

ANCIENT HABITATION PATTERNS OF KEOS.
LOCATIONS AND NATURE OF SITES ON THE
NORTHWEST PART OF THE ISLAND

The island of Keos is primarily known archaeologically for its four Classical poleis (Koressia, Ioulis, Poiessa and Karthaia)¹, the Bronze Age settlement of Ayia Irini², and the Neolithic site at Kephala³. Our survey was undertaken to determine ancient settlement patterns on the island more completely and to provide a background against which the known sites can be evaluated.

Very little work has been done in identifying archaeological sites on Keos, although the excavations of the American School have provided much information. Few sites have been dug, but the prehistoric site of Ayia Irini excavated by J. L. Caskey is one of the most important known in the islands⁴. The American team also investigated the site of Troullos near Ayia Irini, on a small summit above the bay of Tris Ammoudies, a look-out point as well as a shrine associated with Ayia Irini⁵. In addition, excavations were conducted at the Late Neolithic site of Kephala, a small promontory on the N coast E of Tris Ammoudies⁶. The fourth site studied by this team was Paouras, on the E side of the bay of Otzias, where there is a settlement contemporary with Kephala⁷. Members of the American team working at Ayia Irini have also observed obsidian at the following sites: 1. Perlevos, a promontory on the W side of Otzias; 2. another crest near Perlevos; 3. a hill near Orkos; 4. the promontory of Ovriokastro; 5. the

1. *RE* 11 (1924) 184 - 187, s. v. (Bürchner)

2. J. L. Caskey, Investigations in Keos I, *Hesperia* 40 (1971) 359 - 91; J.L. Caskey, Investigations in Keos II, *Hesperia* 41 (1972) 357 - 401.

3. J. E. Coleman, *Keos I. Kephala*, Princeton (1977). Hereafter = Coleman.

4. Caskey 1971 (supra n. 2); Caskey 1972 (supra n. 2).

5. Caskey 1971 (supra n. 2) 392; Coleman 156 - 158.

6. Coleman (supra n. 3).

7. Caskey 1971 (supra n. 2) 392; Coleman 156 - 158.

hill of Ay. Theodoros; and 6. Mavrambeli, a short distance from the coast¹. They also noted sherds of the same period as Kephala and Paouras, and of the EBA and of LH III B - C, as well as classical black glazed ware, on the promontory of Sykamia ("Akroterion Sykamias")². There is, however, no site known as "Akroterion Sykamias"; only the bay of Sykamia bears this name. We investigated both promontories at Sykamia, and were not able to confirm this location (see Catalogue 22.03, Kalidonichi).

Earlier investigators mention the following archaeological sites:

1. *Ancient Koressia*. The earliest remains are reported to be pre-historic³. Later it was a fortified site with a harbor. The necropoleis were located to the W and S up to the small promontory of Ay. Georgios and the bay of Yialiskari⁴.

2. *Ancient Ioulis*. It is a fortified site located on the Kastro of the modern town⁵.

3. An archaic statue of a lion to the *NE of the town of Ioulis*⁶.

4. The tower of *Ayia Marina*⁷.

5. The tower of *Panachra* N of Ayia Marina. Some sources mention two towers in this area⁸.

6. *Ancient Poiessa* on the S side of the valley of the same name.

1. Caskey 1971 (supra n. 2) 395 - 396.

2. Coleman 158.

3. G. Welter, Von griechischen Inseln : Keos I, *AA* 1964 (hereafter=Welter) 50 - 52.

4. P. O. Brönsted, *Reisen und Untersuchungen in Griechenland* 1 (1826) 32; L. Ross. *Inselreisen* 1 (1840) 132; C. Bursian, *Geographie von Griechenland* 2 (1868) 472; L. Savignoni, Ἀρχαϊότητες τῆς Κέω, Ἀρχαιολογικὴ Ἐφημερὶς 1898, 221 - 222; Welter 52 - 64; F. G. Maier, Stadtmauern auf Keos *Ath. Mitt.* 73 (1958) 7 - 16; F. Zapheirou, Ἀρχαιολογικὸν Δελτίον 27 (1972) B, 607 - 611; H. Lauter, Bemerkungen zum archaischen Tempel von Koressia, *AA* (1979).

5. Brönsted 1826 (supra n. 11) 28; Ross 1840 (supra n. 11) 129; Bursian 1868 (supra n. 11) 471; Savignoni 1898 (supra n. 11) 220 - 221; P. Graindor *MB* 15 (1911) 62, and P. Graindor *MB* 25 (1921) 84; Welter 69 - 78; Maier 1958 (supra n. 11) 6.

6. Welter 78 - 85, includes earlier bibliography.

7. Brönsted (supra n. 11) 27; Ross (supra n. 11) 241; Koepp *AA* (1890) 140; Savignoni (supra n. 11) 228 - 231; Welter 88 - 92.

8. Welter 92; E. Kirsten *RE* 21 (1951) Nachträge 1272; see Catalogue under sites 47.02, 47.04.

It is a fortified site with a harbor. The cemeteries are NE of the site¹:

7. A fortified village with shrines at *Ellinika*².

8. The ancient fortified city of *Karthaia* at Poles, with a harbor and other installations³.

In addition to these important sites, there are many others for which there is no detailed or specific information. The small map published posthumously from the notes of G. Welter approximately locates a series of 24 towers⁴. They are discussed in the catalogue. I. N. Psyllas, the historiographer of Keos, did not have archaeological training, but he includes in his book a chapter on ancient remains, which was based on the notebook of K. Manthos, a dedicated amateur who was very much interested in the history of the island⁵. This information using local place names to identify sites but unaccompanied by a map was nonetheless very useful to archaeologists who worked on the island in the previous century. Some of Psyllas' information can be disputed, but there are ancient remains of some sort at each of the sites which he mentions. Wherever possible, we try to connect Psyllas' information with our catalogue entries.

I. A. Thomopoulos also discusses ancient sites in his book on the place names of Keos⁶. Some of these sites are taken from Psyllas' presentation and some coincide with his catalogue, but the lack of a map with the place names makes identification difficult even with the help of local informants.

This preliminary report on our survey presents some of the results of investigations undertaken intermittently from the winter of

1. Brönsted (supra n. 11) 27; Ross (supra n. 11) 133; Bursian (supra n. 11) 473; Savignoni (supra n. 11) 224; P. Graindor *MB* 7 (1903) 291; Graindor 1911 (supra n. 12) 62; Kirsten (supra n. 15) 1270 - 1276; Maier (supra n. 11), 11 - 13, 15 - 16.

2. Welter 92 - 93.

3. Brönsted (supra n. 11) 14 - 16; Savignoni (supra n. 11) 222 - 228; Graindor 1911 (supra n. 12) 62 and Graindor 1921 (supra n. 12) 79 - 108; Graindor *BCH* 29 (1905) 329; Maier (supra n. 11) 13 - 15. Although *Karthaia* is not described here, it is noteworthy that we have found obsidian waste and LBA sherds on the acropolis on the E and S slopes.

4. Welter 87 - 88.

5. I. N. Psyllas, *Ίστορία τῆς νήσου Κέας* (Athens 1920; hereafter Psyllas) 294 - 311.

6. I. A. Thomopoulos, *Μελέτη τοπωνυμική τῆς Κέω* (1963) Athens.

1979 until the winter of 1982¹. It is the first installment of a continuing study of the ancient patterns of territorial occupation of the island². The final publication of our survey will include fuller documentation, with photographs of sites, sections of pottery and more maps. The second installment of this report will be a comparative study of the four ancient acropolis fortifications.

Our investigation began on the northwest side of the island at ancient Koressia (ill. 1) and proceeded W, S and E of the city. This article concentrates on the site and territory of Koressia and, to a limited extent, the adjacent territory of Ioulis. In the course of our work, it became apparent that the island was densely occupied in the past, and the supporting data for the survey are numerous. We present here the area which is related to the sites of Ayia Irini and Koressia.

The Catalogue contains 149 sites, only eleven of which have been previously published or attested. Those we have found, as well as those

1. H. Georgiou and N. Faraklas, "Survey of the Island of Keos, Cyclades,, abstract presented at the Colloquium on Archaeological Surveying in the Mediterranean Area, American School of Classical Studies Athens and Canadian Archaeological Institute Athens, Athens, June 1981. This abstract and any mention of our contribution to the conference were omitted from the final publication: D. R. Keller and D. W. Rupp, eds., *Archaeological Survey in the Mediterranean Area* (BAR International Series 155, Oxford 1983). The abstract is in the file of the proceedings of the colloquium in the library of the ASCSA. The authors wish to thank N. Alexandrou for assistance in identifying many sites and the local place names. M. E. Caskey, N. Winter, and A. H. Ashmead provided valuable editorial assistance. The study was first discussed in 1976 with J. L. Caskey, who encouraged us with his enthusiasm and support. The University of California, Irvine, provided some funds to cover travel expenses.

2. Our study is not related to the surveys begun on Kea in the summer of 1983 by two separate teams, one under the auspices of the American School of Classical Studies at Athens, and the other of the University of Athens. These surveys have different objectives and employ different methods. In this article we do not intend to discuss the relative merit of different methods of surveying; there is no assured formula for success: see J. F. Cherry, "Frogs Round the Pond: Perspectives on Current Archaeological Survey Projects in the Mediterranean Region,, in Keller and Rupp 1983 (supra 22), chap. 9 *passim* and 377 - 378, 387, 405. Our survey is unconstrained by time or other factors, and thus is intensive, having taken place over a long period of time at different seasons; many places have been visited repeatedly. This type of survey is, of course, usually not possible to do for many reasons. Because we do have the ability to work in this way, we felt that our approach could be used as a point of contrast to surveys which employ selective methods of sampling.

already known, are included in order to make the Catalogue complete. Sites already published are not described here, but bibliography is given. The catalogue of sites in the NW area is basically complete, although new discoveries and additional finds can be expected. A few important sites outside the general northwestern area but adjacent to it are included. Sites lying farther south are, however, excluded, although more than 100 have already been investigated. They will be presented in the final publication. Unpublished cemeteries have been omitted specifically in the interest of security.

We used methods successfully applied in other topographical studies on similar terrain; the land itself was the major criterion used in the identification of sites¹. Our survey was conducted by walking repeatedly along parallel paths across the area in question at different times of the year when various factors could reveal the presence of antiquities: after autumn and spring plowing, and the autumn burning of fields, and in winter and spring when low foliage and rain make ancient walls and sherds especially visible. The footwork was aided, in many cases, by reports from local residents. All types of terrain were investigated, and it was found that the location of sites was linked to predictable factors such as topography, exposure to sun and prevailing wind, water sources, and lines of communication including land routes and harbors.

Sherds were not collected on the sites, but were instead studied in situ. The sherds described are those considered diagnostic for each site, but dating is based on the total number of visible sherds and on other material evidence. Foundations and traces of walls described are ancient unless otherwise indicated. These are difficult to date, and one must rely heavily on the ceramic evidence. There are marked differences between ancient and modern walls and terrace walls and this will be treated in a forthcoming study. We have not determined

1. N. Faraklas, *Σικωνία. Ancient Greek Cities* 8, Athens Center of Ekistics (1971); N. Faraklas *Ἀρχαία Αἴγινα Ἡ ἀνθρώπινη κατοίκηση*, Athens (1980); N. Faraklas M. Sakellariou, *Corinthia - Cleonaea. Ancient Greek Cities* 3 (1971); N. Faraklas, *Τροιζηνία - Καλαύρεια - Μέθαινα*, *Ancient Greek Cities* 11 (1972); N. Faraklas, *Ἐπιδαυρία. Ancient Greek Cities* 12 (1972); N. Faraklas - M. Sakellariou, *Μεγαρίς - Αἰγόσθενα - Ἐρένεια*, *Ancient Greek Cities* 14 (1972); N. Faraklas, *Ἐρμιονίς - Ἀλιός*, *Ancient Greek Cities* 19 (1973); K. A. Doxiadis, *Ἡ μεθοδολογία γιὰ τὴν ἔρευνα τῶν ἀρχαίων ἐλληνικῶν οἰκισμῶν. Ancient Greek Cities* 2 (1972); A. Toynbee, *An Ekistical Study of the Hellenic City-State*, *Ancient Greek Cities* 1 (1971).

the size of the site by extent of sherd scatter, but have tried to balance a number of factors: visible remains, intensity of sherd scatter, contours of the land. In very few cases can the size of the site be estimated, and then usually not for all the periods of its existence. We note the relationship of one site to another where this is clear.

We have tested our approach repeatedly in unexplored areas and feel that its efficiency has been proved. Although other types of surveys have been carried out in the Cyclades, the problems facing the surveyor are different in every area¹. Keos is not like other Cycladic islands in every respect², a fact witnessed by the existence of the four Classical poleis as opposed to one on most other islands³.

Specific characteristics influence patterns of habitation and the political structure known for the historic periods and which we hope some day to be able to reconstruct for the prehistoric periods as well. Our goal is to identify sites, and to use the information about their types and patterning to form hypotheses about the way the land was inhabited and used. We present some discussion about the pattern of habitation through the Roman period. It must be pointed out that the conclusions advanced here only apply to the northwestern portion of the island; other areas may have developed in different ways, which we will determine at the completion of the survey.

1. For other approaches, see Cherry 1983 (*supra* n. 22) for a general discussion. R. J. A. Wilson and A. Leonard, "Field Survey at Heraclea Minoa (Agrigento), Sicily,, *JFA* 7 (1980) describe a method which combines that used by us as well as other techniques (p. 221) and pose some of the same questions (p. 220) about a much smaller area.

2. J. D. Evans, "Island Archaeology in the Mediterranean: Problems and Opportunities,, *World Archaeology* 9 (1977) 12 - 15; J. F. Cherry, "Pattern and Process in the Earliest Colonization of the Mediterranean Islands,, *PPS* 47 (1981) 63.

3. This situation is directly related to the geography. Melos had only one major polis and underwent many changes in later times, see C. Renfrew and M. Wagstaff, eds., *An Island Polity. The Archaeology of Exploitation in Melos*, Cambridge (1982) 3, fig. 1.4, 6, 45, 70 - 71, 149. Ancient patterns of habitation do not continue into modern times without change. In recent times we note that the pattern of habitation in some islands, including Keos concentrates in effect on one major settlement (*burgo*) and scattered farmsteads (see R. Kloutsinioti - N. Faraklas *Τζιά (Κέα). Ἑλληνική παραδοσιακή ἀρχιτεκτονική*, Athens 1981) whereas in other islands habitation is principally in villages (see A. Charitonidou, Tinos (1981) in the same series).

