigned purely on the basis of surface finds must be considered as provisional. Sometimes no detailed evidence at all is cited by the publishers.
In order to assess the relative value of the evidence at the sites, each site has been assigned a rating of the worth of evidence in one of two categories - excavated sites (A), and non-excavated sites where surface exploration may have taken place, or accidental finds may have been made (B). These two categories are further divided into sub-categories which distinguish to some extent the quality and quantity of the evidence. Sites in A:1 category are well stratified sites, usually well reported, and thus represent the best and most reliable evidence. A:2 sites are those which though excavated (thus establishing securely the find-place) are incompletely stratified or unstratified, though the evidence is frequently, but not always, well described. In the B:1 category the surface finds may be well described, and other features of the site such as buildings or graves given. B:2 surface finds are only briefly described, or not described at all, though have been called Subminoan by their reporter. For the purposes of the present Gazetteer sites have been included as Subminoan when called such by their reporters, unless subsequent examination and/or more recent evidence contradicts this opinion. Subminoan findsites are thus places where Subminoan find evidence has been found and these places often include finds at several locations clustered around them (e.g. the four locations at Praisos). Every location has been called a findsite, though for purposes of comparative analysis the main place, centre or area only, will be considered.

In addition to the 96 sites included in the Gazetteer there are a few other sites, not included, which are believed by some to be possibly Subminoan, though without confirmation.

Part of the difficulty of defining Subminoan, as well as of understanding its nature, has been the lack of an adequate cemetery and settlement pattern. As a result a number of coloured and possible inaccurate views of the Subminoan period have been presented. Some of these views will be examined, and the nature of the evidence up until the early '70's will be reviewed. Since that time Subminoan material has greatly increased.
There is an urgent need for all evidence at present accessible to be systematically compiled and examined to enable a fresh assessment of the implications for the Subminoan period.

The eleventh century has been seen as a time of upheaval following major changes in the twelfth century in ways of life in Minoan Crete, Mycenaean Greece, and indeed in virtually all the major Eastern Mediterranean Bronze Age civilizations. Early descriptions of Crete in the Subminoan period were gloomy. They described a time of unrest and stress, of fear and insecurity, where there was general depopulation, abandonments of sites, isolation, poverty, decline and inactivity:

"Crete suffered a tremendous loss of population"62. It was a time of desertion of old sites and occupation of new ones63. "All over Crete low-lying, undefended sites were deserted"64. "The plains were not considered safe"65. "Most of the coastal sites were abandoned, particularly to the south. Few inland towns survived. Inhabitants flew to mountain eyries. All West Crete (except Eleutherna) was abandoned"66. Pirates were burning coastal ports, and the caves were filled with refugees67. The people of the Early Iron Age "retired to the mountains for security"68 - or at least the more independent elements of the population did69. There was flight to isolated cities of refuge on defensible high ground which had not been inhabited before the collapse, and which were deserted again when the plains became safe70. Of the plains' sites, only Knossos and Amnisos remained, and some of the major sites were deserted, with only Knossos certainly surviving as an important centre of occupation71.

In their "cities of refuge" the people of this time of stress, trouble and unrest72 lived a "life of terror"73. They dwelt in "defendable, insular communities"74 which were often remote and inaccessible75. Boardman talks of the isolated nature of many centres, which were out of contact with Knossos, which was most sensitive to outside ideas76. Desborough talked of there being "little or no communications between North Central and East Crete until the Geometric period"77. There was, it was believed,
"cautiousness about travelling, particularly through mountainous country"\textsuperscript{78}. It was thought that not only were contacts between districts restricted, with resultant provinciality\textsuperscript{79}, but that "Crete at this time was almost completely cut off from intercourse with the world outside the Aegean"\textsuperscript{80}. Though some limited contact with the mainland and other parts of Greece was acknowledged\textsuperscript{81}, Crete in the Dark Ages was generally believed to have been isolated and inactive, sinking "into a state of gradual decline"\textsuperscript{82}. Coldstream, Snodgrass, and others have talked of Subminoan as a stagnant survival style, which, like much else of the time, was based heavily on Bronze Age forms, and was generally poor and debased in form and decoration\textsuperscript{83}. Boardman saw in Subminoan a relative decline in prosperity, "a time of mistrust and poverty"\textsuperscript{84}.

This generally sad picture was based on material which was very limited in both quantity and quality. There had been a minimal number of thoroughly excavated and well reported sites on which to base a detailed study of the period\textsuperscript{85}. Desborough in his \textit{Greek Dark Ages} of 1972 commented on the very meagre nature of the published material then available\textsuperscript{86}, even though this was greatly expanded since 1939 when the last main synthesis of the period appeared. This was Pendlebury's \textit{Archaeology of Crete}. Pendlebury was able to list only some eight sites which he considered to be definitely Subminoan\textsuperscript{87}. In 1941, Furumark talked of only three excavated Subminoan sites\textsuperscript{88}. Desborough himself, in 1972, listed only eighteen main areas of Subminoan finds. He did not mention minor archaeological sites or chance surface finds\textsuperscript{89}, and emphasised the difficulty of reaching conclusions where there was such a scarcity of material, and where this material was not spread representatively through some areas. There was, he noted, no material from the West, only three areas in the centre of the island, with the rest being in the East.

The value of Subminoan material has further been affected by lack of agreement as to absolute chronology, consisting as it does of a somewhat indeterminate period between
Late Minoan and Protogeometric. As pointed out earlier, opinion has varied as to what material was actually Subminoan. With new information come changes to the list of Subminoan findsites. Some sites previously considered Subminoan are no longer, while others have been added to the list. Lack of stratification at sites occupied over a long period has hampered identification of periods, while poor excavation and reporting, or the absence thereof, has further hindered precision. For instance, at Vrokastro, once described as "the second most important site in Crete" being one of the few Subminoan settlements where both domestic architecture and over 30 tombs have been excavated - settlement stratification was unrecognizable, and only a small part of the large collection found has been published. Rarely does one find a homogeneous pottery sequence with which to make correlation of material of material from different areas. Desborough commented that the difference in the use of vase types from one region to another can be noted, but the meagreness of the material robs such differences of much of their significance.

In the early 1970's the position was such that no-one since Pendlebury, in the Archaeology of Crete, had made a complete list of the Subminoan findsites (including surface finds) as has been done more recently for the Mycenaean sites by Hope Simpson in his Gazetteer of the Aegean Civilization in the Bronze Age, Vol.1. However, between the 1940's and early 1970's Subminoan was studied in passing as part of works on broader themes and periods. In 1968 I. Pini, in his work on Minoan gravefinds, listed the Subminoan burial sites known at that time. Boardman's Cretan Collection in Oxford came out in 1961 and Hutchinson's Prehistoric Crete in 1962, while Faure's numerous studies on caves and worship sites appeared between 1956 and 1967. The theme of religious continuity was studied by R. Higgins in Greek Terracottas (1967), Nicholls (1970) and Dietrich. Contact with the East, and especially with Cyprus, was postulated by some of these earlier scholars such as Furumark (1944) and Demargne in La Crète Dédalique (1947). Still, Cretan studies in the early '70's lagged behind those in other Aegean areas where there was more
complete evidence available, thus enabling the application of more thorough methods of classification and analysis of material. Notable among these was Styrenius' study of material from Submycenaean Greece\(^98\).

The results of work done up until the start of the 1970's were summed up in two valuable publications - *The Dark Age of Greece* by A. Snodgrass (focusing on metals, and particularly the coming of iron), and *The Greek Dark Ages* by V.R. d'A. Desborough (focusing on pottery). In the latter the main pottery types of the three contemporary styles - Submycenaean, Subminoan and Late Cypriot III - were illustrated and compared as to origins, nature and mutual influences. Desborough and Snodgrass confirmed the eastern contact and religious, artistic and cultural continuity demonstrated earlier. But while acknowledging Crete's outside connections they still presented a case for regionalism within Crete, and for a small population\(^99\). Yet even in the early 1970's their conclusions could only be tentative, based as they were on still fairly limited evidence.

Since the publication of Snodgrass' and Desborough's works of the early 1970's, new and diverse evidence for the Subminoan period has greatly increased. Excavation and surface exploration have produced a substantial body of new material for archaeological investigation. A number of important studies have appeared in the field. It is now possible to pinpoint many additional sites, including some in West Crete\(^100\). Of the newer excavation works which have been carried out in several areas, perhaps the most notable has been in the Knossos area, though detailed reports are still awaited. For the first time a stratified early post-Minoan settlement in the area of Knossos has been uncovered, as well as a cemetery of major proportions. In other areas - such as Kavousi and Vrokastro - re-examination of material through additional excavation and/or more detailed study has enlarged our picture of previously uncovered sites\(^101\).
Excavations carried out in Cyprus through the 1970's at such sites as Bamboula\textsuperscript{102}, Kaloriziki\textsuperscript{103} and Alaas\textsuperscript{104} are clearly and fully reported. Containing material contemporary with, and influenced by, that of Subminoan Crete, they allow us to ascertain more accurately the degree and type of contact between Crete and Cyprus in the early Iron Age\textsuperscript{105}. There have been, in addition, a number of studies on Cretan/Cypriot relations - a subject which has been under close scrutiny. A symposium was held in Nicosia in 1978, and published in \textit{Acts of the International Symposium: ''The Relations between Cyprus and Crete ca. 2000-500 B.C.''} (1979). Desborough's article in \textit{Kretika Chronika} for 1972 pointed out the importance of bird vases in the study of trade between Crete, Cyprus and the Mainland through the Subminoan period, and since then additional examples of these vases have been reported in various areas, and have been the subject of several dissertations\textsuperscript{106}.

New studies of the architecture and building traditions of Crete and its continuity into the Subminoan period are being made\textsuperscript{107}. In 1982 Watrous published a valuable longitudinal study of one area of Crete extant during Subminoan - the Plain of Lasithi\textsuperscript{108}. Valuable background information for the period has been provided in recent times by Kanta's \textit{The Late Minoan Period in Crete. A Survey of Sites, Pottery and their Distribution} (1980) In it she demonstrated that Crete remained a major cultural force in the Aegean world throughout the Late Minoan III period\textsuperscript{109}. The importance of the settlement pattern in the study of culture was emphasised by Renfrew in his \textit{The Emergence of Civilization} of 1972, while a useful study of the relationship of the environment to the distribution of settlements was published in 1977 by J.L. Bintliff under the title of \textit{Natural Environment and Human Settlement in Prehistoric Greece}.

As a result of all this new material, new conclusions about the Subminoan period are being drawn, indicating that many earlier views, as cited above, may have been somewhat coloured, and that there may have been more in the firmly rooted ideas of the
Greeks from very early times about the importance of early Iron Age Crete. Recently Hope Simpson and Dickinson maintained that Crete was much more fortunate than the Mainland. While few sites on the Mainland continued from after the LMIIIIB disasters into the Dark Age, and there was a decline in population and wealth, only intermittent Eastern contact, and isolation of communities, Crete "throughout the Dark Age was more prosperous, maintained closer contact to the Near East, and preserved more of its Bronze Age heritage than other parts of the Aegean." Meanwhile Hayden has questioned whether sites previously labelled "refuge" sites can always be accepted as such, and suggests that we should consider whether trade and communications between sites may not have been a more important factor than previously believed.

In short, it is apparent that for any assessment of the nature and conditions of the period there is a need for an updated and comprehensive survey of Subminoan finds and sites in order to provide a systematic pattern of occupation of burials, settlements and worship places. The Gazetteer in Chapter 2 provides this summary of the results of survey and excavation work reported up until the early 1980's. In the analysis to follow (Chapter 3) the location, size, duration and any regional differences of settlements, cemeteries, worship places and surface findsites, will be examined, and an attempt made to assess the motives for choice of site. In Chapter 4 the finds at the sites will be looked at for quantity, quality and trends. Using this information the general aim is to clarify the nature of Subminoan, and to point out unanswered questions and indicate possible directions for future research. In particular, I will question the picture of Subminoan as a time which was unsettled, isolated, impoverished, defensive, depopulated and stagnant. It will be argued that Crete at this period, while preserving its Bronze Age heritage in a number of spheres, was active and in communication - inter-site, interregionally and with overseas - as well as being relatively populated, prosperous, advanced and independent, despite disturbances. For these reasons, and
for the important role it played in the change from Bronze Age to Iron Age, it is suggested that Subminoan deserves a new name which recognizes its importance.

Notes and References

2That architecture and tombs demonstrate the lack of strong central authority is pointed out by Kanta, 321.
3Ibid. 293.
4Popham, M. BSA 60 (1965) 334-5.
5Ibid. 316-342. The presence of Mycenaeans in Crete and their assimilations before the final destructions of the palace is now generally accepted.
6Ibid.
7Kanta, 320.
9Kanta, 323, sees in the pottery "a simple and elemental style in old forms... (which) culminated in the IIIC close style, some examples of which have attained a rare harmony between the ornamentation and form of the vessel".
11This matter is discussed by N.Platon in Acts, 102, and Stech-Wheeler et al., in AJA 85 (1981) 266.
12GDA, 314; 114.
15Hutchinson (PC, 325) remarked that the elements of survival in Protogeometric were so strong that Protogeometric might almost be classed as a variety of Subminoan. See also Desborough, BSA XLIII (1948) 265-6. Nevertheless, Brock talks of Subminoan vases which preserve in form many late Minoan features in shape and decoration which did not survive into Protogeometric (Fortetsa, 8).
17Snodgrass (DAG, 41-2) suggests that Subminoan in Crete remained current for nearly 200 years in all parts of Crete, and for perhaps 300 years in East Crete. Others have disputed this - most recently Kanta (Kanta, 5, n.1).
18LMTS, 17-20, 28, n.1; BSA XLIII (1948) 261.
20DAG, 40.
22Ibid. 144.
24Lacy, A.D. Greek Pottery in the Bronze Age, 222. The style has also been called Middle C Pleasistic Noble Ware by F. Schachermeyer, in "The Pleasistic Pottery Style of Cretan Middle IIIC and its Cycliotic Relations", in Acts, 204-214.
25 Schachermeyer, (Ibid, 207) disagrees with Desborough's designation of a 'fringe style', and suggests that it also reflects many decorative ideas that came from Levantine weavings and embroideries.
26 Kritsa, Knossos, Phaistos, Mouliana, Myrsini Kritis, Kato Symi, Psychro and Karpfi.
27 It has been remarked upon and discussed by Furumark, in Op. Arch. III, "Mycenaean Pottery and its Relation to Cypriot Fabrics", 222-230; and by Desborough in "What is Protogeometric?" BSA 43 (1948) 265.
28 PGP, 247.
29 Starr, C. The Origins of Greek Civilization, 77-78, 103.
30 GDA, 58-63.
31 GDA, 60-61.
32 LMTS, 15.
33 See GDA, 58-63 fuller and more detailed descriptions of Subminoan pottery. Other general studies of the Subminoan pottery have been made by Furumark (Op. Arch. III (1944) 229-230; Desborough, PGP, 247-248; LMTS, 166-195; Seiradaki, BSA 55 (1960) 1-37.
34 PGP, 237-239.
36 GDA, 29-63.
37 Ibid, 227-229.
38 LMTS, 192.
39 E.g. new types of neck-handles and belly-handled amphora.
40 Protogeometric has been defined by Desborough (PGP, 235) as a style based on a geometric system of decoration and a forerunner in its own locality of a subsequent Geometric school - or if no such school existed - to be reasonably close to other local styles which have already been called Protogeometric. Common Protogeometric motifs include linked cross-hatched diamonds and triangles, concentric semicircles, and cross-hatchings, zig-zags and wavy lines.
42 AR (1979-80) 48-9; AR (1982-3) 76-83.
43 The is questions is discussed by Desborough in "What is Protogeometric?" in BSA XLIII (1948) 267.
44 E.g. Pendlebury, AC, 301, puts the start of Subminoan at about 1123 B.C.
45 E.g. Kanta, 5, says that Subminoan starts about 1075 B.C.; Furumark also puts the start of SM at 1075 B.C. (Op. Arch. III, 262); Brock - c. 1020 B.C. (based on the rather late material at Fortetsea) (Fortetsea, xvi).
46 Furumark - 1010+ B.C.; Pendlebury - 1050 B.C.
47 Kanta - 970 B.C. as Brock (Fortetsea, xvi); Snodgrass - 925-810 B.C. (includes variations in different regions).
48 Op. Arch. III, (1944)257 . Furumark equated the latest Proto White Painted Ware with early Submycenaean and Subminoan, and Early Cyprogeometric I with later Submycenaean and Subminoan, and Early Cyprogeometric I with later Submycenaean and Subminoan. Gjerstad (Op. Arch. III (1944) equated Proto White Painted ware with Submycenaean, and said the CGI must be later than Submycenaean. Desborough (LMTS, 28) said that the change from LCIIIIB-CGI in Cyprus is contemporary with the transition in Athens from Submycenaean to Protogeometric (at about 1050 B.C.) and this is now widely accepted.
49 DAG, 114.
50 Ibid, 115.
51 Strong Subminoan connections have recently been shown with Proto-White Painted ware at Alaas (of 1075-1050 B.C.)
52 DAG, 128.
53 GDA, 115; Hope Simpson, Mycenaean Greece, 6.
54 BSA (1972) 65-66.
56 The relative chronology is thus affected, though probably not by 300 years in some places as suggested by Snodgrass, DAG, 34-5.
57 Watrous also suggestes this date (Hesp. Suppl. XVIII (1982) 20,40.)
The sherd with compass-drawn circles, noted by Coldstream at Knossos Royal Road, and mentioned above, could also have dated to c. 1000 B.C.

Kanta, 326.

A number of sites have not been included in the Gazetteer of Subminoan sites, in spite of having been designated Subminoan by their reporters. For example Akhaldia, in the Siteia district, was dated LMIII A-SM by I. Pini (Beiträge zur Minoischen Grabefunde (1968) 75), while Kanta (Kanta, 178) says that there is no present evidence to show that the tomb was still in use in SM. Olous, on the other hand, designated LMIIIC/SM by its excavator (El. Cret. 7 (1947), when later examined by Kanta, was pronounced as belonging to LMIIIA and B, and with nothing attributable to a period later than this (Kanta, 129). More recently (AR 1978-8) 41) a Subminoan pithos burial (plus other finds which compare with Subminoan material elsewhere) show that there probably was SM occupation, even if slight, and hence the site here been included in the present Gazetteer.

Such sites include Kourtes (LMTS, 182) where the tholos tombs contained vases of from PG onwards, but where the persistence of SM characteristics might suggest that there was an original settlement contemporary with Karphi. Others include Katsambes (LMTS, 181), Kritsa, Kastri, Kommos and Akhaldia (see note 31).

AC. 303. Also PGP, 234; CCO, 129; GDA, 118.

GDA, 57.

Pendlebury, J.D.S. BSA 37 (1936-7) 194f.

PGP, 237.

AC, 313.

Faure, BCH 89 (1965) 27f.

BoyD, Kavousi, 129; Faure, BCH 89 (1965) 27f.

PG, 320.


CCO, 129.

GDA, 57.

AC, 303, 305.

GGP, 276.

AC, 305; GDA, 57.

Coo, 130. Coulson, Day and Gesell in Hosp. 52 (1983) 413, note that the ceramic material at Kavousi was unlike Central Cretan material and suggest a possible independent development in the East from Central Crete.

PGP

PGP, 233-4.

See note 15. PGP, 233, 270.

AC, 313. Pendlebury talks here of period from 1050 B.C.

Ibid.


GGP, 234; AC, 303; PGP, 233; Bowman, J. Crete, 85; DAG, 44.

CCO, 130.

An exception was Brock's Fortetsa. However, though well stratified, it only included a small amount of very late Subminoan material.

GDA, 117.

The sites listed were Vrokastro, Kavousi, Karphi, Knossos, Mouliana, Erganos and Amnisos.

MP, II, Chronology (1972) 106 - Knossos, Spring Chamber, Alsiphades, Vrokastro (Florigy 1941).


See notes 31 and 32, supra.

Desborough, PGP, 266.

GDA, 63.


99GDA, 118.

100In 1975 Dorothy Leekley and Robert Noyes published Archaeological Excavations in the Greek Islands. It presented a list, as current as possible up to the mid 1970's, of both major and minor find sites in Crete. It mostly omitted chance finds and rescue operations. These last have been reported in the annual publications of Kreitika Chronika, and the Archaeologikon Deltion, in the Archaeological Reports which are a supplement to the Journal of Hellenic Studies, and in the Bulletin de Correspondance Hellenique, and in the Annual of the British School in Athens. Information is included from the annuals till c. 1983-4, which means information from digs up to approximately 1980-1.


102Benson, J.L. Bamboulata at Kourion (1972).


104Karageorghis, V. Alasa. A Protogeometric Necropolis in Cyprus in Cyprus. (1975)

105Pottery, religious rites and cults (witnessed by the presence of sacred figurines, including terracotta goddesses with raised arms and centaurs - and metals, both bronze and iron, provided the material evidence for contacts.


109Kania, 326.

110The Odyssey suggests that Crete was important even in the post-Mycenaean period (Odyssey. XIX, 11).


112Hayden, B.J. Expedition. (Spring 1983), 112.
CHAPTER 2

THE GAZETTEER OF SUBMINOAN FINDSITES
WEST CENTRAL CRETE

1. ATSIPHADES AT FONISES AND Lakkos

LMIIIIC-SM/PG

(B:1) *

Atsiphaides lies in an upland valley west of the Mesara Plain. There was an extensive
"refuge" settlement high on the side of Mount Kourotopas at Fonises, and nearby at
Lakkos, and what appears to be a shrine site on the highest point of the site. Most
pottery is Late Minoan III in character, indicating that the site was established at the
very end of the Bronze Age, and it probably prevailed into the succeeding period.

References:

* This is a classification of quality of the site evidence, and its reporting. 'A' sites are
evacated sites. Those marked 'A:1' indicate well-stratified sites, which are usually
well reported. Those marked 'A:2' indicate sites with limited or no stratification
and which often are of not well reported. 'B' sites are sites with surface finds only.
These often are only briefly surveyed and reported, but where site features such as
buildings and tombs, as well as the artifacts are described. Those marked 'B:2'
indicate sites which have been designated as Subminoan by the reporter, but whose
finds are only briefly described or not described at all.

2. ATSIPHADES at PEZOULOS
LMIIIB,C-SM.
(A:2)

Atsiphades is situated on the inland road 6 kilometres to the west of Rethymnon. The burials found at Pezoulou were connected with the settlement site at Fonises (see infra). A cemetery consisting of 21 LMIII-SM pithos burials was excavated by E. Petroulakis in 1912-13 and briefly reported. Recently K. Mavryiannaki, who re-published the material suggested that the cemetery may have largely consisted of child cremations (in pyxides and amphoriskoi) with accompanying grave goods inside them. The vases chiefly dated to LMIIIB and C, but prevailed into Subminoan at least. Vases which were probably Subminoan included an askos, and a small stirrup jar, both with linear triangle decoration, bands around the belly, and stripes on the handles. The stirrup jar has parallels at Mouliana, at Kephala at Knossos, and at Vrokastro. There were also other stirrup vases of typical Subminoan shape and decoration. Further objects found with the burials included a bronze ring and an arched bronze fibula. The fibula is of the same type as ones at Karphi, Phaestos and Vrokastro.

References:
AE (1915) 48-50.
AE (1975) 41-58.
AR (1977-8) 6

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2AE (1915) 48-50.
3AE, (1975) 41-58
5Ibid, Pl. 21,e.
6AE, (1904).
7BSA 62 (1967) 263, Fig. 4).
8Hall, Vrokastro, 152, fig. 92.
9E.g. AE (1975) PL 18 c and d.
10Atsiphades - Ibid, Pl. 20f; Karphi - BSA 38 (1937-8) Pl. 28; Phaestos on hill - Boll. d'Arte (1955) 159; GDA, 116; Vrokastro - Hall, Vrokastro, Pl. XIX, c.
Axos, an important site situated to the west of Rethymnon, clings daringly to the precipitously steep northern slopes of the higher peak of Ida. It appears to have been first settled towards the end of the Late Minoan era (its earliest sherds of late IIIB) and to have continued to be occupied into the Subminoan and Protogeometric periods, becoming fully established by the eighth century B.C. The most important finds are of the Archaic period.

A number of excavations have been undertaken by the Italian School, of which Taramelli reports Mycenaean sherds and a figurine\(^{11}\). Kanta reports the finding of several Subminoan and Protogeometric vases at the location of Megalos Trafos in the Axos area in 1928\(^ {12}\). These include a stirrup jar with globular body, hollowed base, knob on the disk and air-hole at the base of the neck which was decorated with chevrons and triangles\(^ {13}\). It still retains the typical Minoan feature of a continuous band encircling the handles, false neck and spout (which usually disappears in LMIIIC). Another stirrup jar has lost its handles, but has a globular body and conical base, with a shoulder decoration of elaborate triangles and a band filled with vertical wavy lines\(^ {14}\). It also has a knob on the disk, and an air hole at the base of the neck. The spout and area above the handles is decorated with dashes.

A deep bowl, or amphoriskos, has a tall, straight, "collar-like" rim. Its base is conical and it is decorated with a zig-zag line\(^ {15}\).

\(^{11}\) *Mon. Ant.* (1899) 313-5.
\(^{12}\) *Kanta*, 21.
\(^{13}\) *Ibid*, fig. 7.
\(^{14}\) *Ibid*, fig. 8.
\(^{15}\) *Ibid*, fig. 83.4.
A jug with a very wide neck was covered with paint, and is similar in type to one at Karphi\textsuperscript{16}.

Desborough reports a bird askos from Axos, probably Subminoan, in the Herakleion Museum, with three small strut legs, basket handle and airhole, with decoration of widely spread alternating diagonals, fringed\textsuperscript{17}.

References:
\textit{Mon. Ant} 9 (1899) 313-5.
\textit{Kanta}, 201
\textit{K. Chr.} (1972) 253, and pl. AB', 2

\textsuperscript{16}Axos - \textit{Ibid}, fig. 83.3; Karphi - \textit{BSA} 55 (1960) 15, fig. 9).
\textsuperscript{17}\textit{K. Chr.} 24 (1972) 253.
Sited on a low flat-topped hill surrounded by a ravine, east of Rethymnon, Eleutherna was one of the inland city-states of Dorian Crete.

On the western side of the acropolis at Ortha Petra a large deposit of Geometric pottery was uncovered, along with some Subminoan and Protogeometric ware.

The site was later used in Archaic, Classical, Hellenistic and Roman times.

References:
*BSA* 30 (1928-30) 266f.
*BSA* 31 (1930-31) 108ff.
5. MEIXOROUMA

Subminoan.

(B:2).

A "Subminoan" animal figurine made of bronze has been accidently discovered at Meixorouma.

References:
Kanta, 209.
AD Chronicles (1966) 429.
K. Chr. (1965) 299.
6. MESONISIA

MM?, LM-SM.

(B:2)

Faure found sherds from a pithos burial in the Kalogerospeliós Cave of the Pano Savakino location of the village of Mesonisia. He suggested that they were Subminoan, though they have been assigned by Hood, Warren and Cadogan to Middle Minoan.18

Faure also saw signs of a small Late Minoan to Subminoan village at the Ai Nufris location.

References:

*BCH* (1965) 503-4.
*BSA* (1964) 75.

18*BCH* (1965) 503-4; *BCH* (1964) 75
7. PATSOS

LMIII-G-Roman

(A:2)

The sanctuary of Hermes Krainias, in the Cave of Agios Antonios, and dedicated to the cult of Hermes Krainias, was situated in the ravine north west of the village of Patsos, in the rich Amari Valley to the west of Mt. Ida. At this spot there were two springs. In it the material ranges from LMIII through Geometric to Roman - i.e. from the twelfth to the seventh century B.C.

The votive deposit investigated by Halberr in 1886 included bronzes and clay human and animal figurines which bear a strong resemblance to the cult material at Hagia Triadha in the "Piazzale dei Sacelli" which dates from LMIIIC into Subminoan. Kanta has noted, for instance, the striking comparison of the head crowned with snakes from Patsos with one from Hagia Triadha. It is also like one from Kato Symi19. In 1961 Faure visited the cave and recorded LMIII votive statuettes20.

References:
Faure, P. Fonctions des Cavernes Crétoises (1964) 136ff.
Kanta, 204-5.

19Patsos - Kanta, 204; Hagia Triadha - Ann. 3-5 (1941-3) fig. 49; Kato Symi - PAE (1975) pl. 257, b.
20Faure, Fonctions, 136ff.
8. RETHYMNON at VRYSINNAS

MM, LMIII-G, Archaic, Hellenistic, Roman, Christian

(A:2)

A very important peak sanctuary was excavated by Davaris in 1972-4 at Vrysinas on the smooth slope east of the peak. Situated at an altitude of 2815 feet (858 metres) it was one of the richest peak sanctuaries of the Middle Minoan period, and was occupied also from LMIII to Geometric, Archaic, Hellenistic, Roman and Christian times.21

Bintliff notes that it is one of the few shrines in Crete which physically bridge the interval from prehistoric to historic times.22

References:

Adromyloi lies far from the sea in the low mountains of the Sitia region, at an altitude of between 250-300 feet above sea level.

Northeast of Adromyloi village, towards Sykia, at Agios Apostoloi, Platon excavated, in 1953-4, a group of Subminoan or Proto-Geometric and Geometric rectangular-built tholos tombs of the same type as those at Karphi and Kourtes. He recovered about 200 vases, fibulae, pins, iron weapons and Minoan sealstones\textsuperscript{23}.

Kanta mentions a settlement of LMIIB and C in the same area, and notes that some of the tombs went back to LMIIC also.

Amongst the pottery in the cemetery area were several vases that have parallels at Karphi and whose shape and style suggest that they were Subminoan. These include a side-spouted basket-handled jug (thelastron)\textsuperscript{24} showing Mycenaean influence and which is like Karphi's example\textsuperscript{25}; a kalathos like one from Karphi\textsuperscript{26}; and a bird vase\textsuperscript{27} resembling the one from Karphi\textsuperscript{28}.

\textsuperscript{23} K. Chr. 7 (1953) 490; K. Chr. 8 (1954) 511; PAE (1954) 365ff.
\textsuperscript{24} Kanta, pl. 72, fig. 8.
\textsuperscript{25} BSA 55 (1960), fig. 10.
\textsuperscript{26} Ibid, fig. 7.
\textsuperscript{27} Kanta, Pl. 49, fig. 6.
\textsuperscript{28} BSA 55 (1960) fig. 20.
References:
K. Chr. 7 (1953) 490.
K. Chr. 8 (1954) 511.
PAE (1954) 365ff.
Kanta, 185-6.
2. BRAIMIANA

SM-PG

(B:1)

Braimiana is situated in the foothills bordering the plain descending to the gulf of Mirabello, on the road to Kalamavka about four kilometres from Ierapetra. Small built tholos tombs were discovered here, below ground, by Marinatos, and designated Subminoan to Protogeometric\(^{29}\).

References:
AR (1932) 255.
AA (1932) 176.
BSA 38 (1937-8) 111.

\(^{29}\)AR (1932) 255.
3. DREROS

LMIII C/SM, PG,G.

(A:1)

The ancient site of Dreros, beside the small fertile plain of Neapolis, occupies two peaks with a saddle between. Its position is important in that it guards the only easy route from the north coast to the east of Crete. A necropolis, at the foot of the Dreros acropolis, and on the north side, was excavated by the French school in 1936. Most of the 25 cist graves were Geometric, but tomb I, a rectangular tomb with three inhumations, and lying lower than the rest, dates from Late Minoan IIIC to Subminoan. It covers the same period of time as Karphi. Comparisons can also be made with material from Mouliana and from Liliana at Phaestos.

The material from the late IIIC-SM tomb I is largely without decoration, or has simple designs, such as bands and hatching, and is in general rather sombre in appearance.

There were four stirrup jars - D8, D10, D11 and D12. D11 has banded decoration and concentric arcs with hatching and lines of points. D8 is decorated with bands and four groups of two vertical fish figures. A fifth stirrup jar has a broad flat base and steeply rising sides.

A kylix with a swollen stem parallels one at Vrokastro.

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31*Kanta*, 261.
32Effenterre, *Nécropoles*, pl. 11.
33*Ibid*, pl. 44.
34*Ibid*, pl. 10.
35*Ibid*, pl. 15.
A feeding bottle or spouted jug is globular in shape, and has a basket handle, and a spout, and is undecorated\textsuperscript{36}.

A one-handed jug or pitcher of perked-up globular shape, is blue in colour and undecorated. It is elegant and harmonious.

A skyphos is globular and undecorated and has a flat bottom\textsuperscript{37}.

A kalathos or truncated basin has a handle on the rim and excrescent cup or spout opposite\textsuperscript{38}.

A high-stemmed blue bowl or fruit stand has a low stand and is of heavy form with a ridge on the stem - similar to mainland examples of the Mycenaean type\textsuperscript{39}.

A skyphos or very shallow cup has a channel spout from the rim and a protruding base\textsuperscript{40}.

Some of these vases were Late Minoan IIIC, others survivals into Subminoan.

The location of this Submycenaean tomb in the vicinity of other graves of Protogeometric and Geometric probably indicates a survival of Subminoan into Protogeometric and Geometric\textsuperscript{41}. Further, continuity of worship is indicated by the Subminoan features in an eighth century B.C. temple discovered at Dreros which recall

\textsuperscript{36}ibid, pl. 45,1.
\textsuperscript{37}ibid, pl. 10 (D36).
\textsuperscript{38}ibid, pl. 10 (D7).
\textsuperscript{39}ibid, pl. 10 (D6).
\textsuperscript{40}ibid, pl. 41 (D31).
\textsuperscript{41}LMTS , 184-5.
the latest Minoan-SM sanctuaries; these include a central column, central hearth, a table of offerings on a ledge at the inner end for the sacred images\textsuperscript{42}.

As the occupation of Dreros only starts about the time that occupation at Olous (the former port of Dreros) finishes, it has been suggested that the inhabitants of Olous may have moved inland to the area of Dreros for protection from sea attacks\textsuperscript{43}.

References:
\textit{Kanta}, 261.

\textsuperscript{42}Hutchinson, \textit{PC}, 332.
\textsuperscript{43}Kanta, 129.
Located on the north-south road across the Ierapetra Isthmus, Episkopi is not far from Kalo Khorio.

Subminoan vases of uncertain providence from the collection in the Ierapetra Collection indicate that the prosperous and important settlement that existed in the Episkopi area from LMIIIA, continued into Subminoan times. The settlement is still unexcavated, but the finds have been described in some detail by Kanta.\(^{44}\)

Two Subminoan vases, both with parallels in Karphi, were found. One is a jug with globular body, round lip and handle raised above the rim, and bands around the body. It has a narrow decorative field extending from the base of the handle to the beginning of the neck, and vertical bars in groups for decoration. It is similar to a jug from Karphi.\(^{45}\)

The other vase is a duck vase with a shape comparable to other duck-vases of the period at Vrokastro, Knossos and Karphi,\(^{46}\) but with a high conical foot instead of the three miniature feet usually seen on these vases, and horizontal wavy lines decorating the body.

References:
Kanta, 153-4.

\(^{44}\)Kanta, 153-4.
\(^{45}\)BSA 55 (1960) pl. 5d.
\(^{46}\)Vrokastro - Hall, Vrokastro; Knossos, Spring Chamber - PM II, pl. 69, n; Karphi - BSA 55 (1960) pl.11,6.
5. KALAMAFKI

LMIII, SM.

(B:1)

Kalamafki, which was probably ancient Larissa, is a mountain village high above the sea of the south coast of Crete. It is on the southern route from Ierapetra into Lasithi lying north of very fertile plains on a steep, easily defended acropolis.

The archaeological evidence, which is limited, included a large terracotta clay figurine of Karphi or Gazi type\(^{47}\), a LMIII pithos, and a small bronze axe or pick\(^{48}\).

Faure found Subminoan material in the cave of Kalamafki\(^{49}\). He suggests that the site was utilized as a refuge acropolis, with shrine, at the end of the Bronze Age\(^{50}\).

Pendlebury reported sherds of Geometric to Classical date on the Kastellos, and Roman sherds at Sellia\(^{51}\).

References:

\(^{47}\) Now lost.
\(^{48}\) K. Chr. 6 (1952) 481.
\(^{49}\) Fonctions, 60.
\(^{50}\) BCH 77 (1953) 241; BCH 89 (1965) 29.
\(^{51}\) AC, 326, 343, 353, 375.
6. KAROUMES

MMIII/LMI, SM, Roman

(A:2)

Karoumes, on the banks of the estuary of the Kholakes, overlooks a bay on the east coast of Crete. At the outlet of the gorge of Karoumes a large cave was found with what Faure has described as Subminoan "constructions" and sherds of Neolithic and Subneolithic, MMIII/LMI, Subminoan and Roman periods. It was apparently only used for temporary habitation, for watering purposes.

References:
BCH  86 (1962) 38.

52Faure, BCH 86 (1962) 38.
In Katophygi Cave at Platvulos, at an altitude of 500 metres, an isolated small refuge site was found in which were LMIII, SM and Geometric sherds, and bones of men and animals. The site is on the surface of the Plateau of Platvолов - 2 kilometres and 800 metres northeast of Karydhi village. It consists of a corridor of 15 metres, of a little room, and of galleries stretching in three directions.

References:
Faure, *Fonctions*, 60.
8. KATSYDHONI

Subminoan.

(B:2)

A "Subminoan" acropolis was observed here by Platon. Karsidhoni is a village about 16 kilometres from Sitia on the road to Karydhi via Sitanos (which connects with Zakros and Palaikastro).

References:
PAE (1956) 240.
In 1901 Wheeler found four tholos tombs at Aloni, 100 metres below the peak of the Kastro. It is probable that the site served, in its later usage, as the cemetery for the Kastro. The rectangular stone-built tholoi are difficult to date as little was published and the material was lost. Occupation of possibly Subminoan to Early Protogeometric is indicated by a stirrup jar found there and the tombs may parallel the three phases of Vronda - i.e. SM-EPG, PGB, and EG-MG, with the heaviest occupation being in the last phase. It includes also some LG material, thus extending occupation at Kavousi to fifty years later than in the Vronda cemetery.

References:
10. KAVOUSHI at PLAIOU KASTROU (Plate 1)

SM-EO.

(A:2)

The tholos tombs recorded by Evans at Plai Tou Kastrou on the lower slope to the south of the Thrifti range of the Sitia mountains must have belonged to the residents of an Iron Age settlement, referred to by its excavator as "the castle".\textsuperscript{56} The excavation was only partly published. Evans found 117 vases in the tomb(s) of Plai Tou Kastrou, of which 88 still remain in the Herakleion Museum. They range in date from SM-EPG to LG-EO. Some have been illustrated\textsuperscript{57}. Desborough in his article on bird vases\textsuperscript{58} illustrated a Subminoan bird askos from this tomb which had three small strut legs and a basket handle.\textsuperscript{59} Its main decoration consisted of concentric bands following the outline of the body. In both shape and decoration it bears a striking resemblance to a bird vase from Alaas, Cyprus of Proto-White Painted ware\textsuperscript{60}.

On as ledge just east of the tomb(s) was a shrine, where seven terracotta animals, mostly bulls, were found, which seem to date to the Subminoan period\textsuperscript{61}.

References:
AJA 5 (1901) 137.
Ann. 10-12 (1927-9) 568ff.
Hesp. 52 (1983) 412.

\textsuperscript{56}AJA 5 (1901) 137.
\textsuperscript{57}E.g. in Ann. 10-12 (1927-9) figs. 624-7, 630-8, 640, 643.
\textsuperscript{58}K. Chr. 24 (1972) 245ff.
\textsuperscript{59}ibid., Pl. AB, 4.
\textsuperscript{60}Alaas, T. 16, no. 18, pls. 10 and 58.
\textsuperscript{61}AJA 5 (1901) 149-50.
11. KAVOUSI at VRONDA (Plate 2)
LMIII/SM-EPG, PGB, EG-MG.
(A:1)

The beautiful area of Kavousi, high in the mountains, is important in that it lies at the
northeast edge of the Isthmus of Ierapetra - the shortest and lowest passage on Crete
between the Aegean and Libyan seas. This passage is bordered by the foothills of the
Diktaean massif on the west and the Siteia Mountains on the east. The site of Kavousi
thus strategically commands the roads not only from north to south, but also from east
to west. These include the roads to the eastern harbours to the northeast three
kilometres away through a fertile plain producing olives, wheat and barley - south to
the Libyan Sea, east to upper Sitia, and west to Herakleion.

In 1900 and the following years Harriet Boyd excavated the remains of buildings and a
necropolis of eight tholos tombs on Vronda ("Thunder") Hill, southwest of Kavousi,
some 330 metres above sea level. They occupy a site which had been a peak
sanctuary in Middle Minoan times. This may have been a small "city of refuge".
All tombs except Tomb 3 (Vronda 4) had been plundered to some degree. Burial was
by inhumation. The publication is unclear in detail. A re-examination of the site and
re-appraisal of the finds was undertaken recently (1978-81) by the American team of
Coulson, Day and Gesell, thereby providing a valuable clarification, especially of
chronological detail. The ceramic contents of the Vronda tombs have now been
shown to indicate continued occupation in three general periods - SM-EPG, PGB, EG-
MG, with the most widespread being SM-EPG, but the heaviest use being in PGP.

62AJA (1901) 125ff.,
63Hutchinson, PC, 323.
64Hesp. 52 (1983) 387ff.
65Ibid, 405.
Of the forty vases found by Boyd in Vronda tomb 4 (or Boyd's tomb 3) only eighteen survive in the Herakleion Museum. Existing vases range from Subminoan to PGB. The Subminoan pottery includes a lentoid flask with short, slightly flaring neck, and a single round vertical handle from rim to shoulder. Its shape may be copied from Cypriot prototypes. Traces of concentric circles can be seen, with a large filled circle in the centre.

Another Subminoan vase from Vronda tomb 4 is an askos on a low pedestalled foot with a globular body decorated with hatched triangles on its shoulder and top. It has Subminoan parallels at Vrokastro, and at Pezoulas.

A bird vase in the same tomb is made. It has body decoration of triangles between vertical bands. These decorations are paralleled at Karphi.

Another bird vase has a cross-hatched inner triangle divided by vertical rows of dots. Yet another, unillustrated and undescribed, is mentioned.

Desborough designates a number of the vases in this tomb as belonging to the Late Mycenaean period (or "early"). Included in these are the askos, bird-vases and lentoid flask referred to above, as well as a straight-sided pyxis with vertical handles, a stirrup vase, two squat bowls, an amphora with broad bottom and two horizontal handles, and a little jug. These are illustrated - but badly - and not described. Coulson, Day and

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66Ibid., 397, fig. 4 (T.4, no.2.).
67Ibid. (T.4, no.4).
68Ibid., fig. 89, b and f.
69Ibid., fig. 5.
70BSA 55 (1960) fig.5.
71AJA 5 (1901) pl. 1 (mid row, third from right); id. Maximova, Vases Plastiques II, pl.10, no. 39; id. K.Chr. (1972) pl. AB, no. 4.
72AJA 5 (1901) 135.
73Ibid., pl.1.
Gesell note that these should be more accurately called Subminoan, considering them in the context of local developments in ceramic styles in East Crete.\textsuperscript{74}

In Tomb 7, among vases ranging from SM to PGB, was a stirrup jar.\textsuperscript{75} There was another stirrup jar in Tomb 8 with shoulder decorations of concentric arcs divided into quadrants.\textsuperscript{76} Three Subminoan vases were found in Tomb 9 - a bird vase, a stirrup vase, and a lentoid flask - not illustrated, but similar to earlier presented examples.\textsuperscript{77}

Some metal finds, including weapons, of both bronze and iron were reported by Boyd.\textsuperscript{78} Most of these were found in Tomb 3 (Vronda 4). A bracelet was composed of twisted and knotted bronze.\textsuperscript{79} There were several fibulae of bronze, including one of twisted wire, contemporary with Submycenaean.\textsuperscript{80}

Pieces of iron blade, and parts of iron swords and spear heads were also found. Other finds included a pick-axe and, from a house at Thunder Hill, a sword with blade and hilt entirely of iron, and probably of Subminoan date.\textsuperscript{81}

All the Vronda tombs were of similar size, but they varied in shape from round to rectangular.

References:
AIA 5 (1901) 125ff.
Ann. 10-12 (1927-29) 562ff., 582ff.
Hesp. 52 (1983) 389ff.

\textsuperscript{74}Hesp. 52 (1983) 399. n. 26.
\textsuperscript{75}Ibid., 401 (not illustrated).
\textsuperscript{76}Ibid., 402, fig. 6, no. 14.
\textsuperscript{77}Ibid., 136-7, fig. 4.
\textsuperscript{78}AIA 5 (1901) 133-4.
\textsuperscript{79}Ibid., 136. fig.3.
\textsuperscript{80}Ibid., fig. 2.
\textsuperscript{81}Ibid., 137, fig. 4.
12. KHAMAIZI at LIOPETRO (Plates 3,4)

LMIIC-SM, PG

(A:2)

Liopetro, the coastal location of the village of Khamaizi, is near Sitia. A cemetery was discovered in an area of low hills with arable land, containing several small built tholos tombs of similar shape to those found at Karphi. A number of vases and offerings were found in the plundered tombs, showing development from LMIIC into Subminoan\textsuperscript{82}. A ring vase and flask have been designated LMIIC by Kanta. The flask should, however, be considered Subminoan as it has concentric circles for decoration as on vases at Mouliana, and tomb 5 at Vrokastro of Subminoan date\textsuperscript{83}.

Three Subminoan stirrup jars each have a biconical body, conical base, prominent spout with spreading rim and airholes behind the false neck. One stirrup jar was decorated with parallel dashes on the spout and handles - as is typical for Subminoan\textsuperscript{84}. Kanta remarks that the shape of these stirrup jars has analogies with slightly earlier examples at Karphi\textsuperscript{85}.

The duck askos\textsuperscript{86} has parallels in shape at Karphi and Vrokastro\textsuperscript{87}. It has three small strut legs, a basket handle, and is decorated in the main with alternating diagonals, with occasional cross-hatching.

\textsuperscript{82}K. Chr. (1961) 386; Kanta, 176.
\textsuperscript{83}Mouliana - AE (1903) 27, Pl. 6; Vrokastro - Hall, Vrokastro, 89,b and f.
\textsuperscript{84}Kanta, pl. 125,1.
\textsuperscript{85}Ibid, 176, n.3.
\textsuperscript{86}K. Chr. 24 (1972) pl. AC.
\textsuperscript{87}Karphi - BSA 55 (1960) fig. 20; Vrokastro - Hall, Vrokastro, 152, fig. 92.1.
In 1977-8 Davaris reported the discovery at Liopetro, between Khamaizi and the sea, of several recently pillaged small square-plan built tholoi of SM-PG date. Finds included a duck-vas, stirrup jars, and a fine bronze knife with ivory handles.  

References:
K. Chr. (1961) 386.
Kanta, 176.
AD 27 (1972) 650
BCH (1977) pt.2, 644

88AR (1977-8); AD 27 (1972); BCH (1977) pt. 2, 644.
In the Kato Spilios Adiavatou cave a LMIII or Subminoan pithos was reported by Faure.

References:
Faure, *Fonctions*, 60.
14. KHOUMERIAKOS

LMIII, SM.

(B:2)

There have been LMIII finds in this village\textsuperscript{89}, and "Submycenaean" remains are mentioned by Van Effenterre\textsuperscript{90}.

References:
\textit{Études Crétoises} VIII, 5.

\textsuperscript{89} K. \textit{Chr.} (1958) 481.,
\textsuperscript{90} Ét. Crét. 8, 5.
Krya is situated on the road to Stavrokori, about 25 kilometres from Sitia.

Excavations between 1971-777 on a group of graves at Tsachali, a deserted spot on the lower slopes of the hill, revealed a cemetery of LMIII/Subminoan and Protogeometric. The grave goods in the many unpillaged graves were of generally poor quality. A complete stone-urned tomb with its funerary pithos and human remains was removed and is now in the Agios Nikolaos Museum\textsuperscript{91}. A bucranium of pressed gold decorated in dot-repoussé, was among the finds\textsuperscript{92}.

References: .

\textsuperscript{91}Illustrated in Davaros, C. Hagios Nikolaos Museum, pl. 72.
\textsuperscript{92}Ibid.
The city of Lato was built chiefly on the saddle of a twin-peaked hill. Surrounded by mountains, this grandiose settlement site would have been easily defendable. At a handy distance from the sea, communication and commerce, it was sheltered from sudden invasion from the coast and from the surrounding countryside. It was strategically placed to command the direct route which linked with the valley of Mirabello - i.e. the route from west to east. It was fortified on the southern acropolis. The settlement was probably founded in Subminoan times, and continued to flourish until the third century B.C. Individual buildings are, however, hard to date. The countryside of the area was fertile and productive, though water had to be brought up from the bottom of the mountain.

Remains of houses and other buildings, including a detached fort, were of superior materials, such as luxury stone and marble. Post-Mycenaean pottery and terracottas have been reported at this prosperous site.\(^\text{93}\)

A sanctuary and a cistern have been reported on the agora.\(^\text{94}\)

References:
\begin{itemize}
  \item \textit{BCH} 25 (1901).
  \item \textit{BCH} 27 (1903) 206ff.
  \item \textit{RA} (1913) 278ff.
\end{itemize}

\(^{93}\text{BCH}$ 25 (1901) 306-7.
\(^{94}\text{BCH}$ 27 (1903) 207.
17. LATSIDHA

Subminoan.

(B:2)

"Submycenaean" remains have been reported here by H. van Effenterre.95

References:
Effenterre, H.V. Nécropoles du Mirabello. Études Crétoises VIII (1948), 5.

95Effenterre, H.V. Nécropoles du Mirabello. Études Crétoises, VIII (1948), 5.
18. LENIKO
SM, G-Archaic
(A:2).

Leniko stands on a steep acropolis on the south-east slopes of Dikti in south-eastern Crete. The site is thus naturally defendable. It is about 200 metres above the village of Mythi, and 20 to 30 minutes climb to the north-east, at about 420 metres altitude. This beautiful place overlooks the very fertile valley of the river Myrto which stretches to the sea. It is on the route into the Lasithi.

Sherds of large pithoi of the Subminoan and Geometric periods have been found, plus various blackish vases. The site was apparently in use until the Archaic period\(^\text{96}\).

References:
*BCH* 89 (1965) 27f.

\(^{96}\textit{BCH} 89 (1965) 27f.$
19. METOXOKHORI

Neolithic, LMIII, SM, G

(B:1).

Faure reports the 'refuge' cave of Kleisidi with shrine and material from Neolithic, LMIII, SM, and Geometric, of which he gives no description\(^7\).

The area of these finds in the eastern Mesara, is lush and beautiful. The cave, about 30 metres in depth, has three chambers with tall stalagmites resembling those in the Minoan caves of Trapezi in Lasithi and of Eleuthyia near Amnisos.

References

*Faure*, Fonctions, 60.
*BCH* 80 (1956) 100, n.3.

\(^{97}\) *Fonctions*, 60.
20. MONASTIRAKI

Subminoan.

(B:2)

Monastiraki was situated on the easy road across the Ierapetra isthmus from Ierapetra to Pakhyammos.

Pendlebury observed an unexcavated "Subminoan" site at the Palaealemata location above the village.

References:
BSA 38 (1937-8) 137.
21. MESA MOULIANA at SELLADES

LMIII-PG.

(A:2)

Sellades is 19 kilometres from Sitia on the main Sitia-Agios Nicholaos road, well to the east of Vasiliki. It is sited on high but fertile ground surrounded by mountains, with easy access to the sea.

Two tholos tombs of probably wealthy people were found by Xanthoudhis and reported in 1904. Tomb B is of the twelfth century, but Tomb A may go on into the Dark Ages. The dating of Tomb A is still problematical, as there were two interments - an earlier inhumation (early LMIIIC) and later cremations (possibly going into Protogeometric). The bell-shaped krater which held a cremation is LMIIIC/SM in style, but possibly later in date. Snodgrass suggests that it may be of the eleventh or early tenth century, while Desborough assigns it to the latest LMIIIC-SM. The krater is of pictorial style, depicting a hunting scene and a man on horseback which may be of ritual significance. Its decoration of white on red shows a survival of the Kamares style. It is closely matched by Mycenaean IIIC:IC types, in its wavy lines and accessory semi-circles. Though Mycenaean in character, it is of Cretan execution.

Furumark dates the two cremations LMIIIB:2A and LMIIIB:2C (i.e. equivalent to Subminoan in our scheme). The burials can be compared with the advanced Subminoan Tylisos cremation burial and the late Subminoan Vrokastro burial at

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98AE (1904) 1-56.
99ibid, pl. 3A.
100DAG, 168.
101LMTS, 26, 27, 177, 188.
102AAA (1973) 315-323.
104AM 56 (1931) 112-18, figs. 1-4.
Vases in the second cremation included the globular flask and the smaller bowl\textsuperscript{106}. The form of the almost globular flask was unusual for the time. It had no base and was decorated with concentric circles. Other late flasks in Crete were in the chamber tombs at Vrokastro, and at Kavousi. Both of these indicated Cypriot influence\textsuperscript{107}. It is probable that this Levanto-Mycenaean flask was an import. The smaller bowl was covered with paint except for the lower part which was edged with two lines.

Also in the tomb were a pyxis, three stirrup jars (earlier than Subminoan) and three bronze-hilted swords (of the latest Bronze Age), two fibulae (one of which is Submycenaean)\textsuperscript{108}, a pin, a pair of lances with two spearheads, several bronze plaques, and five or six bronze vases. Among these last was a bronze jug which, as Müller-Karpe has pointed out, demonstrates the continuation of high standard metalwork technique into the Iron Age. Tomb A also contained a gold shield-shaped ring\textsuperscript{109} which resembled one in Vrokastro Tomb I\textsuperscript{110} which has been attributed to Subminoan by Snodgrass\textsuperscript{111}.

Among Mycenaean contents in Tomb were a number of bronze weapons, a piece of iron, and a gold ring.

References:
\textit{AE} (1904) 1-56.
\textit{LMTS}, 27, 177, 188.
\textit{PGP}, 269ff.

\textsuperscript{105}Hall, Vrokastro, 173, pl. 27:1.
\textsuperscript{106}AE (1903) 27, pl. 16.
\textsuperscript{107}See Kania, 281.
\textsuperscript{108}AE (1901) fig. 7. See Jacobstaal, \textit{Greek Pins}, 2.
\textsuperscript{109}AE (1901) fig. 8.
\textsuperscript{110}Hall, Vrokastro, 138, fig. 82.
\textsuperscript{111}DAG, 250.
In the cave of "To Kleisidi" near Myrtos in Southern Crete, remains of Neolithic, LMIII, SM and G periods have been found. The cave, about 30 metres in depth, has three chambers with tall stalagmites resembling those in the Minoan caves of Trapezi in Lasithi, and of Eileithyia near Amnisos.

References:
*BCH*, 80 (1956) 100, n.3.
23. OLOUS area

LMIIIB, SM.

(A:2)

The present-day town of Elounda is situated on the west side of the Mirabello coast, about the isthmus between the mainland and the peninsula which ends at the fortress of Spinalonga. This is almost the same place occupied by the ancient city-state of Olous, which was the port of Dreros.

The site was excavated long ago, and reported by V. Effenterre who dated it to LMIIIC/SM\textsuperscript{112}. In 1980 Kanta pointed out that the material from the cemetery did not date to later than LMIIIB, and that the cremations belonged to the LMIIIA period. They were thus the earliest known cremations in Crete\textsuperscript{113}.

Two pieces of evidence indicate that there may have been some sort of occupation - however slight - in the Subminoan period in the Olous area. Two figurines were found in the cave at Sto Trachili and designated Submycenaean by Effenterre\textsuperscript{114}. They closely parallel examples found at the "piaccale dei saccelli" at Hagia Triadha of LMIIIC/SM date\textsuperscript{115}.

More recently an excavation revealed a pithos burial probably of Subminoan date containing a LMI talismatic seal\textsuperscript{116}.

\textsuperscript{112}Et. Cret. 7 (1947)
\textsuperscript{113}Kanta, 129.
\textsuperscript{114}Et. Cret. VII, pl. 39,2.
\textsuperscript{115}Ann. 3-5 (1941-3) fig. 49.
\textsuperscript{116}AR (1978-9) 41.
Bronze metal finds of the twelfth and eleventh centuries have also been reported in the Olous area.\textsuperscript{117}

If there was Subminoan occupation of Olous, it probably was slight. It seems likely that, as Kanta suggests, the majority of the inhabitants of Olous moved away from the coast after LMIIB to the area of Dreros.

\textbf{References:}
\textit{AR} (1978-9) 41.
\textit{Kanta}, 129.

\textsuperscript{117} \textit{Et. Cret.} VII, 8,9.
24. PACHLITSANI AGRIADHA
LMIIC/SM-C.6 B.C.
(A:2)

Alexiou reported in 1951 his excavation of a shrine of a goddess (probably Eileithyia) on the site of Pachlitsani Agriadha near Kavousi, at an altitude of 200 metres. It may have been founded at the very end of the LMIII period, but was still in use in the sixth century B.C.118. A small oblong structure, built of large irregularly hewn stones, with a ledge for sacred objects, it resembles LMIII household shrines at Knossos, Mallia, Hagia Triadha and Gournia, and is similar to the shrine at Karphi. It contained female figurines and votive offerings which dated to Subminoan, Daedalic and Archaic times.

References:
Hutchinson, Prehistoric Crete, 323-4.
K. Chr. 5 (1951) 442-3.
K. Chr. 10 (1956-7) 7-19.

118 Hutchinson, Prehistoric Crete, 323-4.
Palaikastro is on the northern end of the east coast 20 kilometres from Sitia. It overlooks a small bay with a good natural harbour, protected by the islet Grandes - a position providing a convenient anchorage for eastern trade.

The area of Palaikastro has yielded EM, MM and LM remains, flourishing particularly in the early Late Minoan period.

In 1903 Dawkins and Tod excavated seven LIIIIC/Subminoan houses at Kouremenos to the north of the village of Angathia, on the 'Kastri' bluff close to the sea\(^{119}\). The houses were of large stone blocks and contained a megaron. They resembled in general plan the normal megalithic homesteads of East Crete. The pottery included only a small amount of painted ware, indicating a poor area. There was also a bronze pin.

References:
BSA 9 (1902-3) 329ff.

\(^{119}\)BSA 9 (1902-3) 329-335.
26. PLAKA

Subminoan.

(B:2)

This site is on the north-west coast of the Gulf of Mirabello. "Submycenaean" remains have been observed here by Van Effenterre\textsuperscript{120}.

References:

\textsuperscript{120} \textit{Ét. Crét. VII} (1948) 5.
The ruins of the ancient town of Praisos were first discovered by Halberr in 1884\textsuperscript{121}, and further explored by Platon\textsuperscript{122}. It was situated in country which is mainly rough and mountainous, 17 miles south of Sitia, at an altitude of some 420 metres. The ancient city was built on three cone-shaped hills at the north-west side of the plateau of Armenoi, between the two streams which join to form the Sitia river. A number of roads connected at Armenoi from the east, west and south-west.

Praisos seems to have been occupied more or less continuously from Late Minoan to Hellenistic times. It became an important centre at the very end of the Bronze Age, its dominion extending over much of Sitia. The evidence is fairly scant, and more excavation is needed.

A "Submycenaean" homestead was excavated in a lateral valley near a spring a mile away from the acropolis\textsuperscript{123}.

A strongly Minoan tradition survived into later times. Subminoan finds have been found in a number of areas - at Photoulos, at the hill of Platalonia, the hill of Potistiria, at Kato Kefali Spetsoti, as well as in the acropolis area.

References:
\textit{AR} (1901) 339.
\textit{BSA} (1901) 286-316.
\textsuperscript{121}\textit{BSA} (1901) 339.
\textsuperscript{122}\textit{PAE} (1960) 294-307.
\textsuperscript{123}\textit{PAE} (1960) 294\.\textsuperscript{f}
28. PRAISOS at PHOTOULOS

LMIIC-SM

(A:2)

In 1960, in the Photoulos area 15 minutes northeast of the village of Praisos, Platon cleared a LMIIC-Subminoan rectangular tholos tomb with bronze items, vases, and jewellery\textsuperscript{124}. Some of the vases correspond with LMIIC vases from Mouliana and Karphi - e.g. the stirrup jars, while others resemble LMIIC/Subminoan examples from Karphi - for example, the cylindrical pyxis\textsuperscript{125}, and the miniature jug\textsuperscript{126}. The jug has a globular body, ring base and narrow neck like the Karphi vase\textsuperscript{127}.

References:

*Ergon* (1960) 212-3
*K. Chr.* (1960) 514f.

\textsuperscript{124}PAE (1960) 303ff; Ergon (1960) 212-3; K. Chr. (1960) 514f.
\textsuperscript{125}Kanta, 68,2.
\textsuperscript{126}ibid, 68,6.
\textsuperscript{127}BSA 38 (1937-8) fig. 9.
29. PRAISOS - Hill of Platalonia

LMIII, SM, PG

(B:1)

At the hill of Platalonia, which dominates the sources of the Pentelis, south of the modern village, Faure has reported many ruins of LMIII, Subminoan and Protogeometric. This was probably a "refuge" settlement established at the end of the Bronze Age, similar to Krya and Sphakia at Kastri.

References:
BCH (1962) 39.
Kania, 182.
30. PRAISOS - Hill of Potistiria

Subminoan.

(B:1)

Faure sighted and reported a small "refuge" town with long walls and lots of Subminoan sherds. It was situated on a small hill 200 metres southeast of Krya129.

References:
BCH (1962) 39
Kanta, 182.

129 BCH (1962) 39
31. SEISI

Subminoan.

(B:2)

At Seisi, in the Mirabello district, a deposit of "Subminoan" sherds, and figurines, plus a building, were investigated by C. Davaris, but have not been described\textsuperscript{130}.

\textbf{References:}
\textit{K. Chr.} (1963) 405.
\textit{AD Chrons.} (1964) 442.
32. SFAKIA at KASTRI
LMIIIA,B,C, SM.
(A:2)

A "Subminoan" acropolis has been noted at the Kastri location by Platon. He found traces of a LMIII building which may have been a small peak sanctuary, and which contained material dating from Subminoan to Archaic\textsuperscript{131}.

References:
K. Chr. (1956) 413.
K. Chr. (1961) 386.
AD Chrons. (1962-3) 290.
BCH 80 (1956) 359
PAE (1955) 294ff.

\textsuperscript{131} PAE (1955) 294ff.; Bintliff, Natural Environment, 150.
A Subminoan stirrup jar with a decoration of spirals and hatched triangles was found at the Kouri location.

References:
BCH Chrons. (1956) 359.
K. Chr. (1956) 413.
K. Chr. (1951) 386.
AD Chrons. (1961-2) 290.
At a site below the Patela Platon found a tholos tomb with small circular chamber and short dromos with fifteen burials. Desborough has described the material in this tomb, which was used during Protogeometric, as apparently ranging from Subminoan or Protogeometric to Geometric\textsuperscript{132}.

More recently, Kanta has examined some other vases from this tomb, now in the Herakleion Museum, and has dated them from LMIIIA-B and advanced LMIIIB\textsuperscript{133}. It seems that this tomb may have been used and re-used over a long period.

References:
Bintliff, *Natural Environment*, 150.
*PAE* (1955) 294ff.
*BCH* 80 (1957) 359.
*K. Chr.* (1955) 563.
*LMTS*, 268.

\textsuperscript{132}LMTS, 268. These dates were allocated very tentatively, as little material was available for examination at the time.
\textsuperscript{133}Kanta, 186-7.
35. SKHINIAS at MORONIKITA (Plate 13)

LMIII, SM.

(B:2)

"Submycenaean" remains in the area of the village of Skhinias at the Moroni kita location were seen by Van Effenterre, and later s small decorated LMIII jug was noted from the site.134

References:
K. Chr. (1957) 339.
Et. Cret. 8 (1948) 5.

134Et. Cret. 8 (1948) 5; K. Chr. (1957) 339.
At a low-lying site three kilometres south-east of Gournia at the isthmus of Ierapetra, on the kephala at Vasiliki, a settlement and burials, dating from EMII, were excavated in the early 1900's\textsuperscript{135}. Recently the site has been further explored by A.Zois for the Archaeological Society of Athens\textsuperscript{136}. Several other houses of the settlement were discovered belonging to various periods. The old excavation was cleared and stratigraphically examined. The new material now shows that the site was occupied without interruption from EMIII until Protogeometric times\textsuperscript{137}.

References:
\textit{PAE} (1972) 274-309.
\textit{Ergon} (1972) 113ff.
\textit{AR} (1975-6) 31.

\textsuperscript{135}Seager, \textit{Excavations at Vasiliki} (1906) 129-132.
\textsuperscript{137}See also \textit{AR} (1974) 28; \textit{AR} (1975-6) 31; \textit{AR} (1976-7) 66-7.
Near the narrow isthmus of Ierapetra, Vrokastro is on a steep hill, naturally defended and with a fine view, on the east side of the Kalo Khorio valley. It is situated in the foothills which border the plain which descends to the Gulf of Mirabello 300 metres below. Fishing from the nearby sea probably boosted the economy of Vrokastro\textsuperscript{138}, while the rolling hills surrounding the site and the nearby coastal fields were no doubt used for olive and wheat production as they are today.

The area of Vrokastro had been occupied in Middle Minoan times, but after a possible interruption, the rather poorly-built town was again used continuously from LMIIIB/C, through Subminoan, Protogeometric and Geometric (c. 1200-700 B.C.)

Beginning in 1910 Vrokastro was excavated by Hall and Seager, and some of the findings were published by Hall in her \textit{Excavations in Eastern Crete, Vrokastro} in 1914. The findings of the chamber tombs have been discussed by Levi\textsuperscript{139} and by Desborough\textsuperscript{140}.

Most of the published settlement material is LMIII in date, but Desborough\textsuperscript{141} describes two vases as Subminoan :- one a straight-sided kalathos with excrescent

\textsuperscript{138}Hesp. 52 (1983) 369, and n.10.
\textsuperscript{139}Ann. 10-12 (1927-9) 551ff.
\textsuperscript{140}PGP, 262-8; \textit{LMTS}, 185ff.; \textit{GDA}, 117.
\textsuperscript{141}PGP, 262.
cup\textsuperscript{142} which is similar to a kalathos from Dreros\textsuperscript{143}, the other a bowl from the north side of the hill\textsuperscript{144}.

As well as the settlement material there were also a number of burials dating from LMIIIB, including seven chamber tombs, three of which (tombs 5, 6 and 7) were found together on the lower foothills west of Vrokastro, on the slopes of the Kopranae\textsuperscript{145}. These circular tombs, in use in the Subminoan period, each contained several burials (unusual in Minoan practice) and exhibit both inhumations and cremations.

Tomb 5 contained a large stirrup jar\textsuperscript{146} with no air-hole and flat base decorated with horizontal bands, and a hatched area with a row of curls beneath, similar to one in Dreros Tomb 1\textsuperscript{147}. Also in Tomb 5 were two flasks with concentric circle decoration, one of which was one-handled\textsuperscript{148}, and the other two-handled\textsuperscript{149}. Both of these flasks were of Cypriot influence. Other vases in the tomb included a dipper with bird's head and zig-zag line decoration\textsuperscript{150}, two two-handled kylikes\textsuperscript{151}, and a small trefoil-lipped oinochoae\textsuperscript{152} with horizontal lines and shoulder-decoration of a row of triangles and laddered border which, in shape, resembled examples found at Knossos Spring Chamber\textsuperscript{153} and at Panaghia\textsuperscript{154}. Also in tomb 5 were parts of three small bell-kraters each with their lower body and foot unpainted, and two other stirrup-jars with air-

\textsuperscript{142}Hall, \textit{Vrokastro}, fig. 57,B.
\textsuperscript{143}Effienterre, \textit{Necropoles du Mirabello, Et. Cret} (1948), pl. 10 (D7).
\textsuperscript{144}Hall, \textit{Vrokastro}, 118, pl. 29,2.
\textsuperscript{145}ibid, 149ff.
\textsuperscript{146}ibid, fig. 89.l.
\textsuperscript{147}Et. Cret. (1948) pl. 10 (D10).
\textsuperscript{148}Hall, \textit{Vrokastro}, fig. 89f.
\textsuperscript{149}ibid. fig. 89g.
\textsuperscript{150}ibid, fig. 89d.
\textsuperscript{151}ibid, fig. 89a.
\textsuperscript{152}ibid, fig. 89.b.
\textsuperscript{153}Evans, \textit{PM II}, fig. 69A.
\textsuperscript{154}Ann. 10-12 (1927-9) figs. 512, 516.
holes, one decorated with horizontal bands and hatching\textsuperscript{155}, and the other with slanting lines\textsuperscript{156}. Other material in this tomb included an iron knife\textsuperscript{157}, two bronze earrings\textsuperscript{158}, a bronze fibula of twisted wire type\textsuperscript{159} which resembled one from Kavousi\textsuperscript{160}, as well as faience beads and obsidian chips.

Chamber tomb 6, which showed no signs of cremation, contained pottery closely resembling material from Knossos. A large flaring bowl or kalathos\textsuperscript{161} resembled examples from Tylisos\textsuperscript{162} and Knossos at Fortetsa\textsuperscript{163}, and at the Stratigraphical Museum site\textsuperscript{164}. Two bird-vases with three knobs and a handle above were decorated in one instance with bands and waved lines following the contours of the vase\textsuperscript{165}, and in the other with much cross-hatching\textsuperscript{166}. A stirrup jar with air-hole and knob on false spout had hatched triangle decoration\textsuperscript{167}. An askos was a combination of bird-vase and stirrup jar, and was decorated with horizontal bands and hatched triangular decoration on top\textsuperscript{168}. In shape and decoration it was close to an example from Kavousi, Vronda\textsuperscript{169}. Also in tomb 6 was a bronze ring, a coiled iron ring, an iron knife-end with four bronze rivets on the tang\textsuperscript{170} of the type found at Knossos,
Gypsades tomb 7171, and at mainland Perati172; and finally, a large bronze fibula with high forearm173, similar to fibulae from Kavousi174 and Tylisos175.

Chamber tomb 7 at Vrokastro contained a bell-krater and three stirrup vases with hatched triangular decoration and air-holes holes and knobs on their false spouts176, a bronze ring with three coils and an iron spearhead.