G E O G R A P H Y (ill. 1)

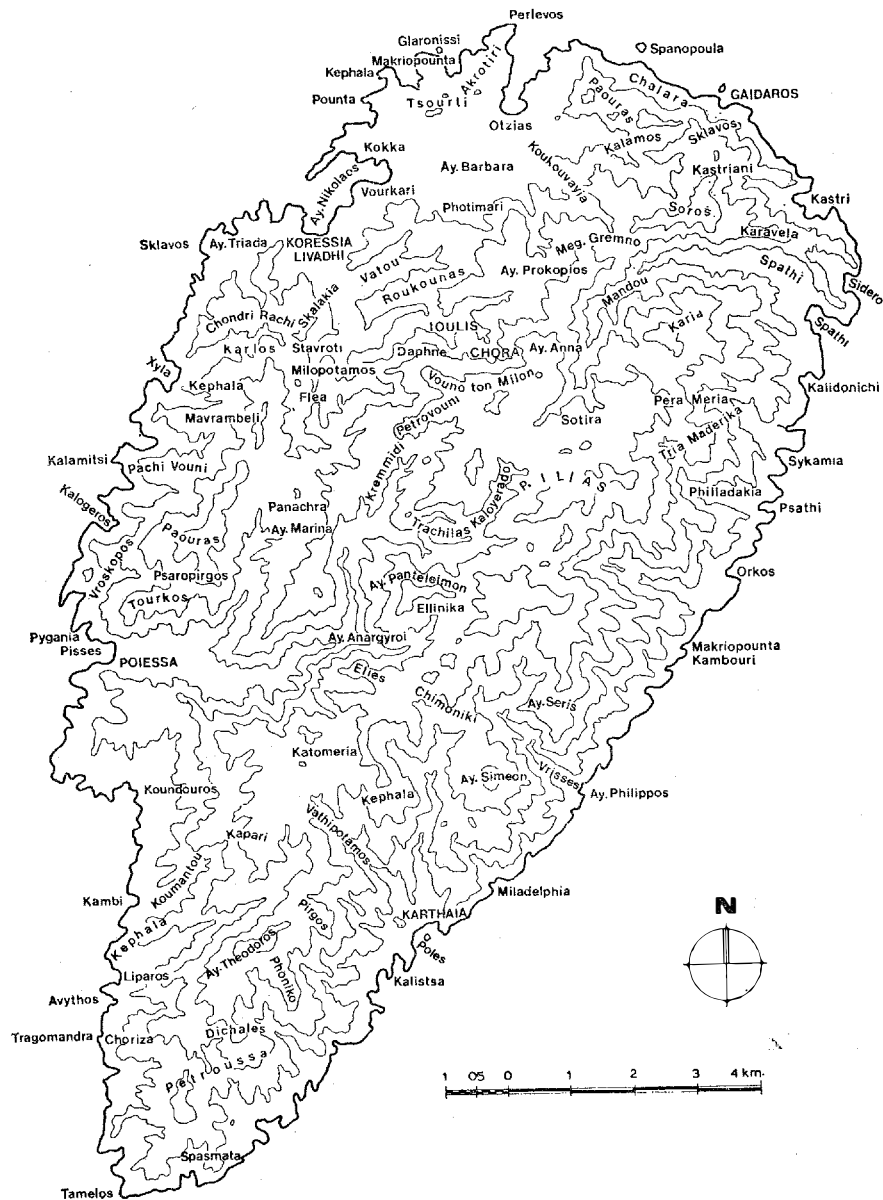
Keos is the northermost of the western group of Cycladic islands; it lies east of Attica and south of Euboia. Its situation is strategic because of its proximity to Attica, and because it serves as a natural maritime stopover between the mainland and the Cyclades, as well as southern Euboia.

Keos is shaped like a drop of water, with the larger end facing northeast. The long axis runs northeast - southwest, and the distance along it, from the north coast near Spanopoula island to the southernmost promontory of Tamelos, is about 19 km. At the widest point, the island is 10 km., from the promontory of Sklavos west of Koresia to the northern promontory of Orkos bay. The island stands in very sharp relief. Only a small portion of the land is below the 100 m. level, and at places heights of over 500 m. are reached. The highest point is the summit of Profitis Ilias (el. 561 m.), which is situated 6.900 m. S of the NE end of the main axis and 13.400 m. in a straight line from the SW end of the same axis. Thus it is closer to the SE coast.

Profitis Ilias is the northermost of two peaks of a range on the NE - SW axis. Another range splits off from this one toward the NE at a lower altitude and ends at about 4.500 m. in the E - W valley of Spathi. To the SSW several smaller hills run from Profitis Ilias down to the area of Ellinika, which is above 500 m. in altitude. From Ellinika, the range continues to the SW past the settlement of Katomeria and beyond to the next small summit, Kapari, down to the coast between the bays of Liparos and Avythos, 4.000 m. directly N. of Tamelos at a point approximately 10 km. from Profitis Ilias.

This main range is shaped like an open bow with the Ellinika area lying at the SE end. Smaller ranges run off to the SE and most continue to the coast where they descend sharply to the sea. The ravines between them form small valleys ending in bays. The northernmost descends from the Karia range which is also the northernmost part of the central spine, toward the NE to reach the coast to the N of the small promontory of Sykamia. The next one starts in the Sotira area, continues parallel to the previous one and ends to the N of the bay of Psathi and the valley of Philladakia. Along the way it splits into three parts and is called Tria Maderika.

The third ridge is higher and wider. Starting at Profitis Ilias, it continues at first toward the E, and then to the SE, branching off in a smaller western range and a larger one to the E. The small bay of



III. 1. Map of Kea showing the names used in the geographical description. Contours are at 100 m. intervals.

Orkos with ancient and modern mines lies between the two promontories of the coastal range.

The fourth ridge starts from an eastern extension of the Ellinika plateau and descends to the S, terminating with a rise to 413 m. at Ay. Seris. Three parallel ridges descend to the ESE from the extension of the Ellinika plateau. The southernmost ends in the promontory of Makriopounta Kambouri.

The next and fifth ridge originates in the area of Chimoniki and ends shortly to the NE. It rises again to the SSE and then broadens into the high hill of Ay. Simeon. The small valley of Vrisses lies NE of this and SW and S of Ay. Seris and ends in the bay of Ay. Philippos. To the S of Ay. Simeon is the promontory of Miladelphia.

This is the end of a smaller coastal ridge which starts from the hill, extends SSW and then turns E. The S and the SW slopes are the NE boundaries of the Poles area, the location of ancient Karthaia.

The sixth ridge begins in the area of Katomeria, develops to the SSE forming the hill of Kephala and then descends almost due S to the coast and the center of the bay of Poles, bisecting it. The ravine on the E descending from the N is called Kalamitsi and the SW ravine is called Vathypotamos.

The seventh and most important ridge in this group begins at Katomeria and runs S with smaller offshoots to the SE. The first spur forms the SW boundary of the area of Karthaia and, on reaching the coast, ends in the promontory Kalitsa or Pounta tis Chiras on the southern side of Karthaia bay. Thereafter, the ridge curves S and then SW in a large arc. The summit of Ay. Theodoros (el. 418 m.) rises gradually and in effect covers the entire S end of the islands, known as Petroussa. The ridges of Pirgos, Phoniko and Dichales extend SE from Ay. Theodoros. To the S, another separate ridge extends to Spasmata and the promontory of Tamelos. To the SW are two ridges, that of Choriza on the S side and another to the N, which is parallel to the central ridge and the promontory of Tragomandra.

A broad, large ridge originates at Katomeria and extends 3.500 m. NW to the coast from the central spine of the island, and forms the southern side of the valley and bay of Pisses, ancient Poiessa. On the N side, the ridge drops sharply to the valley. On the W it descends gradually to the open bay of Koundouros on the N and E.

Parallel to the central spine and on its NW side lies another ridge, ca. 12 km. long, whose central peak is in the center of the island. It

reaches only as far as the valley of Pisses to the S. On the N it extends further than the other ridge to the NE coast, where it forms the coastline of Chalara.

The highest peak of this ridge is SE of the principal town of the island, Chora or Ioulis, on the spot of ancient Ioulis. This ridge is called "Vouno ton Milon» (Hill of the Windmills) due to the presence of the windmills in use until recently but now in ruins. A high ridge connects this summit on the SE side with Profitis Ilias. On the NNW of the windmills is another crest above the area of Kaloyerado at the same distance from Profitis Ilias on its WNW side, separated from it by a ravine.

South of Kaloyerado, extending to the W, is a small abrupt spur of the central spine. It is called Trachilas. The above-mentioned ravine lies on its N side and turns W. To the W of Trachilas the ravine joins another S of the summit. To the S of this and the western prolongation of these confluent ravines rises the hill of Ay. Panteleimon. On the western side, this hill is an extension of the Ellinika plateau with a separate summit (el. 547 m.). On the S side a canyon separates the hill from the southern spur of the central spine named Elies, W of the area of Chimoniki. This spur drops abruptly to the W and terminates in the E side of the valley of Pisses.

A second spine proceeds W from the hill of the windmills and then turns SW to encompass the area of Petrovouni and then Kouroupi. About 5 km. from the point where it turns SW, it drops sharply to the S and forms the NE side of the valley of Pisses. At mid-length the spine narrows and then widens and rises further S to a summit at 400 m. SE of the northern end is the ravine of Kremmidi, which unites with those ravines descending from the N side of Ay. Panteleimon and the southern end of the spine. This is the ravine of Ay. Anargiroi, named for the nearby monastery; it forms the deep gorge between Ay. Panteleimon and Elies. This ravine and the ravine of Ay. Marina irrigate the valley of Pisses. They enrich the soil with silt carried down from the crests, accounting for the exceptional fertility of this valley.

The hill of the windmills has a spur to the WNW which surrounds Chora on the S and SW and takes its name from the former monastery of Daphne. The crest continues NE beyond the hill of the windmills to form the hills of Ay. Anna and Megalo Gremno. Between these two locations a low flat ridge splits into three parts. One continues to the N towards the bay of Otzias but ends before reaching the coast. The

second extends N and W and forms the ridge of Fotimari. The third, called Roukounas, drops to the SW enclosing the area of Chora to the N and continues in a westerly direction parallel to the crest of Daphne. East of the hill of Ay. Anna and SE of Megalo Gremno the ridge descends to the steep ravine of Mantou. The SE side of the ravine lies at the base of Karia, the northernmost part of the central spine. The ravine extends to the E into a valley and ends on the SE at a considerable distance; here it is called the ravine of Spathi and empties into the sizeable bay of Spathi. The southern promontory of this bay is called Kalidonichi.

To the N of Karia across the ravine, the continuation of the crest beyond Megalo Gremno turns E and rises to a distinct peak which is called Soros (max. el. 315 m.), from which another spur extends to the NW; the ravine of Koukouvayia lies SW of it and the small valley of Kalamos to the NE.

From the summit of Soros toward the N runs a significant ridge with a small separate peak called Sklavos abutting the sea forming the rocky coast of Chalara opposite the island of Gaidharos. The crest turns thereafter to the NW parallel with the coast on the N side of Kalamos and extends to the promontory of Ladou and the E side of the bay of Otzias forming the crest of Paouras. To the SE this ridge extends above the sea and leads to the small but abrupt promontory on which stands the monastery of Kastriani above the relatively large bay of Kastri.

From Soros, the ridge progressively widens to the E above the valley. This part is known as Karavela and continues in two spurs to the SE and the ESE. The first forms the N side of the bay of Spathi, the other the promontory of Sidhero. The small bay of Sidhero is located between these two promontories.

Immediately to the NW of the second ridge, a third and lower one runs parallel from the SW to the NE. The southern end is the double promontory below the small bay of Pygania which defines the N side of the bay of Pisses. The crest continues slightly E and forms the summit Tourkos (Psaropirgos) above Vroskopo. The crest continues to the NE forming a central peak, Paouras, at an elevation of 363 m. At about 1.5 km. from the summit, the ridge descends gradually to form a saddle and rises again to a summit further N in the area of Mavrambeli. Further S of the saddle a perpendicular land mass unites the ridge with the SW spur of Petrovouni. Midway between the two

ridges is a small summit called Panachra. Between Paoura, Panachra, and Kouroupi is the narrow valley of Ayia Marina named after the monastery located there and especially well-known because it is built around an ancient tower which, after the lion of Ioulis, is the most impressive ancient monument on the island.

From Mavrabeli the ridge continues to the NNE to the region of Karlos (now called Stavroti Koressias). It rises again to the NNE forming the crest of Skalakia with a separate summit barely more than 200 m. in elevation. Between this part of the ridge on the W and NW, with Panachra on the S and Petrovouni and Daphne on the SE and E lies the valley and ravine of Milopotamos, which must be the ancient river Elixos. It first extends N between Skalakia and Roukounas and is fed by water from the valley of Chora between Roukounas, Daphne and the hill of the windmills. It then turns to the NW and empties into the S side of the bay of Ay. Nikolaos.

From the ridge of Paouras - Skalakia, six small parallel spurs extend to the W forming promontories with small bays between them. Immediately to the N of Tourkos (Psaropirgos) lies Vroskopo, then Kaloyeros, Pachi Vouni, Mavrabeli and Kephala Xylon. The sixth promontory is the most important. It extends W from Skalakia and forms the mass of Chondri Rachi (el. 198 m.). A spur extends to the SW to the N side of the bay of Xyla. Another, on the NW forms the promontory of Sklavos and a third, with many spurs and peaks to the NE, constitutes the SW side of the bay of Ay. Nikolaos. The ancient city of Koressia was built on its N end and on the E slope, now the location of the village of Livadhi, which has been renamed Koressia.

Beyond Milopotamos, NE of Skalakia, the terrain rises again in a continuation of the same ridge. These summits are located on the W side of Fotimari. To the NW they form the flat-lands around the SE side of the bay of Ayios Nikolaos. On the N side they descend gradually to the valley of Ay. Barbara which originates N of Fotimari and ends on the SW side of the bay of Ay. Nikolaos, adjacent to the village of Vourkari.

The hills which form the flat peninsula on the NW side of the island between the bay of Ay. Nikolaos and Otzias are an extension of the same low ridge. The area is called Akrotiri Otzias or Tsourti, and the summit barely surpasses 100 m. A spur extends to the SW to form the promontory of Kokka which closes the bay of Ay. Nikolaos on the NW side. It leaves a narrow entrance to the harbour on the S.

Two other ridges extend to the NW and form the two promontories of Pounta and Kephala. An additional one forms the equally rocky promontory of Makriopounta opposite Glaronissi to the N, and yet another larger promontory extends to the NE to form Akrotiri, which is the W side of the bay of Otzias ending at the northernmost point of the island, the promontory of Perlevos. The flat valley to the S of Otzias unites with the valley of Ay. Varbara and ends at Vourkari.