In 1983 Hayden published a new plan of the larger, lower portion of the settlement excavated in 1912, but not published earlier177. The lowest level of the north slope settlement, forty to sixty metres below the summit, contained a northern encircling wall which may have been employed for defence as well a shelter. The house buildings were simple two -to -three-room structures - "mean, rude, irregular"178. A "bench sanctuary" is noted, with figurines. It was a type of shrine derived from the Minoan period and continuing into the Iron Age, in the same way that the houses did also179.

A gold ring from a tholos tomb is hard to date180.

References:
Hall, Excavations in Eastern Crete, Vrokastro (1914).
PGP, 262ff.
LMTS, 185ff.
GDA, 117.

171BSA 53-4 (1958-9) fig. 32, VII, 12.
172Prak. (1954) 98, fig. 10; Prak. (1955) 106, pl. 31b.
173Hall, Vrokastro, pl. XIX, c.
174(Vronda) AJA 5 (1901) 136, fig. 2,b.
175AM 59 (1931) 115, fig. 3,b.
176Hall, Vrokastro, figs. 93, a and b.
177Hesp. 52 (1983) 367f; idem, Exped. (Spring 1983) 12-25.
178In the words of the original excavator.
179Ibid., 18.
180GDA, 304.
38. ZAKRO at (EP)ANO ZAKRO

Neolithic, LMIII, SM, PG.

(A:2)

At an altitude of 714 metres, dominating the rich Zakro plain and port, Epano Zakro is the main village of the district of Zakro. Faure reports a cave shrine some eight kilometres inland from Kato Zakro, with remains from Neolithic, LMIII, Subminoan and Protogeometric times. The whole area has shown traces of Minoan habitation. The finding of a LMIIIIC-type ash urn at nearby Palaimylos in the shape of a decorated pyxis was reported in 1973 and 1978, and demonstrated the early use of cremation in East Crete.

References:
AR (1978-9) 41.
AD 28 (1973) 591-2.

181Fonctions, 60.
182AD 28 (1973) 591-2; AR (1978) 41.
39. KATO ZAKRO at LENIKA GORGE (Plates 14,15)

MM, LM, SM.

(A:2)

The port site of Zakro, on a poor and mountainous part of the coast of Crete, consists chiefly of two spurs and the valley between. It possessed one of the more important harbours of Crete especially in Minoan times when it was possibly an Eastern trading port for Knossos. It was the first landfall for ships sailing from the Southeast Mediterranean.

A Subminoan "refuge" settlement was found on an inaccessible hill along the Lenika Gorge ("Gorge of the Dead") where it widens out. In the remains of a building some pithos and vase sherds and some implements were found - two whet-stones, four pounders, weights and a conical whorl\(^{183}\). LMIII pottery has also been found at Lenika\(^{184}\), and nearby Kato Zakro has evidence of important Middle Minoan, Late Minoan and later occupation, including a palace which was destroyed about 1450.

References:

*PAE (1962)* 167f.
*Kanta*, 195.
*PAE (1963)* 187ff.

\(^{183}\) *PAE (1962)* 167.
\(^{184}\) *Kanta*, 195.
40. Ziros at Plagia

MM - SM.

(B:1)

A peak sanctuary on the sacred mount of Plagia was found occupying a small plain in the mountains of the Siteia peninsula. Located at an altitude of 795 metres it served the vaste community of Ziros and the surrounding area continuously from Middle Minoan to Subminoan times.\(^{185}\)

At the Pentalitros location Faure reports an acropolis which was occupied from LMIII to the end of the Oriental period.\(^{186}\)

References:

*K. Chr.* (1963) 406.

(1964) *Chr. 3*, 442.

*BCH*, 89 (1965) 28, 29.

*Kanta*, 197.

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\(^{185}\textit{BCH} (1965) 28, 29.\)

\(^{186}\textit{Ibid}, 28.\)
WEST CRETE

1. CHANIA at KASTELLI
   Neolithic - Greco-Roman.
   (A:1)

Chania is sited on the north west coast of Crete, facing the Peloponnese. Nearby is its port, Souda, on the Bay of Souda - the largest and most secure natural bay of Crete, and indeed the whole Mediterranean. Chania also has a very fertile hinterland. It may have been an important commercial centre in ancient times, shipping oil in stirrup jars, etc. to the mainland.

Ancient Greek Kydonia was situated where Chania now is located. Kastelli was an important site, inside the old town of Chania, which was recently discovered by Greek and Swedish archaeologists who found large quantities of pottery - from Neolithic through Graeco-Roman times. Settlement evidence was particularly strong in IIIB, though also in III C, with a few sherds of the end of IIIC or Subminoan, and Subminoan to Protogeometric, some Protogeometric and more Geometric and Orientalizing. Occupation was thus shown to be continuous\textsuperscript{187}. A chamber tomb of Subminoan/Protogeometric is reported. The evidence, with references, and including pottery descriptions is reviewed in some detail by Kanta in *The Late Minoan III Period in Crete*\textsuperscript{188}, and by Kanta and Tzedhakis in *Kastelli Chanion* 1966 (1978).

Kanta remarks on the strong Mycenaean influence in the IIIC material. Decorations include the use of the reserved band, concentric semicircles, wavy lines, and panelled

\textsuperscript{187}AD Chrons. (1971) 508-9; Kanta, *Kastelli Chanion*; AA 45 (1930) 167; AA 45 (1930) 167.
\textsuperscript{188}Kanta, 217ff.
patterns - many of which were features used in Subminoan times in other parts of Crete.\footnote{Kanta, 221-2.}

References:
Kanta, 217-228.
AA 45 (1930) 167.
2. MELIDHONI in STA KHALSMENA CAVE

Neolithic, EM, LM, SM, Archaic-Roman.

(B:2)

One of several caves of Neolithic, Minoan and later use in the area of Melidhoni, the Sta Khalsmena Cave has three rooms in one of which is Late Minoan pottery and one Subminoan sherd. Of painted pink clay, this sherd is incised.

The cave is situated in the gorge of Leranes at an altitude of about 220 metres, and one kilometre as the bird flies west of Melidhoni, at the foot of the Triakofalia massif. The cave is 30 metres long.

References:
BCH 86 (1962) 42-3.
BSA 60 (1955) 112.
3. PEMONIA

LMIIIB, SM, Roman

(B:2)

The cave of Skolakas - both deep and wide - contained plentiful natural formations of calcium and numerous LMIIIB and Subminoan dishes or large basins, designed to catch the dripping water. Faure suggests that these, plus discarded animal bones, and Roman and Mediaeval sherds, lead one to think that the cave was used as a shelter in times of insecurity.\(^{190}\)

References:
Faure, P. *Fonctions des Cavernes*, 61. 
*BCH* (1962) 43.

\(^{190}\) *BCH* 86 (1962) 43.
4. VRYSES at HAGIOS IOANNIS
SM, PG.
(A:2)

The site of Vryses dominates an area four kilometres from the coast. Numerous archaeological remains have been found in the surrounding area. Near Modi at Hagios Ioannis, twenty minutes northeast of Vryses, eight tombs were found in 1952, dating from the period 1100-900 B.C. These included both cremations and corpses in funerary pithoi. Objects found included vases with Subminoan-type chequor-board or broken-line decoration, a bronze fibula, long swords and lance-heads of iron.

References:
Kr. Chr. (1953) 485-6.
BCH (1953) 240
In the Vryses area near Timios Stavros some chamber tombs of the same era (Subminoan/Protogeometric) as those at nearby Agios Ioannis were found and reported by Theophanides in 1939\textsuperscript{191}. They were also mentioned by Hood in 1965\textsuperscript{192}. The finds were not described, but have been called Subminoan.

References:

\textit{EEKS 40} (1940) 485.
\textit{BSA 60} (1965) 106.
\textit{BCH 82} (1958) 499-500.

\textsuperscript{191}EEKS 3 (1940) 485.
\textsuperscript{192}BSA 60 (1965) 106.
EAST CENTRAL CRETE

1. AFRATI

LMIIC/SM - G, EO.

(B:1)

On the eastern end of the Mesara plain, within the territory around Agios Ilias hill, the site of ancient Arkhades, Halberr identified a series of Subminoan and Protogeometric centres, including Erganos, Panaghia and Afrati. All three were situated near summits above fertile valleys with water. Afrati was on the Agios Ilias hill between Emparos and Niphiditos.

Pendlebury refers to Subminoan tholos tombs at this site. Traces of prehistoric remains (including terrace walls) - some called Mycenaean - were seen here by Halberr, and a LMIIC vase is noted by Kanta.

Later material included Geometric and Early Orientalizing pottery, as well as terracotta figurines and various bronze finds.

Afrati was to become an important proto-Hellenic centre.

References:
AJA 5 (1901) 283ff.
BSA 38 (1937-8) 111.

193AJA 5 (1901) 283f.
194BSA 38 (1937-8) 111.
195AJA 5 (1901) 283ff.
196Kanta, 5.
197Ann. 10-12 (1927-9) 1ff.
2. AMNISOS
MM - Roman
(A:2)

Amnisos was an important port of Minoan and early post-Minoan Knossos. Situated on the coast eight kilometres east of present-day Knossos it had a long sandy beach for easy landing.

The site was excavated through the 'thirties by Marinatos. Layers of LMIII and Subminoan pottery were found below the low hill west of the villa near the shore in the temple of Zeus Thenatos. The monumental cistern of Amnisos is comparable to that at Tylisos, and apparently contemporary.

Some of this pottery is illustrated. At this spot all phases of Minoan history seem to have been represented, and persistence of cult without gap is shown from Middle Minoan to at least Roman times.

References:
PAE (1935) 196-203
Kanta, 38
PAE (1932) 80.
PAE (1933) 93-4.

198 The post-Minoan finds were reported in PAE (1935) 196-203.
199 Kanta, 12.
200 Ibid, figs 16,17.
Continuity of cave sanctity and cult from Minoan (c. LMIIIB) down to post-Minoan (Subminoan) times is demonstrated in the cave at Eileithya south of Amnisos.

Eleithya was the daughter of Hera, and goddess of childbirth. The cult was widespread in Crete (though also in Greece) in such cities as Lato and Eleutherna. The cave of Amnisos was only consecrated from the time its waters were designated of special value - probably at the end of the Bronze Age. The cult had periods of "crises" and intense periods.

The cave material was unstratified, but included offertory bowls and cups of the LMIII and a Geometric vessel.

References:
PAE (1929), 94-104.
PAE (1930) 91-99.
Kanta, 42.
Faure, Fonctions, 82f.
4. AMPELOUZOS
LMIIC - SM.
(B:2)

Ampelouzos is situated in the Mesara Plain, northwest of Gortyn. Kanta describes
finds made at this site from LMIIC into Subminoi - i.e. the period contemporary to
that of the Spring Chamber at Knossos\textsuperscript{201}. A deep bowl with an elongated body has
its upper part covered with paint, and inside has a reserved band around the rim. A
form similar to this was found in the Spring Chamber\textsuperscript{202}, and the type was also found
in Protogeometric times\textsuperscript{203}.

There was also an oinochoe with a biconical body, conical foot, narrow neck, handle
slightly raised above the rim, and a wide trefoil mouth. It is a shape which goes from
LMIIC into Protogeometric. It has a triglyph decoration of groups of four parallel
lines\textsuperscript{204}.

References:
\textit{Kanta}, 90; fig. 141:9.

\begin{footnotes}
\textsuperscript{201} Kanta, 90.
\textsuperscript{202} PMII, 136, fig. 69
\textsuperscript{203} See BSA 55 (1960) pl. 35:1.
\textsuperscript{204} Kanta, fig. 141:9.
\end{footnotes}
5. AVDHOU at SPIRIARIDHIA CAVE

Mycenaean - historic.

(B:2)

Avdhou is found about 39 kilometres from Knossos along the southeast road to the Lassithi Plateau in the beautiful green valley of Langada. It is only twelve kilometres from Karphi, and may have been occupied at least seasonally when used for olive production by the inhabitants of Karphi.

The cave served as a cult place from Mycenaean times to the historic period. A series of rather crude bronze and clay figurines from this cave served as votaries. They had one hand on the head, and the other on the waist or on the chest\footnote{Kanta, fig 24:9.}. Kanta thinks they were probably Subminoan or early Protogeometric\footnote{Ibid, 71.}. There were also some bronze tools, and some clay Daedalic plaques.

References:
BCH Chrons. (1922) 522.
EEKS Chrons. (1938) 614, 615.
The village of Erganos, to the north-east of Afrati, was situated on four irregular hills in a cliffed and rocky mountain area. Approached through a steep valley above the Pediada plain, it overlooked Mt. Ida, and lay on the southwestern foothills of the Lasithi plain. It was surrounded by fertile and well-watered tablelands with cornfields and pasture, and in the valley below by lands growing olives and cedars, while the seashore was within distant view 1000 feet below.

The site was explored by Halberr in 1893\textsuperscript{207}. He described it as a "little city" of medium importance - a large village of shepherds and hunters and maybe brigands. Erganos, like nearby Afrati and Panaghia, may have been established as a "refuge" settlement in early LMIIC, and was still in use in Subminoan, Protogeometric A, and possible Geometric times.

Halberr found three developed tholos tombs with inhumation, of LMIIB-Subminoan date, on three hills, and right above the tombs on the highest hill, the remains of a settlement similar to Karphi (a house and tower) with sherds of the same period as those in the tombs. In the one intact tomb of the three, a pyxis containing bones was found\textsuperscript{208}. It was 27cms. in height, with panelled decoration of quatrefoil rosettes (a common motive first used in LMIIB) and zig-zag lines and concentric arcs. The shape is taller than the usual LMIIC examples, and is probably very early Subminoan as it is comparable to the Subminoan pyxis from Vrokastro\textsuperscript{209}.

\textsuperscript{207}AJA (1901) 262-281.
\textsuperscript{208}AJA 5 (1901)
\textsuperscript{209}Hall, Vrokastro., pl. 30.
Most of the pottery has been dated by Kanta to LMIIIC\textsuperscript{210}, and the settlement shows close analogies with Karphi (LMIIIC-Subminoan).

References:
AJA 5 (1901) 262-281; 294-301; 302-314.
Kanta, 75-76.

\textsuperscript{210}Kanta, 75-76.
7. GORTYS (Plate 16)

Neolithic-Minoan, LMIIIIB/C, SM, PG. Archaic.

(A:2)

Gortys lies 45 kilometres from Herakleion on the road to Phaestos, and to its east, in the foothills on the Mesara plain. Gortyn's site was markedly propitious, being close to the rich plain, irrigated to the south by the Lethe and its tributary between the hills, plus possessing the possibility of effective defence from the very steep heights overlooking the plain - of the Idaean massif on the north, and the Asterusian chain on the south.

The area had been occupied from Neolithic times. Gortyn, which was to become one of the mightiest city states of classical Greece, was only an insignificant settlement in Minoan times. The most substantial findings of the Italian School under Levi, investigating between 1956-61, were on the acropolis where, under an Archaic temple of Apollo, Submycenaean foundations were found. A deposit of votive offerings from this spot ranged in date from Submycenaean to Roman times. The new settlement on the east side of the acropolis, examined by Levi between 1954-7, was small. A fortification wall and some stone houses of poor construction were found here, but incompletely excavated, and there were pottery finds which ranged from earliest LMIIIC (some even LMIIIB) to Subminoan and Protogeometric\textsuperscript{211}. As at Phaestos, there was probably continuous occupation from its beginning through the tenth into the ninth centuries. It must be noted, however, that the stratigraphy is incomplete, and there is confusion in publication re dating\textsuperscript{212}. The material in part belongs to the same chronological stage as that of Tylos (IIIC-Subminoan, and early Protogeometric). There are similarities in decorations, paint, clay and slip. Though much of the pottery


\textsuperscript{212}See\textit{ Kanta} , 92.
is fragmentary, and very little has been illustrated, several Subminoan motives are included in the decorations, as they are at Phaestos - such as spirals, fringing and wavy lines\textsuperscript{213}. Other Subminoan motifs were sets of thin and thick encircling bands, languettes, zig-zag triangles with rectilinear filling, cross-hatching, vertical lines, and curvilinear ornaments\textsuperscript{214}.

Small animal and human figurines found on the site are paralleled at Hagia Triadha\textsuperscript{215}.

With the sherds three bronze fibulae of violin-bow and arched types were found\textsuperscript{216}, the latter probably falling within the eleventh century\textsuperscript{217}.

References:
Kanta, 91-92.

\textsuperscript{213}Gortina, 116, 119-201, and figs. 200, 205, 206, 232; Ann. 33-34 (1955-56) fig. 13.
\textsuperscript{214}Ann. fig. 13:1,2; Gortina, fig. 200:1,3,8; fig. 205,3; fig.232:1,2.
\textsuperscript{215}Gortina, figs. 84, 85; Ann. 37:1.
\textsuperscript{216}Ann. 33-34, 216-7, fig. 33.
\textsuperscript{217}According to Desborough, GDA, 116.
Hagia Marina is situated on the coast an hour west of Herakleion. A Subminoan to Protogeometric circular chamber tomb with a dromos contained two Subminoan vases, together with two of Protogeometric\textsuperscript{218}.

One was a tall tripodic bell-krater with a bell-like base that was practically useless, as there were three other feet\textsuperscript{219}. It was made of pale clay with chestnut varnish. It had a high painted lip and thin bands encircling the lower half. The decorations of the upper half were done in a repetitive free-hand style which has been described as consisting of loops and loop-fringed vertical lines and sets of alternating vertically-set diagonals. There was black tinning on the interior of the pot. The other Subminoan pot was a krateriskos\textsuperscript{220}. This was covered with a black varnish. The lip was banded inside and out, as were the handles and the lower section of the base. There were four bands - one wide and three narrow - below the middle of the belly, and a broken zig-zag line above and below the middle. It compares with an almost identical example from the Spring Chamber\textsuperscript{221}.

References:
\textit{AD} 14 (1931-2) 1-2, pl. I.
\textit{PGP}, 252.

\textsuperscript{218}\textit{AD} 14 (1931-2) 1-2, pl. I.
\textsuperscript{219}ibid., pl. I.2.
\textsuperscript{220}ibid., pl. I.3. This has also been described as an amphoriskos by Desborough, \textit{PGP}, 252.
\textsuperscript{221}\textit{PM II}, 136, fig. 69:O.
Located on the ridge one kilometre north of Pinakiano, Papoura is one kilometre southwest of Karphi, and nearer to the surface of the plain (seven metres above). The site has an unassailable north face and an uninterrupted view down through the pass of Selli to the Aposelemis Valley, which is the natural approach to Lasithi from the north coast of Crete.

Sherds from Middle Minoan through Roman were noted by Pendlebury who originally partly excavated the site\textsuperscript{222}.

The unpublished pottery is mostly Protogeometric, Geometric and Archaic. The size during the Bronze Age is uncertain, though it was probably small. Some rare LMIII sherds were noted by Watrous, including a round brazier with legs and a conical cup\textsuperscript{223}.

During Subminoan there was a gradual movement down from Karphi, so that by the early Iron Age (Protogeometric to Geometric) there was a large settlement at Papoura. Subminoan to Protogeometric pottery found on the site includes fragments of two krateriskoi of the same type found at Fortetsa\textsuperscript{224}.

There was continual occupation until Roman times at Papoura.

\textsuperscript{222} \textit{JLN} 5 (1938) 384; \textit{BSA} 36 (1935-6) 10; \textit{BSA} 38 (1937-8) 1.
\textsuperscript{224}Fortetsa type B (iii) - cf. \textit{Fortetsa} 33, no. 303 and pl. 21 (PG); \textit{BSA} 17 (1972) 70, fig. 2 C30 (PG).
References:
BSA 36 (1935-6) 10.
BSA 38 (1937-8) 1, 15.
ILN 5 (1938) 384.
10. HAGIOS THOMAS
LMIIB, SM.
(B:2)

Hagios Thomas lies on a spot which commands the road to the Mesara between Knossos and Phaestos, near Panasos, which leads to Kamares.

Five vases from this area are in the Herakleion Museum, four of LMIIB date and the fifth Subminoan. The Subminoan piece is the upper part of a stirrup jar, probably very similar to a stirrup jar from the tomb at Atzolon at Tylisos\textsuperscript{225}. It is decorated with cross-hatched elaborate triangles, one on each side of the handle, and behind the false spout, and an oval space between them transformed to a leaf-like design\textsuperscript{226}.

References:
\textit{BCH Chrons.} (1934) 272.
\textit{AA Chrons.} (1934) 249.
\textit{Kanta}, 81-3.

\textsuperscript{225}AM (1931) 117, fig. 4.
\textsuperscript{226}Kania, pl. 36:7,8
Hagia Triadha lies four kilometres to the west of Phaestos, above the Mesara plain. Except for a study by Banti on Minoan and Greek cults the material has barely been published. Recently Kanta has examined some of the material from the settlement which until LMIIA was princely, but later became a normal settlement and popular cult place. This is indicated by the most datable material available - that of the "Piazzale dei Saccelli" - the open-air sanctuary whose site had probably previously been a shrine at which the goddess with upraised arms was worshipped. It dated from the twelfth century into the late eleventh century, or even the early tenth, when it fell into disuse. It was replaced by Kommos where there were no symbols of Minoan goddess cult, and where a building replaced an open-air sanctuary. This may represent evidence of social and economic changes in the late eleventh century to the early tenth.

At the "Piazzale dei Saccelli" a large number of bronze and terracotta cult figures were found. These are illustrated and fully discussed by Banti in the above-mentioned study, while Kanta briefly examines patterns on Subminoi-Protogeometric pottery from the site in the Herakleion Museum. The votives included figurines of bulls and bullocks, of rams and horses, of doves and geese or swans, and fantastic creatures such as griffins and sphinxes, as well as human figures, both masculine and feminine, and altars, double axes and horns of consecration. Most of these pieces had patterned decoration and included many designs typical of the Subminoi period, such as parallel zig-zags and cross-hatching with vertical parallel lines, zig-zags and
cross-hatching with vertical parallel lines\textsuperscript{230}, curved triangular decoration\textsuperscript{231}, chequorboard pattern and pendant part-circular lines\textsuperscript{232}. Some of the pieces had parallels at other Cretan sites, e.g. the altar\textsuperscript{233} resembled one from Karphi\textsuperscript{234}.

References:
\textit{Ann.} 3-5 (N.S.) (1941-3) 9ff.
\textit{Kanta}, 102-3.

\textsuperscript{230}\textit{Ibid}, fig. 39:8.
\textsuperscript{231}\textit{Ibid}, fig. 40:6.
\textsuperscript{232}\textit{Ann.} 3-5 (1941-3) fig. 57.
\textsuperscript{233}\textit{Ibid}.
\textsuperscript{234}\textit{JHS} (1938) 233-6, fig. 12.
12. KAMARES
Neolithic, MM, LMIIIA-C, SM, PG, G, O.
(A:2)

The Kamares Cave is to be found on the south side of the mountain of Psiloritis beneath the double summit known as the Saddle of Digensis. North of Phaestos, it lies at an altitude of 1524 metres and is five kilometres from the south coast of Crete. Known as Mavro Spilia (or black) cave, and occupied even in Neolithic times, it was dedicated to worship and was the religious centre of the Phaestos district in Middle Minoan and to some extent in Late Minoan times, and again in the Geometric and Orientalizing periods (C.8-C.7 B.C.)

While cult continuity was apparent in the Kamares cave at least until Late Minoan times\(^{235}\) there is tomb and settlement evidence in the area which goes at least into Late Minoan-Subminoan, and possibly Protogeometric\(^{236}\).

The area was investigated by Taramelli in 1894\(^{237}\), and by Dawkins and the British School in 1913\(^{238}\). Four tholos tombs were examined in the vicinity of the Kamares village at the location of "tis Kaimenis to Sopato" or Lakkous on the summit of a hill at the meeting of two valleys. Vases of LMIIIA, IIIB and IIIC-Subminoan date were found. Desborough dates these as late as Protogeometric\(^{239}\). Faure mentions several spear-heads found here of from the beginning of the Iron Age relating to the tribal initiations of the inhabitants of a Subminoan village\(^{240}\). The area of this Mycenaean necropolis was fairly inaccessible and not very fertile. Subsistance must have been by

\(^{235}\)Kanta, 112.
\(^{236}\)Faure, Fonctions, 179.
\(^{237}\)AM 9 (1899) 291-4; AJA 5 (1901) 437-51.
\(^{238}\)BSA 19 (1912-13) 1-34.
\(^{239}\)PGP, 259.
\(^{240}\)Faure, Fonctions, 178.
pasture and wood-cutting. This, and the poor utensils found there, indicated that it was a modest, possibly decadent Mycenaean population centre near its end\textsuperscript{241}.

Taramelli also reported a settlement site of similar date (LMIIC/Subminoan) to the west of the cemetery at a location called Kainmenis Mitato\textsuperscript{242}.

References:
\textit{Mon. Ant.} 9 (1899) 291ff.
\textit{BSA} 19 (1912-13) 1-34, and pls. 2-12.

\textsuperscript{241}\textit{AJA} (1901) 442-3.
\textsuperscript{242}\textit{Ibid}, 443.
Karphi is situated some 4000 feet up on the north-west corner of the Dictaean range on the saddle of a peak 1000 feet above the town of Tzermiadon. On the north side of the Lasithi plain it commands the road from the coastal plain at Mallia. The site is rocky and mountainous and bitter in winter.

Karphi has been extensively excavated and reported - largely by Pendlebury. Evans excavated a tholos at Ta Mnimata and Dawkins seventeen more, as well as four at Atsividhero - below the settlement. They were small rectangular or circular tholoi. The settlement consisted of at least 150 rectangular rooms, including a megaron-type room in the grandest complex. A simple sanctuary was located on the highest spot, together with associated dependencies. The two main publications are in BSA 38 (1937-7) 57ff. and BSA 55 (1960) 1ff. - the latter providing a detailed analysis of the pottery. More recently the site and finds have been further described and analysed by a number of scholars including Desborough\textsuperscript{243} and Watrous\textsuperscript{244}.

In Middle Minoan times there was a peak sanctuary at Karphi\textsuperscript{245}, though the extensive settlement site - of possibly 3500 persons, suggests Pendlebury - was only established in LMIIIC, c. 1150 B.C. It may have been a "refuge" site, and it continued into Subminoan times, and possibly, though in a reduced form into the early tenth century\textsuperscript{246}. Watrous suggests that by around 1000 B.C. the settlement started to be evacuated voluntarily to the nearby lower site of Hagios Georgios Papoura\textsuperscript{247}. The

\textsuperscript{243}GDA, 120f.
\textsuperscript{244}Hesp. Supp. 18 (1982) 19-20.
\textsuperscript{245}K. Chr. 5 (1951) 119-20.
\textsuperscript{247}Ibid.
economy of the place was based on shepherding, cultivation of grains and olives, and some hunting. Use was made of the land around theLasithi and, when necessary, of the lowlands outside. For example, in winter evacuation may have taken place to nearby Siderokephali where rectangular tholos tombs like those at Karphi have been found\textsuperscript{248}, or possibly to Armi near Mesa Lasithi\textsuperscript{249}.

The material evidence indicates that, in spite of its reasonably isolated geographic position, Karphi maintained widespread outside contact. The prolific pottery remains were both religious and domestic in nature. Pottery for religious observances was Minoan in character and included female figurines with raised hands, hut urns and offerings or cult objects. The hut urn was neither Mycenaean nor Minoan in origin, and was of the same type as the one found in the Spring Chamber at Knossos - where the Minoan goddess was contained in a foreign dwelling. Contact between Karphi and Psychro is shown by the many votives they had in common and by the fact that they both showed foreign contact. The daily pottery demonstrated a mixture of influences - traditional Minoan, intrusive Mycenaean and Cypriot, and resembled that of other parts of Crete - especially Knossos, and including that of other so-called "fortress" sites of the Subminoan period. These connections have been remarked upon in some detail by Desborough\textsuperscript{250} and can be augmented by more recent discoveries, especially in the Knossos area and in East Crete.

The most common pottery shapes were jars, tripods, basins, dishes, kalathoi (both handleless and two-handled Cypriot types), jugs (one and two handled), stirrup jars, pyxides, bowls and kraters (especially in the late occupation). Present, but less common, were side-spouted jugs or feeding bottles, tankards, cups, kylaxes (also found in East Crete at Vrokastro and Dreros\textsuperscript{251}), duck vases, kantharoi, a bottle-

\textsuperscript{248}Mon. Ant. 9 (1899) 402-5.
\textsuperscript{249}BSA 38 (1937-8) 139.
\textsuperscript{250}GDA, 51f.
\textsuperscript{251}Hall, Vrokastro, fig. 89,A; Ét. Crét. VII (1948) pl. 15, D30 (Dreros).
shaped vase, feeding bottles and kylikes. The clay stands or tripods seem to imitate Cypriot metal stands. Decoratively the material demonstrates the changes from LMIIIC into Subminoan in the triangular motives on stirrup jars, and in the general simplification of decoration on the other vases.

A few traditional bronze weapons (sword blade, daggers, spearhead, arrowheads) were found, and there were five examples of iron, including parts of a knife blade, nail and a fibula. Some of the bronze and iron implements imitate Cypriot types\textsuperscript{252}, notably a rod-tripod fragment. Tools included awls, saws, chisels, sickles and a trunion axe. Multiple-spiral hair-rings and violin-bow and simple arched fibulae (one of iron) show sub-Mycenaean connections\textsuperscript{253}, while a swivel-pin of fibula type resembles examples in Italy and Sicily, and some of the dress-pins are of Cypriot inspiration\textsuperscript{254}.

The architecture, probably established in LMIIIC, but still in use in Subminoan, shows some distinctly non-Minoan elements, including important rooms in Achaean megaron shape (i.e. with the entrance at the short end), indicating an influence and awareness of mainland developments\textsuperscript{255}.

References:
BSA 38 (1937-8) 57ff.
GDA, 57-63, 120-129.

\textsuperscript{252}Bronze - Catling, H.W. \textit{Cypriot Bronzework in the Mycenaean World} (1964) 211, note 47, and 214, IV; iron - DAG, 250-3
\textsuperscript{253}E.g. BSA 38(1937-8) pl. 28.
\textsuperscript{254}GDA, 126-7.
\textsuperscript{255}Megaron-type houses were found in LMIII at Hagia Triadha (LMIIIA), Chania and Gournia (LMIIIB). The building with a megaron plan at its centre at the peak sanctuary at Smari is said to be one of the earliest post-Minoan sanctuaries, and it has been suggested that it is contemporary with megar 137 and 138 at Kaphri (AR (1981-2), 55), and thus of early Subminoan date.
East of Viannos, on the border of Lassithiou provence, near Kato Symi village, a large and important sanctuary dedicated to Hermes and Aphrodite has recently been discovered at an altitude of 200 metres by the Greek archaeologist A. Lembessi. Excavations still in progress show that there was continuous occupation at the site from at least Middle Minoan IIIIB until the third century A.D., but probably dating mainly to the early Iron Age.

Transmission of cult from Minoan to post-Minoan times is shown in the architectural forms\textsuperscript{256} as well as by offerings which include pottery and human and animal figurines (of LMIIIIB/Subminoan) which closely resemble material from the "Piazzale dei Saccelli" of Hagia Triadha\textsuperscript{257}.

References:
AAA 6 (1973) 104ff.
Ergon (1972) 125ff.
Ergon (1973) 118ff.
PAE (1975)

\textsuperscript{256}See Kania, 119.
\textsuperscript{257}Ann. 3-5 (N.S.) (1941-3) figs. 35-57.
At the Marathokefala location of Kavrokhori, not far from the coast, between Tylisos and Herakleion, Alexiou and Kanta found sherds of LMIII, particularly of LMIIIB, IIIC and Subminoan, which seemed to indicate a rural settlement\textsuperscript{258}.

The vases accidently found here were probably of advanced Subminoan date. They closely paralleled vases from the Subminoan tomb at Fortetsa, and others from Agios Ioannis\textsuperscript{259}. They were a deep bowl and two stirrup jars with airholes and knobs on the disk\textsuperscript{260}. One stirrup jar had three handles. The deep bowl was partly covered with paint outside, while inside was a reserved band around the rim, and a reserved circle around the base.

References:
\textit{Kanta}, 22.
\textit{PAE} (1971) 286, 300.

\textsuperscript{258} \textit{Kanta}, 22.
\textsuperscript{259} \textit{BSA} 55 (1960) pl. 38, III,3, 132.
\textsuperscript{260} \textit{Kanta}, pl. 21: 1,2,4.
Keratos lies on twin peaks on the southern route from Hierapetra to the plain of Pedhiadha, not far from the southern coast of Crete in the Viannos region.

Near the summit the large sacred cave of Vigla contained stalactites (often considered sacred) and surface sherd[s of Early Minoan, Middle Minoan, LMIII, Subminoan, Geometric, Classical and Roman which were found by R.W. Hutchinson and Miss Money-Coutts in 1935, and remarked on by Faure. A natural altar of dressed stone was also noted.

References:
AC, 148, 178, 235, 290, 352, 374.
BCH 80 (1956) 96.
Faure, Fonctions, 30.

261 BC II 80 (1956) 96; Fonctions, 60.
MAP 2: SUBMINOAN SITES IN THE KNOSSOS AREA
Knossos lies in an area of lowland in one of a series of small river valleys (Kairatos) running south to north around Herakleion. The area is hidden from the sea by low hills around Ambelokipi (Teke) and Zafer Papoura, and constricted by higher ground on both east and west sides. The land around is well-watered and of good quality for arable purposes - particularly for vine and olive growing.

Several important roads led from Knossos, including the "Great South Road", which probably followed the gorge of the Kairatos past Spilia to Arkhanes, another probably leading directly to the peak sanctuary on the summit of Mt. Juktas. One main road leading northwards from Knossos evidently followed the west flank of the Kephala and Isopata ridges where tombs of the Bronze and early Iron Ages have been found. This road would have led directly to the Bronze Age harbour town of Amnisos - now shown to have been used in Subminoan times - which may have been on the terraced walls east of the Kairatos and on the slopes of Aillas.

The 5x3 kilometre archaeological area of Knossos itself and most of the outlying cemeteries of all periods - has been perhaps the most thoroughly explored region of ancient settlement in Greece. Despite this, relatively little was known until recently, of the early post-Minoan period, and it was considered that the Subminoan settlement (twelfth and eleventh centuries) had drastically diminished even before the end of the Bronze Age, and was relatively small and unimportant. Recent finds in the area (210) west of the palace, and along the Royal Road, as well as in the region of the Unexplored Mansion (186) and the Stratigraphical Museum (188), indicate that

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263 Ibid, 11-12, 27.
Knossos, the traditional and chief lowland centre, continued to be an area of major importance in Subminoan Crete, even though the Palace area itself was only occupied by a sanctuary. The recently excavated Stratigraphical Museum site (reported 1982-3) was so substantial in size as to possibly represent the major area of settlement at the time. There are now a total of at least twelve explored Subminoan sites around the Knossos area, which will be described below.

The Archaeological Survey of the Knossos area, compiled by Sinclair Hood and David Smyth, and published in 1981 by the BSA a supplementary volume, provides a valuable up-to-date synthesis and useful maps.
Recent excavations have confirmed that "by far the heaviest concentration of early Iron Age tombs, including the most important ones, was in the region of Ambelikipi (Teké)". A number of Subminoan finds have been made in the area. (See Map 2 of Knossos area).

In 1933 Payne and Blakeway excavated the area of Fortetsa and Ambelokipi. The findings were more fully described by Brock in his *Fortetsa* of 1957. In the early Iron Age cemetery one of the earliest graves (tomb Pi) dated to advanced Subminoan, probably enclosed a cremation, as no bones were found in the tomb. It contained some twenty vases - all very late Subminoan - as well as a fragmentary iron pin, and two beads of terracotta clay with incised decoration. (Some similar clay beads were found at Athens, and some two hundred were found at Hagios Ioannis). The vases included four kalathoi with two cylindrical handles - one with banded and panelled decoration with a lozenge motif between, and tryglyphs and sickles and chevrons or loops, another with a zig-zag motif. There were also four to five krateriskoi (bowls or skyphoi), some painted, some decorated, for example, with an interlocked horizontal 'S'. Among other vases were a small krater, a false-spouted variant, possibly of Cypriot influence, bearing a cross-hatched lozenge and pendant sickles; three stirrup vases with bands and triangular decorations, four cups, one with a zig-

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265 BSA 33 (1932-3) 218; JHS 53 (1933) 292.
266 Ibid, 8-10.
267 Fortetsa, pl. 3:1.
268 Ibid, pl. 3:14.
269 Ibid, pl. 3:9.
270 Ibid, pl. 3:3.
271 E.g Ibid, pl. 3: 9.
zag motif\textsuperscript{272}, another with vertical strokes; one feeding cup with diagonal strokes between black bands\textsuperscript{273}; a jar with panel decorations of pendant curvilinear triangles enclosed by broad strokes between finer lines\textsuperscript{274}.

In 1967 Coldstream excavated one of the outlying tombs of the Fortetsa cemetery\textsuperscript{275}. Largely plundered, it lay in an olive grove between the roads leading from Herakleion to Knossos and Fortetsa. It had been in use between Subminoan and Roman times. A Subminoan amphora and stirrup jar were found - both slightly earlier than the oldest vases recorded in the area\textsuperscript{276}.

Also found were ivory seals (two with hieroglyphic signs) and fragments of plaster horns of consecration and offering tables.

Mention must be made of a possibly late Subminoan pyxis from a largely early Protogeometric tomb at Teké on the west of the village facing Fortetsa\textsuperscript{277}. It had a sharply carinated shoulder, and banded decoration with wavy line and zig-zag motifs between. Though the pyxis is a characteristically Cretan shape, this particular shape with its straight sides, concave neck and two vertical handles just below the neck to the rim, is found only at Teké.

Further finds in the area were a bronze spearhead and a Subminoan stirrup jar apparently from a destroyed tomb in the area of the vaulted Turkish building in Ambelokipi (Teké)\textsuperscript{278}.

\textsuperscript{272}Ibid, pl. 3:14.
\textsuperscript{273}Ibid, pl. 3:12.
\textsuperscript{274}Ibid, pl. 3:20.
\textsuperscript{275}AR (1967) 22-23; BCH 92 (1968) 986; AD 23 (1968) 412.
\textsuperscript{276}BSA (1967-8) 22, fig. 35.
\textsuperscript{277}JHS 80 (1965) supp. 26; BSA 58 (1963) 34-7, and fig. 8
References:
BSA 33 (1932-3) 218.
JHS 53 (1933) 292.
Fortetza, 8-10, 31ff., 60ff., 84ff.
BSA 58 (1963) 34-7.
AR (1967-8) 22-3.
BCH 92 (1968) 986,
AD 23 (1968) 412.
18. KNOSSOS under car park site west of the palace
LMIII, SM, PG, G, Hellenistic, Roman.
(A:2)

Three Minoan roads crossing the paved area on the site of the existing car park west of the palace revealed traces of LMIII, Subminoan, Protogeometric, Geometric, and Hellenistic occupation, as well as a Roman cistern.\textsuperscript{279}

References:
\textit{JHS} 57 (1937) 137.
\textit{BCH} (1937) 475.

\textsuperscript{279}\textit{JHS} 57 (1937) 137; \textit{BCH} (1937) 475..
The Gypsades cemetery lay to the south of the palace. The eighteen or so chamber tombs contained material covering largely the LMIII period, including some of the LMIIIB2 into early Subminoan, which was found in tombs 6, 6A and 7. The Subminoan vases were very early, often transitional from LMIIIB, with LMIIIC apparently not represented. They included two belly-handled amphorae, a single-handled jug (or trefoil-lipped oinochoai), a two-handled jar (or neck-handled amphora), and at least two stirrup jars. The belly-handled amphora from tomb 7, which was transitional LMIIIB2-SM, had a symmetrical ovoid body with flat base and concave splaying neck, with handles at the broadest part. The horizontal linear decoration was punctuated by a wavy line at the level of the handles, with net patterns above the handles. The other belly-handled amphora from tomb 7 had a spreading foot and flaring neck. There were traces of linear bands around the body and radial strokes on the upper surface of the neck. It is like Furumark's Type 63, but with no flaring neck, indicating it was later - i.e. Subminoan. The trefoil-lipped oinochoai from tomb 7, had a thin swept-up oval handle, and is decorated with a thick band surrounded by thin bands on the belly and a continuous wavy line on the shoulder. This is a common mainland Greece IIIC2 period shape (Furumark's Type 137), while the decoration indicates the vase is probably transitional Subminoan. The two-handled jar from tomb 6, had simple linear decoration around the belly, with handles and neck unpainted, and a wavy line on the upper shoulder looped over on each end. This

280BSA 53-4 (1958-9) fig.7:1.
281ibid, fig. 7:2.
282MP, II, Chronology, 134
283BSA 53-4 (1958-9) fig. 7:9.
284MP, II, Chronology, 137
was a common Mycenaean IIIB shape, but the debased decoration indicates a Subminoan date. The two stirrup jars each have false necks with air-holes at the base end and spirals on the disk, horizontal stripes on the belly and front of neck, and triangular hatched panels on the shoulders. They are vases with typical LMIII B2 shape and decoration which persisted into the Subminoan. Other stirrup vases dated by the excavators to LMIII B2 may in fact be Subminoan also.

Tomb 7 at Gypsades also contained four bronze dress pins of the type with gradual and elongated swelling, three with ribbed upper part. These closely paralleled ones in the latest chamber tombs at Argos which are considered to be of northern character. In Subminoan Crete others have been found at Hagios Ioannis and the Spring Chamber in the Knossos area, as well as at Karphi. There was also an iron knife with bronze rivets which is paralleled on the mainland in the LHIIIC tombs of Perati, and probably of Cypriot origin. Four beads (including one of amber) and two sealstones, were also found in this tomb.

References:
BSA 53-54 (1958-9) 194-262.

286 Ibid, fig. 28:1:2.
287 See tomb 7, nos. 3,4,5,6,7 and 8.
288 BSA 53-54 (1958-9) fig. 34:14.
289 Nos. 13, 14 and 15.
290 BCH 79: 312; BCH 80: 365; BCH 83: 771.
291 See BSA 63 (1968) 212.
292 BSA 53-4 (1958-8) fig. 32:12.
293 LMTS, 180.
It is possible that there was a small settlement on the hill of Hagios Ioannis, but finds so far have been from tombs in the area, so there may only have been a main cemetery at Hagios Ioannis.

In 1960 some graves were published which lay in a group by the junction of the main Knossos-Herakleion road and the secondary road to Ambelakia\textsuperscript{294}. They dated to between late Subminoan to Late Protogeometric, and though mainly Protogeometric, contained some possibly Subminoan vases. There were inhumations in the chamber tombs as well as cremation, and in one tomb both occurred together. The earliest burial was an inhumation and this was accompanied by a belt and two spearheads. The dating of some of the earlier vases is uncertain (Subminoan or early or middle Protogeometric?) but they carry typical Subminoan decoration. This is particularly notable in a series of krateriskoi in tomb 1 (nos. 13-17) and one in tomb 4, and with stirrup vases in tomb 3 (no.2), tomb 6 (no. 4), tomb 7 (no.1), and tomb 8 (no.6). The stirrup vases have typically Subminoan decoration - curvilinear triangles on their shoulders - on a standard post-Minoan shape, with a spike on the knob, air-hole and foot, which continues through Protogeometric\textsuperscript{295}. Bronze fibulae were found in tombs 5 and 8 of the simple bow type, which is the earliest Iron Age form.

A late Minoan tomb was excavated on the south edge of Hagios Ioannis on a southward-facing slope, and reported in 1968\textsuperscript{296}. It was dated to LMII and re-used in Subminoan times. One of the two people buried here wore a pair of large bronze pins

\textsuperscript{294}BSA 55 (1960) 128ff.
\textsuperscript{295}BSA 55 (1960)
\textsuperscript{296}BSA 63 (1968) 205ff.
of central European type. The three clay vases consisted of a large belly-handled amphora\textsuperscript{297} and two stirrup jars\textsuperscript{298}. The body of the belly-handled amphora has banded decoration and continuous wavy lines on its body. This decoration, and its shape with its flaring rim, resembles a four-handled amphora from Liliana near Phaistos\textsuperscript{299}. It is also like the Subminoan belly-handled amphora from tomb 7 at Gypsades\textsuperscript{300}.

Stirrup jar B2\textsuperscript{301} is of a late LHIIIC type, but with a higher and narrower foot. It resembles the stirrup vases in Fortetsa (Teké) tomb 5\textsuperscript{302}. The composite triangular decoration, with its advanced features of internal hatching and the outlines being predominantly straight, is similar to contemporary work in Cyprus\textsuperscript{303} and anticipates the decoration of the Subminoan to Protogeometric series at Fortetsa\textsuperscript{304}. The broad bands of glaze are like those of the dark-ground stirrup jars of the Attic Subminyan\textsuperscript{305}.

The other stirrup vase\textsuperscript{306} has a flat disk rising to a pronounced central spike, and decorated with a spiral. Short horizontal strokes decorate the front of the spout and behind the false neck. The false neck is made separately from the body. The jar has a high ring foot, and a small air-hole. There is broad-banded decoration between the lines below the shoulder zone, and curvilinear triangular decoration, as found at Vrokastro\textsuperscript{307} in chamber tomb 7, and also on the mainland at Argos\textsuperscript{308}. Two long

\begin{itemize}
\item \textsuperscript{297}Ibid, pl. 53: b.c.
\item \textsuperscript{298}Ibid, pl. 54:b.c.
\item \textsuperscript{299}Mon. Ant. 14 (1904) 644, fig. 110.
\item \textsuperscript{300}BSA 53-4 (1958-9) 247, pl. 56,e.
\item \textsuperscript{301}BSA 63 (1968) pl. 54,b.
\item \textsuperscript{302}BSA 62 (1967-8) fig. 35.
\item \textsuperscript{303}Op. Arch 3 (1944) 94, fig. 12; fig. 13:22
\item \textsuperscript{304}Fortetsa, 192-3.
\item \textsuperscript{305}Especially Op. Ath. 4 (1963) 107:no. 3612, pl. 3 - Salamis cemetery).
\item \textsuperscript{306}BSA 63 (1968) pl. 54,e.
\item \textsuperscript{307}Vrokastro, 154, fig. 93.
\item \textsuperscript{308}Deshayes, J. Argos: \textit{Les Fouilles de la Deiras} (1966) pl. 86, 4 DV 151 (end of LHIII C1).
\end{itemize}
bronze dress pins were found. One was made in one piece of a gradually swelling circular section (comparing closely only with examples from Karphi, Vrokastro and Submycenaean Grave 16 at Kerameikos). The other long pin, with its acorn-shaped ivory head, is without close parallels.

In AR (1980-81) J. Carrington Smith reports the excavation of four Subminoan and up to late Protogeometric chamber tombs accidently found in the area. Among the finds was much Subminoan and early-late Protogeometric pottery, including several stirrup jars, a Protogeometric pictorial amphora, iron weapons - including a Protogeometric bronze sword with iron rivets and wooden handle - and some gold jewellery. Stirrup jar 12 from tomb had lined and banded decoration on its body, with slightly curvilinear triangular and lined motives above the shoulder and stripes on the handles. The other illustrated stirrup jar was similar in shape and decoration to the first, but differed from it in the shoulder motif where the triangles were more numerous, smaller and more curved, and were punctuated with dots. The excavator has remarked (recently to this writer) that a feature of the Subminoan pottery found in the Knossos area was that no two designs were the same as each other.

References:
BSA 63 (1968) 205ff.
AR (1980-1) 42-3.

309 BSA 63 (1968) pl. 54:B4.
310 See Ibid, 212.
311 Ibid, pl. 54:B5.
312 AR (1980-81) 42-3.
313 Ibid, figs. 80a and b.
314 This compares closely with one of the Pantalica II culture in Sicily of late C.11 or early C.10:
315 AR (1980-1) fig. 80a.
316 Ibid, fig. 80,b.
21. KNOSSOS - under house site west of Palace

LMIIIB, SM, PG.

(A:1)

In 1969 pottery dating to LMIIIB, Subminoan and Protogeometric was found in a cess-pit dug for the house of Antoni Vlakhakis.

References:
Arch. Surv. Knoss.49 (no.192)
The Kephala ridge faces west towards the Sanatorium, not far from Isopata. It is the middle part of the long ridge that extends from Zafer Papoura on the south to the Isopata on the north. Numerous Late Minoan and Protogeometric tombs were uncovered on the west slopes of the ridge. It has been suggested that there was probably a Minoan Appian Way connecting both with the harbour town at the mouth of the Kairates and with the naval station at Amnisos.\footnote{BSA 51 (1956) 74f.}

The Kephala area was probably occupied in LMIA-IB, and then in the thirteenth and twelfth centuries through to Protogeometric. A tholos tomb was found in the area, which was re-used in LMIIIIC and Subminoan times.\footnote{Ibid; BSA 62 (1967) 257ff.} It contained some fifteen vases of which some are certainly late (i.e. Subminoan), including a deep bowl\footnote{Ibid, 263.}, a krateriskos or bowl\footnote{Ibid, 265, no.14.}, an amphoriskos or two-handled jug or jar\footnote{Ibid, 262, no.3.}, and a stirrup jar\footnote{Ibid, 265, no.1.}. The deep bowl has pendant and rising concentric semicircles with hatched filling, and hatched triangle decoration, and curving lines, with a broad band and line on the waist. The krateriskos or bowl which shows connections with the Argive Granary class (thus demonstrating strong Mycenaean influence in Subminoan), is of fine pinkish-buff clay with lustrous slip of the same colour. The exterior is largely covered with a solid-wash purplish-brown paint, and the pot has a wavy band on the reserved panels between the
handles, and a very small reserved central inside. The amphiorkos or two-handed jug is in fact a kind of miniature neck-handled amphora of a rare type which is also known at Karphi. Both examples have the same simple disposition of colour - pinkish-buff slip, and lustrous brown paint outside. The stirrup jar is of depressed globular shape with an air hole at the base of the false spout, and a conical base. It has banded decoration in black around the rim of the spout and false spout, as well as at the base of the spout, and vertical dashes. On the shoulder are four panels of triangles, filled with hatched lines at different angles. There is a band and line at the belly, and a band to the base. It can be compared with examples in Gypades tomb 6, Fortetsa tomb 7, and Hagios Ioannis tomb 8.

References:
BSA 51 (1956) 74f., and pl. 16, c and d.

323 BSA 55 (1960) 13, fig. 8, no.2.
324 BSA 53-4 (1958-9) 242, fig. 28: VIA 1,2.
325 Fortetsa, pl. 3:9.
326 AR (1980-81), fig. 80a.
A large plot of land one kilometre north of the Venezelion Hospital and immediately east of the main Herakleion-Knossos road was excavated in 1978 when university buildings were planned in the area of 5-6 acres. Mostly relatively level, the site is dominated by Fortetsa village on the west. To the nearby north-west Protogeometric and Geometric tombs were excavated in 1975-6. No building remains, except wells and pits, exist beyond the end of Subminoan (or early Protogeometric - c. 970 B.C.) until Hellenistic in the later third century.

A number of burial rites were represented in the ten or so LMIIIIB/Subminoan graves clustered in an East-West line on the southern side of the cemetery. Tomb 40 - a normal chamber tomb - was reached by a broad, sloping dromos. The primary LMIIIIC/Subminoan burial (with its Orientalizing overlay) showed no signs of inhumation or cremation, but contained a group of painted vases. These included a shoulder-amphora decorated with a horizontal 'S' pattern, two two-handled flasks with the same 'S' design, four stirrup jars with elaborated triangles on the shoulder, and a plain trefoil-lipped oinochoe.

Tomb 121 contained three skeletons accompanied by two stirrup jars, a small jug with high handle, a feeding bottle and two symmetric arch bow bronze fibulae.

327 AR (1976-7) 11-17. (Knossos Survey nos. 25 and 26).
328 AR (1978-9) 45, fig. 6.
329 ibid, 45, fig. 6.
330 ibid, 45, fig. 6.
331 ibid, 45, fig. 6.
332 ibid, 45, fig. 6.
Three other LMIIIC graves resembled the 'shaft graves' at Zapher Papoura. Each had a roughly rectangular pit with a shaft grave at the bottom. One of the three contained goods, including a painted stirrup jar.\(^{333}\)

Tomb 186 had (as at Zapher Papoura) a very small tomb chamber cut into the sides of the bottom face, which contained an undisturbed cremation, plus a large bronze spearhead, a crushed shield boss, a curved iron knife with bronze rivets, an iron dagger or dirk with Type III hilt form, two wetstones, and a decorated stirrup jar. The group is close to contemporary Tiryns tomb 28\(^{334}\). Tomb 200 contained a Subminoan decorated stirrup jar, a bronze (?) pin head of Italian type\(^{335}\), an ivory comb, beads of glass frit and faience, a necklace of 80 spherical solid gold beads, and two rosettes of gold leaf.

Tomb 201 was a 'warrior' grave. It contained a very damaged shield boss, a damaged bronze spearhead, five large bronze arrow heads, and a type II bronze sword of Group III\(^{336}\), as well as many fragments of an openwork four-sided support of Cypriot type. Later Cretan copies of this last item have been found in both tombs and shrines - including one recently at the rural shrine at Syme Viannou\(^{337}\) of the Idaean cave type. Catling recently reported that further studies of the cremated bone from this tomb reveal remains of slices of boar's tusks with stitch holes, presumably part of a boar's tusk helmet\(^{338}\). An ivory handle, a comb and bone inlays were also found.

\(^{333}\)Ibid, 45, fig. 7.
\(^{334}\)AM 78 (1963) 1ff.
\(^{336}\)Cf. BSA 63 (1968) 98.
\(^{337}\)AR (1977-8) 64, fig. 112.
\(^{338}\)AR (1983) 53.
This cemetery at the University site appears to have been the chief necropolis of Dark Age Knossos and to have been in touch with other places - probably including the Greek mainland, Italy and Cyprus.

A forthcoming Supplementary volume of *BSA* will provide a comprehensive corpus of the numerous finds from the tombs.

Also found in the area, under the boundary fence of the hospital to the east, was a LMII chamber tomb re-used for a pair of Subminoan burials.\(^{339}\)

References:

*AR (1978-9) 43f*

*AR (1982-3) 51-3.

*BSA 43 (1968) 205-15.*

*AR (1959) 25.*

*K.Chr. (1959) 380.*


The Royal Road excavation made by Hood on the north and south sides of the Minoan road between 1957 and 1961\textsuperscript{340} revealed two deposits, including some of late Subminois, but mostly EPG-PG-G. Some pieces found in the EPG-built house remains are still Subminois (e.g. A1,10,18) and much pottery belonged to a primitive stage of EPG, with lingering survival of Subminois features.

The Subminois pottery includes a hydria\textsuperscript{341} of globular shape with a lumpy surface, a vertical handle and horizontal banded decoration as well as a bracket or 'moustache' motif on the upper body (which was to become 'de rigueur' for hydrias in times to come). Coldstream\textsuperscript{342} suggests that it may have been adapted from the tassel pattern of Late Helladic (and Late Minoan?) IIIIC\textsuperscript{343}. There was also a large krater with dull black glazing and splatter decoration inside. This was similar to one in the Spring Chamber\textsuperscript{344}. A glaze-dipped bell skyphos\textsuperscript{345} has parallels in Fortetsa tomb Pi\textsuperscript{346}. Probably Subminois is a brown-glazed kalathos with white decoration\textsuperscript{347}. This use of white decoration is a likely LMIIIIC survival. A stirrup jar (A5) with traces of two composite triangles with concave outline, and a vertical row of dots in between, is of Subminois-Protogeometric date. Also of this date is a cup with vertical handle,

\textsuperscript{340} AR (1957) 21ff; AR (1958) 18ff; AR (1959) 22ff; AR (1960-61) 26ff; AR (1962) 25ff; AD 17 (1961-2) Chr. 294-5.
\textsuperscript{341} BSA 67 (1972) 68, fig. 1.
\textsuperscript{342} BSA 67 (1972) 66.
\textsuperscript{343} MP motif 72, 7-8.
\textsuperscript{344} PM II, 137.
\textsuperscript{345} BSA 67 (1972) 70, fig. 2:A18.
\textsuperscript{346} Fortetsa, pl. 3:2.
\textsuperscript{347} BSA 67 (1972) 73, fig. 4:A27.
decorated with a wavy line on its top half and a horizontal, broadly applied, band below.\textsuperscript{348}

References:
\textit{BSA} 67 (1972) 66-73.

\textsuperscript{348}Ibid, 70, fig.2:A18.
25. KNOSOS IN THE AREA OF THE SHRINE OF GLAUKOS

SM, Archaic, O, Classical, Hellenistic, Roman.

(A:2)

A Classical and Hellenistic shrine of Glaukos was exposed during excavations by Alexiou in 1976\textsuperscript{349} on the sloping ground east of the Acropolis, about 300 metres west of the central court of the Minoan palace and 200 metres south of the Unexplored Mansion\textsuperscript{350}. As well as the Roman, Hellenistic, Archaic, and Orientalizing signs of occupation, Alexiou uncovered, in a small area immediately north of the shrine, among the earliest pottery, a mass of Subminoan sherds - which may have been either in situ or fill and which suggested Subminoan occupation somewhere near.

References:
BSA 73 (1978) 1-30.

\textsuperscript{349}AR (1976-70) 19-21; BSA 73 (1978) 1-30.
\textsuperscript{350}See map \textit{Ibid}, 1, fig. 1:5.
The Spring Chamber was attached to the Caravanseraï building south of the Palace of Knossos. The probably public cult at the underground Spring Chamber which flourished in Subminoan times, is already attested in use by at least LMI\textsuperscript{351}. It was then used again in Subminoan times, but was abandoned during Protogeometric when the supply of water became blocked. It was probably replaced by the nearby Sanctuary of Demeter on the slope above to the southwest. It was excavated in 1924 and rather poorly reported\textsuperscript{352}. Subsequently Desborough examined the findings in more detail\textsuperscript{353}. Nearly twenty Subminoan votive vases were found in the Spring Chamber, as well a numerous plain small handleless kalathoi, a hut-urn inhabited by an eleventh-century Minoan goddess with upraised arms, a terracotta sphinx\textsuperscript{354}, and a banded stand with small cuttings and straight sides on the solid body\textsuperscript{355}.

The painted pottery consisted of the following:-

- a trefoil-lipped oinochoe, long-necked, with bands on the lowest part of the body, a rectangular ladder decoration on the shoulders, and a handle to the level of the lip\textsuperscript{356};
- a stirrup jar of squat globular shape with straight foot and knob on the disk. The shoulder is decorated with rudimentary triangles, while below is plain\textsuperscript{357};

\textsuperscript{351}PMII, 134f, fig. 68.
\textsuperscript{352}PMII 128ff; JHS 44 (1924) 263f.
\textsuperscript{353}PGP, 236-7.
\textsuperscript{354}PMII, fig. 69.
\textsuperscript{355}Ibid, 133, fig. 67b.
\textsuperscript{356}Ibid, fig. 68A.
\textsuperscript{357}Ibid, fig. 69, S.
two kalathoi (wide shallow bowls) have two vertical handles to the rim, one with a low base, one with a ring foot and banded decoration;

two different kalathoi are handleless and have simple decoration. They are a well-known Minoan type;

an amphoriskos has a low conical foot, a squat rather globular body, two horizontal handles on the belly which slopes inwards, and a flaring neck. It is decorated with short vertical lines between the handles, a painted lip, a horizontal band over the belly, and is plain below. It can be compared with a Submycenaean type at Kerameikos, but is rare in Crete;

three vases are a cross between an amphoriskos and a deep bowl or krater, and could be called amphotroid kraters. One of these is decorated with short vertical lines on the shoulder, another with diagonal lines alternating in direction;

two bell kraters - which were a variation of the krater, and out of which was to emerge the fully developed Protogeometric bell-krater - each had a highish foot, deep body, and slightly out-turned lip. The upper part of the body was painted over;

the three cups also has a highish foot, but is more globular than the bell-krater. They have a fairly high-flaring lip and handle from belly to rim. They have a fairly high-flaring lip and handle from belly to rim. The decoration - on a clay ground consisted of vertical lines or a rough zig-zag on and above the belly, with bands below;

an askos has three short feet and a handle on its back, and is decorated with groups of alternating diagonals in two rows, and bands and zig-zags in between;

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358 Ibid, fig. 69,Q.
359 Ibid, fig. 69, R.
360 Ibid, fig. 69, O.
361 Ibid, fig. 69 B (and H).
362 Ibid, fig. 69,U.
363 Ibid, fig. 69, C (and E).
364 As in Ibid, fig. 69,F (and D)
365 As in Ibid, fig. 69, V.
366 Ibid, fig. 69, N.
a one-handled jug had a simple reserved banded decoration on the shoulder;
three fragments of kraters of deep bowl shape had moulded everted rims and exhibited a dying fringe style decoration from LMIIIC of metope between the handles, with a curvilinear ornament flanking a rectilinear panel.

Although contemporary with tombs in the area, the Spring Chamber included several shapes not found in the tombs - the bell krater, the amphoriskos, the krater, and the askos. All these (except perhaps the askos) were of Mycenaean origin.

References:
*PGP*, 236-7.

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367 *ibid*, fig. 69.P.
368 *ibid*, fig. 70, A:2-5.
In 1967 and 1971 occupation material from the Subminoan to Roman periods was found above the Unexplored Mansion, on a sloping site. The reporters note that the nature and extent of the Subminoan-Hellenistic settlement are difficult to estimate because of lack of intelligible structures owing to earthquake disturbances\textsuperscript{369}. There were isolated deposits of the Subminoan. This material, it was noted, began slightly earlier than the earliest Fortetsa material\textsuperscript{370}. Two vases were illustrated - a belly-handled amphora\textsuperscript{371} with horizontal band and wavy line decoration, and a stirrup jar with horizontal banded decoration\textsuperscript{372}.

References:
AR (1967-8) 22.
AR (1972-3) 62-3.

\textsuperscript{369}AR (1972-3) 62f.
\textsuperscript{370}AR (1967-8) 22.
\textsuperscript{371}Ibid.
\textsuperscript{372}Ibid.
28. KNOSSOS - WEST of the STRATIGRAPHICAL MUSEUM


(A:1)

The Stratigraphical Museum stands on the gentle hillside some 350 metres north-west of the palace, just west of the Unexplored Mansion and the Little Palace. Soundings taken in 1962 revealed stratified house material from MMIII to Roman, and some LMIIIC finds included also a fine Subminoan pyxis. The site which was excavated by Warren between 1978 and 1982 lies behind the Stratigraphical Museum to the west, and covers 750 square metres. The occupational sequence of this major settlement ranged from MMI/LMI-III A2, LMIIIC, SM, PG, G, Classical, Hellenistic and Roman. After a break at LM IIIA, a new extensive settlement was created in LMIIIC which continued without break through the Subminoan period. The excavator remarks on the significant position of the site - lying as it does between Gypsades cemetery to the south (which finally ended in Subminoan) and the extensive cemeteries to the north, which seem to have begun in the same period. The excavation was reported in some detail.

Two main areas of Subminoan finds were discovered - the first and most substantial in the central part of the site, in a pit set into a LMIII pit, and the second in the southeast part of the site where a fragmentary sequence of walls and features indicate Subminoan stages subsequent to the LMIIIC phase.

In the central part of the site the ten vases so far catalogued included two wavy-lined bell-cups - internally banded; a juglet, a bell bowl and a bell krater - each with an internal reserved band (similar to, but broader in proportion and more strongly

373 Arch. Surv. Knoss., 48, no. 188.
374 AR (1982-3) 63f.
curvaceous profile to subsequent Protogeometric examples), also two globular collared amphoras with shoulder scrolls and bands on the body, two plain lekanai (continuing the LMIIC type), and part of a globular tripod cooking pot with a deep thumb hole at the top of the leg (as in IIIC). The ancestry of some of the material was thus in LMIIC, and of others in LHIIC (e.g. bell cups, amphoras, and some decorative details), though other LHIIC forms were conspicuously absent. Warren concludes\textsuperscript{375} that the material stands close to the Subminoan material in the Spring Chamber, in Fortetsa tomb Pi, and to that in the Subminoan - early Protogeometric tombs of Hagios Ioannis to the north, as well as to other deposits at Knossos.

In the other part of the site - i.e. to the south-east - two infant skeletons were buried beneath the floor in one area, while at floor level in the northern room a stone vase lid and a small bronze spearhead were found. Nearby was a Subminoan krateriskos\textsuperscript{376} like some from the Spring Chamber\textsuperscript{377}. Its decoration was banded, with a thick zig-zag continuous border on the shoulder. West of the south room a pit contained four Subminoan bell-bowl (or bell-skyphoi) of the second phase. Three of the bowls have the usual solid painted upper part\textsuperscript{378}, while one is decorated\textsuperscript{379}. Other vases of this phase in nearby areas were another bell-bowl, and also a fine, side-handled kalathos\textsuperscript{380}.

In phase 3 of the Subminoan occupation a bell-shaped skyphos was found, of wide proportions, and with reserved band and disk\textsuperscript{381}. It can be compared with examples from the Spring Chamber\textsuperscript{382}, and from the Royal Road deposit\textsuperscript{383}.

\textsuperscript{375}ibid, 79.
\textsuperscript{376}ibid, fig. 61.
\textsuperscript{377}PM II, fig. 69, B.H.V. These are also called amorphoid kraters.
\textsuperscript{378}AR (1980-1) fig. 65, centre.
\textsuperscript{379}ibid, fig. 66, left.
\textsuperscript{380}ibid, fig. 66 right.
\textsuperscript{381}ibid, fig. 65, left.
\textsuperscript{382}PM II, fig. 69, R and T.
\textsuperscript{383}BSA 67 (1972) 70, fig. 2, A18.
Phase 4 was represented by a small bell-skyphos with reserved interior disk\textsuperscript{384}, and two bell-bowls (or small kraters)\textsuperscript{385}.

There were no clear Protogeometric deposits at this site, though there were some nearby nearer to the Palace, and extensive ones in the Fortetsa and North Cemetery tombs.

References:
\textit{AR} (1982-3) 76-83.

\textsuperscript{384} AR (1980-1) fig. 65, centre.
\textsuperscript{385}\textit{ibid}, fig. 65, right.
29. LYTTOS
LMIIIC-SM-Archaic, Roman.
(B:2)

Lyttos was situated near Aski on a hill just west of an entrance through the mountains to the plain of Lasithi at the western base of the Dictaean range, and fed by the Lasithi river of Megalos Potamos. Lyttos was probably settled in the twelfth century by the Laconians, thus causing the majority of inhabitants of the Lasithi plain to establish Karphi.\(^{386}\) Later Lyttos became a powerful Dorian centre.

No systematic archaeological investigation has been undertaken here.

Lyttos took part in the Cretan contingent under Idomeneus against Troy.

References:

\(^{386}\) See BSA 75 (1980) 282.
The small settlement of Armi was situated 700 metres north of the village of Mesa Lasithi on the plain, west of the Mirabello kalderimi. Sherds indicate occupancy in Middle Minoan, Late Minoan IIIC and Subminoan-Protogeometric. Pendlebury saw the site as being contemporary with Karphi$^{387}$. The finding of an altar and a bronze figurine probably indicate that this was a worship place.

References:
BSA 38 (1937-8) 2.
AC (1930) 314.
Larnax burials and LMIII-Subminoan sherds were found about 200 metres to the east of Armi under the modern road at the Vlykistra location on the west edge of the village of Nikophardo. They may represent the cemetery of Armi\textsuperscript{388}. The sherds included klylix stems, krater ring feet (which compare with examples from Karphi\textsuperscript{389}) and a pithos sherd decorated with a rope pattern (like one from Karphi\textsuperscript{390}).

References:
*BSA* 38 (1937-8) 2
*AC*, 263, 314.
*Kanta*, 122.

\textsuperscript{388}AC 314, 263.
\textsuperscript{389}BSA 55 (1960) 23, fig. 15:2.
\textsuperscript{390}Ibid., pl. 1a.
Karnari lies between Arkhanes and Mt. Juktas at an altitude of 847 metres above sea level. It is situated on the lower slopes of the sacred mountain in a beautiful and rich wine-growing area south of Knossos.

A small Late Minoan and Subminoan settlement has been found here\textsuperscript{391}. Minoan buildings and an intact LMIII sarcophagus, as well as pottery in a nearby cave, were reported in 1950\textsuperscript{392}. The pottery represented the Minoan, Geometric, Orinetalizing, Greek and Roman periods, and indicated uninterrupted cave sanctity to the end of antiquity. It was probably the ancient Lycastos. It is likely that the cult was that of Eileithyia - a goddess who was protectress of children\textsuperscript{393}.

In 1978 a Subminoan cremation burial in a limestone-lidded ash-urn was unearthed. Grave goods included a stirrup jar, a bronze spearhead and one of iron, and two iron Type II swords\textsuperscript{394}.

References:
\textit{BCH} 74 (1950) 311.
\textit{JHS} 71 (1951) 252.
\textit{AR} (1979) 80

\textsuperscript{392}\textit{BCH} (1950) 311.
\textsuperscript{393}\textit{JHS} 71 (1951) 252.
\textsuperscript{394}\textit{AR} (1979-80) 50, fig. 86.
33. PANAGHIA
LMIIIIC, SM-PG.
(A:2)

On the road between Embaros and Nipiditos, this site is situated very close to the eastern end of the Mesara. It lies on the low ascent from the Mesara to the Pediada plain which links northern and southern central Crete.

A small plundered Subminoan tholos tomb was investigated by Halberr at the location Stou Kofina to Kefali in an acropolis on the eastern end of the Mesara near Afrati. Five new tombs, all rectangular and with inhumations, were found by Levi, most of them containing pottery. The pottery was mostly quite poor in quality and largely Subminoan in character. This pottery has been described in detail by both Levi and by Desborough.

Tomb A contained a small stirrup vase with a fat globular body and highish foot and a triangular shoulder decoration; a small bell krater or krateriskos with flaring foot and elongated body, with only the upper half painted; two kalathoi or low bowls, which were shallow, one having a wavy line between the handles, the other decorated with three series of vertical dashes; a deep bowl or little stamnos with two horizontal looped belly handles; two small trefoil-lipped oinochae with dumpy body, flat base and short neck; a globular bowl or skyphos; two small hydriae.