Although the island does not now have many water sources one of its ancient names is Hydroussa¹. Ancient sources mention the river Elixos, which must be modern Milopotamos in the territory of Koressia². In ancient times the river probably always had water, and although the sources never dry, the farmers now dam the water for irrigation. The same occurs with other streams in various small valleys such as Koukouvayia above Otzias, the ravine of Spathi, the ravines of Vrisses, Kalamitsi and Vathypotamo in the Karthaia area and Ay. Anargiroi at Pisses.

There are many sources but few are abundant today. Psyllas counts 230 aside from wells³. The most important are Firi at Koresia, Flea at Milopotamos, Vromoneri at Vourkari, the three springs at Vatou (Koressia), the source at the ravine of Vrisses and the sources of Ay. Seris. In addition, there are the springs at Diaselli Otzias, Astra and Ellinika, the spring of Ay. Martinos in Kalamos and the spring at the monastery of Ay. Marina. The town of Chora was irrigated until recently by the sources and fountains of Rokomenos, Tria Pigadia, Kanali, Kourenti and the fountain of Veniamin.

The advantages conferred by the location of the island in relation to the mainland and the Cyclades are often vitiated by the heavy seas caused by the Makronisos - Euboia narrows and the current of Kaphireus (Cavo d'Oro); small craft frequently cannot leave the harbor of Ayios Nikolaos in summer and winter. However, this sheltered natural harbour is the most important one on the island. Within its area are three major anchorages: Livadhi (Koressia), on the south side, is exposed to the northwest wind; while Vourkari on the northeast and another bay on the north are sheltered from all winds. A few other small harbors exist on the island.

1. Storck, *Die ältesten Sagen der Insel Keos* (Mainz 1912) 5 - 6.

2. Strab. 10, 5.6.

3. Psyllas 279 - 280.

The bay of Pisses has some local importance, but it is not suitable for large boats and is not protected from the prevailing northwest wind. Vroskopo, to the north of Pisses has a deeper inlet and is somewhat more protected. Consisting of a series of small inlets, the bay of Koundouros is more open, but it is sheltered from the wind. South of Koundouros, the small harbor of Kambi was used until recently for loading acorns. The bay of Karthaia (modern Poles) in the southeastern part of Keos is the next good harbor; it is well sheltered, except from east or southeast winds, and was probably a major stopover in voyages to the other Cycladic islands. Orkos on the east central coast can be used as a limited mooring, but the bay of Spathi provides a better anchorage and is well placed for shipment of agricultural products from the fertile Spathi valley. The bay of Kastri below the Kastriani monastery on the northeast is relatively large, but is a poor anchorage because it is totally exposed to the north winds and is cut off from the interior by hilly terrain. It is used as a stopover by fishermen who work the waters between Ayios Nikolaos and Poles. The narrow inlet of Otzias, although it faces north, is nearly always calm because of its length; rough seas beyond Perlevos, however, make it difficult to enter and leave. Between Otzias and Ayios Nikolaos, the coast is quite rugged, although Kephala bay is a small and fairly well protected anchorage.

Thus, in addition to strategic location, Keos has been a natural place for travellers and traders to layover because of its harbors. Ayios Nikolaos is the largest and most sheltered harbor, and therefore probably the most important, but other anchorages—Pisses, Kambi, Orkos and especially Karthaia and Spathi—could also have served. These harbors are located at fairly regular intervals around the coast, so that virtually all parts of the island are accessible by sea.

T H E S U R V E Y

GEOGRAPHIC SUBDIVISION - AREAS OF HABITATION (ill. 2).

There is a natural division of the island along geographic boundaries with two intersecting watersheds subdividing the island into four regions. This natural feature surely played a role in the establishment of four political divisions in classical times. One watershed to the NE of Sklavos Koressias extends to Soros, Megalo Gremno, to the hill of Ay. Anna and reaches the hill of the windmills to the SW. It then

turns SE and includes Profitis Ilias, where it follows the central spine S to Katomeria. It includes the ridge of Ay. Theodoros to the SE and ends at Choriza or Tamelos.

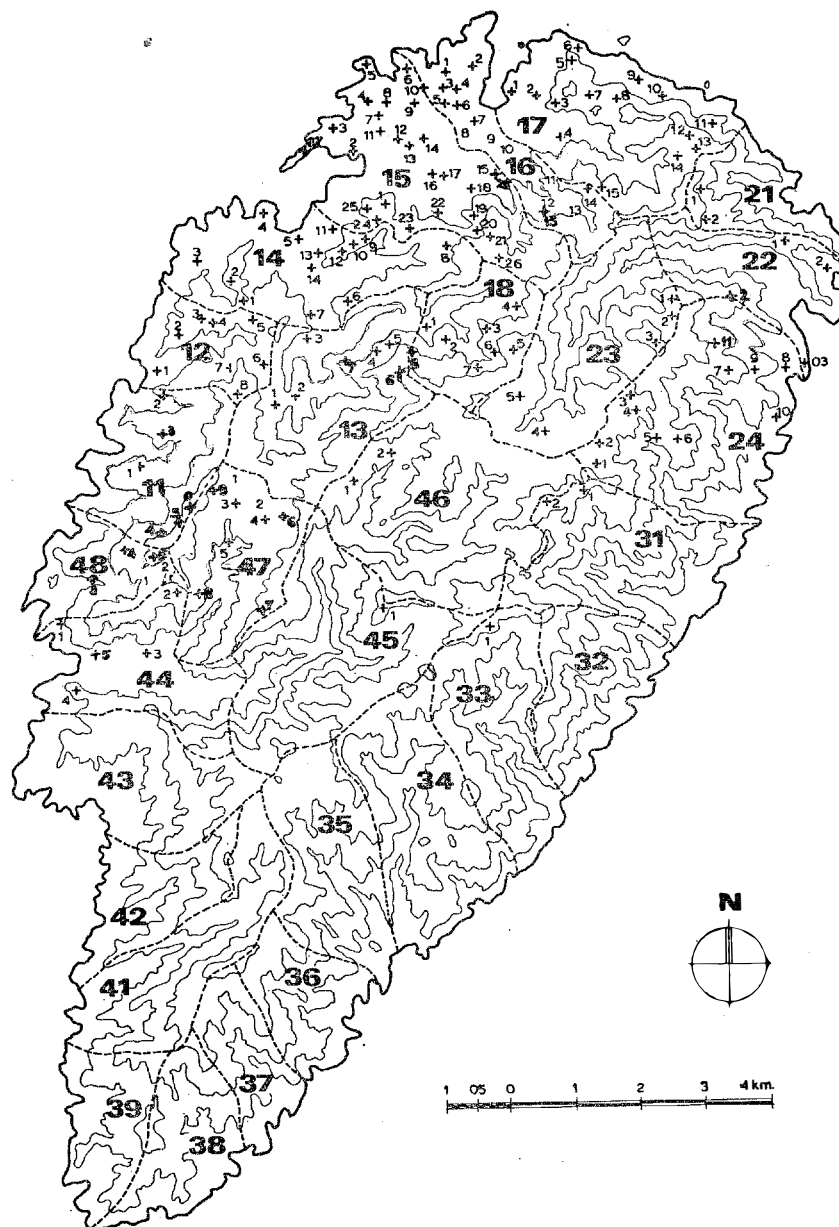
The second watershed starts at Paouras above Pissēs and proceeds ENE to Panachra, rises to Petrovouni and ends at the hill of the windmills. From this point up to Profitis Ilias it unites with the other watershed and then descends to the E ending between the bays of Psathi and Orkos.

Each of these four regions is subdivided into smaller areas. Thus the SE territory of ancient Karthaia includes the area between Tamelos and Dichales and possibly the areas between Choriza and Tamelos on the W. Also included on the N side are the regions between Dichales and Phoniko and between Phoniko and Pirgos. In addition, the Karthaia region includes the valleys of Vathypotamos and Kalamitsi, which are connected to the ancient city. Also included are Vrises between Ay. Simeon and Ay. Seris, the ravines NE of Ay. Seris up to the S side of the valley of Orkos and this valley itself.

The central and western region which is that of ancient Poiessa includes from S to N the area between Choriza and Kephala, the valley of Komantou with Kambi, Koundouros, the lower part of the valley of Pisses, and Vroskopo. The ancient city of Poiessa is on the S side of the bay of Pisses. To the E of Vroskopo the region includes the valley of Ay. Marina and to the E of the valley of Pisses, the valley of Ay. Anargiroi and to the NE of this the valley of Kaloyerado, or more exactly, the region between Ay. Panteleimon, Profitis Ilias and Petrovouni.

The small NE region is divided into fewer areas. On the summit is the valley of Mantou between Karia and Megalo Gremno; E of this the coastal region between Kalidonichi and Philladakia, N of this the valley of Spathi, and further N the area between Karavela and Sklavos including the bay of Kastri. In strict geographical terms, ancient Ioulis lies just outside this region. Yet the area must have belonged to Ioulis. There is no other region which can be connected with this city. It is apparent that the territory had two centers, one at Ioulis and another on the coast, possibly at Spathi. The city of Ioulis developed because of its physical location on the natural crossroads which connect it to the other cities of the island, and especially to the two harbors, Karthaia on the West and Koressia on the East.

Thus the largest and richest area of the island, the NW area, and that of ancient Koressia, loses a region that in strict geographic



Ill. 2. Map of Kea with natural subdivisions and ancient sites. Contours are at 100 m. intervals.

terms belongs to it, namely the one delimited by the E side of Roukounas, the hill of Ay. Anna, the hill of the windmills and Daphne. The other areas belonging to Koressia are the upper valley of Milopotamos on the W, Mavrambeli on the S, and the plateau of Karlos (Stavroti). Further N, the area N of Chondri Rachi extends to the E along Ay. Triada to the acropolis of the ancient city, the area N of the lower valley of Milopotamos, the valley between Roukounas and Fotimari, the valley of Ay. Varvara, the valley of Koukouvayia and the valley of Kalamos.

The designation of ancient sites starts in the general NW area and proceeds clockwise. The area of Koressia is presented first, then Ioulis, Karthaia and last Poiessa. They are numbered in this sequence from 1 to 4. All four are included here for reasons of clarity although the southern regions are not discussed in this article. Each smaller area has the number of the main region and the consecutive numbers listed below :

General NW region- Koressia	1
Mavrambeli	11
Karlos	12
Upper Milopotamos	13
Lower Milopotamos	14
Ayia Varvara	15
Koukouvayia	16
Kalamos	17
Chora	18
General NE region- Ioulis	2
Kastriani	21
Spathi	22
Mantou	23
Parameria (between Kalidonichi and Orkos)	24
General SE region- Karthaia	3
Orkos	31
Kambouri (between Fleva and Ay. Seris)	32
Vrisses	33
Kalamitsi	34
Vathypotamos	35
Between Pirgos and Foniko	36
Between Foniko and Dichales	37
Between Dichales and Tamelos	38
Between Tamelos and Choriza	39

General SW area - Poiessa	4
Between Choriza and Kephala	41
Koumantou	42
Kountouros	43
Pisses	44
Ay. Anargiri	45
Kaloyerado	46
Ayia Marina	47
Vroskopos	47

Thus the region of Koressia includes the areas 11 - 17, that of Ioulis 18, and 21 - 24, Karthaia 31 - 39 and Poiessa 41 - 48¹. For each site there is a consecutive double number starting with 01 which is entered after the two numbers indicating the region. For example, the fourth site of the third area in the fourth general area has the number 43.04.

C A T A L O G U E

REGION 11 (*ills. 2, 3*)

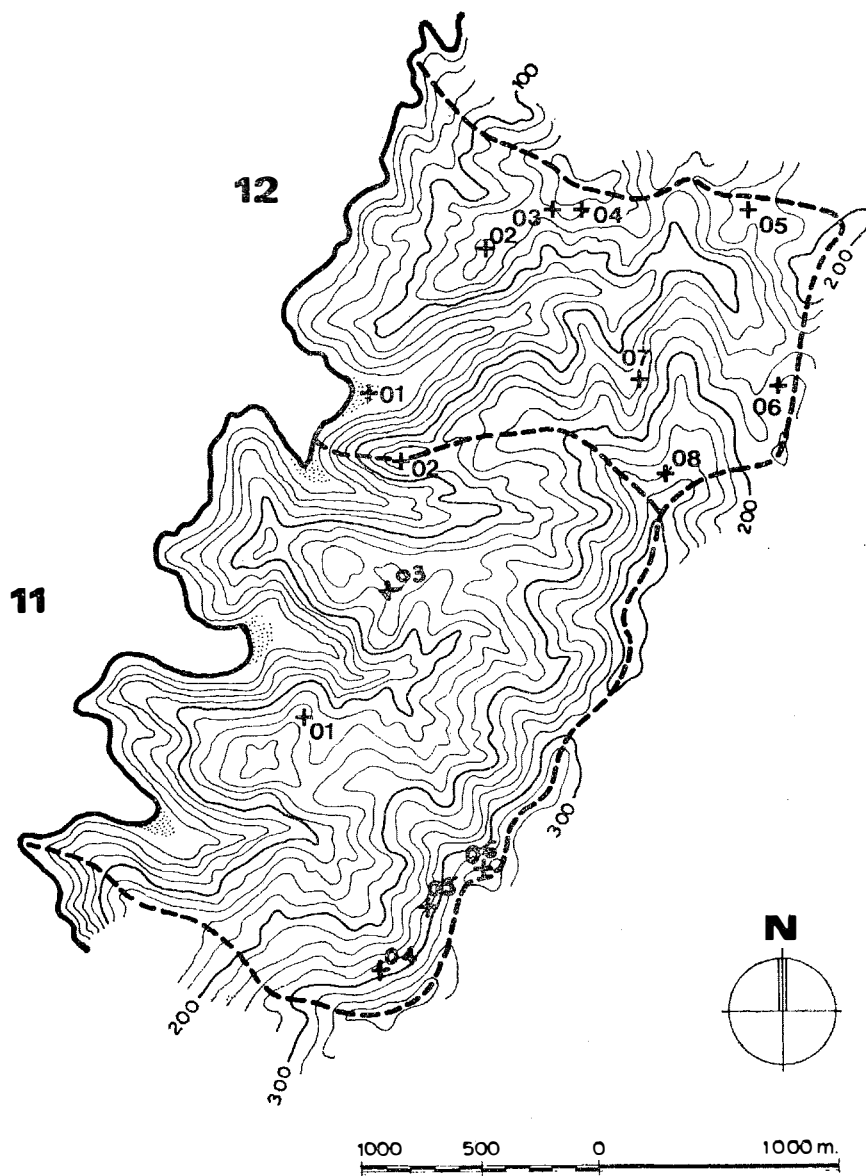
11.01. *Mavrambeli*. Terraces on E side of Pachivouni. Protected area with arable land, water sources in the ravines below. Sparse sherd scatter, radius of about 20 m. on terraces. Some Classical sherds and some obsidian.

11.02. *Kephala Xylon*. Promontory on S side of ravine and bay of Xyla commanding the beach and ridges to the E and S. Rock outcroppings on the summit are extensively quarried. Several large walls of undetermined date. A rectangular enclosure follows the course of the bedrock. A large wall is situated below this to the E near modern stable and enclosure wall. Topographic marker on the NE side at 140 m. el. Area is sparsely covered with sherds scattered at approx. 50 m. radius. Obsidian flakes, badly worn and broken, frags of obsidian tools. LN and LBA sherds. Habitation site and lookout, prehistoric.

11.03. *Mavrambeli*. N side of Mavrambeli ravine. Site on ridge above modern farm buildings, above and N of the planted terraces at el. 160 to 180 m. Traces of a rectangular foundation, not datable. Dense sherd scatter. Pithos frags. and smaller domestic vessels, roof tiles. Sherd scatter extends ca. 50 m. down the slope. Classical, Hellenistic, some obsidian flakes.

11.04. *Paouras area*. Below summit of Paouras on N side. Large retaining wall constructed of large, even blocks of schist, approx. 10 m. l., immediately above

1. For the identification of the four poleis with modern sites, see Burchner, (*supra* n. 1). For the identification of "Arsinoe,, with Poiessa, see G. Daux, Notes de lecture, *BCH* 81 (1957) 393 - 395.



Ill. 3. Map of Regions 11 and 12. Contours are at 20 m. intervals.

the foot-path leading from Ayios Nikolas to Paouras. Wall may be unfinished. The h. of approx. 2.5 m. suggests that it is not a common terrace retaining wall. The construction appears to be ancient and may be unfinished or subsequently looted. No other traces of structures in area. Extremely sparse sherd scatter, mostly undiagnostic material but no modern clays. Possibly hellenistic, some Roman.

11.05. *Between Paouras and Ay. Nikolaos.* Site straddling the foot-path joining Paouras and Ay. Nikolaos, on the W side, 500 m. NNE from the summit of Paouras. Natural rock outcropping. Traces of structures below and to the W. Sherd scatter approx. 50 m. d. around and below rocks and along the foot-path. Cistern on opposite side of the foot-path near a modern stable may be ancient but is not datable. Channels made in the bedrock along the foot-path for gathering the water may be related to the ancient site. Frags. of large pithoi, sherds are Classical (some black glazed ware), Hellenistic and Roman. Roman sherds around cistern.

11.06. *Between Paouras and Ay. Nikolaos.* Site at 357 m. el. with commanding views of Ay. Marina valley and W coast. Round vigla foundations, ancient construction but not datable. Functions as a look-out for Ayia Marina, Panachra and Paouras areas. Obsidian waste and blades noted on N slope.

REGION 12 (ills. 2, 3)

12.01. *Xyla Beach.* S side. Abandoned farm house and associated structures on S slope. Water source above and to the SW of the house. Modern well below, closer to the shore. Area between the house and the well, ca. 20 m., sparsely scattered with sherds, Hellenistic. Possibly a farm site.

12.02. *Korakou.* Plateau on crest of hill extending SE from Chondri Rachi. Terraces on slopes to the E and W. The area between two lookout towers on the crest is covered by a single large site, ca. 100 m. long. The southernmost tower, square and two-storeyed, overlooks the bay of Xyla. The crest is covered with sherds and some obsidian. Remains of a very large square or rectangular structure of ancient construction on the W side of the crest between the two towers.

Sherds predominantly Hellenistic, with some late 5th c. and some BA. One round loomweight, LBA. LN or EBA stone celt on E side of crest near a threshing floor, conical section 1/2 pres., max. dimensions 0.063 × 0.056, (comp. Coleman 1977 : pl. 68, 65 and 77). Spindle whorl, d. pres. 0.044, h. pres. 0.024. One small blue glass bead from W. slope (Psyllas 1920 : 303 site 3 and Welter 1954 : 88, tower 7, ill. 24 refer to this as a tower site, but the evidence is not conclusive).

South and below the last vigla is another site or an extension of this one; Classical sherds, obsidian waste. Traces of foundations.

12.03. *Sklavos/Chondri Rachi.* To the S of Sklavos in the area of Chondri Rachi and on the E side of the modern road below the 156 m. topographic marker. Limited sherd scatter, some undiagnostic coarse wares, very worn. Domestic LBA pottery. Similar sherds also observed at lookout points and remains of structures of undetermined date on promontories overlooking the coast due W.

12.04. *Chondri Rachi*. Site located on summit at northernmost topographic marker (el. 196 m.). Round foundation of a lookout tower, few Hellenistic sherds. Hill S of the southern topographic marker descends gently and is covered with sherd material, mostly Hellenistic, late 4th to 1st cs. Many amphoras at a saddle below this crest and just above site 12.03. Two stamped amphora handles: one depicts an amphora, one has an illegible inscription. Extensive Hellenistic habitation site. Traces of foundations, probably ancient on the saddle and to the E below it.

12.05. *Stavroti*. On the SE side of Ay. Triada the terrain forms an uneven plateau. Several abandoned farm houses and stables located here. Terraces are broad and even, protected from the N winds. Sherds scattered at ca. 20 m. radius near a flat plateau with almond trees. Coarse wares, pithoi, amphoras, 6th - 4th cs. Probably a farm.

12.06. *Ay. Vassilis*. Milopotamos/Stavroti area at Skalakia. Church on small saddle overlooking Xyla and Milopotamos W of Flea. Sparse sherd scatter, radius ca. 100 m. around church and near stable S of church. Undiagnostic coarse wares. LBA pithos frag. with rope pattern decoration. LBA coarse wares. Relatively large site, possibly a farm.

12.07. *Xyla ravine*. Small secondary ravine branches out of the NE end of the Xyla ravine, deep in the valley and on the S side. Well and fountain, «πι-gadhi tou Angelli», below site 12.08. The hillside ascends steeply, but terraces are evenly spaced and well constructed, providing a limited area of arable land around the water source. The area between the well and the houses is sparsely covered with sherds, radius ca. 25 m. One or two sherds may be LBA. Archaic pithos frags. 5th c. and Hellenistic amphoras and household vessels. Wheel-ridged and combed ware, mostly Roman.

12.08. *South side of Xyla ravine at Karlos*. The slope ascends suddenly. Flat ridge on the summit extends S to Ay. Nikolaos overlooking Mavrambeli. On the N end of the ridge are the remains of several abandoned structures of undetermined date. The walls include large dressed stones that may have been looted from a Classical or Hellenistic structure. Sparse sherd scatter, ca. 20 m. N to S. Archaic pithoi. Hellenistic pithoi with canted rims. Very worn undiagnostic body sherds of local coarse ware.

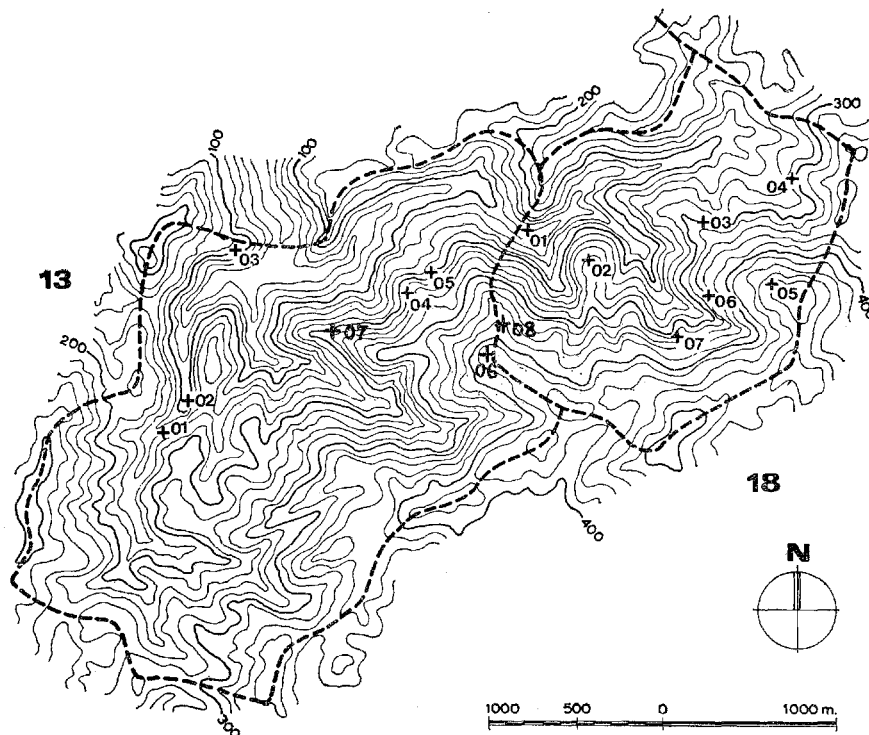
REGION 13 (ills. 2, 4)

13.01. *Milopotamos*. S slope, near spring of Flea. Ancient retaining walls. Sparse sherd scatter. Some Classical black glazed ware (Psyllas 1920 : 303, site 6).

13.02. *Milopotamos, Flea*. N of the present spring, E side of foot-path, opposite southernmost water mill and church of Panagia. Fountain and spring cut into the bedrock. Indeterminate age. Still in use.

13.03. *Milopotamos/Stavroti area*. Summit of hill on NW side of Milopotamos opposite Roukounas and overlooking the Koressia - Chora road. Olive press carved into large solid blocks of schist. Sherds scattered around summit and mo-

dern buildings, predominantly Roman. Arable land extends N toward Skalakia. The terraces along the slope yielded some Roman combed ware, randomly scattered (Psyllas 1920 : 303, site 1).



Ill. 4. Map of Regions 13 and 18. Contours are at 20 m. intervals.

13.04. *Daphne*. Formerly a monastery on the slope below the hill of the wind-mills W of Chora, overlooking Koressia. Very few sherds below the monastery, mostly coarse wares, some Hellenistic, some Roman. Denser in area around the spring to the NW. Small Doric capital and drum in church sanctuary.

13.05. *Ay. Constantinos : Tsoukalario*. Site named for pottery kilns formerly located here. Area S and above the church. Small geological basin NE of the stream bed. Exceptionally high ancient retaining wall on the W side. Roman and undiagnostic material in small flat-land above the church. Water source at fountain and spring below church. Psyllas mentions the wall and a statue of Aphrodite, now lost, found here (308, site 1).

13.06. *Pera Milous*. Summit of hill NW of Chora, above Merovigli (18.08). Commanding view of NW coast, Koressia, Milopotamos. Terrace or retaining wall for a temple on peak at 300 m. el. Massive construction of large, dressed stone blocks measuring 24×10 to 12m. , and pres. to over 2 m. h. E-W axis. This is

one of the largest temple terraces on the island. Windmills and modern structures to the E incorporate many dressed blocks of blue-grey marble from the now destroyed building. Small church, now abandoned, incorporated in the NW corner of the terrace. Structure with wine press to the N below the terrace may have ancient foundations but is not datable. Byzantine church and monastery below to the SE abutting Chora - Pisses road. On the summit, above the terrace, pieces of badly worn limestone indicate existence of architectural decoration as at Koressia and Karthaia temples. Abundant sherds in the area of the terrace, Classical black glazed luxury wares and Hellenistic (Psyllas 1920 : 308, may be site 3). Below the N wall some very worn sherds which appear to be LBA but are otherwise undiagnostic.

13.07. *W of Daphne*. Site on a spur, 250 m. W of the last wind mill named Paliomilos at el. 220 m. The foot-path leading from Daphne ends here. Rondacados lies to the S and lower Milopotamos to the W. On the spur are two structures. One is Ay. Giorgios, a double nave church now used as a stable. The other is a structure containing a wine press (*patitiri*) which has been altered into a stable. The church is built over an earlier foundation wall. The differences in construction are visible, the lower course being of evenly hewn and larger blocks of schist. The area to the N and S of the church is densely covered with sherds. Many are undiagnostic. Frag. of a black glazed krater, Archaic. Some Roman. Terrace walls below this site and between it and Daphne are of massive construction, probably ancient, but stray sherds in the area are not diagnostic although not modern.

REGION 14 (ills. 2, 5)

14.01. *Koressia, Stavroti*. N side of Xyla ravine on crest facing N to Koressia. Overlooks the hillside and valley to the N with evenly spaced terraces. Nearby water source is the Xyla ravine and the valley below Ay. Triada. Limited sherd scatter, ca. 10 m. radius. Hellenistic amphora frags. and coarse ware. Probably a farm.

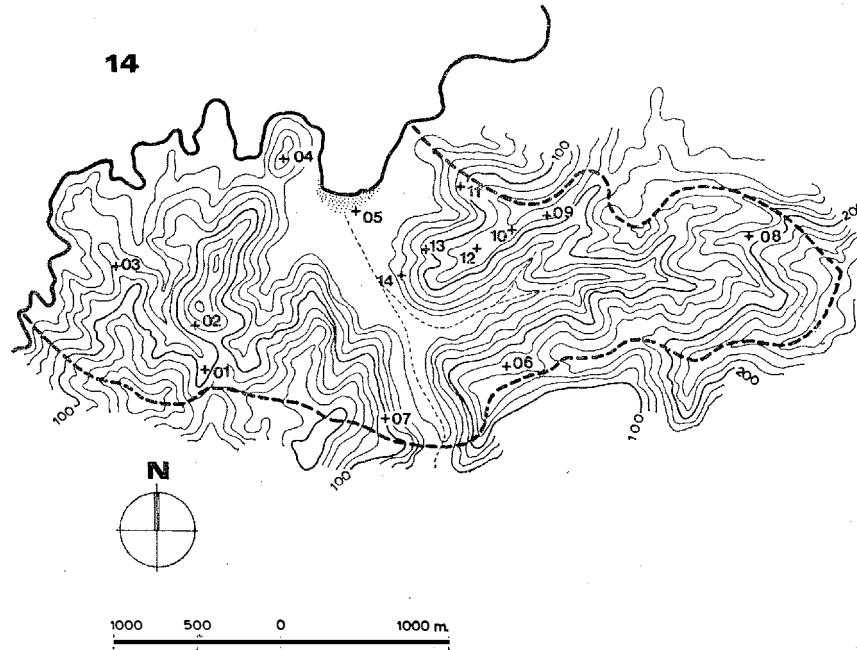
14.02. *Stavroti*. SW slope of hill beyond Ay. Triada overlooking Stavroti, Chondri Rachi and Skalakia. Square or rectangular structure incorporated into wall of a stable and made of large, even blocks, possibly a lookout site. Classical, Hellenistic and Roman sherds.

14.03. *Sklavos area*. Above quarry S of Sklavos, site is bordered by the modern road cutting on the N and a vein of blue marble on the S. It occupies the crest of a small hill and the principal area is within a circular modern enclosure wall abutting the road and surrounding the crest. All enclosure walls include dressed stones of earlier periods. Terrain around site is terraced. Sherds are plentiful on the summit and extend down the slope on the N and W sides. The densest scatter is within 20 m. radius of the summit. 5th c. and Hellenistic sherds. Very worn coarse wares.