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395 *AIA* 5 (1901) 283-7.
396 *Ann. 10-12* (1927-9) 389-400.
398 *PGP*, 253-4.
399 *Ann. 10-12* (1927-9) fig. 502.
400 *Ibid.*, fig. 504.
401 *Ibid.*, fig. 505.
403 *Ibid.*, fig. 507.
which were squat and footless, one being decorated with a double-spiral decoration enclosing a cross-hatched triangle, volutes with small circles with a point in the middle beneath, and, on the side, a possible meander element.\footnote{405}{\textit{ibid}, fig. 509.}

In tomb B were a stirrup vase with high foot and globular body; a small oinochoe or spherical jug with trefoil lip; and a pyxis of Subminoan type with vertical handles from body to lip and a high foot\footnote{408}{\textit{ibid}, fig. 514.} (similar to ones from Knossos).

Tomb C contained only a small, very deep cup with vertical handles and no foot.\footnote{409}{\textit{ibid}, fig. 515.}

In tomb D was a small, flat-bottomed oinochoe with banded neck and lower body, and a narrow band of vertical lines near the handle.\footnote{410}{\textit{ibid}, fig. 11.} Near tomb D a mass of iron weapons were found, which included iron swords and spearheads.\footnote{411}{\textit{ibid}, fig. 517.} As well, one whorl and one bronze wire ring were found.

References:
\begin{itemize}
\item \textit{AJA} 5 (1901) 283-287.
\item \textit{Ann.} 10-12 (1927-9) 389-400.
\item \textit{BSA} 38 (1937-8) 111.
\item \textit{PGP}, 253-4.
\end{itemize}
Dominating the large Mesara plain, the site of Phaestos was situated on an acropolis site, with the surrounding areas occupied. It was defended on the north by Geropotamus, on the east by a little stream with high steep banks. On the eastern limit were hills dividing the plains of Dibaki and Mesara, while to the south were fields and olive groves.

Settlement was extensive during the Late Minoan and Geometric periods (1400-700 B.C.) The Minoan centre spread over three hills, each lower than the rest, with the Palace on the lowest hill, and various buildings clustered about its slopes.

Following the destructions of the Palace in Late Minoan II and IIIB, partial occupation, of an urban nature, was evidenced on the south east side of Phaistos hill. In the early twelfth century a new settlement, which continued to enlarge to Geometric times, was built over the earlier palace remains. "Submycenaean" remains have been found underneath the houses of the Protogeometric quarter at the clearing of the west court. No sherds are illustrated. Further north in the clearing of the west court, strata of all periods have been found, with particularly numerous "Mycenaean and Submycenaean" sherds. The material which probably ranges from late LMIIIC to Protogeometric is roughly contemporary with that of Karphi, and exhibits a gradual change as at Gortys, Knossos and Tylisos. It has been discussed briefly by Desborough. Most of the sherds were of either bowls or kraters, with a few kylix stems, and in the Open Style of Karphi. Spirals were a commonly used decorative

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414 *LMTS*, 182-3.
motif (as used in LMIIIB), and wavy lines appear also, implying influence of later LHIIIC. Two sherds were in the fringed style.

At this naturally well-defended site Levi noted a Subminoan-Geometric fortification wall, 2.8 metres thick, with gates and a bastion, composed, at least in part, of large blocks of stone.\textsuperscript{415}

References:
Boll. 'd'Arte (1956) 240-3, 273.
Annuario 19-20 (n.s.) (1957-8) 255ff., 286ff. (fig. 125), 292 f. (fig. 135).
Borda, M. Arte Cretese Micenea nel Museo Pigorini di Roma. 1946.

\textsuperscript{415} Boll. d'Arte 16, fasc. 4 (1956) 241, 273, note 5.
35. PHAESTOS - on the slopes of the hill

Subminoan.

(A:2)

In 1954 a tomb, possibly a chamber tomb, was found of the slopes of the Phaestos acropolis. Its contents may have covered only the first half of the eleventh century. In it were thirteen Subminoan vases, as well as a steatite button, a hair pin, and two bronze arched fibulae. Desborough briefly discussed these, noting that a number of them were not in the Minoan tradition – including a four-handled vase or hydria, three monochrome deep bowls, and a small askos (monochrome, except for the foot). All of these had dark background decoration, which is not to be found among the settlement sherds. Two kalathoi with wavy-line decoration were also not in the Minoan tradition. The other vases were stirrup jars and two amphorae. More recently these vases have been illustrated and discussed in greater detail in Rocchetti’s Annuario article, alongside others from the area in the Herakleion Museum, to demonstrate the passage from Late Mycenaean to Protogeometric times. Notable is the increasing geometricization of the decorative motives, combined at times with curvilinear decorations.

The four-handled hydria is unique for its time (eleventh century). Variously arranged lozenges and groups of slanting parallel lines closely decorate the shoulder. On the belly is a frieze of triangles with concave upper sides which may be conventionalized bucrania.

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416 *Boll. d’Arte* (1955) 159.
417 *GDA*, 116.
418 *LMTS*, 183.
420 *Ann.,* 42-3 (1969-70) 46-7, fig. 7.
The neatly organized triangular pattern filled with parallel lines on the lip of the kalathos represents a foretaste of Geometric technique\textsuperscript{421}.

The three skyphoi with their straight-sided, angular look demonstrate the evolution in shape from that of the Late Minoan IIC (though of Mycenaean heritage) to the deeper type which followed, and which was to become the bell-krater of Protogeometric times.

\textbf{References:}
\textit{Boll. d'Arte} (1955) 159, and fig. 28.
\textit{Ann. 31-2} (1969-70) 41-61.
\textit{LMTS}, 183-4.

\textsuperscript{421}\textit{Ibid.} 47, fig. 8.
The cemetery of Liliana was discovered on the slopes of the small hills to the north of the palace. The chamber tombs contained several clay coffins. They were published in 1904, but both the material and the quality of the publication were very poor\textsuperscript{422}. It is probable that the cemetery was first used in the thirteenth century, and continued into the eleventh century, but no further\textsuperscript{423}. A cremation dating to LMIIC or Subminoan in date has been noted\textsuperscript{424}.

Vases which appear to be Subminoan in date include a monochrome deep bell-shaped bowl\textsuperscript{425}, and a similar, though smaller, cup\textsuperscript{426}. Furumark compares them with similar Submycenaean shapes\textsuperscript{427}.

Also parallel to Submycenaean examples is a hydria\textsuperscript{428} which, in its shape and decoration (wavy lines on belly, cross-hatched triangles on shoulder) resembles a belly-handled amphora from Gypsades tomb 7\textsuperscript{429}.

Another later vase is a small amphoroid or necked krater (or kantharos) with conical feet\textsuperscript{430}. Other rare contemporary examples of this vase were found at Fortetsa\textsuperscript{431} and

\textsuperscript{422}MA 14 (1904) 627ff, and figs. 107, 110-2.
\textsuperscript{423}See GDA, 116.
\textsuperscript{424}LMTS, 187.
\textsuperscript{425}MA 14 (1904) fig. 107.
\textsuperscript{426}Ibid.
\textsuperscript{428}MA 14 (1904) fig. 110.
\textsuperscript{429}BSA 53-4 (1958-9) fig. 7:1.
\textsuperscript{430}MA 14 (1904) fig. 107.
\textsuperscript{431}Fortetsa, 164, pl. 11 (tomb 11).
at Modi in West Crete\textsuperscript{432}. As well, similar vases have been discovered in Cyprus\textsuperscript{433}. The shape is Minoan, going back to at least LMIIIA, and surviving in Crete into LMIIIC/Subminoan\textsuperscript{434}. On the Greek mainland it was characteristic of LHIII A and B. It has been suggested that the prototype of the small amorphoid kraters found quite frequently in Cyprus may be Subminoan, evidencing the strong contact which existed in LMIIIC and Subminoan between Cyprus and Crete\textsuperscript{435}.

Another vase in the Liliana tomb was a one-handled jug\textsuperscript{436} with typically simple horizontally-banded globular body, fairly squat, with low conical foot and a short neck, plus a possible trefoil lip, and handle from rim to shoulder. It is similar to ones from Gypsades\textsuperscript{437} and Karphi\textsuperscript{438}. It is a type common in LHIII C2 (Furumark’s type no. 137), and it has also been found commonly among Proto-white painted ware in Cyprus\textsuperscript{439}.

A small jug with flaring lip\textsuperscript{440} is of earlier Minoan derivation. A similar one has been found at Karphi\textsuperscript{441}.

There is also a feeding bottle\textsuperscript{442} - i.e. a spouted jug with basket handle and horizontal line decoration - which has its proto-type in Mycenaean pottery of LHIIB and IIIC:1, and was found at Karphi too\textsuperscript{443}.

\textsuperscript{432}K. Chr. (1953) 485f.
\textsuperscript{433}Cf. Karageorghis, V. Alaas (1975) 48.
\textsuperscript{434}Cf. BSA 62 (1967) 385.
\textsuperscript{435}Kanta, 274.
\textsuperscript{436}MA 14 (1904) fig. 107.
\textsuperscript{437}BSA 53-54 (1958-9) fig. 7:9
\textsuperscript{438}BSA 38 (1937-8) fig. 9:1.
\textsuperscript{439}E.g. at Alaas. See Alaas, 49.
\textsuperscript{440}MA 14 (1904) fig. 107.
\textsuperscript{441}BSA 55 (1960) fig. 8:5.
\textsuperscript{442}MA 14 (1904) fig. 107.
\textsuperscript{443}BSA 55 (1960) fig. 10.
Though at least half of the eight stirrup jars can be dated to LMIIIB, two at least, with the motive of semi-circular lines within a triangle, are of later (LMIIIC/Subminoan) date\(^{444}\). In this, they correspond with examples from Cyprus in LCIIIIB \(^{445}\), as well as with ones from many Cretan Subminoan sites. The Phaestos examples tend to be less straight in their lines than other examples from elsewhere, for example from Gypsades, and the bodies are generally squatter.

Glass paste ornaments were also found in the coffins at Liliana.

References:
*MA* 14 (1904) 637ff., figs. 107, 110-12,
*LMTS*, 184.

\(^{444}\)Borda, M. *Arte-Cretese-Micenea ne Museo Pigorini di Rome* (1946), pl. 34:2.
\(^{445}\)E.g *Alaas*, pl. 68:B1,B3,B4.
The territory centred on the steep-sided, triangular-shaped plateau known as the Patela of Prinias, lies at the junction of two valleys that connect the northern and southern coasts of Crete. This high mountain site overlooks and commands the present road connecting Herakleion to the southern end of the plain of Mesara. It can only be approached from the west. It was first occupied in LMIII times, perhaps as a typical refuge area.

Halberr discovered the site in 1894, and Pernier excavated it in 1908446. In 1969 new excavations were started by Rizza447.

The evidence indicates that there was a sanctuary at Prinias which was probably in continuous use from the twelfth century onwards into the Dark Ages. Later temples were built over the earlier site. A residential quarter arranged on three terraces on the north end of the plateau was found with material dating to Subminoan and Protogeometric, over which was material from the first half of the sixth century.

Finds include at least five goddess figurines448 which are similar to ones found at Karphi449. Five snake tubes found at the Patela consisted of cylindrical stands with out-turned lips, while each had four pairs of opposing vertical roll-handles finishing in a snake-like tail450. Both the goddess figurines and snake tubes have been ascribed to

446AJA 5 (1901) 399ff; Boll. d’Arte 1 (1908) 441-62.
448AM 26 (1901) 247-257; Boll. d’Arte 2 (1908) 15.
449BSA 38 (1937-8) pl. 31.
450AJA 80 (1976) 253.
Subminoan\textsuperscript{451} though Kanta designates them late IIIC\textsuperscript{452}, and Gesell, LMIIB-IIIC\textsuperscript{453}. Sherds found with them have been dated to Subminoan or later\textsuperscript{454}.

Two clay animal figurines and the head of another were found by chance in the area of the Subminoan shrine\textsuperscript{455}.

References:
\textit{AM} 26 (1901) 247-257.
\textit{AJA} 5 (1901) 399ff.
\textit{Boll. d'Arte} 23 (1908) 441-462.
\textit{Ant. Cret.} II (1978) 154ff.
\textit{AJA} 80 (1976) 253ff.

\textsuperscript{451}By Alexiou in \textit{K. Chr.} 12 (1958) 180-5.
\textsuperscript{452}Kanta, 14.
\textsuperscript{453}AJA 80 (1976) 253.
\textsuperscript{454}\textit{K. Chr.} 12 (1958) 180f.
\textsuperscript{455}\textit{K. Chr.} (1961) 386.
At Siderospilia, five hundred metres northwest of the Patela of Prinias, a pre-palatial necropolis has recently been identified by the Mission from the University of Catania, and excavated between 1970 and 1978. 680 tombs were explored which formed a continuous sequence from the end of the thirteenth century to the middle of the sixth century B.C. The necropolis lies on a wide, southeast facing slope separated from the Patela by a deep valley. The development of the cemetery coincides with that of the settlement on the Patela. So far, four stages have been identified with certainty. The first phase (from the thirteenth century) had cremations in pits; the second phase had tholoi and inhumations; the third had cremations in urns.\footnote{Ann. 61 (1983) 130.}

Among the finds in the second phase was a small clay head with diadem, of Subminoan type - with large bulbous eyes and deep-cut nostrils, and features outlined in paint.\footnote{La Ricerca Scientifica, 100 (1978) 130, fig. 45.}

Possibly slightly later, from a late stage of the second phase, was a jug with trefoil lip\footnote{Ancient Crete. A Hundred Years of Italian Archaeology (1884-1984) (1984) 277, b.} which resembled in shape one from Submycenean Athens\footnote{Kerameikos I, pl. 24, no. 438.}, and decoration, one from Protogeometric Knossos\footnote{BSA 55 (1960) pl. 35:V8.}. Also from this phase was an amphoriskos\footnote{Ancient Crete. A Hundred Years of Italian Archaeology (1884-1984) (1984) fig. 277.c.} which is paralleled both in shape and decoration by an example in the Spring Chamber at Knossos\footnote{PM II, 136, fig. 69B.}. Again from this phase was the uncommon form of a small jug with...
cylindrical spout on the shoulder\textsuperscript{463}. All of these may be of late Subminoan to early
Protogeometric in shape.

References:
Rizza, G. Gli Scavi di Prinias e il problema delle origini delle origini dell'arte greca. 

\textsuperscript{463}\textit{Ibid}, fig. 277.a.
39. PSYCHRO - the Dictaean Cave

MM-C.6 B.C.

(A:2)

The Dictaean Cave is located on a plateau at an altitude of 920 metres, 100 metres above the Lasithi Plain on the slope of modern Psychro.

An important peak sanctuary was established in Middle Minoan I and probably continued in use until the sixth century B.C. Dark Age offerings in small numbers indicate continuity of cult from LMIII to Protogeometric. These were in the form of well-turned animal and human figurines.

As Boardman comments, it is difficult to accurately demonstrate a sequence in the pottery because there was too little pottery from the cave. Also, bronzes are difficult to diagnose464. But, he concludes, there was probably continuity in production of minor objects such as bronze finger-rings, of which there are examples which can be compared with Subminoan examples at Karphi465, and at Mouliana466.

References:
BSA 6 (1899-1900) 94-116.
CCO, 1ff.
Faure, P. Fonctions, 151ff. See refs. note 1, 152.

464CCO,1ff.
466AE (1904) 37, fig. 8.
40. SIDEROKEPHALI
LMIIIC-SM.
(B:1)

The large site of Siderokephali is located on a bisected hill in an easily accessible valley outside the Lasithi, and at a distance of one-and-a-half kilometres from Karphi.

Taramelli reported a small rectangular tholos tomb partly constructed from blocks of stone similar to those found at Karphi, Panaghia and Erganos in Central Crete, and at Khamaizi (at Liopetro) in East Crete. These appear to have belonged to Cretans of no great wealth. Watrous suggests that there was a big LMIII C/Subminoan settlement at the site which may have provided winter quarters for Karphiites.

References:
MA 9 (1899) 402-5.
The Hagia Paraskavi cave is situated south west of Gournes and 12.5 kilometres east of Knossos, at an altitude of 231 metres. It is the largest cave between the Lasithi and Psiloriti massifs. It is 60 metres long and reaches a depth of some 160 metres, while its interior is impressive and cathedral-like, with stalacmites. The site has been described by Evans in 1921\textsuperscript{469}, by Faure\textsuperscript{470}, and by Davaris\textsuperscript{471}. Sherds and votive objects have been found dating from Middle Minoan I through Roman, and including abundant LMIII material, but with a gap between Archaic and the end of Hellenistic.

Several concretions in the cave appear to resemble animal and human figures, and must have been used as cult images. An idol of Aphrodite Ourania was identified by Faure under a mass of religious offerings of Minoan, Geometric and Roman periods\textsuperscript{472}.

\textbf{References:}

\textit{PMI}, 163.
\textit{BCH} 80 (1956) 96.
\textit{BCH} 82 (1958) 508-11.
\textit{AD Chrons.} (1963) 312.
\textit{K. Chr.} 17 (1963) 398.

\textsuperscript{469}PM I, 163.
\textsuperscript{470}BCH 80 (1956); BCH 82 (1958) 508-11; \textit{Fonctions}, 163-4; K. Chr. 17 (1963) 398.
\textsuperscript{471}BCH 93 (1969) 620.
\textsuperscript{472}K. Chr. 17 (1963) 398.
42. SMARI at TROULLI TIS KARPHIS

LMIII, SM

(A:2)

Smari is situated 5 kilometres northwest of Kastelli Pediados. While signs of LMIII and post-Minoan cemeteries have been found recently at Lenika, south of the village, the chief site is Trouli ti Karphis. This site is 1700 metres east of Smari on the summit of a hill commanding the whole region. A complex of walls were discovered, possibly being part of a peak sanctuary, with a building of megaron plan at its centre. It is suggested that it may be one of the earliest post-Minoan sanctuaries - perhaps contemporary with megaras 137 and 138 at Karphi, and earlier than the temples at Prinias.

References:
AR (1981-2) 55.

43. TYLISOS (Plates 29, 30, 31)
LMIII A, IIIB, IIIC, SM, EPG
(A:1)

Tylisos is situated eight miles to the south-west of Herakleion on the ancient road leading to Axos and Eleutherns, and on the road that led from Knossos to the Idaean Cave. Its position on a fertile plain is not designed for easy defence.

Remains from Early Minoan, Middle Minoan and LMIII have been found and reported by Khatzidhakis. Additional information from a stratigraphic test done in 1971 on the site is described by Kanta. It helps clarify to some degree the hitherto controversial chronology of the later cremation burial. It established that the occupation of Tylisos in LMIII commenced in LMIIIA, and continued through IIIB, IIIC and Subminoan into Protogeoemtric. Finds indicate that the occupation included cemetery, settlement and shrine.

The material from the chamber tomb reported by Khatzidhakis contained vases of LMIIIB and three of advanced to final LMIIIC, all of which are paralleled in the Subminoan tomb at Fortetsa. One of these is a kalathos which is decorated with a zig-zag line.

475Kanta, 9ff.
476AM 38 (1913) 43-50.
477Fortetsa, pl. 3, nos. 1, 2, 11, 14, 27.
478Kanta, fig. 1:4.
Marinatos discovered a later cremation burial in a chamber tomb at Atzolou\textsuperscript{479} which Furumark designated to LMIIC\textsuperscript{480}, Desborough to Protogeometric\textsuperscript{481}, and Kanta to just before the start of Protogeometric - i.e. advanced Subminoan - and into early Protogeometric\textsuperscript{482}. The only clay vase in the tomb was a stirrup jar\textsuperscript{483} decorated with curvilinear elaborate triangles - a style paralleled in the material of the Tylisos 1971 Stratigraphic test\textsuperscript{484}. This tomb also contained a hemispherical bronze bowl (with burnt bones), two pieces of iron (probably from a small knife), and two bronze fibulae\textsuperscript{485}. One of these fibulae\textsuperscript{486} was very similar to an example from Vrokastro\textsuperscript{487}.

A cistern found at the site contained no sherds. It can be dated, to some degree, by the presence of several human and animal figurines which indicate that it was used as a shrine between LMIIB and C/Subminoan. Among the figures was that of a male head\textsuperscript{488}, possibly a sphinx - with protruding pellet eyes and moulded features, which can be compared with a sphinx of probably Subminoan date from Hagia Triadha\textsuperscript{489} and also with one from the Spring Chamber at Knossos\textsuperscript{490}. A bull's head pendant, with its simple abstract decoration, and its use of thin dullish reddish paint, is probably the latest piece in the cistern\textsuperscript{491}.

\textsuperscript{479}AM 56 (1931) 12-18.
\textsuperscript{480}Op. Arch. III, 227 and 229.
\textsuperscript{481}PGP, 255.
\textsuperscript{482}Kanta, 11.
\textsuperscript{483}Ibid, pl. 2:1.2.
\textsuperscript{484}Ibid, 9ff.
\textsuperscript{485}AM 59 (1931) 115. fig. 3, a and b.
\textsuperscript{486}Ibid, fig. 3.b.
\textsuperscript{487}Hall, Vrokastro, fig. 19.c.
\textsuperscript{488}Kanta, 489.
\textsuperscript{489}Ann. 3-5 (1941-3) fig. 46.
\textsuperscript{490}PMII, 136, fig. 69L.
\textsuperscript{491}Kanta, 12 (no. 7286).
Kanta compares the monumentality of the cistern building with the apparently contemporary one at Amnisos, and the observed cult practices with those at the Spring Chamber.\footnote{492Ibid,12.}

The material from the 1971 Stratigraphical tests has not as yet been properly assessed, but it seems to indicate from the architecture and the sherds - which include advanced pieces with thinner slip and less lustrous paint - that "a considerable part of the site was inhabited during the terminal phase of Minoan civilization" and that there was continuity from LMIIC to Subminoan and early Protogeometric. Kanta concludes that Tylisos remained an important settlement throughout this period without finding any necessity to re-locate.

References:
AM 38 (1913) 43-50.
AM 59 (1931) 112-118.
AE (1912) 197-223.
PGP, 255,256.
LMTS, 169,184.
CHAPTER 3

ANALYSIS OF THE FINDSITES
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ANALYSIS OF THE FINDSITES

The last chapter presented a detailed description of the sites at which Subminoan occupation has been indicated, and of the material finds themselves. In this chapter the site evidence, as distinct from the material finds, will be discussed for Crete as a whole, and for the four main regions into which it is naturally divided - East, East Central, West Central and West Crete.

In Chapter I some commonly-held assertions about the Subminoan period have been described. They argued that during Subminoan - a time of unrest, upheaval, and disturbance - there was depopulation. All West Crete (except Eleutherna) was abandoned, while desertion took place at most of the main sites (except Knossos), especially if they were low-lying and undefended, as they were so often on the plains. Many inland towns, as well as coastal sites, were considered unsafe, and abandoned. At the same time fear drove people to establish new sites in defensible, high places, often remote and inaccessible. Caves were filled with refugees. It was assumed that communities were isolated and out of communication both with other settlements in Crete (especially in other regions separated by mountains), and also with overseas. It was also believed to be a time of poverty and stagnation.

The purpose of this analysis is to test and to modify, these assertions. In this chapter the patterns of settlement will be analysed, and the sites examined for number, distribution, size, geographical and topographical situation, duration of occupation and type. In this way we may learn more of why the people who inhabited Subminoan
Crete chose the sites they did, in order to gauge some feeling of the times. At the least we can summarize the material available, point out trends and answer some questions.

Colin Renfrew has said in his book *The Emergence of Civilization* (1972) that the pattern of settlement of a culture is a fundamental aspect of culture, a record and symptom of its activities. He notes that this major source of information has rarely been considered by historians in quantitative terms, and proceeds to demonstrate its use. Other scholars, both before and after Renfrew, have stated firm reservations about making summaries from our present incomplete and haphazard state of knowledge. For instance, Hope Simpson has pointed out that few sites have been thoroughly enough excavated for us to be certain that they were not inhabited during periods so far unrepresented by finds, so gaps may not be gaps where surface data provides the exclusive data for Subminoan sites. He continues that statistics may exaggerate expansion and decline. Larger sites may be more easily located. The selection of sites for excavation, and of areas for surface exploration, has been to some extent arbitrary, favouring large important sites. He concludes by warning "that the 'raw data' ... should be used with great caution in any statistical computations or predictions".

Despite these reservations I believe that more use can be made of Cretan quantitative evidence than has in the past. Crete has been more thoroughly surveyed and explored than most other Aegean regions. With the comprehensive material in the Gazetteer we have now a substantial body of evidence for analysis. Of the 96 sites described in the Gazetteer as Subminoan, 63 were from major and minor excavated sites, including 13 major sites which were well stratified and had well-described material. The sites which provided the firmest evidence were Dreros, Kavousi-Vronda and Vrokastro in East Crete; Karphi, Kato Symi, Knossos (4), Phaestos, Prinias, and Tylios in East Central Crete, and Chania in West Crete. Thirty-three Subminoan sites were indicated by surface exploration or accidental finds only. Of these, 14 produced material which was
described, and which resembled that of Subminoan material from stratified sites\(^5\). Though it is very difficult to interpret evidence given by surface finds alone, these sites form a small minority of the total sites, and overall there is a reasonably reliable body of evidence\(^6\).

In analysing this material I have tried to employ quantitative analysis with care alongside qualitative, and to strengthen its validity by comparing data between periods to reduce errors. This comparison has been made possible by the material provided for the preceding period by Kanta's recently published survey of the Late Minoan III period in Crete\(^7\).

Maps 1 and 3 indicate the distribution of the known and reported Subminoan sites. Subminoan material has been found at 96 locations at or around 70 places as recorded up to 1982-3. Map I shows the names of the 70 towns (cities, villages, etc.) at, or in the vicinity of, which Subminoan finds have been made, plus the location of sites clustered around them, numbering in total 96. They consist of a fair distribution of settlement and burial sites, as well as worship or cult sites, and surface-finds probably indicating sites\(^8\). The sites were spread widely, if sometimes thinly, over the whole of Crete, both inland and coastal, on mountains and plains. While the distribution in East Crete with 40 recorded sites and East Central with 43 was fairly even, the overall Cretan distribution was uneven, as only 8 sites have been recorded in West Central, and only 5 in West Crete. There were certain notable large concentrations in the map. The biggest concentrations of sites were to the north of East Central Crete (about 12 main sites, with the various findsites of the Knossos area being counted as one), around the edges of the Lasithi Plain (8 main sites), and in the mid northeastern part (more than 22 main sites). In 11 cases (incorporating 26 findsites)\(^9\) two or more findsites were located around a nucleus area, which in a number of instances had been old Palace centres. The most important of these was around Knossos where, so far twelve different sites have been found. Other nucleus sites in this region were at Mesa
Lasithi (2), Phaestos (3), and Prinias (2). In East Crete there were three sites around Kavousi, four at Praisos, three at Sphakia, and two at Zakros. In West Central Crete at Atsiphades there were two sites clustered together, and in West Crete at Vryses there were two also. Other sites were dotted at irregularly spread intervals over Crete, mostly within a few miles of another site.

The maps though they may contain some omissions, indicate that Subminoan settlement distribution - i.e. number of sites discovered - is very closely proportional to the intensity of the survey. But comparison period-by-period of the density of known sites should be far less dependent upon the intensity of exploration. As each of the periods - LMIIIA, B and C and Subminoan - have been allocated an approximately equal period of duration (c. 85-125 years) they can be compared on a roughly even basis\(^{10}\). In the analysis to follow a main site, where it is the centre of a cluster of other sites in the same area the complex has been counted as a single unit for comparative purposes, and named by the main town of the area. Table 2 sets out the number of known sites in Crete in the four regions prior to and during Subminoan.
TABLE 2: Comparison of No. of Known Sites in the Four Cretan Regions Occupied Prior to Subminoan and During Subminoan

<table>
<thead>
<tr>
<th></th>
<th>LMIII A</th>
<th>LMIII B</th>
<th>LMIII C</th>
<th>LMIII Indet.</th>
<th>SM</th>
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<td>corrected: 17</td>
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<td>7</td>
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<td>corrected: 4</td>
<td>corrected: 7</td>
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<td>c.169</td>
<td>c.68</td>
<td>c.97</td>
<td>c.70</td>
</tr>
</tbody>
</table>

Note: Owing to the distortion of the figures for LMIII A, III B and III C, caused by the large number of indeterminate LMIII sites, the figures for each of these periods in each region have been corrected by adding the calculated proportion of indeterminate LMIII sites to each of them.

The 70 recorded main sites in Subminoan Crete represent only a slight rise (of 2 sites) from the number of sites in LMIII C. This number would be considerably higher if one considered such factors as the large rise from LMIII C in the number of find locations around the area of Knossos (12 compared with 5 in LMIII C) which for the purposes of our analysis are all considered as one main site. There are, as there had been in III C, far fewer sites in Subminoan than there were in either LMIII A or, especially, III B. There had taken place a distinct levelling out following the dramatic drop in site numbers (of 101 sites) from III B to III C, which pointed to some sort of recovery. Regionally, by far the most significant rise in site numbers was in East Crete where, in Subminoan, there were 8 more main sites than in LMIII C.
In as far as site numbers are an indication of population size, it appears that there may have been a slight increase in the population in Subminoan, and that the time of "considerable depopulation" referred to by Boardman as belonging to the early post Minoan period\textsuperscript{13} was in fact towards the end of LMIIIB, just prior to the heavy fall in site numbers in LMIIIC. Before this there had been a general trend of increase in site numbers from Neolithic times\textsuperscript{14}.

We could more accurately establish the population size if we knew the size of the sites. The establishment of the size of ancient sites is a task of notorious difficulty. It has been discussed in some detail by Hope Simpson in the introduction to his \textit{Mycenaean Greece} of 1981, and will be briefly recounted here\textsuperscript{15}.

The site size may be defined by the area over which the finds spread, particularly where there are excavated buildings. This can provide only a very rough guide, as the actual field data are of varying degrees of reliability. Where there has been no proper investigation the estimates are mainly based on the observed amount and distribution of the surface sherds, common sense, personal experience and guesswork. Generally sites have been called minor where only surface finds have been made or where little excavation has taken place. Excavated sites are not always more important than those not excavated, but can be useful in indicating the varieties of Subminoan sites we may expect. They can also help in our assessments of the size or density of settlement at similar, but not yet excavated sites. Settlements designated as major have generally been excavated, and often survived as major centres in historic times. Renfrew states that an estimate of size of settlement (i.e. occupied areas) is often possible, particularly where estimates for the area of settlement are taken from the plans of excavated settlements. His important general conclusion is that typical Aegean prehistoric settlements did not exceed in area a total of four hectares, or 40,000 square metres, and that the size range of a typical Late Bronze Age major settlement was from 10,000-40,000 square metres\textsuperscript{16}. It does not, of course, follow that the density of occupation
within these boundaries was necessarily large or that sites which were large and important in the Late Bronze Age were still important in the Subminoan period.

The number of stratified Subminoan sites in our survey which are also well enough reported to allow an accurate estimate of size is very limited. Almost one third of the sites have been unexcavated (see infra) and in assessing size there is a natural tendency to designate these as small. For these reasons it has been thought best not to attempt a size classification of the Subminoan sites. From the evidence of excavated sites which we do have it is possible to state that by no means all sites were small in size. There were among them a good number of sites which could with some confidence be called medium-large to large\textsuperscript{17}. They were found in all regions except West Crete, and included Hagia Triadha, Tylisos, Siderokephali, Karphi, Kato Symi, Hagios Georgios Papoura, and 3 Knossian locations in East Central Crete; Adromyloi, Kavousi, Lato, Vrokastro, and Praisos in East Crete, and Axos and Atsiphades in East Central Crete. The population of Karphi, one of these larger sites, has been estimated by its excavators at 3500. We have insufficient information to estimate the population of most of the other sites.

From the slight rise in site numbers, plus the presence of a reasonable number of larger sites it is possible to reasonably draw the inference that Subminoan Crete did not witness any dramatic depopulation, as had taken place between LMIIB and LMIIC\textsuperscript{18}. The now-recognized probability that there was an exodus of a contingent from the Cretan population about 1100 B.C.\textsuperscript{19}, could, if large, have been reflected in a fall in population in Subminoan. Such does not appear to have been the case. We must consider the probability of an influx of new people large enough to more than offset the exodus.

It has been suggested that part of the Subminoan population may have been incomers. Did they cause much disturbance? Did they set up new sites, or did they settle into old
sites - either by integrating with the old population, or displacing the old population into new sites elsewhere in Crete, or even overseas? We need to examine the continuity of Subminoan settlements with the preceding Late Minoan age by establishing the date of the original occupation of the site from the survey data. Period by period comparison can cast light on transfers of population, with consequent discontinuity of occupation.

Before proceeding with analysis of this data we must be aware that finds dating to Subminoan do not necessarily imply continuity of occupation throughout the period. This can be clearly illustrated by Table 3 which shows the commencement and duration of occupation over the Subminoan period for nine Knossian sites, some of which were occupied for only part of the period. Another reservation to note is that the absence of finds from many, especially unexcavated, sites does not necessarily mean abandonment.
TABLE 3: Extent of Period of Occupation in Subminoan of Nine Sites in the Knossos Area

<table>
<thead>
<tr>
<th>Site</th>
<th>LMIIC</th>
<th>Early SM</th>
<th>Mid SM</th>
<th>Late SM</th>
</tr>
</thead>
<tbody>
<tr>
<td>West of Strat. Mus.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gypsades</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Cem.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kephala</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring Chamber</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unexplored Mansion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hagios Ioannis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Royal Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fortetsa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix 4 indicates the date of the original occupation of each of the Subminoan sites and the span of occupation. From this we can observe where there was continuity into Subminoan, which sites were newly established in Subminoan, and which Subminoan sites continued into Protogeometric. Table 4 is based on this information. All 96 sites are considered in this analysis, not just the main sites.
### Table 4: Continuity of Occupation of Subminoan Sites

<table>
<thead>
<tr>
<th></th>
<th>Started prior to LMIIIIC</th>
<th>SM sites of LMIII incl. IIIIC</th>
<th>New in SM</th>
<th>Occupd. in SM only</th>
<th>Contg. in PG</th>
<th>Reg. Site Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>21</td>
<td>24 (60%)</td>
<td>16 (40%)</td>
<td>11 (27.5%)</td>
<td>15 (37.5%)</td>
<td>40</td>
</tr>
<tr>
<td>EC</td>
<td>24</td>
<td>35 (81.4%)</td>
<td>8 (18.6%)</td>
<td>4 (9.3%)</td>
<td>26 (60.5%)</td>
<td>43</td>
</tr>
<tr>
<td>WC</td>
<td>5</td>
<td>6 (75%)</td>
<td>2 (25%)</td>
<td>1 (12.5%)</td>
<td>5 (62.5%)</td>
<td>8</td>
</tr>
<tr>
<td>W</td>
<td>3</td>
<td>3 (60%)</td>
<td>2 (40%)</td>
<td>-</td>
<td>3 (60%)</td>
<td>5</td>
</tr>
<tr>
<td>Cretan Total</td>
<td>53</td>
<td>68 (71%)</td>
<td>28 (29%)</td>
<td>16 (17%)</td>
<td>49 (51%)</td>
<td>96</td>
</tr>
<tr>
<td>%</td>
<td>55%</td>
<td>71%</td>
<td>29%</td>
<td>17%</td>
<td>51%</td>
<td></td>
</tr>
</tbody>
</table>

Analysis of this information reveals that there was a fairly high continuity from LMIII into Subminoan for Crete as a whole. Overall, 71% of all recorded Subminoan sites had been established prior to Subminoan, just over half of them prior to LMIIIIC. In no region does the number of new sites in Subminoan exceed the number surviving from the previous period. The low percentage of sites on new locations at the beginning of Subminoan does not suggest a situation of unrest for Crete as a whole. But in East Crete the situation may have been more disturbed. Of the 29% of the total Cretan sites which were established newly in Subminoan there were more in absolute numbers in East Crete than in all the other regions put together. In fact, 40% of all East Crete's Subminoan sites were only established during the Subminoan. They included ten new settlement sites. The trend in Subminoan East Crete towards increasing new foundations of sites may suggest an influx of new people (if clearly identified in the
remains), or a situation of unrest, or a simple change in settlement pattern in this region.  