14.04. *Koressia*¹.

1. Brönsted 1826 (supra n. 11); Ross 1840 (supra n. 11); Bursian 1868 (supra n. 11); Savignoni 1898 (supra n. 11); Welter (supra n. 11); Maier 1958 (supra n. 11); Zapheiropoulou 1972 (supra n. 11); Lauter 1979 (supra n. 11).

14.05. *Ay. Giorgios, Koressia*. Church on rocky promontory on E side of beach of Koressia. Traces of cuttings in the rock for burials. According to Psyllas and Welter, cemetery continues N for ca. 50 m. along the coast to Yialiskari. Some very worn Hellenistic sherds¹.



Ill. 5. Map of Region 14. Contours are at 20 m. intervals.

14.06. *Roukounas*. W summit at 160 m. el. Abandoned Byzantine church (Thomopoulos 1963 : 52 refers to a ruined church of Ay. Giorgios) on the S slope facing Chora. Above this is a small plateau with views to Chora and Koressia. Large rectangular foundation and dug-out cistern lined with plaster. Very weathered Classical and Hellenistic sherds sparsely scattered around the structure. Welter lists this as a Hellenistic tower, but on present evidence his identification cannot be corroborated (Welter 1954 : 88, tower 5, ill. 24).

14.07. *Ay. Spyridon, Koressia*. Church with a N-S axis along the Koresia - Chora road, NW of Milopotamos. Remains of fountain or well, now dry, partially built into the terrace wall and partially carved from bedrock on the terrace above and E of the church. Large quantity of pottery around this fountain, mostly Roman amphoras and hydrias. Terrace walls on the S and especially on the N

1. Welter 6.

side of the church appear to have traces of ancient construction, possibly Classical. No diagnostic sherds on terraces.

14.08. *Ay. Ioannis Prodromos*. Church located on a crest and small plateau at approx. 200 m. el. between Fotimari and Roukounas. The site overlooks the entire Fotimari area and has a view to Chora. A foot-path joins it with Ay. Prokopios to the E. The fields on the plateau and the terraces on the surrounding slopes are especially suitable for vineyards. Site of a Hellenistic tower. There are stones in the church walls and outbuildings which are dressed in the same way as at other tower sites with pie-crust edging characteristic of Hellenistic stonework (see Ay. Marina, Psaropirgos, Panachra). There are no visible traces of foundations but they may be below the church or in the vicinity of the stables W of the church. Dense sherd scatter around the church and in the fields on the plateau. Lots of undiagnostic coarse ware. Other pottery includes some Classical, Hellenistic and some Roman terra sigillata.

14.09. *Southern spur and crest above Vatou* running E to W, parallel to the ravine and Roukounas, and joining the Fotimari region on the E end. At the intersection of the crest with the main axis (NW to SE) of the Yialiskari ravine. Extensive site on the crest and the S slope at 120 - 140 m. el. on the NE end of the crest and above the last two houses. S slope is terraced. Nearest water source is the Vatou ravine and its fountains. NE of the last house are traces of a structure and a retaining wall with massive stone construction to the W above it. Sparse sherd scatter, about 10 m. radius around the house. Very worn undiagnostic coarse wares. Worn body frags. with black glaze. 5th c. sherds, 5th c. amphora handles. Frag. of Hellenistic pithos. Obsidian. Probably a farm site.

Above this and on the crest within the veins of blue-gray marble of the quarry are the remains of a large ancient structure and traces of drains, possibly for gathering water into a cistern. A portion of the bedrock is levelled as a pavement and has been used in more recent times as a threshing floor. Traces of other foundations are visible along the crest. Sherds are very worn. Some 6th c.; late Roman combed ware. Further W, above a house with a threshing floor situated on a small outcropping, the enclosure walls include some large stones which may have been looted from older structures. No other traces of buildings. Sparse sherd scatter with a few diagnostic pieces, mostly very worn and fragmented. Storage vessels and amphoras, Classical. 6th c. black glazed ware. Prehistoric coarse ware, very worn frags. of body sherds.

14.10. *Spur above Vatou* defined by the ravine of Vatou on the S side and the valley of Livadhi on the W. The crest is marked by a cairn and an army topographic marker. On the crestline ca. 50 m. SW of the last modern stable a large olive mill stone is built into the wall flanking the foot-path which runs from NE to SW along the crest and is marked by a double wall for a length of ca. 50 m. The stone is schist, d. 1.30 m. Traces of buildings on the summit. Dressed stones of blue-gray marble in the enclosure walls are not modern. Coarse ware frags, BA and later. 4th c. ware, Hellenistic amphora frags, pithoi and slipped sherds. Flat roof tiles, possibly of Corinthian clay.

14.11. *South of Yialiskari* a small spur ascends from the point forming the SW side of the bay of Yialiskari and joins with the saddle overlooking Fotimari

and Yialiskari. At el. 80 - 100 m. on the slope are a series of old terrace walls in very poor condition exposed to the NW wind. Few sherds scattered along the hillside. Prehistoric, very badly weathered and fragmented, some Classical or Hellenistic, obsidian frags., waste and tools.

14.12. *Crest of hill overlooking Vatou and Livadhi*, 100 m. NE of the topographic marker. Traces of the foundations of a large wall (ca. 0.70 m. thick) proceeding in an E - W direction ca. 10 m. This wall or another may continue at el. 120 m. between the topographic marker and the cairn. Remains of a mill stone in very bad condition at the cairn. Twin to the one at site 14.10. The wall continues W of the cairn. Smaller walls on S side of the cairn. No sherds.

The tip of the same spur above Aetofolia has no traces of structures, but some very weathered sherds, possibly Classical or Hellenistic.

14.13. *Overlooking Livadhi* and valley on W end of spur at el. 100 - 120 m. and N of *Aetofolia*. Very old terraces in disrepair, not cultivated in recent times but evenly spaced amphitheatrically and protected from the NW wind. Rock outcropping and shelters 10 m. below end of spur. An enclosure wall follows the crest from E to W ending at the rock shelters on the W. This is built over an older foundation. Two large schist jambs with tooled sides, h. ca. 1 m., mark an entry and are probably *in situ*. Sherd scatter ca. 15 m. W of the rock outcroppings and 40 m. to the S along the terraces. On the S side are frags. of obsidian tools and waste and very badly worn frags. of prehistoric pottery. Later pottery closer to the rocks. Frag. of LBA pithos with applied rope pattern, very worn; 7th - 6th c. sherds. Some Hellenistic.

14.14. *Mellisomandra*. Small site 10 m. above valley floor below Aetofolia. Terraced area on an otherwise rocky slope adjacent to a modern house and threshing floor. Classical sherds.

REGION 15 (ills. 2, 6)

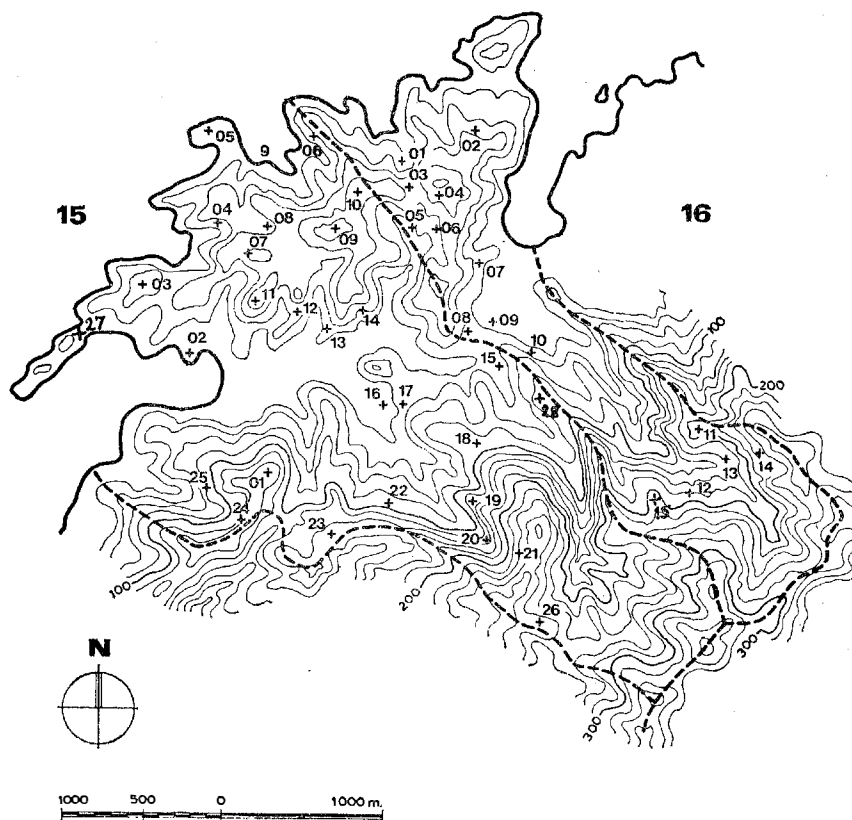
15.01. *Lookout on summit overlooking Vourkari* at 160 m. el. Modern cairn on summit. Large foundation wall on NE and N side of the cairn, ca. 20 m. below it, extends about 20 m. on the E side, corner on the NE side and continues for at least 6 m. on the N side. Traces of other foundation walls on N and E sides of cairn. Sherd scatter is sparse and extends for a radius of 25 m. around the summit. Very worn frags. of coarse wares near summit including pithos frags., some possibly MBA. Frag. of LBA pithos: body sherd with applied ridges, 3 horizontal, 6 vertical. Body sherd with deep red glaze, late Hellenistic. Late Roman combed ware. This may have been a lookout site in ancient times because of its advantageous position. There are habitation sites to the SW. Not likely to have been a habitation site or farming site because of exposure to all winds.

15.02. *Ay. Irini*¹.

15.03. *Troullos*².

1. Caskey 1971 (supra n. 2); Caskey 1972 (supra n. 2).

2. Caskey 1971 (supra n. 2) 392 - 395.



Ill. 6. Map of Regions 15 and 16. Contours are at 20 m. intervals

15.04. *The path N of Ay. Irini* leads NNW toward "Tris Ammoudies,,". Two abandoned structures are located above the second of the three beaches NW of the path. Some prehistoric sherds scattered here, possibly EBA and LBA and one definitely MBA. In the ravine leading E to Kephala there are many sherds and bits of obsidian along the path possibly washed down the slopes by rain.

15.05. *Kephala*¹.

15.06. *Otzias Akrotiri, Vourlidia*. Sparse surface scatter near well, no traces of structures. Obsidian blade and waste. Frags. of very worn LBA coarse wares.

15.07. *Akrotiri Otzias*. Small mound at 80 m. el. at end of double-walled path leading N from Ay. Irini to Kephala at the crest of the first hill on the E.

1. Coleman.

A true mound covering the entire summit. Corinthian roof tiles of the 7th - 6th cs. are scattered around the entire summit. The enclosure walls include many roof tiles and white marble stones taken from a structure which must have existed on the mound; they do not occur in any other enclosure walls in this general vicinity nor is there a quarry for white marble nearby. Traces of several structures. At the top of the mound and slightly to the SE of the summit there is a large, thin, rectangular block of local schist set upright into the ground. It appears to be in its original position. The block is relatively thin and pyramidal in section, narrowing towards the top; a dressed stone, it may be part of an entry system. The sherd scatter covers a large area with a radius of ca. 300 m. from the top of the mound, becoming sparser as one moves down the hill in all directions. Half of a mould-made palmette antefix of Corinthian type was found near the upright stone. The face is decorated with a Corinthian palmette motif. The face bearing the decoration is triangular, one narrow end pres., increasing in w. toward the break. Clay may be Attic and is covered with a light tan slip imitating Corinthian clays. This type of antefix is found in Attica, Corinth and Aigina at temple sites. Date ca. 570. Sherds are predominantly Archaic, some Geometric, some Classical (including Attic), few Roman, one LBA. Some obsidian flakes. Temple site.

15.08. *Ravine branches* off to the E of the *main ravine leading to Kephala* and ends in a small basin and terraced hillside on the E. Roman sherds on the lower part of the N slope, sparsely scattered. Probably not a habitation site.

15.09. *Akrotiri Otzias, Plativoles*. A very large site covers the summit of the hill to the NE of site 15.07 at 100 m. el. The ruins of a church—Ay. Giorgios Plativoles—are visible here on the summit. Traces of older structures on the summit and the S slope. Relatively dense sherd scatter covering a radius of ca. 50 m. from the summit. Obsidian tools and waste. Pottery includes LBA, Classical BF and some Roman. Habitation site.

15.10. *Akrotiri Otzias*. Lookout (vigla) above Makriopounta and Glaronissi at 100 m. el. Remains of a round structure of undetermined date. Sherd scatter is sparse on the crest and N side of the enclosure wall surrounding the summit. Site extends down the S slope below the crest. Sherds mostly 5th c. black glazed ware and some LBA on the S slope.

15.11. *Area between Vourkari and Akrotiri Otzias*. NE of Ay. Irini the path leading to Kephala splits at the crest of the hill. W to Troullos and E to Akrotiri. Between the path and the ravine lying to the E there are very few scattered frags. of prehistoric sherds. The crest of the hill (el. 80 m.) directly to the SE overlooks Ay. Irini, Vourkari and Kokka. At the summit there is a lookout tower of undetermined date and traces of foundations of two older structures, one square and one round, similar to the structures on Troullos. The surface of the hill is exposed and weathered. Few undiagnostic prehistoric sherds, coarse wares. No other periods noted. Foundations of a large wall extend along the spine to the NE and stop ca. 150 m. to the NE. The wall may be associated with structures on the summit. This may correspond to Welter 1954 : 88, ill. 24, site 1.

15.12. *Valley between Vourkari and Diaselli Otzias*. Hill to the NW of site 15.13, on the opposite side of the small valley. Abandoned farmhouse and almond

trees on the E above even terraces on gradual slope. Sparse sherd scatter, some LBA, Geometric, Archaic, Classical.

15.13. *Valley between Vourkari and Diaselli Otzias.* Third hill E of the harbor on the N side of the modern road and E of site 15.12. Small round hill, known as "Marmaristra,, separated by narrow ridges from higher hills extending to the N and E to Akrotiri Otzias. Located near quarries of blue-gray marble which give the site its name. This stone was used in the construction of a structure with massive walls on the summit of the hill; three courses of stone are preserved at one corner. It is probably a Roman structure judging from the nature of the stone work. Traces of several structures on the W and N slopes, at the base of the hill on the S side, and in the small cultivable flat land to the W. Structures on the W slope, some built Roman cement containing sherds of earlier periods, including 5th c. black glazed ware. The hill is covered with sherds on all sides, mostly Roman on the summit. Prehistoric sherds on S slope. Many pithos frags. and amphoras of the Hellenistic and early Roman periods. LBA, 6th c. and 4th c. sherds. This is a settlement site which was used from at least the LBA to the Roman period. The structure on the summit is problematical. It may correspond to Welter's tower 1, but his map is not clear enough to be sure (Welter 1954 : 88, ill. 24), and it is not necessarily a tower site. Psyllas mentions a tower and a village site at Vourkari which may correspond (Psyllas 1920 : 303, site 13).