It is interesting to note that many of the sites which had originated prior to Subminois, and then continued into Subminois, had been large and important sites earlier - e.g. Kavousi, Mouliana, Vrokastro, Zakros, Gortyn, Hagia Triadha, Kato Symi, Knossos (Gypsades), Knossos (Stratigraphical Museum), Phaestos (west of Palace), Phaestos (Liliana), and Tylisos. In fact, there were only one or two other large and important LMIIC sites which in Subminois showed little or no sign of habitation - e.g. Chania and Kritsa, though this may be due to chance of finds.

The strong signs of continuity evident over much of Crete in the transition from LMIIC to Subminois contrast strikingly with the situation in the rest of the Aegean. In most other parts there was little or no continuity of settlement occupation from the latest Mycenaean age into the early Dark Ages. Although the number of Subminois sites which were occupied without break from pre-IIIC to post Protogeometric was much lower (22 sites) this was still very high compared with elsewhere (see Appendix 4).

Desborough has proposed that once the Dark Age settlements of Greece were established they seem to have continued to be inhabited throughout this period and beyond. Was this in fact the situation in Crete? It has been shown (for example in Table 4) that at least some Subminois sites were only inhabited during part of the period - some starting later than others, or some going out of use before the end of the period. We do not know how many sites were like this. We do know (see Table 4) that 51% of Subminois sites continued to be inhabited into the Protogeometric period. This was not a high proportion compared with the very high continuity from LMIIC into Subminois. It may not signify unrest, but rather a return to a previous order. Such probably was the case with Karphi - one of the largest Subminois settlements - which did not survive at its elevated site beyond Subminois. At the end of
Subminoan, the inhabitants removed themselves to a lower and more convenient and comfortable location at Papoura\textsuperscript{23}.

In East Crete fewer Subminoan sites continued into Protogeometric than in other regions, and more sites were occupied here during Subminoan only than elsewhere. In East Central there was less disturbance and change.

The pattern of settlement may help us discover what factors influenced the people of Subminoan Crete in choosing the sites they did. They must be considered in the light of the actual geographic layout and features of the island, and the position of the Subminoan sites within this environment. Naturally the geography and climate of Crete were major factors in determining the pattern of prehistoric settlement.

It can be seen from Map 3 that a chain of high mountains (dominated by the White, Ida and Dikte mountains) naturally divide the island of Crete into its four main regions - West, West Central, East Central and East. These mountains run through the middle of Crete for its whole length with two large breaks by fertile plains. There is a further line of mountains along the south coast of the East Central and East districts which provide a natural barrier often quite near the sea. Here the approaches are difficult and there are few good harbours\textsuperscript{24}. The north coast, on the other hand, is naturally provided with sandy beaches suitable for anchorage, and more natural harbours. The best sheltered bay is at Souda in the North West, and the largest gulf is at Mirabello, the Bay of Mallia and Siteia. There are also several upland plains surrounded by mountains - the most fertile being the plain of Lasithi in East Central Crete. Others are the Omolos plains in the White Mountains, and the plain of Nidha on the north-east slope of Mt. Ida. But the majority of Crete's terrain is rugged and mountainous (and in former days largely tree-covered) only partly suitable for nomadic grazing. The amount of land available for cultivation and grazing has been estimated at no more than 30%,
and was probably much the same in antiquity. Despite these limitations Crete was a rich agricultural producer, as well as pastoral and piscatorial.

Did the sites tend to be located in high or low places? in fertile plains or barren heights? inland or coastal? in isolated or accessible positions? in familiar or new situations? If we could answer these questions we would then have some indication of whether they were most concerned with subsistence and proximity to natural resources, with preservation of traditional dwelling places, or with political concerns of security in the face, or fear, of danger from sea, or peril from land.

The choice of a site by prehistoric people depended on such interrelated factors as the subsistence economy and social constraints of the community, and environmental conditions. They would tend, where possible, to establish their settlements within any region in safe and pleasant places close to water and food, often near the sea.

The Bronze Age people, as the people of Crete today, preferred (at least until near the end) to dwell in the fertile lowlands in relatively harmonious, easily accessible, scarcely defensible settlements. But towards the end of LMIIB a number of lowland settlements were abandoned - for example, at Knossos, Gournia, Palaikastro and Mallia. Sometime in LMIIC settlements had appeared on a number of sites which has not been occupied during the previous period - at Kastri, Vrokastro, Erganos, Mouliana and elsewhere. These have been associated with the arrival of Mycenaeans in one or two influxes. Some of them were called "cities of refuge" and were built on commanding heights. Notable among these were Kavousi, Vrokastro and, largest of all, Karphi, which was built in a remote and desolate spot above the Lasithi plain.

In Subminoan times the sites, as demonstrated earlier, were spread widely, if at times thinly, over most of Crete. Also shown earlier was the fact that the large majority of the sites established in LMIIC continued to be occupied in Subminoan, and there were
also a good number of new sites founded. From Map 3 we can see that in the Subminoan period there tended to be clusters of occupation around fertile plains' areas, including the upland hill-surrounded plains. In the fertile lowlands to the north in East Central Crete lay the important settlements at Tylisos and in the widespread area of Knossos, and at its port Amnisos. To the south of this region was the well-watered and productive Mesara Plain on which, fairly densely, were clustered such well-known sites as Hagia Triadha, Phaestos and Gortyn. In the east part of the North Central region, on or near the high, but inaccessible plain of Lasithi, lay a number of sites including Lyttos, Mesa Lasithi, Avdhou, Khoumeriakos, Siderokephali and Erganos, and above, but still accessible to the plain, Karphi, Psychro and Hagios Georgios Papoura. In East Crete sites formed clusters on the Neapolis Plain and near the isthmus of Ierapetra, around the Bay of Mirabello. Skinias was one such site. In West Crete where evidence of population is sparse (possibly partly due to lack of exploration, and partly to heavy forestation in prehistoric times), people gathered around the area of the Chania plain at Chania, Vryses, Pemonia and Melidhoni. In the West Central region Axos was situated on the edge of the Nidha plain, while Atsiphades was in a fertile valley on the edge of the southern mountain ranges, with Patsos, Mesonisia and Meixorouma not far away. The choice of these sites, close to food resources, exhibit the predominant influence of subsistence. Their situations do not indicate that defence or security was a major concern. At only two of these lowland sites was there any sign of man-made fortification - at Gortys and Phaestos (on the hill), both of which were old sites with new settlements in Subminoan. Most of these sites were quite accessible, many being situated close to cross-island routes.

Defence and security were probably not the major concerns of Subminoan coastal communities, either, but rather subsistence from fishing and the use of harbour facilities for trade and communication. In Subminoan eleven sites were located immediately on the coast\(^{28}\), while fourteen others were a little way inland, but close enough to overlook and have ready access to the coast\(^{29}\). Of a total of 25 coastal sites
where there was evidence for occupation in Subminoan the vast majority (18) were in East Crete, while there was a significant near absence of coastal occupation in the other three regions. There were fewer sites in Subminoan actually right on the coast than in LMIII\textsuperscript{30}, and none of them was very large or important. Several port sites, including Chania in West Crete, Rethymnon in East Central, Zakros and Olous in East Crete, were greatly reduced in size from what they had been in LMIII. The fact that there is very little evidence for occupation in Minoan times around Chania’s bay, the largest and most secure natural bay in Crete or the Mediterranean\textsuperscript{31}, may be significant. It appears that insecurity may have been a deterring factor in the positioning of sites on and near the coast in at least some parts of Crete - though not all.

Many of the sites near, but not immediately on, the coast combined proximity to both arable hinterland and coast. One such was the important site of Vrokastro. It was situated on a high peak some thirty minutes climb from the sea, and while its surrounding hills and plains were fertile providers, it seems that at least part of its economy may have been based on fishing\textsuperscript{32}. The dual location of villages - near cultivatable land and sea, or on lowland and highland (e.g. an acropolis and a village) - was a feature of a number of both Bronze Age and post-Bronze Age sites, according to Bintliff. He points out that even today, Cretan farmers often maintain two dwellings, one in a village, and the other near fields which need cultivation on a seasonal basis\textsuperscript{33}. Even if not directly paired, sites were connected through the provision of subsistence. Villages or farmhouses in remote areas may well have resulted from the cultivation of upland plains and mountain slopes for wheat and grapes, or may have been related to the seasonal movement of sheep and goat flocks from low-lying to mountainous pastures. Even Karphi - apparently isolated on an inhospitable high peak - was accessible to the fertile high plains of the Lasithi, and may well have been paired for support with the nearby plains' settlement of Mesa Lasithi\textsuperscript{34}. 
There was another group of sites occupied in Subminoan (which includes some sites already mentioned) - sites which may have been concerned with security, refuge and control. These sites were usually found in high, sometimes uncomfortable situations, seemingly geographically isolated. Prominent in this group is the large LMIIC/Subminoan settlement site of Karphi, which lay on the bitter and inhospitable slopes above the Lasithi plain. Vrokastro and Kavousi were situated high on the southern side of the Bay of Mirabello. Kato Symi was a large sanctuary with settlement high in the southern district of East Central Crete. Other sites were situated on flat-topped hills, surrounded frequently by ravines or gorges - for example Eleutherna in the West Central region, Prinias in the East Central, and in the East region Lato and Dreros, and the inaccessible Lenika Gorge near Kato Zakro. There were approximately thirty sites of this type, including some caves. They are listed in full in Appendix 5. They made up about a third of all Subminoan sites. Most of them had been established before Subminoan, but six of them were newly founded in Subminoan, all in East Crete. The majority of these sites were found (in approximately equal numbers) in the East and East Central regions, while in West Central four out of the total number of known sites were of this type, and in West Crete, two.

The location of these sites appear at first sight to have been chosen primarily for defensive and security purposes. Pendlebury, Hutchinson, Boardman and others have labelled such settlements "refuge" sites, and suggested that it was to these mountainous locations, in the LMIIC period, that descendants of the old Minoan stock fled for protection. To call a place a "refuge" site is to imply that it is a place of safety or security, a shelter or protection from danger or trouble to which people may flee, and possibly a citadel or strongly fortified place of defence. One should ask whether, in fact, fear and a concern with defence were always the motives for the establishment of these sites. Were the inhabitants fleeing, or just withdrawing from choice?
These so-called "refuge" sites should perhaps be called "acropolis" or "kastro-type" sites, as they were usually set safely on a high hill, guarded by mountains, ravines, gorges or streams, often at some distance from the sea, but frequently within view of the sea. Their position suggests that their first concern seems to have been to keep a wary eye open for danger from sea or peril from land. But these kastro-type sites may have been chosen not only for protection but also for domination and contact, for many of them were set dominating important cross-island routes (see plates 10, 11, 15-19, 20, 21). Kavousi, for example, commanded the north-south and the east-west roads, a nearby fertile plain, and a view of the sea (see plates 11 and 12). Lato (plates 15-19) was strategically placed to command the direct route linking with the valley of Mirabello, from west to east. At the same time it was at a handy distance from the sea, communication and commerce, while its surrounding mountains sheltered it from sudden invasion from sea or countryside. As well, it was one of only a few Subminoan sites which employed man-made fortification (see Supra). Several prominent "kastro" sites were the location of high 'peak' sanctuaries - for example Kato Symi, Smari, Karphi, Psychro, Dreros, Lato, Pachitsani Agriadha, Sphakia and Rethymnon.

Only a few Subminoan kastro sites were in isolated and fairly inaccessible positions, which appeared to sacrifice comfort and contact for security. The most notable example was Karphi. If Karphi was as bleak, bitter and exposed in winter then, as it is now, it cannot have been chosen for comfort. Was it, and other high sites like it, set up in order to escape from the "tyranny, insecurity and economic stagnation" of the plains? Watrous, in his study of the Lasithi plain, suggests that it was. His theory regarding the settlement pattern of Karphi, and similarly of other mountain-top settlements of the same kind of the time (such as Vrokastro, Gortyn and Kavousi) in central and eastern Crete, was that it was founded when Lakonians arrived and settled at Lyttos, and set about reducing the local population to serfs. At this stage a large number of the Lasithi inhabitants fled to settle at Karphi. This site was later abandoned, peacefully,
probably for another plains' settlement, at Papoura\textsuperscript{40}. If Pendlebury is correct in his assertion that forts probably continued to be employed at Karphi, it does seem that there was a need for defence here\textsuperscript{41}.

Though many Subminoan sites were situated in positions which were naturally defensible, occasionally there were traces of man-made fortifications. Fortification was known in the third and second millennia in Crete, and probably re-appeared in Late Minoan III, continuing into the Geometric and later periods. It was fairly rare, however, and its presence at this time is still somewhat tentative\textsuperscript{42}. There are signs that there were probably man-made fortifications at Vrokastro (LMIII-Geometric)\textsuperscript{43}, Lato (Subminoan and later), Gortyn (Subminoan or later)\textsuperscript{44}, Phaestos (Subminoan to Geometric)\textsuperscript{45}, and possibly Karphi. The presence of fortifications at Gortyn and Phaistos, both newly established settlements in Subminoan, show that defensive measures may have been needed in some low-lying areas, as well as in the classic high "refuge" sites.

A few caves have been designated "refuge" caves - such as those at Karydhi, Metoxokhori, Karoumes, Kalamafka, and possibly Orous in the east, and at Pemonia in the west. Most Subminoan caves, however, appear to have been used for worship purposes.

Even in those cases where defence seemed to have been a consideration, subsistence probably remained of paramount importance in the selection of sites. Bintliff found that in all cases, prehistoric sites which occupied eminently defensible positions were always associated with arable land or marine sources which were particularly favourable in the region\textsuperscript{46}. Most of the sites in the present study, including the kastro-type settlements, can be shown to be adjacent to fertile areas. As has been noted, Karphi had access to the fertile Lasithi plain, Lato lay above rich plains where olives and other crops grew, and even such out-of-the-way places as Afrati and Erganos in
East Central Crete were adjacent to the rich Mesara plain and its resources. Almost all the peak sanctuaries come within the altitude regions associated with the summer transhumance of sheep and goats.\textsuperscript{47}

It has been assumed that early Iron Age settlements of the period 1200-700 B.C. were relatively isolated, and trade and contacts were relatively restrained during an unsettled time.\textsuperscript{48} More recent evidence suggests that most sites were neither isolated, inaccessible, nor out-of-contact with those around them. We have referred earlier to the common Subminoan practice of positioning of sites on cross-island routes which would have facilitated intercourse for trade, worship and other purposes. Contact also took place for purposes of pasturing. The practice of transhumance, or the seasonal movement of sheep and goat herds for grazing between upland and lowland areas, was widely practiced. Bintliff talks of the "vast network of transhumance routes between every lowland and upland area".\textsuperscript{49} The process, he considered, was a powerful cultural integrator from Minoan times, particularly in the Mesara plains and adjacent mountains. Through it small communities came into touch with wider regions, novel customs and artifacts. Further social integration may have been achieved through the uniting of districts in religious and communal ritual as it was in the Bronze Age.\textsuperscript{50} The find evidence will illustrate that in fact this contact must have taken place.

Summary and implications

During Subminoan the number of sites, and probably the population, rose following the depressed LMIII C period. The greatest increase was in East Crete, which also showed more signs of change and restlessness than elsewhere. The population rise coincided also with an exodus to Cyprus about 1100 B.C. of some Cretans along with
a larger Mainland contingent. It may well have been mainlanders arriving in Crete that accounted for the general rise in population.

While a relatively peaceful climate seemed to have prevailed in some areas, there is evidence of wariness at others. Some measure of caution seems indicated by the continued, and slightly increased occupation of strategically positioned kastro-type sites and by one or two lowland site employing man-made fortifications. These sites, which represented about one third of all Subminoan sites, did not seem to be exclusively concerned with defence, but also with subsistence and with contact. They included the significant site of Karphi. The other two-thirds of the Subminoan sites seemed unconcerned with defence and included the traditionally and then still most important occupation area of Knossos. A relative lack of disturbance is probably indicated by the large measure of continuity of site occupation from IIIC into Subminoan, though in East Crete there was more restlessness than elsewhere. However, around the coasts, occupation was reduced both in number and size in all regions except East Crete. There was an air of wariness. Contact between sites probably continued for domestic purposes, and trade and communication could have taken place both at home and with overseas, possibly largely through East Crete where there was less coastal fear and more use of ports. As will be seen the analysis of finds will further support these propositions.
Notes and References

1. I have followed Kanta's division which includes the district of Lasithi on the East Central region. It would have been feasible to have grouped together the West and West Central regions, as in both these there is still a paucity of material, owing to limited survey and excavation work.

2Renfrew, C. *The Emergence of Civilization*. (1972) 225.


4Renfrew, EC, 230.

5The material of the other 16 category B sites (i.e. class 2) was poorly described, or not described at all, but presumably compared with Subminoino 'koino' material for them to have called "Subminoino" by their reporters. The large majority of these (11) occurred in East Crete.

6There are still some shortcomings in the material from East Crete, as mentioned in the previous footnote.


8This analysis will treat all these types of sites under the one category of 'site'.

9The cluster sites were Vryses in West Crete; Atsiphades in West Central; Arnisos in East Central; Knossos, Mesa Lasithi, Phaestos, Prinias in East Central Crete; Kavousi, Praisos, Sphakia and Zakros in East Crete. Some of these consisted merely of a settlement site and its related cemetery.

10LMIIIA - 1425-1300 (Kanta); 1405-1320 (Hope Simpson);
LMIIIB - 1300-1200 (Kanta); 1320-1200 (Hope Simpson);
LMIIIC - 1200-1075 (Kanta); 1200-1000 (Hope Simpson);
Subminoino - 1075-970; 1100-1000 (Hope Simpson).

11Correction is achieved, in each region, by adding together the total number of sites known in IIIA, IIIB and IIIC, and calculating for each period the proportion it represents of the indeterminate SM sites, and adding this to the original number of sites of known period in the period being considered. For example, in EC, where the total no. of sites of known period over LMIIIA, IIIB and IIIC is 77, the sites in IIIA represent 16/77 x 22/1. This is then added to the number of sites in the region of known period in this period: i.e. 16. So: 16 + (16/17 x 21/1) = 32.

12Kanta, 30.

13CCO,

14Renfrew EC, 234-6.


16Renfrew, EC, 240-2.

17These were sites of 10,000-40,000+ square metres in area, and include sites described as cities, large towns or settlements, major cemeteries, and large sanctuaries.

18BSA 60 (1965) 316-342.

19GDA, 118.

20This high figure may have been partly due to the fact that Subminoino lingered on in East Crete longer than in other regions, and some sites may have been founded beyond the "normal" 100 or so year period of Subminoino elsewhere.

21E.g. Re-use of Late Minoan tombs in the Knossos area for burials during the LMIIIC and Subminoino period after an interval of disuse could imply some dislocation involving lack of respect for the dead of former times, and might even reflect an influx of new people whom ignored the traditions of previous inhabitants. (*BSA Supp. Vol. 14* (1981) 14).

22This situation has been described by e.g. Desborough, *GDA*, 263.


24Kommos, on the southern coast of East Central Crete, was an important port site in LMIIIB, but no evidence for occupation between that time and Protogeometric has been forthcoming so far. (*See Hesp.* 50 (1981).


26*AC*, 303; *AJA* 5 (1901) 125ff; *BSA* 38 (1938-9) 57ff; *BSA* 55 (1960)1ff; *GDA*. 
27 Willets, CAC, 146, based on Popham's study in BSA 60 (1965) 316-42.
28 The sites on the coast were Chania in West Crete; Rethymnon in West Central Crete; Hagia Marina and Amnisos in East Central Crete; and in East Crete - Liope, Palaikastro, Kato Zakro, and Myrtos.
29 Sites near the coast, but slightly inland, were Vryses in West Crete; Keratos and Kavokori in East Central; and in East Crete - Ano Zakro, Karoumis, Pachlitsani Agriada, Vrokastro, Kavousi, Episkopi, Lato, Vasiliki, Braimiana, Mouliana, Skhina and Leniko.
30 Kanta's map shows that in LMIIIIB there were 25 sites immediately on the coast.
31 Kommos on the south coast of Crete was another coastal site with ideal port facilities for which there is at present no firm evidence of use in Subminooan.
32 Expedition, Spring (1983), 12.
34 Pendlebury, J.D.S. in "Lasithi in Ancient Times", BSA 37 (1936-7) 198, talks of two sites, Mesa Lasithi and Zmalio, in the Lasithi plain, to which inhabitants of Karphi presumably descended, thereby gaining access to cultivable land.
35 Lato, Pachlitsani Agriada, Vrokastro, Karoumis, Oulous, and Kalamalok.
36 AC, 303-5.
37 PC, 320-3.
38 CCO, 130.
39 Aristotle, Politics, 127ff. As will be discussed in the Conclusion, the coming into Crete of a number of mixed Greek people from 1200 B.C. onwards was probably all part of the so-called "Dorian Invasion".
41 BSA 37 (1936-7) 198.
43 Ibid.
44 Gortina, 21-22.
45 BdA 16, fasc. 4 (1956) 241, 273, note 5.
46 Bintliff, J.L. Natural Environment, 115.
47 Rutkowski, B. Cult Places of the Aegean World (1972) 152-188.
49 Bintliff, J.L. Natural Environment, 115.
50 Ibid, 116.
51 The presence of Cretans in Cyprus at this time is now firmly attested by the appearance there of Cretan influence on the local pottery, and of Cretan-type worship items, notably the goddess with upraised arms.
CHAPTER 4

A BROAD OVERVIEW OF THE MONUMENTS AND ARTIFACTS
AT THE SUBMINOAN SITES
Chapter 4

A BROAD OVERVIEW OF THE MONUMENTS AND ARTIFACTS
AT THE SUBMINOAN SITES

Chapter 3 described the number, type and location of the known Subminoan findsites, and analysed their significance.

It was found that in Subminoan there was a probable increase in population, and that wide areas of Crete were occupied. Though we could not accurately estimate the size of the sites, it was possible to establish that there were several large sites among them - notably Karphi and those in the Knossos area. There was strong continuity of site occupation from LMIIC into Subminoan, though in the East the founding of many new sites indicated some unrest. In choice of location of sites wariness was frequently indicated, though more often it was not. Most sites were at a handy distance from other sites and to cross-inland routes, as well as being close to food-producing areas. The importance to the Subminoans of contact and subsistence are thus indicated. Enough coastal sites with ports remained in use to enable overseas contact to continue.

The Gazetteer of the Subminoan sites in Chapter 2 includes detailed descriptions of the finds at the Subminoan sites. Although a detailed analysis of these monuments and artifacts is not possible within the confines of this thesis - it is important to incorporate this evidence to complement the site analysis (of Chapter 3). I shall, therefore, undertake a broad overview of the material finds, including much new recent evidence¹. It is hoped that this will serve to support and confirm the findings of Chapter 3 by:
a. showing continuity from the latest LMIII, and preservation, in part at least, of Bronze Age culture;
b. indicating contact links between Cretan sites and regions, and overseas, though influences and changes must be noted; and
c. indicating signs of concern with security and defence.

Evidence of prosperity and/or poverty, and of vitality and activity and development, as opposed to stagnation, in the material finds of the culture will also be examined.

It must be stressed that this is to be a broad view of trends which is, of necessity, summary in nature, and based on evidence both uneven and often incomplete. It may, nevertheless, provide a basis for future research.

The material will be examined in six categories:
- grave types and burial customs
- cult material
- architecture
- pottery
- metals
- other valuable or unusual finds.

A summary of the distribution of the finds in each of these categories, with the exception of the pottery, is set out in Table 5. A detailed analysis of the distribution of the pottery is beyond the scope of this present work, though the raw evidence for such an analysis has been provided in chapter 2.
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<th>SITE</th>
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<td>East Crete</td>
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<td>Adromyloi</td>
<td>Rect. built tholoi</td>
<td>Inhum.</td>
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<td>Bronze fibulae; iron weapons</td>
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<td>Sealstones</td>
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<td>Brainiana</td>
<td>tholoi</td>
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<td>Dreros</td>
<td>rect. cist grave or tholoi</td>
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<td>Kalamafki</td>
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<td>small bronze axe or pick</td>
<td>terracotta</td>
<td>figurine</td>
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<td>animals</td>
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<tr>
<td>Kavousi-Aloni</td>
<td>rectang. stone-built tholoi</td>
<td>inhum.</td>
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<td>bronze weapons, twisted</td>
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<td></td>
<td>bracelet, fibulae, iron blade,</td>
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<td>weapons</td>
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<tr>
<td>Kavousi-Vronda</td>
<td>round &amp; rectang. stone-built tholoi</td>
<td>inhum.</td>
<td></td>
<td>bronze knife with ivory handle</td>
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<tr>
<td>Khamazi</td>
<td>square plan tholoi</td>
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<td>ivory-handled</td>
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<td>Khoklakes</td>
<td>pithos</td>
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<td>bronze knife</td>
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<td>Krya</td>
<td>pithos</td>
<td></td>
<td></td>
<td>gold bucranium</td>
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<td>Lato</td>
<td>sanctuary, fort, cistern</td>
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<td>terracottas</td>
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<tr>
<td>Leniko</td>
<td>fort of large stones</td>
<td>large pithoi</td>
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<tr>
<td>Moulina</td>
<td>tholoi</td>
<td>inhum. &amp; cremation</td>
<td></td>
<td>bronze-hilted swords, fibula, pin, pr. lances with 2 spear-heads, plaques, jug, vases.</td>
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<td>SITE</td>
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<td>cremation</td>
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<td>Pachitsani</td>
<td>small</td>
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<tr>
<td>Agriadha</td>
<td>sanctuary of hewn stones</td>
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<td></td>
<td>Palaikastro</td>
<td>stone-block houses with megaron</td>
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<td>bronze pin</td>
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<td></td>
<td>Praisos - Hill of Potistiria</td>
<td>long walls</td>
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<td></td>
<td>Praisos - Photoulus</td>
<td>rectangular tholos tomb</td>
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<td>bronzes, jewellery</td>
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<td>jewellery</td>
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<td>Praisos - Acropolis</td>
<td>homestead</td>
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<td>Sphakia - Patela</td>
<td>tholos</td>
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<td></td>
<td>Vrokastro</td>
<td>encircling wall; circular chamber tombs or rectang, tholoi with corbelled roof. Rubble-built ossuaries</td>
<td>multiple burial, inhum. &amp; cremation</td>
<td>bronze earrings, fibulae, rings, pins, iron knives, one with bronze rivets; spearhead; gold ring</td>
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<td>figurines gold shield shaped ring</td>
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<td></td>
<td>Vasiliki</td>
<td>wealthy tholos tombs</td>
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<td>pyxis/ash urn</td>
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<td>with cremation</td>
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<td></td>
<td>Zakro - Ano Zakro</td>
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<td>Afrati</td>
<td>tholoi</td>
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<td>bronze tools &amp; figurines</td>
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<td>figurative votives</td>
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<td>Erganos</td>
<td>House &amp; tower</td>
<td>tholoi</td>
<td>inhum. in pyxis</td>
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<tr>
<td>Gortys</td>
<td>poorly constructed stone houses</td>
<td></td>
<td></td>
<td>bronze arched fibula</td>
<td>animal &amp; human figurines</td>
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<tr>
<td>Hagia Marina</td>
<td>circular tholos tomb</td>
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<tr>
<td>Hagia Triadha</td>
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<td></td>
<td></td>
<td>bronze cult figures</td>
<td>bronze &amp; terra-cotta cult figures - animal &amp; human, incldg. sphinx</td>
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<tr>
<td>Kamares</td>
<td></td>
<td></td>
<td></td>
<td>spearheads, poor utensils of bronze</td>
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<tr>
<td>Karphi</td>
<td>multiple rectangular rooms, some with megaron, Sanctuary, temple</td>
<td>tholoi</td>
<td>inhum. in pyxis</td>
<td>bronze weapons hairrings, violin-bow &amp; arched fibulae; swivel &amp; dress pins; iron implements, tools, blade, arched fibulae, scraps of tripod stand</td>
<td>female figurines with raised hands; hut urns</td>
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<tr>
<td>Kato Symi</td>
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<td></td>
<td>human &amp; animal figurines</td>
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<tr>
<td>Knossos - Amb. Teke</td>
<td></td>
<td>chamber tombs</td>
<td>cremation (?)</td>
<td>bronze</td>
<td>spearhead, rings, iron pin</td>
<td>terracotta beads with incised decor. ivory seals</td>
</tr>
<tr>
<td>Knossos - Gypsades</td>
<td></td>
<td>chamber tombs</td>
<td></td>
<td>4 bronze dress pins, 2 finger-rings; iron knife with bronze rivets</td>
<td></td>
<td>4 beads, 1 of amber, 2 lentoid sealstones</td>
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<tr>
<td>Knossos - Hag. Ioannis</td>
<td>chamber tombs</td>
<td>inhumat. &amp; cremat.</td>
<td></td>
<td>bronze fibulae, lge. pins, long dress pins; one with ivory head; iron weapons; gold jewellery</td>
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<td>long dress pin with ivory head</td>
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<tr>
<td>Knossos - Kephala</td>
<td>tholos</td>
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<tr>
<td>Knoss - Ven. Hosp.</td>
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<td>chamber tombs, some re-used; shaft graves with rectangular pit</td>
<td>inhumat., cremation</td>
<td>bronze arched fibulae, spearheads, shield boss, pinhead, arrowhead, sword (Type II) 4-sided open-work support; curved iron knife with bronze rivets; iron dagger; 80 gold beads, 2 gold rosettes</td>
<td>ivory comb; glass frit &amp; faience beads; gold leaf rosettes &amp; beads; boar's tusk helmet (?), ivory handle; comb &amp; bone inlays</td>
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<td>Knossos - Spring Chamber</td>
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<tr>
<td>Knossos - Strat. Mus.</td>
<td>walls</td>
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<td>hut urn with goddess figurine; terracotta sphinx</td>
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<td></td>
<td>small bronze spearhead</td>
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<td>Mesa - Lasithi - Armni</td>
<td>altar</td>
<td>larnax</td>
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<td>bronze</td>
<td>bronze</td>
<td>figurine</td>
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<td>burials</td>
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<tr>
<td>Mt. Juktas</td>
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<td>cremat. in</td>
<td>bronze spear-head; iron spearchead,</td>
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<td></td>
<td></td>
<td>ash urn</td>
<td>2 iron Type II swords</td>
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<tr>
<td>Panaghia</td>
<td>rectang.,</td>
<td>inhumals.</td>
<td></td>
<td>iron weapons, inldg. swords &amp;</td>
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<tr>
<td></td>
<td>vaulted tholos</td>
<td>&amp; partly</td>
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<td>spearheads; bronzed wire</td>
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<td>tombs</td>
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<tr>
<td>Phaestos - Liliana</td>
<td>4 chamber</td>
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<td></td>
<td>bull figurines</td>
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<td></td>
<td>tombs with clay coffins</td>
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<td>glass paste ornaments</td>
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<td>Phaestos - Palace area</td>
<td>fortification</td>
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<td>wall of large</td>
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<td>blocks</td>
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<td>Phaestos - hill area</td>
<td>chamber tomb</td>
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<td>hair pin, 2 bronze arched fibulae</td>
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<td>Prinias - Patela</td>
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<td>snake tubes; goddess figurines, 2 clay animal figurines</td>
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<td>Prinias - Siderospilia</td>
<td>tholoi, pits</td>
<td></td>
<td>cremation in pits, inhum. in tholoi; cremation in urns</td>
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<td>small clay head with diadem</td>
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<td>Psychro</td>
<td>cave sanctuary</td>
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<td>bronze fingerrings</td>
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<td>wheel-turned animal &amp; human figurines, some in bronze</td>
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<td>SITE</td>
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<tr>
<td>Siderokephali</td>
<td>small rectang. tholoi of stone blocks; chamber tombs</td>
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<td>Skoteino</td>
<td>cave sanctuary</td>
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<td>votive figures</td>
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<td>Smari</td>
<td>wall complex of possible peak sanctuary with megaron building</td>
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<tr>
<td>Tylisos</td>
<td>chamber tombs</td>
<td>cremation</td>
<td></td>
<td>Hemisph. bronze bowl, 2 bronze fibulae, 2 pieces of iron from small knife</td>
<td>human &amp; animal figurines, incldg. sphinx; bull's head pendant</td>
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<td>West Central Crete</td>
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<tr>
<td>Asiphades at Pezoulos</td>
<td>pithos burials; possibly with cremation</td>
<td></td>
<td></td>
<td>bronze ring &amp; fibula</td>
<td></td>
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<tr>
<td>Meixorouma</td>
<td></td>
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<tr>
<td>Mesonisia</td>
<td>pithos burial</td>
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<tr>
<td>Patsos</td>
<td></td>
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<tr>
<td>West Crete</td>
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<tr>
<td>Chania</td>
<td>chamber tombs</td>
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<tr>
<td>Vryses at Hag. Ioannis</td>
<td>peak sanctuary</td>
<td></td>
<td></td>
<td>cremats. &amp; inhum. in pithoi</td>
<td>iron long swords &amp; lanceheads</td>
<td></td>
</tr>
</tbody>
</table>
1. Tomb Types and Burial Customs

We have evidence for burial at thirty-seven sites (16 in East Crete, 18 in East Central, 2 in West Central Crete and 1 in West Crete\(^2\) (See Table 5: Non-Pottery finds at the Subminoan Sites).

Tholoi were represented at more sites than chamber tombs. In East Crete all sites employed tholoi, and there were no chamber tombs, and only one cist grave. In the East Central region about an equal number of sites used tholoi and chamber tombs, while a larnax and a shaft grave were also found. Some tombs may have been a mixture of tholoi and chamber tombs as in the square or rectangular tholoi, or the circular chamber tombs. In no case did tholoi occur in the same site as chamber tombs - though both occasionally occurred in the same area\(^3\). At what were probably the largest occupation sites in Crete in Subminoan - Knossos and Karphi - both in the East Central region, one (the Knossos area including all the burial sites, except for Kephala) favoured chamber tombs, while the other (Karphi) used the tholoi of Mycenaean tradition. It is hard to grasp the significance of the choice of grave types at different localities.