15.14. *Hill to the NE above outcropping of blue marble* near site 15.13. Above abandoned farmhouse and threshing floor. Very sparse sherd scatter, mostly undiagnostic coarse wares. One small pyramidal loomweight, probably Hellenistic. Obsidian waste. Possibly a farm site related to 15.13.

15.15. *Fields just S of Diaselli Otzias* in the ravine of Kokkinou which leads to Ay. Prokopios, W of Koukouvayia. Stone quarry and threshing floor in the valley. Water source. Dense sherd scatter, some Classical black glazed ware. No traces of structures.

15.16. *Vourkari/Ay. Varvara area.* On the S side of the Vourkari - Otzias road, N of Fotimari and site 15.22. Below the church of Ay. Varvara and to the W in the fields. Sparse sherd scatter, possibly washed down from the higher land around the church. Frag. horizontal loop handle and body of vessel, polished on int., EBA. Type and extent of site not clear.

15.17. *Ayia Varvara.* Church on a low saddle on the S side above the road between Vourkari and Otzias. Traces of an ancient ruined building with rectangular or square foundation to the NW of the church abutting a farmhouse with a lintel dated 1862. Stones, probably from this structure, are incorporated in the walls of the church and other buildings. A small column in Ionic style stands in the church yard. Traces of several structures to the SW of the church. Sherd scatter is densest below the church and extends for a radius of ca. 100 m. Undiagnostic coarse wares. Pithos frags., amphora handles and bases, mostly Hellenistic and early Roman. Flat roof tiles. Probably a small settlement built around a principal building of undetermined function situated above fertile fields in the valley.

15.18. *Tower above Ay. Varvara.* SE of site 15.17 on a flat crest at 80 m. el. within a rectangular field with no terrace walls abutting the foot-path to the SW. Large round structure of rectangular blocks of blue-gray marble. D. is at least 15 m. Parts of walls pres. to about 2 m. h. in two farmhouses or stables on the N and S sides of the circle. Walls of the modern buildings incorporate stones of the earlier structure. Sparse sherd scatter around the mound and on top of it. Coarse wares, Roman. This may be a lookout tower with a clear view of Otzias and the Ay. Varvara region.

15.19. *Area between Ay. Varvara and Ay. Prokopios.* Site located on the hill at ca. 150 m. el. to the E and below the Otzias topographic market, above Ay. Varvara and sites 15.17 and 15.18. Views towards Mavrou (site 15.22), Ay. Varvara and Vourkari valleys and E end of the bay of Ay. Nikolaos. Foundations of a large rectangular substructure or platform located about midway between the topographic marker on the summit and the valley below. The foundation is partially obscured on the E by more recent terrace walls. The visible part measures 10 m. on the W side, 1.5 m. on the S side and 2.5 m. on the N side. The walls are pres. to a h. of about 1.5 to 2 m. The platform probably continues to the E to form a rectangle with a long E - W axis and may be a temple platform. The stone work appears to be Classical. Traces of other buildings along the slope. The stones for the platform and some of the retaining walls were quarried from a rock outcropping to the NE of the site at approx. the same elevation. This is not a modern quarry. Sherds scattered in the field below the platform, 5th - 4th c.

Terrace walls above the platform are of massive construction, probably Classical. The terraces are covered with a dense scatter of sherds. 100 m. above the platform is an abandoned farmhouse with stables and threshing floor. One terrace below this a cistern is built against the slope; probably an early construction. Classical and Hellenistic coarse wares, pithoi and amphoras. The hillside is the site of a small farming community built on the slope above the probable temple platform.

15.20. *NW of Ay. Prokopios* on hillside facing Vourkari, Ay. Varvara and Mavrou valleys and below site 15.21. A small valley descends to the larger ravine on the SW side of site 15.19. The ravine continues below the Mavrou tower (site 15.22) in the valley below. Structures, probably dams, span the ravine at approx. 160 m. el. related to water use and irrigation at this group of sites and surrounding terraces. Sherds sparsely scattered, Classical.

15.21. *Photimari - Otzias.* Topographic marker at 280 m. el. S of Diaselli Otzias and due N of Ay. Prokopios. To the S of the marker, the hill descends to a small saddle and rises again farther S. This lower ridge faces Fotimari on the W. Traces of structures in the fields. Many enclosure walls and terraces for vineyards. Modern house and stables. Sparse sherd scatter on entire ridge. Pottery is Classical of the 5th c. Habitation and farm site with several buildings, probably related to sites 15.19 and 15.20.

15.22. *Mavrou.* Hellenistic tower on a crest at 100 m. el. Modern farmhouse built within the walls. On the W side of the principal footpath leading from the valley S to Fotimari. Overlooks the valley of Ay. Varvara and Vourkari. Sec-

tions of the lower courses of the walls pres., especially on the E side including one corner and the entrance threshold. Sherds cover the entire area of the tower site. Some LBA frags. Classical and Hellenistic. Undiagnostic coarse ware. Frags. of obsidian tools comp. to Coleman's cat. 1a. Tower is included in Welter's study but the location given on the map is incorrect (Welter 1954 : 88, tower 2, ill. 24). It is mentioned by Psyllas (1920 : 304, site 14).

15.23. *Photimari*. Church of Ay. Nikolaos located on the crest of a low ridge overlooking the entire Fotimari basin and surrounded by terraced, low hills. Roman sherds around church and churchyard.

15.24. *Saddle and crest, el. 140 m., overlooking Yialiskari and Photimari*. Views of Chora, Koressia, harbor, Photimari, Otzias. Traces of a large building on the crest immediately S of a modern stable. The mound formed by this building is ca. 10 × 20 m. The foundations of a wall are visible inside the stable running at an angle to the E wall. Traces of several ancient structures in the fields on the NW side of the stable.

The fields below the crestline facing N form an amphitheater and the terraces are evenly spaced. The hillside is somewhat protected from the N wind by the higher ridge to the N which overlooks Vourkari. The fields on the E side are more abrupt and have a few upright stones in them. Both sides of the hill must be associated with this site. Water sources are the Yialiskari ravine, Photimari and Vatou. Dense sherd scatter at a radius of 50 m. around large building and the modern stable. Becomes sparser in all directions thereafter. Very fragmentary LBA coarse wares; Classical, 4th c. and Hellenistic sherds. Late Roman combed ware. Flat roof tiles. This is a farm site possibly in all periods with several buildings, and may be the site referred to by Psyllas (1920 : 303, site 10) and Welter (1954 : 88, ill. 24, site 3) as «Tourlos tou Fotimariou», although it cannot be located with accuracy using Welter's map.

15.25. *Rock outcropping on the N side of the Yialiskari ravine* at about 100 m. el., NW of site 15.24 and SW of site 15.01. Traces of ancient walls and foundations in rock outcroppings, but none form coherent plans. Terrace walls in this area are in poor condition. Sparse sherd scatter in an area 25 - 30 m. around the rock outcropping. Weathered sherds, small frags., but considerable quantities. Misc. worn coarse wares, possibly LBA. Some obsidian tools. Frag. of a rubbing tool of low grade white marble. Pithos frags. Amphora frags. Finer wares, Classical and Hellenistic. Frag. byzantine bowl. Clay source in stream bed to the SE at same elevation. Nature of site cannot be determined but it is probably related to 15.24.

15.26. *Ay. Prokopios*. Church built over a Hellenistic tower. Located 600 m. due S of the Otzias topographic marker between Roukounas and Megalo Gremno, facing Chora on the S. Situated on a rise overlooking a vineyard and terraced hills with gentle slopes. Tower foundation visible on exterior E side of church. Hellenistic sherds scattered around the church and in the vineyard. Foot-path leading from the fountain of Veniamin to Dasonari below Ay. Prokopios has evenly spaced steps constructed of regularly dressed stones and may be ancient.

15.27. *Koressia, Kokka*. Promontory on N side of Koressia. Above the narrows at approx. 20 m. el. along the foot-path, considerable quantity of obsidian flakes and worn tools. Very fragmented sherds. All directly on bedrock and exposed to weathering. No traces of structures.

15.28. *Otzias*, 550 m. SE of Diaselli along footpath. Crest and saddle of hill at 170 m. el. between two inhabited farm houses. Stone mounds and traces of ancient foundations near southernmost house. Sherd scatter extends approx. 100 m. to the N. Archaic banded pithos frag. with floral motif. Archaic and Classical sherds.

REGION 16 (*ills. 2, 6*)

16.01. *Otzias Akrotiri, Volada - Perlevos*. Above inlet of "tis Tountenas,,. Sparse surface scatter, no traces of structures. Obsidian waste. LBA pithos frag. with large, deeply impressed circles in a band. Late Roman combed ware and other late Roman sherds.

16.02. *Perlevos*. Late Neolithic material, pottery and obsidian, in the ravine leading NW from the summit of Perlevos towards the "Avlaki tou Gregou,,. Sparse scatter on the surface, badly weathered. In a small basin N of the summit of Perlevos there is a flat schist stone (approx. 1.10 x 1) with 5 holes drilled into the surface. This may be a type of kernos or offering table datable to the BA.

Obsidian occurs sparsely all over the Perlevos promontory. Some sherds of later periods, mostly very worn and undiagnostic and some Roman¹.

Volada. Large rock outcroppings on E side of Akrotiri, N of Ay. Giorgios overlooking Otzias bay. Ruins of a lookout and stables located W of the rocks. Neolithic site in a sheltered area with small terraces below the modern buildings. No traces of structures, sparse sherd scatter. Small frags. of obsidian, mostly chips, frags. of larger vessels of indetermined date, possibly BA. Some LN body sherds, very worn. Some frags. with black glaze, prob. 5th c. Site is small.

16.03. *Akrotiri Otzias*, summit with "vigla,,, formerly "metochi Ayias Annas". Crest of hill to the E of site 15.10 is marked by a lookout tower (vigla) of relatively recent date. Just to the SE of this are traces of an older round structure with a round foundation, probably Classical. Some retaining walls of terraces, especially on the N side, may also be ancient. Traces of structures extend S and SW of the summit. The summit forms a small plateau and drops off relatively sharply to the N and S and more gradually to the E and W. Sherds on the summit are Classical, 6th - 5th c. bf. Some Roman. Prehistoric sherds noted on the SW side include LBA pithos frags. There appears to have been a Classical site on the summit and a prehistoric site 5 - 10 m. below this facing S. Both appear to be habitation sites using the S slopes for cultivation and the N slopes for grazing.

16.04. *Otzias Akrotiri*. To the E of site 15.13 a ravine leads N to a small flat-land. Hills rise above this on all sides and on the NE toward Akrotiri and

1. Caskey 1971 (*supra* n. 2) 395 - 396.

the topographic marker (el. 100 m.) at the easternmost summit. A house, stable and well are situated at the N end of the valley at the foot of the hill. The hillsides on the E and W are terraced and form a cultivable, protected basin. A rocky and uncultivable hill rises to the N. The spine of this hill continues N to the Akrotiri topographic marker. There are no traces of sherds on the summit near a lookout structure. S of the marker an enclosure wall runs approx. E to W. Below this wall are two stables separated by a wall running N to S. In the terraced field below the easternmost stable and around the stable as well as embedded in its roof are large quantities of LBA sherds. The scatter is dense and approx. 200 m. Various types of pithoi characteristic of the LBA. Base of conical cup with concentric string marks, LC I. 1 fine obsidian arrowhead. This site must have included several structures and was probably a farm.

16.05. *Otzias Akrotiri*. About 100 - 150 m. below and to the W of site 16.06. Small terraced valley. Very sparse sherd scatter limited to a 5 m. radius. Sherds are LBA, 5th c. and Roman.

16.06. *Otzias Akrotiri*. Farmhouse and stables on the crest at el. 80 m. above Ay. Giorgios and modern road cutting. Small rise and plateau with views over Otzias and the basin SW of Akrotiri. Retaining walls on the E side of the farmhouse may be ancient. On NW side of house along the W slope is a low structure which appears to be an empty tomb covered with a large slab. Sherds cover the plateau around the house. LBA, Archaic, Classical, Hellenistic and Roman wares.

16.07. *Otzias valley*. "Vornidi,, or "tou Pappa,,. Field on W side of bay just above the valley floor on the first terraces to the W and about 200 m. from the shore. Material appears to be washed down from the hillside and has accumulated against the lower terrace walls. No traces of structures. Pithos frags. and coarse ware, late Roman. Black glazed ware, body frags., 5th c.

16.08. *Otzias Diaselli*. Fields planted with almond trees due E of the Diaselli fountain. Flat, arable land at the highest point of the valley leading to Vourkari. Traces of two or more ancient structures. Dense sherd scatter W of the modern house. Pithos frags. and other domestic wares, 5th - 4th c. Frags. of black glazed ware, Classical. Piece of obsidian. Probably a farm.

16.09. *Otzias Diaselli*. To the NW of the modern fountain and spring is an older fountain structure on the opposite side of the modern road leading from Diaselli to Akrotiri. Partially built and partially cut into the bedrock; undoubtedly very early. The enclosure walls on either side of this older fountain include blocks of dressed gray-blue marble which are probably looted from an earlier structure. A column was removed from this area and has been taken to the museum at Chora. The modern fountain has a few slabs of Parian marble in its walls.

Farm house SE of the Diaselli fountain and N of the Vourkari - Otzias road. Sparse sherd scatter in fields surrounding house. Geometric. Late 6th c. Classical black glazed ware. Roman, 1st to 3rd c. Frags. of marble architectural ornaments, late Roman and Paleo-Christian.

A pottery kiln may have been located near the Diaselli spring as indicated by the baked look of the earth and stones just S of the spring (Miriam E. Caskey, personal communication).

16.10. *Otzias, Vorini*. E of Diaselli. About 3 m. el. above the valley. Traces of large wall of massive construction incorporated into modern terrace wall (max. pres. h. 1 m). Dressed stones with straight edges. Approx. 7 m. long; one corner visible. Sparse sherd scatter in the valley below. Pithos frags., built into walls. Coarse wares, roof tiles, fine black glazed frags. Base of an attic skyphos, late 6th c. Probably a shrine.

16.11. *Otzias, Kambanariotissa*. Extensive site covers the area of the church and the slopes to the E and the N. Traces of foundations on N and E sides of church. Sherds are Classical, Roman, poss. Archaic and Hellenistic. Just S. of the church, on the spine of the hill extending NE from the church of Ayios Giorgios (site 16.12) above the ravine of Koukouvayia, at el. 100 m. is another sparse sherd scatter. Roman combed and incised ware. Moulded and stamped frag. of a lamp decorated with leaf motif. Late Roman, 3rd - 4th c. A.C.

16.12. *Koukouvayia, Ay. Giorgios*. At el. 200 m. in an oak plantation SW of the ravine of Koukouvayia and on the N side of Megalo Gremno. Views over Koukouvayia and the bay of Otzias. The church is built directly over a large platform with a long E-W axis, probably of a Classical temple. Early Christian column on the roof of the church. Dense sherd scatter below the church, especially on the E side and to the E of the modern enclosure wall. Undiagnostic coarse wares, mostly Classical. Frags. of Classical black glazed wares. Site mentioned by Psyllas (1920 : 308 - 11, site 12).

Above the church are the remains of a construction which has been included in a more recent house and stable; partially built into the bedrock, with some very large blocks of blue-gray marble in its foundations which are especially visible on the interior. The stones appear to be in situ. Some Roman sherds with wheel ridging. This structure may be Roman.

16.13. *Otzias, Klossou*. To the E and below Kambanariotissa (site 16.11), "notini Koukouvayias,," Terraces on W slope of ridge overlooking the ravine of Koukouvayia are evenly spaced and until recently used for barley cultivation and vineyards. Water sources in the ravine. Sparse sherd scatter, no traces of buildings. Sherds 4th c. Body frags. w. black glaze. May be a farm site related to site 16.12.

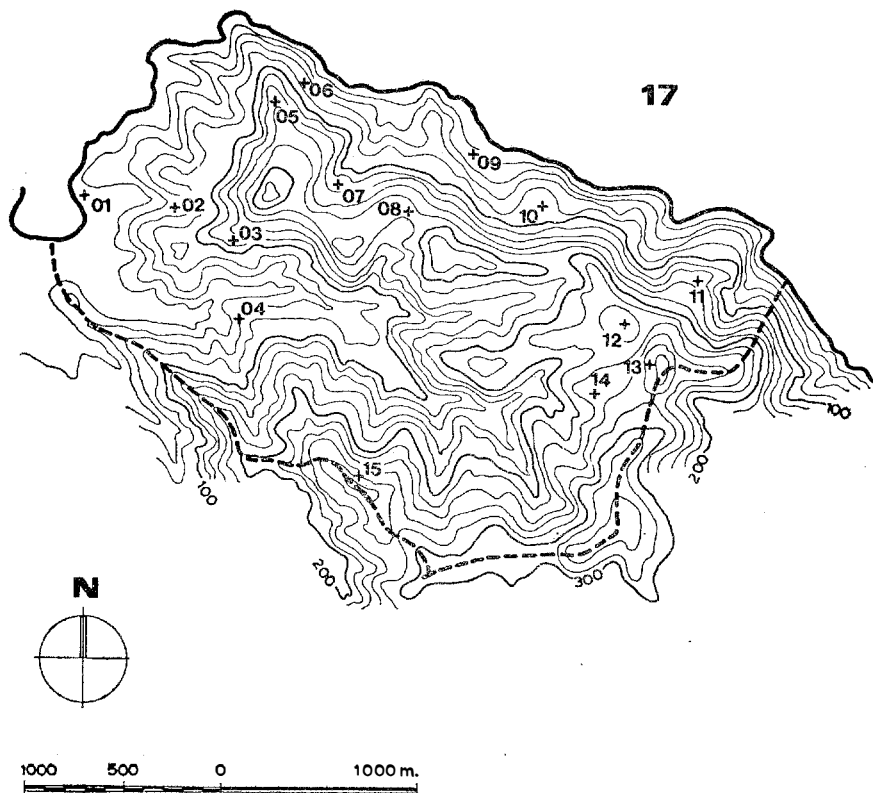
16.14. *Koukouvayia, Exovouni*. Plateau at 300 m. el. overlooking Koukouvayia on the NW and Kalamos on the NE. Terraces surround the modern farm and outbuildings located on the NW side of the plateau. Terraces facing Megalo Gremno to the S and W are ancient. Sparse sherd scatter. Hellenistic and early Roman domestic pottery and some fine pottery. Possibly a habitation site and cemetery.

16.15. *Koukouvayia*. Small spur at 200 m. el., W of 16.12. Site of abandoned farmhouse and outbuildings on a rise. Classical sherds on the E side of the house. No appreciable scatter.

REGION 17 (ills. 2, 7)

17.01. *Otzias. Church of Ay. Sozontas*. On W side of the bay of Otzias. Frags. of Hellenistic amphoras on S side of the church. Traces of an ancient wharf un-

derwater extending from the point below the church to the W: perhaps to close off the E side of the bay which is protected from the N winds by the promontory of Ladou, thus providing a small but safe anchorage here.



Ill. 7. Map of Region 17. Contours are at 20 m. intervals

17.02. *Otzias. Koutouriari.* Site located on a small natural rock platform on the SW side of a stream bed descending SE to NW in to Otzias. Below the modern road to Kastriani and SE above Ay. Sozontas. Farmhouse in ruins and threshing floor. Traces of a circular structure, possibly a kiln. One of the long walls of the modern structure has a much older foundations course. Retaining walls on NW and S and terrace walls to the W are not modern. Sherd scatter around buildings and to the ravine 20 m. below. Frags. of Archaic pithoi. Flat roof tiles. Some LBA pottery. Large lumps of unworked clay. Water source in the stream bed to the E has been dammed. Could be a kiln site attached to a farm house.

17.03. *Otzias, Paouras, S. extension overlooking Kalamos.* To the SE of the summit of Paouras, S of the modern road and older path to Kastriani. Views to Kalamos, Paouras, Chora, the harbor of Ay. Nikolaos and the bay of Otzias.

Area encompasses rock outcropping and narrow fields to the N and E and is limited by the road on the N side which appears to have split the site in two. Abrupt descent to Kalamos ravine on the S provides a partial natural fortification. Modern threshing floor adjacent to rocks. The bedrock on the E side of the boulders is cut at the base to provide a pavement, and there are post holes cut into the boulders, also on the E side. Appears to have been a shelter or a structure here. The field is sparsely scattered with sherds over an area of 150 m. Undiagnostic coarse wares, very worn. Black glazed ware, 5th c. On the other side of the road, 4th c. amphoras, Hellenistic pithos frags.

17.04. *Tripopilies Kalamou*. Caves above the houses and fountain of Ay. Martinos in the lower area of the Kalamos ravine. Caves are sources of iron oxide (miltos) and were mined in Classical times. Sherds near the houses on the S side of the ravine are Classical. Probably a settlement site associated with the exploitation of the mines (Psyllas 1920 : 309, site 17). Valley of Kalamos between Ay. Martinos and Megalo Chorio fountains was inhabited in ancient times. Sporadic sherds, mostly undiagnostic, some Classical.

17.05. *Paouras summit*. The summit has been described with pottery, obsidian and evidence for copper working¹. New finds are listed here : 1) Neolithic pottery — 1 frag. bowl w. lug (comp. Coleman pl. 39. E); frag. vertical strap handle; base of a bowl with smoothed surface (comp. Coleman pl. 40.G); 2 frags. of bowls w. plastic decoration, one a rim sherd. Impressed circles in a band (Coleman pl. 89.BC, BD); 2 lug handles (Coleman pl. 28, 3); 2 frags. of loop handles; body frags of burnished vessels. 2) Classical pottery — body sherds, black glazed ware, mid-6th c. and early 5th c.; frag. of lip and rim of a very fine and very large krater, orig. d. est. 0.60 m. Late 6th or early 5th c. Attic.: base frag., 6th - 5th c. 3) Other — frags. of metal ore or slag; frag. of very good quality stone celt, part of one rounded end pres. Side slightly flattened. Green marble or steatite; obsidian; 2 very fine arrow heads; 2 small narrow blades (Coleman category 1a); 1 cutting tool with triangular section end hooked end (category 3); blades of categories 1a, 1b, 2; obsidian waste.

The scarcity and excellence of the later pottery on the summit suggests that there might have been a small shrine here in the 6th and 5th cs.

17.06. *Paouras, quarry site*. Investigations published in Caskey 1971 and Coleman 1977 do not include the area between the N face and the N quarry which forms a natural protected enclosure with limited access. The entry is a split in the rock which descends sharply from the saddle below the lower N summit. It is restricted and difficult to locate and has been enlarged to allow access to one person at a time. Entry to the area from below the quarry is much more difficult because of the boulders, so this is a very effectively protected site. Some stratigraphy is still intact along the eastern face of the rock, but is being continually eroded. Sherds and obsidian blades abound in this area and in the cracks of the rocks below where they have sifted down. Also much sherd material is wedged between the lower boulders. Visible are considerable quantities of Late Neo-

1. Caskey 1971 (supra n. 2) 392; Coleman 156 - 157.

lithic sherds, pots which are partially intact, cooking vessels, some containing bones. Great quantities of obsidian blades and chips. Flint, stone and bone tools. Either a dwelling site located in the shelter of the rock or a dump used by people dwelling site located in the shelter of the rock or a dump used by people dwelling on the summit, or both. The enclosure is clearly a more important Neolithic site than the summit, judging by the amount of accumulated sherds and obsidian.

Finds : 1) obsidian — misc. beades; 1 very fine arrow-head, leaf shaped, projecting central spine (Coleman pl. 68, no. 85; pl. 95, p. 20); blades of categories 1a, 1b, 2; more blades and less waste in the quarry area — but some waste and some cores; great quantity of categories 1a and 1b, very good quality; some of categories 2 and 5; very few of cat. 3; 4 intact pieces of categories 1a and 1b, extremely fine and long pieces; 2 very fine arrow-heads; very fine type 1a blades; 2 arrow-heads; 2) Neolithic pottery — sherds with red and black burnished surfaces; pottery is thin-walled and coiled, reddish-brown-tan surfaces and biscuit; 1 large handle of a jar very similar to Coleman pl. 38, B but without plastic decoration. Smooth profile and view. Red and black burnished surface; frag. of bowl incl. lip and suspension hole; base and frags. of rim of a very large open bowl, prob. a cooking pot, blackened int. and ext.; base sherd of a footed or pedestal bowl, w. rounded bottom; frag. of either a rim with suspension hole or a frag. of a cylindrical vessel (Coleman 1977 : pl. 37, B), appears to have no curvature and smoothed back; rim sherd of bowl w. int. pierced lug handle (Coleman pl. 84, V.: baking pan); large strap handle, vertical; small strap handle, vertical (both from large jars); frag. w. plastic decoration, small circles connected by a line (Coleman p. 89, BN); frag. of vessel side, no lip pres. with solid ledge handle on ext. having three projections (2 indentations). No comp. in Coleman. 3) Other pottery — 2 small frags. of black glazed ware (6th - 5th c.?). 4) Other — tools of flint or chert. Scraper with bifacial working. Ovoid shape, cutting edges on 1/2 of circumference (0.048 × 0.035); point of a small stone tool, poss. a celt, highly polished gray-green stone with black and white inclusions; marble tool, frag. pyramidal section; pieces of shell and bone; 1 bone tool.

17.07. *Area between Paouras Otzias and Chalara.* Two small ravines to the E of Paouras descend from the SE to the NW. The easternmost ravine has a permanent water source near the shore. A small site is located on a crest (el. 140 m.) above this to the SE and just below the Otzias - Kastriani road. Sherd scatter is sparse and less than 20 m. radius. Amphora handles, Hellenistic; pithos frags.; flat roof tiles; body frags. of smaller vessels, some Hellenistic, others undiagnostic. Possibly the site of a farm house.

17.08. *Chalara.* Shrine of Ay. Ioannis above site 17.09 at el. 180 m. on the N side of the Otzias - Kastriani road. A modern farmhouse now used as a stable is located on the S side of the road. Large quantity of undiagnostic sherds, some modern. No decorated wares. Pithos frags., Archaic and Hellenistic.

17.09. *Chalara.* Church of Ay. Ioannis near the coast at the base of a ravine immediately below and NE of the SE summit of Paouras. Church is situated in the lee of a small rock. Steep drop to the N from the road. Limited arable area with a permanent water source on the E side of the church. The land around the church forms a small flat basin. Entire area, including the steep slope facing

N is terraced and shows traces of recent cultivation. LBA pithoi and coarse wares on slopes to the S of the Church. Archaic and Classical material closer to the church yard and the water source. A habitation site which must have included several structures. No beach or harbor here.

17.10. *Chalara*. To the E of Ay. Ioannis and site 17.09 on higher ground at el. 100 m. Rock outcroppings above the sea. Site concentrated on S side of crest near a plantation of wild olive trees. Dense sherd scatter approx. 50 m. in radius. Body sherds, poss. LN. Late MBA and early LBA. Sherds, some LH III, Geometric and late 5th c. LBA coarse wares dominant. Habitation site.

17.11. *Chalara, Sklavos area*. Between Ay. Ioannis and Kastriani, below the modern road. Small promontory delimited by valleys on either side. E part of valley has a substantial water flow during the winter. Steep descent to the sea. Limekilns of recent date above and below the road. At the highest and northernmost point is a rock outcropping which has served as a quarry. The foundations of a large building are visible just S of the quarry and below it. The building faces NE but is protected from the N wind by the quarry. The structure is built with large rectangular and regularly cut stones of blue-gray marble quarried on the spot: foundation stones pres. up to approx. 1 m. in places. The building is rectangular with an entry on the long E side. Threshold and jambs partially pres. The building was inhabited until relatively recent times as can be seen from traces of white wash and plaster on the lower courses of the interior walls. Stone work resembles that at sites 15.13 and 15.17 and may be Roman. Sparse sherd scatter around building and quarry. Location subject to weathering. Undiagnostic coarse ware, some modern. Roman combed ware. Misc. roman body sherds. 1 obsidian frag. This site may be Apezeftra where Psyllas locates the ruins of a Roman building (309, site 15). Just above the modern road and to the S there is a limekiln, partially destroyed by a drain for the road. The terrace walls in this area are very well built and are not modern. No diagnostic sherds here but many very worn fragments of coarse wares which are not modern. The hillside to the S has several limekilns.

17.12. *Chalara, Sklavos area*. Modern farmhouse, now used as a stable, located at a fork created by a cutting to the NE of the N end of the road leading to Soros and Koukouvayia, about 150 S of the Otzias - Kastriani road. About 200 m. to the NW of site 17.13. The farmhouse stands on a small rise. The walls of the house incorporate stones of much older structures. There are at least 10 stone mounds of various sizes located on all sides of the modern structure. The largest mound is located just below it to the S.