In LMIII chamber tombs and tholos tombs had both been used, and were to persist throughout the Dark Ages and beyond\(^4\). But since the early twelfth century tholos tombs had been the most favoured grave type in the Eastern region, and chamber tombs in the Central regions. Before the twelfth century chamber tombs had been used most commonly everywhere in Crete\(^5\). In the twelfth century these differences in tomb types in different regions had no effect on the unity of culture, nor on free communication. Did they in Subminoan times? Tholos tombs were considered on the Mainland as the burial place of royalty and people of wealth, but in LMIIIC/Subminoan Crete both wealthy and less wealthy and princely people appeared to have used them\(^6\). The tholos
has been described as "one of the oldest, most distinctive and socially important modes of burial".\textsuperscript{7}

Multiple burial continued in Crete from the Bronze into the Iron Age.\textsuperscript{8} In contrast, on the Mainland and elsewhere individual burial became the main custom. The use of cist graves, so common on the Submycenaean mainland of Greece and indicative of the poverty of the times, was rare in Crete in Subminoan.

Though not common in the LMIII, cremation had been found in Crete from as early as LMIIIA2 in pithoi at Olous in East Crete.\textsuperscript{9} Its origin may have been Eastern as Desborough suggests, but earlier than the IIIC date he puts forward.\textsuperscript{10}

| TABLE 6 Subminoan evidence for Burial by Cremation and Inhumation |
|---------------------|---------------------|---------------------|---------------------|
|                     | East                | East Central        | West Central        | West                |
|                     | A. Zakro Olous      | Knossos - H.I.      |                     |                     |
|                     | Praisos - Photoulou | Knossos V.H.        |                     |                     |
|                     | Vrokastro           | Mt. Juktas Panagha  |                     |                     |
|                     |                     | Phaestos - L. Prinias - S Tylisos Erganos | | |
| Inhumation          | Braimiana Dreros    | Erganos Karphi      | Mesonisia           | Vryses - H.I.       |


My findings, set out in Table 6, show that the number of sites where there is evidence for inhumation and where there is cremation were equal, and that they were used by, and spread fairly evenly over, the two main regions, though with a few more East Central sites than Eastern favouring cremation. Cremation has been recorded at 17 sites in the Subminoan period - 6 in the East, 9 in East Central, one in the West Central, and one in the West. Inhumation has been recorded at 17 sites - 7 in the East, 8 in East Central, one in West Central, and one in the West. In seven cases cremation and inhumation both occurred at the one site\textsuperscript{11}. The occurrence together, and therefore toleration, of both these burial methods had been a feature in many places in the Aegean in late Mycenaean times\textsuperscript{12}. The variations in use must be due, Desborough suggests, to some social or political pressure unknown to us\textsuperscript{13}. Often pithoi, pyxides, or ash urns were employed for either cremation or inhumation. In the East, West Central and West pithoi were used, while East Central used no pithoi, but employed ash urns or pyxides.

In summary, the types of tombs chosen demonstrate a persistence of Minoan habits into Subminoan, and so too does the use of cremation plus inhumation, and use of multiple burial. This can be illustrated at such sites as Tylisos where multiple burial in employed in chamber tombs using cremation and inhumation from LMIIIB until the start of Protogeometric\textsuperscript{14}. This continuity is opposed to the discontinuity exhibited elsewhere in the Mycenaean world, in particular in the Mainland, where, in the early Dark Age, individual burial in cist tombs and pit graves became the prevailing practice.

Desborough has pointed out that in East Central Crete, and particularly around Knossos, the common practice was to employ cremation and chamber tombs or pit graves, in contrast to the practice in East Crete where inhumation and stone-built tholoi were the norm, and that these differences may have indicated significantly different developments in East Crete and in East Central Crete\textsuperscript{15}. Further, it has even been proposed that at some places, at least, in East Crete the SM-EPG phases belong to a
true Eteocretan period, in which developments occur independently from Central Crete. An analysis of the present evidence (as set out in Table 5: Non-Pottery Finds at the Subminoan Sites) shows that in East Crete inhumation and tholoi were employed together on 7 occasions, and in East Central chamber tombs and cremation occurred together in 5 cases. As a proportion of the total findings this does represent some sort of trend, but not one that seems very significant. Furthermore, though at Knossos tholoi and inhumation do not occur together, they each occur separately on many occasions, and the two occur together in a number of other Central Cretan sites such as Erganos, Karphi, Panaghia, and Prinia - Siderodephali. There are not, therefore, adequate grounds to say that Kavousi and other East Cretan sites had no relations with other parts of the island. Other evidence - especially that of pottery - is needed to confirm or deny this.

Subminoan saw the growing use of cremation in Crete, and in the tenth century it was to become almost standard, at least in Central Crete. Desborough discusses its possible connection with Athens, but cannot support it. He asks whether there is anything to be found connecting sites with the use of cremation. The presence of iron, perhaps? It is hard to establish such a connection, since apart from the fact that evidence is missing or incomplete for the burial rites at a number of sites, iron by its perishable nature is poorly represented. An analysis of Table 5 indicates that of the 17 sites in our Gazetteer with a record of cremation, eight can be shown to be associated with iron. The majority of these are in East Central Crete. There may be some significance in the fact that of the twelve Subminoan sites where iron has been recorded only four did not also use cremation, and that there is little evidence for iron at sites where inhumation alone was the burial rite. On present evidence the connection of the use of iron with that of cremation is suggestive but not completely clear, but it must be borne in mind that the use of both of these Eastern-associated cultural features increased significantly in Crete during Subminoan.
2. Cult-Associated Objects

Our survey shows that there was widespread evidence of worship and cult in Subminoan Crete - in West Central, East Central and in East Crete. Of the 29 sites where evidence of worship has been reported 3 were in West Central Crete\textsuperscript{21}, 10 in East Crete\textsuperscript{22}, and 16 in East Central Crete\textsuperscript{23}. The objects associated with cult practice demonstrate strong continuity from the latest Bronze Age and through the Dark Age without much development. They also illustrate some inter-site, interregional, and overseas contact.

The objects associated with cult practice which have been found from the Subminoan period include figures of the deity (a goddess, portrayed with upraised arms), both large and small, and, more commonly, votive offerings in the shape of terracotta, and occasionally bronze, animals. Other accoutrements appearing less frequently were hut urns, snake tubes and rhyta. They were found in shrines and sanctuaries in caves, on peaks and in towns and settlements, and in graves. As the distribution shows votive material in Subminoan was much more scant in the East (also the West and West Central) than in East Central, and only later does it become firmly established in the East\textsuperscript{24}.

The terracotta figures and figurines of the deity were most commonly in the form of what has been called (owing to its pose) a 'goddess with upraised (or uplifted) arms'\textsuperscript{25}. These had been used throughout LMIIIIB and C and may have been the epiphany of a deity, the so-called 'house' or 'palace-goddess'\textsuperscript{26}. Nicholls has asserted that there was little evidence of late survival of this goddess type among Minoan Eteocretans, as opposed to Achaean or Dorian elements\textsuperscript{27}. Our evidence shows presence of this type at at least four sites in Subminoan in East Crete - at Kalamafki, Pachitslani Agriada, Vrokastro and Seisi. Sometimes these figurines consisted of quite big, cylinders fashioned hollow on a potter's wheel using an old Cretan technique;
others were smaller and sometimes handmade. Idols of the large type have been found at Kalamafki, Prinias - Patela, Karphi and the Spring Chamber at Knossos. These deity figures continued after Subminoan into the tenth and ninth centuries in Crete\textsuperscript{28}; and from about 1100BC until Archaic times in Cyprus - possibly owing to Cretan influence\textsuperscript{29}.

Votive figurines in the shape of clay animals, and especially domestic farm animals - either wheelmade or handmade - demonstrated the strong link between peak sanctuary cult and pastoral farming. They were abundant in some Cretan sanctuaries at the end of the Bronze Age though not much before the twelfth century, when they arrived from the Mainland, where they had been an innovation of the thirteenth century\textsuperscript{30}. Wheelmade votive bulls bulls dating to the twelfth and eleventh centuries have been found at Phaestos\textsuperscript{31}, and in the new IIIC Subminoan sanctuary at Hagia Triadha near a mainland megaron-type building\textsuperscript{32}. These wheel-made figurines show an unbroken tradition through the Dark Age in Crete, Cyprus and possibly East Greece\textsuperscript{33}. Hand-made figurines enjoyed a chequered survival\textsuperscript{34}.

Bronze statuettes of human figures and large range of small animals, mostly cattle, were found in Subminoan at Hagia Triadha, Mesa Lasithi at Armi, and Psychro in East Central, and at Meixorouma and Patsos in West Central. They were similar to much earlier varieties in bronze and terracotta from peak and cave sanctuaries. They continued down through the twelfth and eleventh centuries and possibly the tenth as well, thereby demonstrating possible continuity in the making of bronze statuettes throughout the Dark Age\textsuperscript{35}.

Of interest amongst the small figurines of terracotta were sphinxes or centaurs (as Karagheorgis calls them). They had the body of a bull and a human head. These attendants of a fertility god had a long tradition in Crete and were found at Hagia Triadha, Knossos Spring Chamber, and Tylisos. They may have evolved in Crete
under Mycenaean influence, for, at Knossos - Spring Chamber they were found in association with material with Mainland links, and at Hagia Triadha with other Attic-type terracotta offerings. They were also found in Cyprus from the early eleventh century onwards, probably having been introduced from Crete ca. 1100 B.C., or by Mycenaeans in the twelfth century.

It is difficult to assess the cultic evidence for inter-contact between sites and regions as so much of the material seems to be a continuation from the twelfth century at least, when Mainland influence may have been strong. Nevertheless, a number of notable similarities and parallels at different sites may be signs of more immediate contact in the Subminoo era. For example the goddess figurines at Prinias Patela are very like those at Karphi and also Kalamafki; and the figurines at Sto Tracheli at Olous in the East resemble markedly figures at Hagia Triadha, while there is a strong resemblance between the female figures at Pachitsani Agriadha and at the Karphi shrine. There were many parallels between the votives at Karphi and those at Psychro. In Minoan times Psychro and other popular sanctuaries such as Kamares and Skoteino attracted population from a wide area, and there is no reason to believe that this did not continue in Subminoo times.

Contact between Crete and Cyprus in the eleventh century is confirmed by the cult-associated objects. It is probable that there was direct and deep Minoan influence in Cyprus in the goddess with raised arms, which together with other Late Minoan elements - such as the wheelmade terracotta votive bulls, and the centaur - were introduced by Crete to Cyprus, and preserved in Cyprus for many centuries with, as elsewhere, little change. Their preservation here, as in Crete itself, serves to emphasise the remarkable tenacity of Minoan tradition in votive figurines. This situation was in firm contrast with that of the Mainland where there is little evidence of cult in the eleventh century, and where the goddess with upraised arms disappeared at the end of the Mycenaean period.
3. Architecture

We shall now look briefly at the evidence of buildings, apart from the tombs described earlier, during the Subminoan period includes houses, sanctuaries and other cult structures - including temples - and long walls and fortifications. Though a great deal is not known about Cretan architecture valuable recent work on this and buildings and building techniques has been undertaken by B.J. Hayden and by B. Rutkowski on cult places\textsuperscript{42}.

It has been proposed that there was little variation in buildings techniques at sites in the Cretan early Iron Age period\textsuperscript{43}. As well, house plans were basically similar at most places - though with some variations. The most extensive evidence comes from Karphi and Vrokastro. The building plans at Vrokastro (see Plate 7, Fig.1), described in some detail by Hayden (see note 33), are representative of the range in use from LMIIIC-Geometric from one-room to more complex structures of two or three rooms usually built along one axis. These buildings had no corridors and often used auxiliary rooms aligned beside the main chamber, frequently of 'megaron' type. Edith Hall, the original excavator, described the buildings' plans as "mean, rude and irregular\textsuperscript{44}. The walls of buildings were composed of medium to large pieces of rubble, either local limestone or conglomerate, and a few worked rectangular blocks of sandstone also were employed. They had flat roofs. The quality of the buildings was generally quite poor, though some were better built than others. At Praisos and Phaestos the structures were more complex; large stone blocks, instead of rubble, were used to build the houses with megaron at Palakaiistro; and sometimes superior materials - as the luxury stone and marble defence wall at Lato - indicating some degree of prosperity\textsuperscript{45}. (See Plate 18: Stone wall at Lato.)

In their rambling Minoan style the building plans demonstrate the preservation of a continuous architectural tradition traceable to possibly the mid fifteenth century. The
1. Vrokastro - houses
   *PC*: 320

   *PC*: 322
rectangular megaron plan, with the entrance on the short side instead of on the long one, was probably of Mainland (Achaean) origin. It has been found in Subminoan at Smari, Vrokastro and Palaikastro. Karphi combined the traditional Minoan rambling-type house with megaron construction in the temple with large room and smaller rooms for stores. (See Plate 7, Fig. 2)

Fortifications, used in earlier times, re-appeared in the last third of the Late Bronze Age, and continued into Geometric and later. As mentioned in Chapter 3, material evidence of possible forts and defence walls in Subminoan Crete comes from four sites in the East region - Leniko, Lato, Praisos (Hill of Pot.), and Vrokastro, and at Gortyn and Phaistos in East Central. Except for the Praisos site, the evidence for a Subminoan date at these sites is not entirely secure, and it may well be that these structures were first built in LMIIIC and continued in use into Subminoan. Since most of them have been found in East Crete we may have further evidence for more unrest and insecurity in East Crete than elsewhere. Overall the presence of these fortifications is a sign of unsettled times.

Sacred buildings or cult places in the form of sanctuaries (including peak and cave sanctuaries), temples, spring houses and domestic shrines, were of simple late Minoan style, and were all found in Subminoan and later. Some were new in Subminoan - for example the open-air sanctuary at Hagia Triadha - which seems to have succeeded a shrine containing a goddess with upraised arms. This sanctuary was of a new type, apparently without LMIII antecedents.

The latest Minoan to Subminoan sanctuaries were flat roofed, generally rectangular, some with one or two rooms, with columned portico and cult room, central hearth, a table of offerings, and a ledge or platform for sacred images. Examples of these are to be found at Kato Symi and Prinias - Patela. Many features of these sanctuaries
persisted right through the Dark Ages, as is demonstrated by the features in the Eighth or Seventh Century B.C. temples at Dreros and Prinias\textsuperscript{47}.

Peak shrines and sanctuaries, popular over much of the Bronze Age, were still used in Subminoan at, for example, the Eastern sites of Sphakia at Patela, and Ziros at Plagia; in East Central at Karphi and Smari (with a megaron-plan building), and in West Central Crete at the important site of Rethymnon. Rutkowski tells us that peak sanctuaries were usually situated at altitudes from 400-800 metres. They were sites within easy reach of inhabited areas, and were notable for being accessible to the religious needs of cattle- and sheep- breeders\textsuperscript{48}.

Cave shrines and sanctuaries also continued in use from Minoan times, e.g. at Psychro, and there was a single spring chamber at Knossos. Simple domestic shrines were found at many Subminoan sites. They often had benches or ledges for offerings as in earlier periods, but now the entrance was on the long side\textsuperscript{49}. One such domestic shrine was the small sanctuary at Pachlitsani Agriadha in East Crete near Kavousi, which was built in the twelfth or eleventh century and continued in use till the sixth century.

Monumental cisterns where there is evidence of cult were recorded at Tylisos and Amnisos and at Lato.

\textbf{IV The Metalfinds}

This survey of the number, variety and distribution of metalfinds in Subminoan Crete provides valuable evidence for the continuity and expansion of Bronze Age metalworking skills and the growing use of iron; of intersite, interregional and overseas
contact and influence; of a relative prosperity, and possibly of some insecurity at a number of places.

Our findings indicate evidence of metal at 30 out of the 96 recorded sites - i.e. at over 30% of the sites. 10 of these were East Crete\textsuperscript{50}, 16 in East Central Crete\textsuperscript{51}, 3 in West Central\textsuperscript{52}, and one in West Crete\textsuperscript{53}. Metal finds were thus spread over the entire island.

The most common metal was bronze. It was recorded at nearly every site where metals were found. Iron was found at 13 (or 45%) of these metal find sites (or 13% of all sites), always in conjunction with bronze. The majority (or 8) of the sites with iron finds were in East Central Crete\textsuperscript{54} while there were 4 in East Crete\textsuperscript{55}, and one in West Crete\textsuperscript{56}. Gold was rarer. It has been found at 3 sites in the Eastern region - at Kyra, Mouliana and Vrokastro; and at 2 sites in the East Central, both in the Knossos area - at Hag. Ioannis and at the Venezeleion Hospital site. No absolute figures are given here for the number of metal objects in each type of metal, but it is interesting to note the findings of Waldbaum in her 1987 study: \textit{From Bronze to Iron}. She shows that about 8.5% of the metal finds in Crete in the eleventh century are of iron, compared with 90% of bronze\textsuperscript{57}.

Table 7 shows the variety of metal types from Crete in the eleventh century - in four broad categories - jewellery and toilet articles; tools, utensils and vessels; weapons and armour; and cult objects. The variety of objects is overall quite large, especially in bronze, and in comparison with the centuries immediately before and after in Crete\textsuperscript{58}. It is also large in comparison with the range in Greece in the eleventh century\textsuperscript{59}. 
TABLE 7: Types of Jewellery, Tools, Cult Objects in Bronze, Iron and Gold in Eleventh Century Crete

<table>
<thead>
<tr>
<th></th>
<th>Bronze</th>
<th>Iron</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jewellery, Toilet Articles</td>
<td>belt, hairring, bracelet, straight pin, toggle pin, fibula, fingerring</td>
<td>fibula, straightpin</td>
<td>rosettes, beads, straightpin, fingerring</td>
</tr>
<tr>
<td>Tools, Utensils Vessels</td>
<td>axe, bowl, plaques, vases, jugs, knife, rivet, nail, open-work, support, awl, adze, chisel, needle, razor, sickle, saw, rod-tripod</td>
<td>nail, knife</td>
<td></td>
</tr>
<tr>
<td>Weapons, Armour</td>
<td>spearhead, shieldboss, sword, arrowhead, knife</td>
<td>spearhead, sword, knife, dagger, lancehead</td>
<td></td>
</tr>
<tr>
<td>Cult Objects</td>
<td>figurine</td>
<td></td>
<td>bucranium</td>
</tr>
</tbody>
</table>

Our findings, plus those of Waldbaum, show that where, in the eleventh century iron was employed, it was generally for weapons, while bronze more frequently was used for jewellery and tools\(^{60}\). About 40% of all the weapons in Crete in the eleventh
century reported by Waldbaum were made of iron\textsuperscript{61}, though the variety was by no means as large as for bronze. In Crete a fair number of tombs of sites all over the island produced weapons. In East Crete - 5, EC-10, W-1. Of a total of 16 weapons, the majority were spears. The occurrence of weapons did not correspond in a significant way with sites that appeared to have been security conscious\textsuperscript{62}.

The heaviest occurrence, as well as the richest variety of metal finds - in both bronze and iron - occurred in the East at Kavousi, Vrokastro and Mouliana, and in the East Central at Karphi, and at various sites in the Knossos area. The recent publication of work being carried out at the BSA site north of the Venezeleion Hospital, at what must have been the chief necropolis of Dark Age Knossos, serves to illustrate both its size, and the importance of its relations with other regions of Greece and with other overseas areas to the East and West\textsuperscript{63}. The Subminoan metal finds include bronze arch bow fibulae, a spearhead, shield-boss, arrow heads, a sword (Type II), a curved iron knife with bronze rivets, a four-sided bronze support, an iron dagger (with Type II hilt), a bronze pin head, many gold beads and some gold rosettes. The use of iron for the weapons probably denotes East Mediterranean contact, as does the bronze four-sided Cypriot support, and the presence of some faience and ivory pieces. The bronze pin head is of Italian type\textsuperscript{64}. The arch bow fibulae, which occur commonly in many parts of Crete at this time\textsuperscript{65}, were probably of Submycenaean origin, and thus may show contact\textsuperscript{66}. Mycenaean and/or Sybmycenaean contact and influence is probably shown in many of the bronze weapons\textsuperscript{67}.

Stimulated by foreign contact, the metal finds at the Venezeleion Hospital site near Knossos were rich and various. To varying degrees this was the picture elsewhere in Crete. Other metal finds in Crete with possible overseas connections were the multiple spiral hair rings and dress pins with Submycenaean ties, and dress pins and rod tripods of Cypriot type, and the swivel-pin of Italian type\textsuperscript{68}. 

In the Minoan period Crete had had an early history of excellence in metal technology in bronze and copper - diverse in products and processes. Bronze Age metallurgical skills, for example in beaten bronze craft, prevailed through into the Iron Age, as has been pointed out by Müller-Karpe. He cites the bronze jug from Mouliana as illustration, seeing it as an example of the shaping of the Protogeometric style in a non-ceramic material.

It is believed by Desborough and others that until 1200 B.C. the knowledge of how to work iron had been a secret, closely guarded by part of the Hittite Empire and only revealed and diffused (possibly by Sea Peoples, including Philistines) when the Empire collapsed. It was probably introduced to the Aegean from the East via Cyprus, with Crete being among the first receivers just before the mid eleventh century, having been preceded before this by iron goods.

It seems probable that Crete played an important role in the transition from bronze to iron. In the Bronze Age there had been strong economic ties between Crete and Cyprus. Cypriot trade in raw materials (especially copper) probably continued with Crete, though probably not elsewhere, into the Iron Age. It has been suggested that when, around about 1100 B.C., Cretans arrived in Cyprus (with other Aegean immigrants) they were responsible for stimulating iron metallurgy. The single-edged bronze rivetted knife of Aegean origin was possibly the cause of 'a revolution in metal craft coming from the Aegean to Cyprus'. The iron knives with bronze rivets, found frequently in both Cypriot and Cretan contexts, were the immediate products in this process. In both Crete and Cyprus there was a strong link between cult and metallurgy (probably of Cretan origin). Was it coincidence that at the very time that iron metallurgy was beginning to advance that Cretan idols and votives were so enthusiastically adopted in Cyprus? Meanwhile, Crete continued to work in bronze. Crete, and possibly the Dodencanese, was unique in continuing to use bronze when
there was apparently a shortage elsewhere in the Aegean. This has been said to be proof of continued contact with Cyprus, the chief supplier.

In short, one finds in Crete in the Subminoan a rich picture of metal working, varied and by no means backward, employing the well-developed Bronze Age techniques in bronze, and taking on new techniques in iron. The evidence points (in the words of Müller-Karpe) to a lively and productive culture.

V. The Pottery

Pottery was the major defining factor of Subminoan. It is not possible to adequately survey the Subminoan pottery in this dissertation. Instead, a short summary of its major features, and of findings so far, will suffice. Recent evidence will be considered. Trends will be pointed out. A thorough examination of the finds, using numerical taxonomy is to be recommended for future research.

A number of general studies have been made of the Subminoan pottery by Furumark, Desborough, Snodgrass and Seiradaki. Their findings are that the pottery of Subminoan shows a mixture of continuity (though weakened) from LMIIIIC (when Mycenaean influences were absorbed), little direct contact with the Submycenaean Mainland (except through earlier influences), and strengthening links between Cyprus and Crete. These points will be looked at, and signs of interregional contact observed in order to test the contention of isolation between areas.

Pottery as the major definer of the period has been found at all the sites in the Gazetteer, though in some instances the reporters have provided no description of the finds. The main types of pottery, both shapes and decorative motifs, have been surveyed in some detail in the introduction, and are listed in Appendix 3, and Plates 1,3,4,5. Twenty-nine
main shapes are listed for Subminoan - a total not less than for LMIII\textsuperscript{84}. The variety is, therefore, no less wide in Subminoan. The repertoire consists of some stereotyped LMIII shapes (though many others have faded away), some developments from these\textsuperscript{85}, plus several others of East Mediterranean influence including feeding bottles, flasks, kantharoi, a ring vase and a bottle shaped vase. A good deal of Mycenaean influence could still be felt in Subminoan. Though the motifs, too, were based on many earlier designs, they were generally uninspired, and were mostly simpler or more abstract, and more geometric, and less curving (see Plate 1). Sometimes there was no decoration at all, and often only the upper part of the vase was painted.

Though the local pottery shows a large measure of continuity from an earlier period, and we have no reason to believe that the population did not chiefly consist of Minoans with a Mycenaean element. The pottery evidence seems to indicate that Crete's links with its own Minoan past had become appreciably weaker\textsuperscript{86}. At the same time there seem to be few links (save through common ancestry and/or cross fertilization) with Submycenaean Greece. The evidence of the typically eleventh century bird vases - so common throughout the Aegean and Cyprus - confirms the dearth of contact between Crete and Mainland Greece in Subminoan\textsuperscript{87}.

\textit{Inter-site and inter-regional contact}

It has been held that sites and regions in many parts of Crete tended to be isolated one from the other in Subminoan\textsuperscript{88}. In particular, scholars have maintained that many sites in the Eastern part of the island had little contact with Central Crete\textsuperscript{89}.

To properly ascertain the presence or absence of links between places a thorough analysis should be undertaken of the complete range of types of pottery types at each
place, and comparisons made\textsuperscript{90}. In the absence of such a close study we have noted in the individual entries of many sites in the Gazetteer a number of ceramic (and other) connections between sites all over Crete - i.e. between East and Central and Western regions, and within each of these. These will now be briefly discussed, and note made of the origin of the influences which determined them.

One of the chief difficulties in comparing the ceramic evidence from different regions is that East Central Crete has been far more thoroughly explored and reported than has East Crete, or West or West Central Crete. This may account for the apparent greater variety in shape, and particularly in decoration, of the pottery in East Central. On examination, the ceramic wares of the East and East Central regions have much in common. Stirrup jars are found commonly at many sites in both regions bearing the typical Subminoan features of air-holes and knobs on the false spout (a LHIIC inheritance). The bell cups, bell kraters and bell skyphoi which were so popular in Subminoan East Central Crete have also been found (if much less commonly) in East Crete, though sometimes with variations in shape. Examples are the bell kraters at Mouliana and Vrokastro. These vases were also a LHIIC heritage. Both regions have the trefoil-lipped oinochoai (from LHIIC), lentoid flasks (from Cyprus), one-handled jugs, feeding bottles (probably of Cypriot influence), pyxides (Minoan), kalathoi (Minoan), askoi (Cypriot) and the commonly occurring bird vases (possibly of Cypriot influence). Though there are variations between regions in the forms these shapes take, they are often very similar\textsuperscript{91}.

When it came to patterns East Central had some patterns not seen in the East (e.g. quatrefoil rosettes), and East Crete some not seen in East Central (e.g. stylized vertical fish figures, seen at Vrokastro). Nevertheless, overall the two regions had much in common, particularly in the use of linear patterns such as the bands around the body of the vases, hatched triangles often with elaborate decorations, parallel lines, concentric circles, zigzags, vertical bands and strokes. Both regions employed the typical
Subminoan technique of painting solid the upper body of a vase, and leaving the lower body unpainted (or just decorated with lines around the body)\textsuperscript{92}. On stirrup jars parallel dashes on the spout and handles were found everywhere. Although more curvilinear designs have been recorded in East Central than in East Crete - e.g. wavy lines, bracket or moustache motifs, curvilinear triangles, horizontal 'S' patterns, sickles, net pattern - but the dearth of detailed material from East Crete does not allow us to reach any firm conclusions. And the same is true in West and West Central Crete. In West Central the typical linear triangle decoration of stirrup jars is employed, with triangles, bands around the belly and stripes on the handles, and other popular motifs such as vertical wavy lines and zigzags used. In West Crete we find the chequer-board decoration, also a feature in East Central. As with the shapes these decorations reflect a mixture of influences from LHIIIIC, Minoan and Cypriot sources.

Though many interregional similarities were noted, some sites may have been more in touch than others. Karphi, in particular, had ceramic connections with many other sites and regions, especially in the East, as well as with overseas. As observed above, the pottery shows a wide mixture of influences - traditional Minoan, intrusive Mycenaean, and Cypriot, as well as current inter-site connections, but apparently minimal Submycenaean influence. For example, both Karphi and Adromyloi had side-spouted, basket-handles jugs, kalathoi and bird vases. Knossos, on the other hand, did not appear to have many connections with Eastern sites. Yet, despite the fact that the ceramic material at, for example, Kavousi, does not bear much resemblance to that at Knossos and Central Crete, the presence of a bird vase, and also of flasks, at Kavousi is important in showing that there was communication with a number of centres, nevertheless, including ones in Central Crete.

Bird vases, as typical of and largely exclusive to Subminoan, provide some of the most valuable evidence for intersite and interregional contacts. A number of studies have been made of these vases. Probably the most comprehensive of these was
Desborough's paper, entitled *Bird Vases*, of 1972. He concludes that 'the distribution of bird vases in Crete shows a similar homogeneity [to that of Cyprus] from the east of the island to the central western area at least during the early Subminoan period'. Further, he notes that these bird vases have been found at so-called 'refugee' settlements in mountainous areas - areas which one might normally expect to preclude intercommunication. Fifteen bird vases have so far been recorded for Subminoan Crete at ten sites. Most of them are illustrated in Plate 7. The majority of these fifteen (ten vases at five sites) have come from so called"refuge" or kastri sites. These were at Axos, Karphi, Kavousi - Plai tou Kastro, Kavousi - Vronda, and Vrokastro. They were found in all regions except West Crete, though two-thirds of them were in East Crete.

All the bird vases described were of one type of shape - i.e. Desborough's Type II - though two from Kavousi and one from Episkopi were a variant with pedestal base, and the one from Melambes was baseless and had wings. The basic repertoire of decorations is very simple, being based mainly on slanting lines and rough zigzags. The designs on the bird vases at some sites have strong affinities with those at other sites. The use of slanting lines in variations of either multiple triangles or alternating diagonals was found on bird vases from the East at Khamaiizi and Kavousi, from East Central at Knossos and Karphi, and from West Central at Axos. Horizontal zigzags were found on vases from East Crete (Vrokastro), East Central (Knossos) and West Central (Melambes).

One could say that there was a fair uniformity throughout the island at those places where bird vases have been found. They were all locally made, and probably all belong to the first half of the eleventh century, thus signifying current Subminoan contact between many, even distant, sites in Crete.
1. Vrokastro

2. Kavousi: Pl.t.K

3. Khamazi

4. Axos

5. Knossos, Sp. Chamber

6. Kavousi, Vronda

7. Kavousi, Vronda

8. Melambes

9. Karphi

10. Adromyloi

11. Vrokastro
Overseas contact

The bird vases are also important in supporting the case for ceramic contact between Crete and Cyprus so lucidly put forward by Desborough and others\textsuperscript{97}. Not only are the shape types similar, but the patterns have much in common\textsuperscript{98}. Of particular interest in the striking resemblance in shape and pattern of a bird vase from Kavousi to one recently reported from the site of Alaas in Cyprus with thick concentric oval bands following the outline of the body\textsuperscript{99} (see Plate 8, Figs. 1 and 2). Two other bird vases from Kavousi - Vronda are of the pedestal variation of Type II, a variation which is considered a Cypriot development\textsuperscript{100}. They were found together with a lentoid flask, also a typically Cypriot pottery shape. There may be some significance for an East/West connection in the facts that (a) nearly all the sites where bird vases were found near the northern coast\textsuperscript{101}, (b) that the majority of them were in East Crete, thereby allowing, in both cases, ready access of influence with the East Mediterranean.

The bird vases, then, would seem to suggest active communication with Cyprus where the same type was found. The direction of influence is not, however, entirely clear. It has been much discussed\textsuperscript{102}. The strong possibility is that the bird vases were originally an Aegean idea (possibly originating from earlier Cycladic interest in birds)- with independent versions in mainland Achaea\textsuperscript{103} (type 1), and in Crete\textsuperscript{104} (type 2)- which reached Cyprus just before, or just after, 1100 B.C. In Cyprus they were enthusiastically received and a local form made incorporating some Syro-Palestinian influences. This in turn, influenced Aegean forms in Lefkandi and Athens and Crete\textsuperscript{105}.

Lentoid flasks betraying strong Cypriot influence or in some cases actual imports, were amongst typically Cypriot pottery shapes which were found in the transitional period before the Geometric in Athens and Lefkhandi, and in Crete\textsuperscript{106}. They have been found so far in Crete at Kavousi-Vronda, Khamazi, Mouliana, Vrokastrio, and
1. Alaas

2. Kavousi - Plai tou Kastrou
Knossos-Venezeleion Hospital site. Once again, it is interesting to note that all these sites are situated near to the eastern end of the north coast of Crete.

Crete and Cyprus also had a number of other ceramic elements in common in the eleventh century, including the feeding bottle, bottle-shaped vase, kantharos, amphoriskos with false spout, belly-handled amphora, pyxis with high handles, altar stand, and the decoration of triangle enclosing semicircles (often found on stirrup jars). These all imply contact on a regular basis\textsuperscript{107}, but, as with the bird vases, the direction of influence is often hard to establish. There were few actually imported ceramic pieces in Crete (nor Cretan pieces in Cyprus). Trade and communication meant frequent travel backwards and forwards. It is possible that trade with the outside world may have been channeled through some prominent settlements such as Karphi, Knossos, Kavousi, and Vrokastro, and spread from these to the rest of Crete. Finds (described in the preliminary reports) from the recent excavations at the Venezeleion Hospital site at Knossos, support this. Among a rich and varied collection of goods were a feeding bottle, two two-handled flasks, and stirrup jars with composite triangle decorations - vases also found in Cyprus (and on the mainland) - along with other Minoan/Mycenaean type vases, and a great number of metal finds of both mainland and Cypriot influence, plus several interesting East Mediterranean imports of ivory, glass frit, gold, iron, and a bronze shield boss, and an open-work support, as well as an Italian-type pin head\textsuperscript{108}.

In Cyprus, ceramic finds at Alaas and other sites vividly illustrate the enthusiastic adoption of Cretan (and Syro-Palestinian) elements into the local ware after 1100 B.C.\textsuperscript{109}. Karageorghis had pointed out that in Cyprus the Proto-White Painted ware is by far more elaborate than the Subminoan (or Submycenaean). It is better articulated and neater, richer, more varied in motifs, and more lively. In Crete, along with a simplification in designs, the technical expertise of the Subminoan pottery was not high. The fabric was mostly relatively soft, the paint poorly adhering, with flaking,
and the potter’s wheel was inexpertly used. Despite the fair range of shapes used, the repertoire of designs was limited and the syntax was uninspired\textsuperscript{110}. Nevertheless, overall the styles were of wider range and were more refined than those of the mainland\textsuperscript{111}. The quality of the pottery varied from place to place within Crete, and a poor range was particularly evident at some places, for example Kamares, which seems to have housed a modest, possibly decadent Mycenaean population near its end.

\textit{Signs of Prosperity and Development}

Despite some signs of poorer elements in the population, many places showed, both by their range of pottery and the value and variety of other finds, definite signs of a comparative prosperity, and, of ceramic development. Owing to the valuable material provided by the recent thorough excavation and reporting of the major fully stratified settlement near the Stratigraphical Museum at Knossos, it is now possible to trace the development in at least one vase type - the bell shaped vase or deep bowl - which, possibly in combination with the amphoriskos, was to become the miniature bell-krater -a distinctive and characteristic vase in the ninth century in Crete\textsuperscript{112}. An examination of this vase demonstrates its development over Subminoan from LM/LHIIIIC and into Protogeometric, and illustrates its distinct Subminoan identity. Plate 9 illustrates bowls through four stratified stages. Stage I is represented only by a krateriskos (Fig.2), but between stages 2 and 4 we can observe the progress of the bell bowl. Some changes in shape occur. At all stages the Subminoan bowls can be distinguished from the typical Late Minoan IIIC bowl, an example of which was found at this site and is illustrated in (Fig.1). The Subminoan bowl is much less squat than the LMIIC bowl, while it is still broader in proportion and more strongly curvaceous in profile than typical Protogeometric bowls (see Fig.8.), which are also taller and straighter\textsuperscript{113}. The internal reserved band and disk - a feature of Subminoan vases - is present till just
1. LMIIIC deep bowl

2. SM Stage 1 krateriskos

3. SM Stage 2 bell bowl/skyphos

4. Stage 2 bell bowl

5. SM Stage 3 bell skyphos

6. SM Stage 4 bell bowl

7. SM Stage 4 small bell skyphos

8. EPG bell skyphos
before Protogeometric, when it disappears in some cases (see Fig.6.), though not in others at this stage (see Fig.7). In Protogeometric the bell bowls never have the reserved band or disk. The bell bowls of Subminoan are decorated in stage I, but in stage 2 vases with solid painted upper part and with the lower part unpainted, come in (Fig.3), though some remain decorated (as in Fig.4). In stages 3 and 4 this practice continued, and is a distinct feature of these vases in Protogeometric. The bell-shaped vase was originally of Late Helladic IIIC inspiration, as was its solid painted decoration, and the use of the internal reserved band\textsuperscript{114}. When further details became available of finds from the Stratigraphical Museum site at Knossos, a deeper analysis of the pottery, along the line of Syrenious' analysis of the Submycenaean Mainland pottery\textsuperscript{115}.

Finally, it must be stressed that this survey of the Subminoan pottery is limited. A more thorough examination would require a classification of the complete stylistic range of the pottery so far found from all known sites, and a numerical cross-analysis to show which types came from where, which were most common, and what were their origins and connections\textsuperscript{116}. This is recommended for future research.

VI. Jewellery and other valuable finds

As well as a number of utilitarian costume pieces - pins and fibulae - the range of more precious jewellery in Subminoan Crete was quite large. It included bracelets (twisted and plain), multiple-spiral hair rings, fingerrings, beads and rosettes. Bronze was commonly used. Gold, rare in other parts of the Aegean, was employed for a number of pieces in the Knossos region, for rings at Mouliana and Vrokastro\textsuperscript{117}, and also for a bucranium recently discovered at Krya in East Crete.
Ivory, very rare elsewhere in the Aegean, was found at several sites in Subminoan Crete. Sometimes it was employed in conjunction with metals, as, for instance, for the handle of a bronze knife found at Khamazi, and others from the Venezeleion Hospital site at Knossos. A bronze pin from a tomb at Hagios Ioannis in the Knossos area had an ivory head, and was similar to one from Kourion in Cyprus of the mid eleventh century\textsuperscript{118}. Other ivory finds were also from the Knossos area: seals from Ambelokipi and combs from the Venezeleion Hospital site. Links with the East are indicated by the presence of ivory.

Overseas contacts, mostly to the East, were also confirmed by the sealstones, amber beads\textsuperscript{119}, glass frit, steatite and faience finds at a number of sites. Links with the West are indicated by the Italian-type pin heads.

The value and wide range of these valuable items not only show that Crete was in touch with the East, and to some extent with the West, but are witness to the comparative prosperity of Subminoan Crete. The Knossos area, in particular, seems to have been the main focus of this prosperity.

VII. Conclusions

The findings of the analysis of monuments and artifacts found at Subminoan sites give general support and confirmation to the conclusions reached by the analysis of the sites themselves regarding continuity, contact, defensiveness, prosperity and vitality within the Subminoan period.

Just as a good deal of continuity was observed for the occupation of findsites from the latest Late Minoan III era, persistance of customs, practices and traditions from IIIC
into Subminoan, (though with some changes, developments and innovations), was evident in the finds. Tomb types and methods of burial followed IIC in the continued use of both tholoi and chamber tombs, (but with increasing use of tholoi), as did the continued use of multiple burial, and of cremation as well as inhumation, (but with increasing use of cremation). Subminoan architecture carried on an unbroken tradition from LMIIIB/C in houses and in sacred buildings. Even the innovative sanctuary at Hagia Triadha had been founded in the twelfth century. Cult objects, particularly terracotta figurines, continue without much change from the Bronze Age, testifying to the persistance of the Minoan religious practices at least to the end of Subminoan, and longer still in Cyprus. The tradition of excellence in metalwork, particularly notable in beaten bronze, continued through Subminoan into Protogeometric, while an iron industry became established in Crete. In Cyprus the natural metal skill of Cretan immigrants may have helped stimulate iron-working developments. Finally, in pottery, the LMIIIC tradition, with its strong LHIIIC influences, largely persisted in Subminoan, while some Eastern features were also absorbed resulting in a more linear and geometric decorative repertoire.

The site analysis suggested that contact between sites and between regions was likely to have taken place in most places, and though the evidence is varied, the find analysis shows that though some sites were more in contact than others, few appear to have been totally isolated throughout the Subminoan period. Just as there had been in the twelfth century, there were differences of preference in burial and tomb types between East and East Central Crete. It is however probable that these differences alone did not preclude free intercommunication. Cremation and inhumation were tolerated together as they had been prior to Subminoan. While the strong similarities exhibited from site to site throughout Subminoan Crete in both architecture and cult objects120 could be accounted for by the inherited background tradition, the widespread occurrence of similar types of metal objects in bronze and iron is witness to intersite and interregional contacts.
It has been noted that although there were regional differences in pottery, which indicated some measure of cultural separation, the ceramic evidence in general shows many lively connections between regions, which cannot all be accounted for by the persistent background ceramic tradition and does not indicate isolation, even between the so-called "refuge" sites.

The site evidence hinted at the possibility of continued trade and communication between Crete and Cyprus, and is affirmed by the find evidence which indicates exchange in ideas and influence (often rather than direct imports) in both directions in pottery, cultic figurines, metals, technology and luxury items (gold, ivory, etc.). There were not many ties apparent between Mainland Greece and Crete in Subminoan, in fact there were distinct differences in the evidence in ceramics, tombs and burial procedures, and in the presence of luxury items.

The site analysis indicated that despite some signs of unrest, change and wariness, particularly in the East of Crete, the primary concern in the siting of most places was seldom purely defence. Though the appearance of man-made fortifications at a few sites must indicate anticipation of trouble, the find analysis shows that there was no significant correspondance in the occurrence of weapons with those sites which may have been concerned with security or defence.

The site and find evidence combine to suggest that there may have been a relative prosperity, and a vitality which were opposed to the commonly held view of poverty and stagnation in Subminoan Crete. A growing, or at least stable, population is indicated, with maintainance of skills in metalcrafts, and evidence of trade shown in imported raw materials and a number of luxury goods, as well as in the wide variety of pottery.
Notes and References

1 New, that is, since the last detailed overviews of Desborough in GDA (1972), and his earlier publications (LMTS (1964) and PGP (1952), and Pendlebury’s AC (1939).
2 This evidence is far from complete. Sometimes we have details only of tombs, sometimes only of burial method.
3 As in the Knossian area where the Kephala tholos was the only tholos in an area using chamber tombs.
4 See GDA, 113, 274; Kanta, 322. Tholos tombs had been used in Crete since at least LMIII.A, but unlike the mainland they were often employed as communal tombs. These earlier tholos tombs were generally larger and better constructed than those of the 12th century onwards.
5 Ibid, 113.
6 IIIC/SM tholos tombs at Vasiliki, Mouflana, and Praisos - Photoulous probably belonged to wealthy people, while tholoi at Karphi, Erganos, Panagia and Kamaizi were used by people of less wealth. Kanta, 322.
8 GDA, 274.
9 Kanta, 129.
10 GDA, 266, note 2.
11 Cremation and inhumation both occurred together at Moiliana and Vrokastro in the East, at Erganos, Karphi, Prinias - Siderospilia and Tylisos in the East Central, and Vryses at Hagios Ioannis in the West.
12 GDA, 270.
13 Ibid, 275.
14 Kanta, 10-11. Burial tradition also persisted at Vrokastro where, despite the interruption prior to 1200 B.C., tholoi - described as circular chamber tombs - using multiple burial with a mixture of cremation and inhumation, were in use from late IIIB/C into Protogeometric.
15 GDA, 274.
16 Hesperia 53 (1983) 413, in reference to Kavousi.
17 GDA, 274.
18 In East Central Crete there are 3 in the Knossos area, one at each of Mt. Juktas and Tylisos; in East Crete one at Mouiliana, Vrokastro and probably Panagia; one in West Crete at Vryses.
19 The sites with iron, but with no record of cremation were Adromyloi in East Crete, and Karphi, Knossos-Gypasdes, and Panagia in East Central Crete.
20 The exceptions were Kavousi-Vronta and Karphi which while employing inhumation, showed some, though only fragmentary, evidence of iron.
21 Meirxorouma, Patsoos, Reithymnon-Vryses.
22 Kalamakia, Kavousi - Plai ou Kastou, Kamaiza, Lato, Metoxokhor, Oous, Pachlitisani Agriadha, Seis, Sphakia, Vrokastro, Ziros.
25 Karageorghis suggests that the goddess with uplifted arms may have come to Crete originally from the Mainland in LMIII "The Goddess with the Uplifted Arms", Scripta Minor (1977-8:2) 5-29. In Crete it may have evolved under mainland control by a mixed population - part native, part Achaeans (Nicholls, R.V. Greek Votive Statuettes and Religious Continuity c. 1200-700 B.C., 4). Kanta, however, suggests that these idols may have developed from much earlier figures in Crete. Whatever the truth, there were certainly cross-influences at different stages (Kanta, 122).
27 Ibid, 6.
31MA, 12 (1902) 118, 122-6, figs. 47, 54. Zervos, C. L’Art de la Crête, figs. 795,6; Platon, N. Crete, pls. 70, 120-2; Higgins, R. Greek Terracottas, 12-13, 16, pl. 5c.
34Ibid. 12.
35Ibid. 18-19.
36For example, horns of consecration with human heads.
37Nicholls, R.V. " Greek Votive Statuettes and Religious Continuity 1200-700 B.C. ", 11-12.
38Rutkowski, B. Cult Places of the Aegean (1986) 64.
Karagheorgis, V. "Notes on Some Centaurs from Crete", Kr. Chron., 18-20 (1964-6), 50-58; also
Nicholls, in his article already cited on "Greek Votive Statuettes and Religious Continuity C. 1200-700
B.C. (1970), who believes, however, that the influence came more generally from the Aegean in the c.
1100 B.C. migration.
40GDA, 286.
41Ibid, 282.
42Hayden, B.J. The Development of Cretan Architecture from LMIII A through Geometric Periods.
Diss. Univ. of Pennsylvania (1981); Hayden, B.J. New Plans of the Early Iron Age Settlement of
III. (1914)
45BCH 25 (1901) 306-7.
46GDA, 286. This goddess may have come from the mainland earlier.
47PC, 323.
49A probable Mycenaean influence from the twelfth century.
50Adromyloi, Kalamafki, Kavousi - Vronta, Khamazi, Krya, Mouliana, Oulous, Palaikastro, Praisos -
Photoulou, Vrokastro.
51Afrati, Hagia Triadha, Kamares, Karphi, Knossos - Amb. Teke, Knossos - Gypsades, Knossos -
Phaestos - hill area, Psycho, Tylisos.
52Atsipadhes - Pexoulou, Mezorouma, Patsos.
54Karphi, Knossos - Amb. Teke, Knossos - Ven. Hosp., Mt. Juktas, Panaghia, Tylisos, Knossos -
55Adromyloi, Kavousi - Vronta, Mouliana, Vrokastro.
56Vryses - Hag. Ioannis.
58Ibid, table IV.10, 51.
59Ibid, table IV.8, 49.
60Ibid, table IV.9, 50.
61Ibid.
62Only at Karphi and Vrokastro was there evidence of both fortifications and weapons, and of naturally
defended "kastro" sites only Kavousi, Vrokastro, Vryses and Karphi had weapons.
The sections on jewellery and other valuable finds and on pottery in this thesis will further support these foreign connections. It would be interesting to study the correspondence of sites where such typically Cypriot vases as the pilgrim flask, bottles and duck vases have been found, and where metalfinds were also found.


GDA, 315.

Ibid, 316.

Dothan, T. Acts, 173 f. Snodgrass, DAG, notes the curious dearth of bronze objects in all areas of Greece and the Aegean, excepting Crete, from 1025-950 B.C.


Ibid. Desborough, GDA, 309, suggests that the cretan examples were probably imports from East Mediterranean. Muhly would agree, noting that it has been found in the Philistine site of El Qasir (JHS 100 [1980] 264)

GDA, 316.

Müller-Karpe, Jdf (1962) 75.


PGP, 233-271.

DAG (1971), 40-43.

Seiradaki, M. "Pottery from Karphi", BSA 55 (1960), 1-37

GDA, 59-63., contend that the ceramic material of Kavousi in SM bears little resemblance to developments at Knossos and other areas of central Crete - and they are independent in occurrence.

E.g. Coulson, Day & Gesell in Hesperia 52 (1953) 413

Kanta, 244-287, describes a similar number of types for LMIII.

For example, changes took place in kylikes: in SM they now regularly had a stem bulge, and an offset rim. Cups were more conical than before. Stirrup jars had a knob on top of the disc and an air-hole on the upper shoulder. The deep bowl, combined with the amphoriskos, commenced a development towards the PG bell krater.

GDA, 63.

Desborough, V.R. d'A., "Bird Vases", K. Chr. 24 (1972) 268-9. The types of bird vases on the Mainland and in Crete were quite distinct from each other. One or two Subminoan vases have been noted as bearing direct resemblance with Submycenaean, e.g. a stirrup jar from Hag. Ioannis at Knossos with its broad bands of glaze recalls those of the dark-ground stirrup jars of Attic Submycenaean. Also a Submycenaean-type amphoriskos has been found at Knossos-Spring Chamber.

Coulson, Day & Gesell in Hesperia 52 (1983) 413.

Ibid.


E.g. the East Cretan skyphos was sometimes shallower than the East Central version.

This was a LHIIIIC influence which was found first in Subminoan. LMTS, 180.


Ibid.

In type II the spout occupies the position of the bird head. There are three variations: (a) with strut legs, (b) with pedestal conical foot (a distinctly Cypriot type), (c) baseless. Type I - with bird head at the front and spout on the back - is the only type to be found on the mainland, and is not found at all in Crete. Both types have been found in Cyprus.
96 Kr. Chr. 24 (1972) 261. Note, however, that a Protogeometric example comes from Knossos (Fortetata, 12, pl. 5:20) and there are two LMIIIIB bird vases now known - one in West Central Crete at Adele Rethymnis (AR (1981-2) 56; AD 29, Chr. 885-6; PAE (1974) 252-6.)

97 GDA, 57-63. See also articles by M. Yon, V. Karageorghis, K. Nicolaou, Y. Tzedakis and others in Acts (1979).

98 Kr. Chr. 24 (1972) 262. Cross hatching, alternating hatched triangles, alternating diagonals.

99 Ibid, 252, pl. AB'4; Alaas, 15, pls. X, LVIII.

100 Ibid, 56.

101 With the exception of Adromylo in East Crete, and Melambes in West Central Crete.


103 Of LHIIC or 12th century in date.

104 Note LMIIB examples, mentioned infra.

105 Many more bird vases have been found in Cyprus than elsewhere, and from locations throughout the island. A. Pieridou lists 40 examples of Proto White bird askoi (RDAC (1979) 96-101.) The conical-footed bird askos may have been developed in Cyprus says Karageorghis (Alaas, 56).


107 These elements are discussed more thoroughly by Desborough in GDA, 57ff.


112 GDA, 60-61.

113 BSA 58 (1963) 37, nos. 7-15.

114 GDA, 39.

115 Styrenius, C.G. Submycenaean Studies (1967).


117 The dates of these finds may not fall within the eleventh century.

118 GDA, 298. A similar long pin in iron with ivory head from late Submycenaean Athens also shows a Cypriot connection.

119 The provenance of the amber beads was probably to the West, from Sicily, suggests Desborough (GDA, 90) though a northern origin is also muted. Earlier Boardman said that they may have come from the Baltic (CCO, 74-5).

120 Exceptional were the different sanctuary at Hagia Triadha, and the lesser occurrence of cult objects in East Crete than elsewhere.
CHAPTER 5

CONCLUSION
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CONCLUSION

This comprehensive survey of the Subminoan period, presented in a manner not before attempted, is based on the evidence of a Gazetteer of sites and finds which is as complete as presently available evidence permits. An attempt to clarify the nature of the Subminoan phase of settlement in Crete has been made with the aid of a reasonably adequate cemetery and settlement pattern, and find descriptions. It is suggested that the evidence produces a more interesting picture of Subminoan than has previously been presented on the basis of more fragmentary evidence. The former picture of Subminoan as a depressed, depopulated, stagnant, impoverished, isolated period without a true identity, was accepted because the limited number of finds made the situation seem worse than in fact it was. Earlier scholars were more interested in the periods before and after Subminoan, and generally dismissed it as an ill-attested phase of the previous period, or simply as an archaeological convenience to bridge a gap between Late Minoan IIIC and Protogeometric. The picture presented in this thesis is more positive.

Bearing in mind the fact that conclusions drawn from the present state of knowledge, improved though it be, can only be tentative, it seems that a number of long-held contentions can nevertheless be modified or even refuted. It has been found that there was no spectacular loss of population, but rather a redistribution of settlement sites, and possibly even an increase in both site and total population numbers. While unrest and some caution were indicated by considerable occupation at high 'kastro' sites - generally considered, perhaps misleadingly, 'refuge' sites - and by reduced coastal site occupation, there were signs that life was, nonetheless, relatively peaceful. Many
inland, low-lying, undefended and traditional sites continued to be occupied, sometimes with new buildings at the old sites. These, in fact, represented the large majority of Subminoan sites. A good number of coastal sites, particularly in the East, continued to be used. There do not seem to have been many caves filled with refugees. Ties and contacts between communities and regions appear to have been stronger than previously thought. Even Karphi, apparently the most isolated of communities, showed much evidence of contacts with many other parts of Crete, as well as with overseas. Signs of contact with, and influence from, overseas (Cyprus, mainland Greece and Italy) were evident in many places. Between Cyprus and Crete particularly, intense trading in both directions is indicated, with influences flowing backwards and forwards. The considerable influence of Crete upon the more prosperous Cyprus in techniques and taste in the eleventh century is particularly noteworthy\textsuperscript{1}. The conventional impression of a stagnant, insular, culturally fallow and impoverished community is further tempered by indications of a relative prosperity, by a continuation of creative skills (especially in metalwork), and by signs of development in ceramics\textsuperscript{2}. There were many signs of a lively and productive culture.

Changes and developments occurred in Subminoan, but a relative stability is suggested by a basic continuity in such indicators as settlement places and site use, burial and trading patterns, grave types and customs, buildings, artifacts, and in particular, religion. In continuity, in prosperity, and in contracts between sites and overseas, Crete was better off than other areas of the Aegean at this time, in particular in comparison with the thoroughly reduced mainland of Greece. It is probable that there was little continuity of settlement in Greece between the latest Mycenaean and the early Dark Ages\textsuperscript{3}. In Subminoan Crete one sees signs of life and growth, the significance of which has not before been acknowledged.

There is still some measure of uncertainty about the absolute dates of Subminoan - we have suggested c. 1100 -1000 B.C. - and there are variations from region to region,
with localized survival. 1100 B.C. has been mooted as a possible starting date for Subminoan as it coincides with the approximate date of the Cretan exodus to Cyrus, and perhaps signifying a climax to the restlessness of the times. The date of 1000 B.C. suggested as a possible finishing date for Subminoan (at least in Central Crete) is approximately that of the descent of the people of Karphi to a more comfortable site below, and the time at which the Athenian Protogeometric style first asserted its influence in Central Crete. These absolute dates, however, are not of crucial importance for the present purposes, for it has been shown that ceramically and culturally Subminoan has a distinct entity, clearly distinguishable from the periods before and after. It is a new and significant phase of development of wide coverage (96 sites) precipitated by the cross-currents of the age, and involving a change in direction. As such, it would seem to deserve a more suitable name than the denigrating term 'Sub' which does not do justice to the period, and seems to imply the very things which have now been called into question. In the past Subminoan was given to convey the relative decline in prosperity and the preservation of strong Bronze Age traditions\(^4\), and a pottery which, occurring chronologically later, has been called but a "poor remnant of the IIIC style"\(^5\).

It is proposed that the distinctive nature of Subminoan could more suitably be acknowledged by calling it Late Minoan IIID (which acknowledges it as a distinct category part of Late Minoan III subsequent to IIIC), or Late Minoan IV (separating it from the Late Minoan III era), or, preferably, Post Minoan I - a name indicating that this period followed (and was to some extent founded upon) Late Minoan, while being distinguished from Late Minoan by its new directions. Subminoan can be seen as a time of foundation, and a cultural precursor of the pre-Classical period. Levi has described Crete as "the natural and traditional bridge of transition - the centre for new influxes in art and preserver of old art traditions"\(^6\).
Through the course of this thesis the deficiencies of the material have been touched upon. The number of really valuable, fully excavated and fully reported sites, is still fairly limited. Despite these limitations a picture of Subminoan Crete, as reflected by the known archaeological findings, has been presented. To further validate this we must ask how these findings accord with the evidence of other scholars and of tradition. Can the two be combined to draw up some sort of cohesive historical outline of the period, or at least elucidate one or two unanswered questions? The following comments will be brief, and can only be regarded as speculative.

Who were the Subminoans? In other words, who lived in Crete in the eleventh century B.C.? Both archaeological evidence and legend confirm that they were a mixture of people. The Odyssey (XIX, 175ff.) says that Crete's population (at no later than C. 8 B.C.) included Achaeans (i.e. Mycenaean and Doriands - from Greece, and Eteocretans7, Kydonians8 and Pelasgians9 - ancient Minoan peoples. According to Praisian (Eteocretan) tradition, the Achaeans had entered Crete in ever-increasing numbers since the fifteenth century B.C., but particularly in the twelfth century, where they had flocked in, from their dying Mycenaean world, on at least three occasions, intermingling with the indigenous culture which had become depleted10. Dorian-speaking people filtered in with other Greek peoples, possibly in the eleventh century, and later became dominant in many parts of Crete11.

Archaeological evidence of the twelfth and eleventh centuries shows a mixture of elements from the Achaean Greeks with indigenous Minoans - the two existing alongside each other at sites from Knossos to Karphi, and indeed at most areas. Though it is probable that the mass arrival of fleeing Mycenaean was the cause of much of the unrest in Crete at this time, neither people displaced the other, and each retained certain elements of their own cultures12. Many of the distinguishing features of Subminoan - cremation, fibulae and the use of iron - cannot be associated with any particular elements in the population, such as Doriands. In most cases these were
present in Crete in some degree before Subminoan\textsuperscript{13}. It seems most likely that they filtered in from the Near East and were adopted piecemeal by old and new communities alike\textsuperscript{14}. The presence of other people, probably for trading purposes, and possibly mercenaries or pirates, is indicated by the presence of goods from, or influenced by, Italy or Sicily, from Cyprus, and from the Submycenaean Mainland. The intense trading in both directions, indicated by the archaeological finds, between Cyprus and Crete in the eleventh century, is also attested in legend\textsuperscript{15}.

What does the pattern of settlement tell us of the conditions of life in Subminoan? And how does this accord with legend? The movement in the twelfth, and in some cases in the eleventh centuries, of some coastal sites to defensible inland sites, seems to indicate some fear of dangerous conditions on the coast\textsuperscript{16}. So too does the reduction in size, or complete desertion, of some other coastal sites\textsuperscript{17}. The cause of this caution, restlessness and upheaval is problematical. It seems certain that there were constant arrivals and departures in Crete, and there are many stories of piracy and raiding being common features of the times\textsuperscript{18}, so that the sea lanes became unsafe, and ports were probably burned\textsuperscript{19}.

The common use has been noted of kastro or acropolis sites situated just in from the coast, but with a high view of the coast and surrounding region. These have been called "refuge" sites, but they often consisted of flourishing communities (as, for example, Karphi), and should be more appropriately be considered as watch-tower sites, or natural look-outs, where the wary inhabitants could easily keep an eye open for pirates. Only a few of the most cautious employed fortifications. Some scholars have associated the occupation of fortified acropoleis with internecine struggles between Achaean settlers and native Cretans, with independent elements fleeing to the hills, or interpreted it as protection against Dorian attack\textsuperscript{20}. The probable exodus to Cyprus about 1100 B.C. of some Cretan people could be taken as a sign of trouble\textsuperscript{21}. 
Despite coastal disturbances and differences between certain elements of a mixed population, much of the island appears to have been relatively peaceful in Subminoan, and despite the exodus to Cyprus to still be quite populated. There was a basic continuity, reflected most clearly in religious belief and practice. Regions were in touch with each other, and trade continued actively with the outer world, based largely on metals. The leading centres of early post-Minoan Crete were relatively prosperous, advanced and independent, surpassing most other contemporary Aegean communities.

Some trends apparent in the Subminoan period have been pointed out. Future research needs to elucidate a number of questions. There follow a few suggestions.

Our evidence is for many separate centres of occupation (sometimes made up of nuclei of findsites) - rather than large units under centralized bureaucratic control - but with contact between them. To date the meagreenss and uneven quality of the pottery has not allowed a proper estimate of the differences between regions. With increased material a methodical study of the use of vase types in different regions could usefully be carried out to indicate regional differences and ceramic connections between Cretan sites and with overseas. There has been some attempt at correlation between different types of finds in the present work. It is possible that wider syndromes of finds, as suggested by Muhly, could be significant. Is there, for instance, a significant connection between the occurrence of iron, bird vases, pleonastic pottery, and goddess figurines? Closer analysis of the pottery could also enable a more detailed study of the ethnic composition of the inhabitants of specific sites, which have been generally indicated as mixed.

All distribution maps tend to present a simplified picture, and fail to reflect adequately the subtle changes in the development of cultures. With increasing material from stratified sites, longitudinal studies could be undertaken (in the manner of those in
Athens and elsewhere) of changes within one setting, such as the study of the bell-shaped vases at the Stratigraphical Museum at Knossos.

It may be possible to make a more accurate assessment of the population size. For instance, Hope Simpson suggests that estimates of the modern agricultural potential of the districts concerned may help us to estimate the probable density of ancient settlement in certain areas and during certain periods\textsuperscript{24}.

In collecting together the available raw data for the Subminoan period in the Gazetteer of Findsites, in summarizing the results of survey and excavation work, and in indicating trends, a useful basis for future research has been provided.

Notes and References

1 See Yon, M. in Acts, 248.
2 The bell krater, so popular in Protogeometric times, develops in Subminoan. What has been seen as degeneration in pottery styles, can also be interpreted as part of a process of a growing linearization which was to lead directly into the more geometricized Protogeometric style.
3 GDA, 263.
4 CCO, 129.
7 East Cretans.
8 Kydonians were people of Western Crete (from Kydonia, at the site of modern Chania) who were most important in the fourteenth and thirteenth centuries. At this time they displayed heavy Mycenaean influence. See Kanta, 217-228.
9 Pelasgians were probably a type of Cretan aborigine.
10 Herodous VII:170f. War, famine and pestilence are said to have caused the depletions.
11 The DORians may have been northwestern Greeks who had possibly reached Southern Greece in the later twelfth century (Warren, P. The AEGean Civilizations (1975), 110). Warren has elsewhere (AR 1982-3, 83) pointed out that an overall continuous sequence of occupation of the Knossos area indicates that LMIIIC-PG was the date of arrival of Doric-speaking Greeks.
12 E.g. Minoan religion, Mycenaean megarons.
13 Cremation has been shown to be present from at least LMIIIB at Olous, and iron goods have been found in the twelfth century at Mouliana and elsewhere. Even occasional bird vases were found as early as LMIIIB.
14 H. Simpson, Gazetteer, 381. It has been suggested by Muhly, JHS 100(1980) 263, and also Vermeule, Greece in the Bronze Age, 271 f., that Sea People, possibly Philistines, may have introduced iron to Crete in the twelfth century.
16E.g. the movement from Olous to Dreros.
17E.g. Zakros, Chania, Kommos.
18Stories reflected, for example in the *Odyssey* (*Od. XIV*, 199-234), where Odysseus claims to be a Cretan pirate.
20*AD* 29, Chr. 900-1. Hutchinson, *PC*, 320. Watrous, *BSA* 75, (1981), talks of Karphi being founded when incoming Laconians ousted Lytiitians from their base, reducing them to serfs, leading to a flight to Karphi.
21Some scholars, e.g. Nicholau, *Acts*, 255, believe that signs of Cretan presence in Cyprus at this time indicate only traders rather than settlers.
23Muhly, *JHS* 100 (1980).
APPENDIX 1

LIST OF LMIIC POTTERY SHAPES

1. Stirrup jar.
2. Deep bowl
   a) with straight angular profile;
   b) deeper, with almost conical rim.
3. Jug with tall conical, globular shape and round rim.
4. Miniature jug with trefoil spout and conical foot.
5. Straight-sided bottle-like jug.
6. Lekythos with perked-up body and handle from rim to shoulder.
7. Jugs with depressed globular body, conical foot, trefoil spout.
8. Kylix
   a) deeper, more conical bowl, handles level with rim;
   b) with raised handles, low-stemmed "champagne glass".
9. Cup
   a) shallower, straight-sided cup;
   b) deep, bell-like cup with big handle.
10. Conical cup.
11. Spouted cup
   a) with strap handle raised above rim;
   b) with raised conical foot;
   c) deep, bridge-spouted cup.
15. Amphoroid krater.
16. Stand.
17. Feeding bottle (thelastron).
18. Pyxis.
19. Spouted pyxis with tall neck and concave sides.
20. Tankard (with spout).
22. Kalathos
   a) handleless;
   b) with 2 horizontal handles.
23. Amphoriskos.
25. Flask.
APPENDIX 2

LIST OF PROTOGEOMETRIC POTTERY SHAPES

1. Stürrup vase.
2. Small jug with trefoil lip.
3. Small oinochoe with ovoid or roughly globular body.
4. Amphoriskos.
5. Bell krater:
   a) with offset rim;
   b) with plain curving rim.
6. Cup.
8. Amphora.
10. Feeding bottle.
11. Spouted cup.
12. Pyxis:
    a) straight-sided with high foot and 2 vertical handles;
    b) with 2 horizontal handles rising vertically;
    c) with low neck and globular body.
13. Bowl, squat and flat-bottomed.
15. Necked pithos.
20. Squat oinochoe.
22. Flat circular tray.
APPENDIX 3

LIST OF SUBMINOAN VASE SHAPES.

1. Neck-handled amphora.
2. Belly-handled amphora.
3. Amphoriskos.
4. Stirrup jar.
5. One-handled jug (hydria).
6. Two-handled jug (like miniature neck-handled amphora).
7. Kantharos (bowl with vertical handles from body to lip).
8. Trefoil-lipped oinochoe.
12. Wide, shallow bowl with relatively vertical walls to belly, then turning sharply inwards to the foot.
13. Wide, shallow bowl with convex curved profile (kalathos)
   a) with handles,
   b) without handles.
15. Krater.
17. Shallow cup with straight sides.
18. Shallow cup with curved profile.
20. Feeding cup.
22. Four-handled jar.
23. Pyxis (lekanos)
   a) straight-sided with concave neck and 2 vertical handles from just below the neck to the rim;
   b) straight-sided with vertical handles along the sides.
24. Feeding bottle (spouted jug with basket handle - thelastron).
25. Tankard.
26. Stand.
27. Flask.
28. Askos.
29. Dipper.
30. Brazier.
## APPENDIX 4

### PROBABLE PERIOD OF OCCUPATION OF SUBMINOAN SITE

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APPENDIX 5

SITES POSSIBLY CONCERNED WITH SECURITY, REFUGE AND/OR CONTROL

A. Sites other than caves

East Crete
Dreros
Kalamafki
Karydhi
Lato
Kato Zakro
Leniko
Pachisani Agriada
Praisos
Sphakia
Vrokastro

West Crete
Vryses

East Central Crete.
Erganos
Gortys
Hagia Thomas
Kamares
Kato Symi
Karphi
Hagios Georgios Papoura
Phaestos
Smari

West Central Crete.
Atsiphades
Eleutherna
Axos
Rethymnon

B. Caves possibly concerned with security, refuge.

East Crete
Kalamafki
Karoumes
Karydhi
Metoxokhori
Olous

West Crete
Peponia
Bibliography


*Ethnika Statiski Yperesseia*. (1962)


Hallager, B.P. "Crete and Italy in the Late Bronze Age Period". *AJA* 89 (1985) 293-305.


Hogarth, D.G. "The Dictaean Cave". *BSA* 6 (1899-1900) 94-116.

Holmes, Y.L. "The Foreign Trade of Cyprus during the Late Bronze Age", in Robertson, N. (Ed.) *The Archaeology of Cyprus. Recent Developments*. N.J. (1975).


Karageorghis, V. "Notes on Some Centaurs from Crete". K. Chr. 18-20 (1964-6) 50-58.


Payne, H G G. "Early Greek Vases from Knossos". BSA XXIX (1927-8) 224-298.


Pendlebury, J.D.S. "Lasithi in Ancient Times". *BSA* 37 (1936-7) 194-200.


Popham, M. "Late Minoan Pottery, A Summary". *BSA* 62 (1967), pp. 337-381.

Popham, M. "Some Late Minoan III Pottery from Crete". *BSA* 60 (1965) 316-342.


Seager, R. *Excavations at Vasiliki*. Transactions of Archaeology, University of Pennsylvania Museum (1906)


Vermeule, E. "The Mycenaeans in Achaia". *AJA* 64 (1960), pp.1-21.-


11. Kavousi is a high mountain site which overlooks the sea in the distance.
12. Kavousi showing the situation of Plai tou Kastrou in the Thrifti range of the Sitia mountains.

13. Khamazi at Leopetro. Liopetro is the coastal site of Khamazi.

15. Lato. View from the acropolis at Lato looking East to the sea. It is set on the saddle of a hill with twin peaks, and surrounded by mountains.
16. Lato. The protective mountains surrounding Lato, looking west.

17. Lato. Rocky terrain and mountains, partly terraced for cultivation, looking West from Lato.

19. Lato area. Olives growing on the fertile plains below Lato.
20. Palaikastro. Olives growing on low hills of Palaikastro on coast with unprotected harbour.

21. Praisos. The acropolis, high to the north-east of Praisos with a fine view of the surrounding country, and a distant view to the north of the sea.
22. Praisos. The spreading, elevated countryside around Praisos is cultivated for olives and other crops.

23. Skhinias. View towards the sea from the low hills of Skhinias.
24. Kato Zakro. The sheltered harbour is in a bay surrounded by barren hills.

27. Mount Juktas. View of Mt. Juktas from the present town of Arkhanes. The site of Khanari, between Arkhanes and Mt. Juktas, is situated at an elevation of 841 metres on the lower slopes of Mt. Juktas in a rich wine-growing area.

28. Phaestos. View from the Palace at Phaestos towards the plain to the South East, with fields and olive groves. The hills divide the plains of Dibaki and Mesara.
29. Tylosos. Ruins of a villa at Tylosos, surrounded by low-lying, gently undulating, cultivated plain.

30. Tylosos. Low hill to the North West of Tylosos with cultivation.
31. Tylisos. View towards Tylisos from Hagia Marina, showing low-lying cultivated hills.
Author/s:
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