Very dense sherd scatter, approx. 40 m. radius around the house, thins out but continues for another 20 m. down the hill to the S. Sherds are early Archaic, late 6th c., 5th c. and early Roman. Large pithos frags. of Corinthian clay. 1 pyramidal loomweight, 1 hole in top, h. 0.053, w. at base 0.033, 5th c., 1 frag. round loomweight with 2 holes in top. 1 round loomweight, almost intact, 2 holes in top with 1 round stamp mark and 1 square stamp mark with rounded edges, both illegible, d. 0.078, th. 0.023, Classical.

The area has evenly spaced terraces and gentle slopes. A small valley and saddle, all cultivated, separate this site from the "acropolis,, site of Megalochori

(17.14) which was probably the local stronghold during the Archaic period. Site 17.12 is probably a small cluster of farmhouses, residences and dependent buildings, at least during the Archaic period.

17.13. *Chalara, Sklavos area.* On the S side of the Otzias - Kastriani road and on the E side of the road leading to the summit of Koukouvayia. Site located at 180 m. el. to the NW of a modern house on a hill overlooking the entire area. Rock outcropping and quarry on the summit of the hill at 200 m. el. Traces of a building, probably with rectangular foundation, located on a terraced platform NW of the house and at the same level. Sherd scatter is dense just below this and extends at least 75 m. down the hillside to a level just above the road. Much of the material is fragmented and very badly weathered. Sherds mostly Early Archaic, also 7th - 6th c., Hellenistic and Roman material. Function of the site cannot be determined, but it is synchronous with sites 17.12 and 17.14 in the same area.

17.14. «*Megalochori*», *N of Soros, overlooking the ravine of Kalamos.* Site occupies the mound and crest of a hill forming a natural acropolis to the NE of the modern road cutting leading to Koukouvayia, 200 m. S of site 17.12. and 500 m. from foot path branching off the road to the E towards Kastriani. Recent structures have partially obscured older foundations. Traces of at least four large structures. Retaining walls and possibly fortification walls reinforce the natural rock formation. Arable fields with terraces all around this area; some terrace walls and enclosures appear to be ancient. Sherd material (Archaic and Classical) is densely scattered all around the crest of the hill. Major site and point of refuge for the area, related physically and chronologically to sites 17.12 and 17.13. It may correspond to the site referred to by Psyllas as "Megalochorio,, in the region of "Kellia tou Kastriou,, with remains of a village and a tower (1920: 309, site 13) and by Welter as a tower site (1954; 88, ill. 24, tower 4). If it is a tower site, it does not appear to be Hellenistic. The fountain of Megalochorio, to the SE on the opposite slope must be the water source for this site.

17.15. *Koukouvayia, Exovouni.* See site 16.14 for general description. Terraces to the N and E of the plateau, below 300 m. el. No structures visible. Sparse sherd scatter along terraces. Frag. archaic pithos. Roman sherds. Obsidian.

REGION 18 (ills. 2, 4)

18.01. *Komi.* Ravine below Chora (Ioulis), at base of hill on NW side of the ancient acropolis. A very large dam and retaining wall, partially cut into the rock and partially built on either side of the ravine. Classical.

18.02. *Ioulis*¹.

18.03. *Fountain of Veniamin.* Promontory extending to the NW on the NE side of Chora. Overlooks Chora, Dasonari and Roukounas. Small site located on the flat crest. Retaining walls and possibly fortification walls in disrepair appear

1. Brönsted 1826 (supra n. 11) 28; Ross 1840 (supra n. 11) 129; Bursian 1868 (supra n. 11) 471; Savignoni 1898 (supra n. 11) 220 - 221; P. Graindor, *MB* 15 (1911) 62, and P. Graindor, *MB* 25 (1921) 84; Welter 69 - 78; Maier 1958 (supra n. 11) 6.

to be ancient. Traces of several structures on the crest. Undiagnostic pottery scattered on the N and S slopes. Classical. The fountain of Veniamin is the nearest water source.

18.04. *Dosonari*. S of Ay. Prokopios (site 15.26) and E of Ay. Triphon on the W side of the footpath. Base of a Hellenistic tower incorporated in the walls of a modern farmhouse with threshing floor. Modern cistern to the N. Many sherds on E side of the path in the same vicinity, mostly Hellenistic. May correspond to Welter's tower 6 (1954 : 88, ill. 24). Also see Psyllas (1920 : 309, site 11).

18.05. *Ay. Anna*. Church on hill NE of Chora overlooking site 18.06 with views to the N, W and S. Site of Doric temple of the late 6th - early 5th c. Architectural frags. incorporated in Byzantine church which is in the center of a small monastic community. Sherd material is dense and includes Classical, Hellenistic, Roman and Byzantine.

18.06. *Archaic sculpture of a lion*¹.

18.07. *Cemetery of Chora*. Foundations of an earlier wall, probably Classical, below the cemetery enclosure wall abutting the foot-path on the S side. This foundations is at least 10 m. long and may belong to a tower.

The path from Chora to the fountain of Veniamin follows the ancient road and must be Archaic, if not earlier.

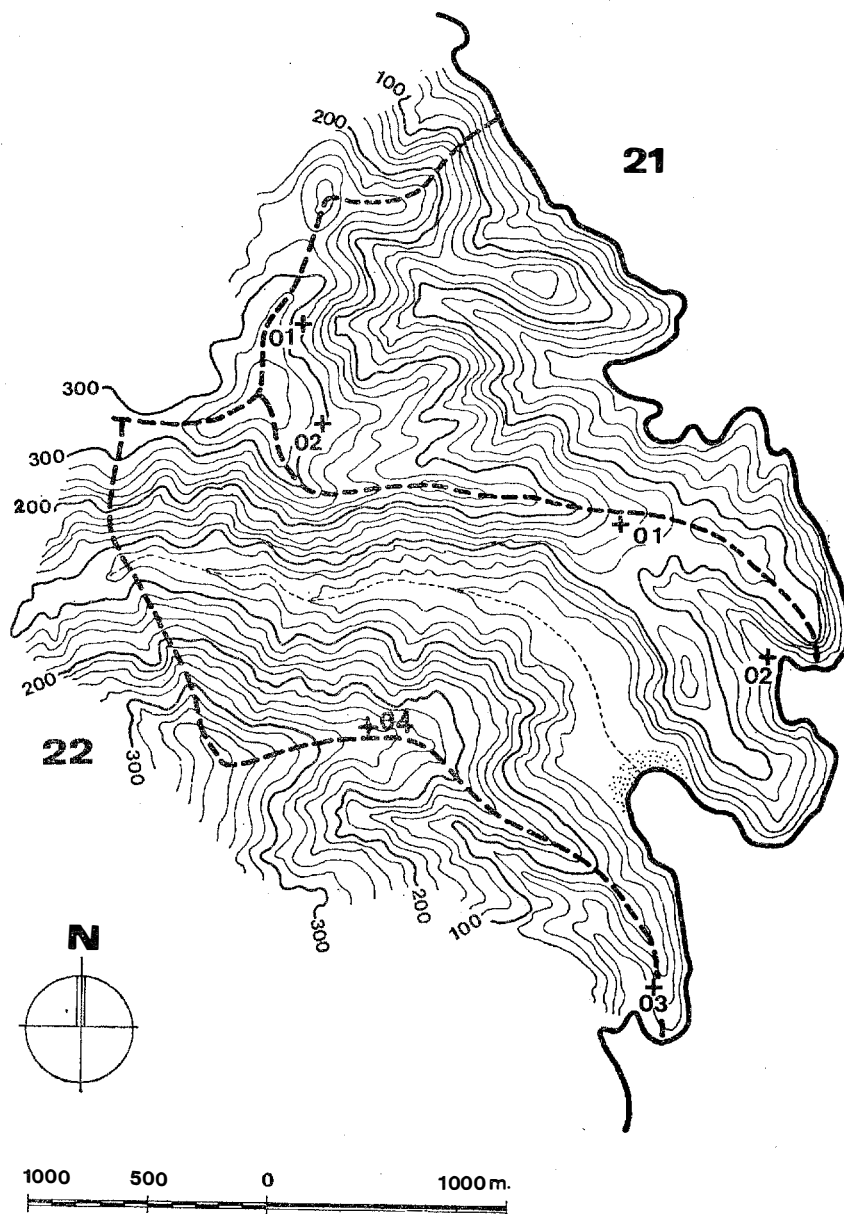
18.08. *Merovigli*. Hill NW of Chora. Temple terrace abutting SW side of Chora - Katomeria road. Massive construction of well dressed blocks of local schist. Sherds are Corinthian, Archaic and Classical. Corinthian roof-tiles. Byzantine chapel situated within rock-outcropping. Traces of other ancient structures in immediate vicinity. Dense sherd scatter over entire area, ca. 200 m. d. (Psyllas 1920 : 308, site 2).

REGION 21 (ills. 2, 8)

21.01. "*Patimitis Panagias*,". On the E side of the road leading to Soros and Koukouvayia, on terraces at 300 m. el. before the drop in the terrain to the E. Extensive site consisting of various buildings on an outcropping and crest overlooking the monastery of Kastriani and the bay of Kastri. Traces of three or four structures at least. Dense sherd scatter, approx. 20 m. radius, thins out on the N side and continues for at least another 10 m. Archaic and Classical pottery. Pyramidal loomweight. Probably a farm site exploiting the terraced fields to the N and S.

21.02. *Soros*. Large enclosure walls with modern structures, now in ruins and abandoned, to the E of the topographic marker at 351 m. el. and visible from the marker. Traces of at least four large structures within the enclosure walls. Dense sherd scatter around the modern structures and the stone heaps, sparser outside the enclosure walls in the fields, approx. 200 m. radius from the center of the enclosure. Mostly archaic coarse wares and some black glazed ware of the 6th c.,

1. Welter 78 - 85.



Ill. 8. Map of Regions 21 and 22. Contours are at 20 m. intervals

some possibly Geometric material. A farm site with several buildings. The fields around the structures are the best in the Soros region and continue to be cultivated with barley. The terraces are very broad and have low steps.

REGION 22 (*ills. 2, 8*)

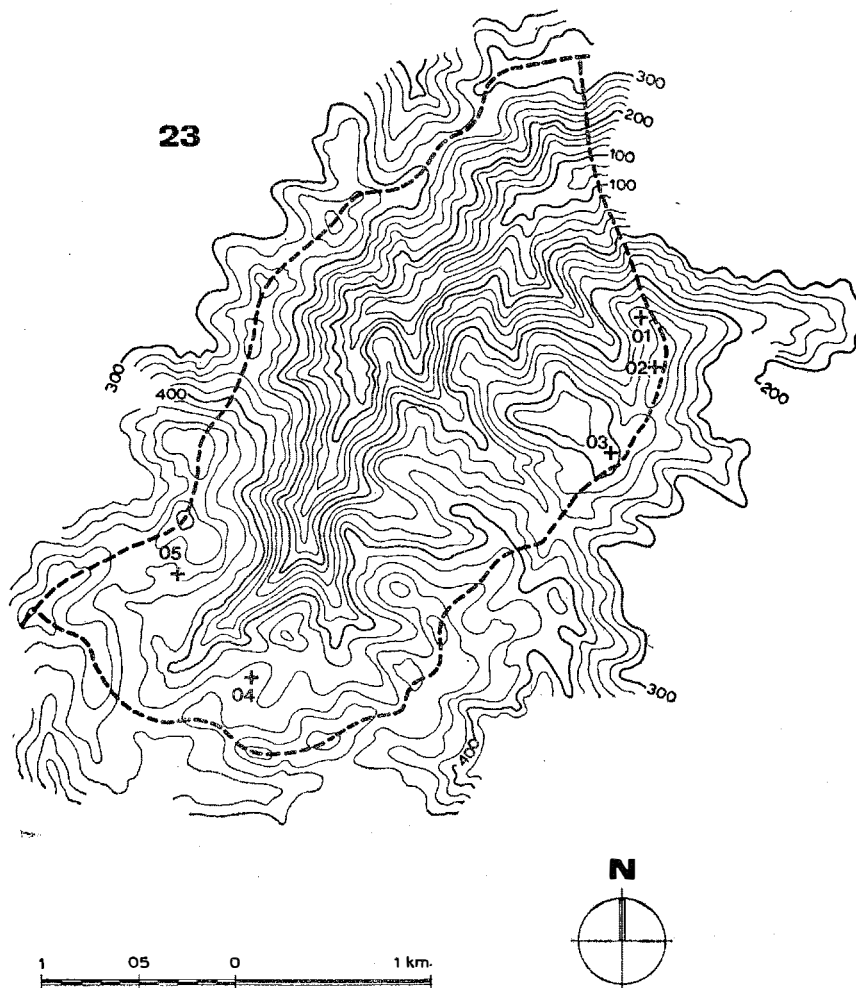
22.01. *Karavela/Marmaromandra*. Between summit of Soros and Karavela (300 - 200 m. el.) overlooking the valley of Spathi. Large quantities of undiagnostic, badly worn sherds concentrated near ruins of buildings and stables situated along the ridge. The slopes on the E are terraced and descend gradually.

The Marmaromandra plateau (between Soros and Sidhero bay at 120 - 140 m. el.) is scattered with obsidian blades and waste which appear to be Late Neolithic. See Psyllas 1920 : site 18 for possible identification.

22.02. *Sidhero Bay*. Small bay on the E side S of the bay of Kastri and N of the bay of Spathi. Exposed to the NE wind but otherwise protected. Traces of walls built directly on bedrock and pres. to max. h. 0.60 m. on the N and S sides of the beach. A ravine empties into the center of the bay and leads up to the Karavela area to the NW. Very few and worn sherds within the ravine. There is a modern well and a carved stone basin for watering animals close to the shore. Several caves on the flanks of the steeper N side of the bay contained very few and undiagnostic sherds. On the S side the land is flatter and terraced for agriculture. Iron mines and exposed veins located on the S promontory. Ores, minerals and crystals with metal-bearing quartz were noted. Sherds sparsely scattered and mostly prehistoric. Misc. coarse wares, some very poorly fired. Neolithic, EBA and LBA pottery, some Archaic or Classical. Obsidian blades comp. to Coleman's type 1 b. Neolithic. Obsidian waste. Site related to the exploitation of the mine. The walls on the shore (Neolithic or EBA) associated with LBA and a few later wares.

22.03. *Kalidonichi*. Large settlement situated on a rocky promontory with virtually no cultivable land, separating the bay of Spathi from the bay of Kalidonichi. Traces of occupation on the S side facing Kalidonichi and on the crest. Outcropping of blue-gray marble on the crest and several ridges below used as quarries from prehistoric times. Water gathers underneath rock ledges in hollowed-out portions of the ridge on the NW. On the Spathi side on the N side of the promontory is an abandoned mine. The lowest eastern terraces above the shore on the Kalidonichi side have an exceptionally dense sherd scatter. Most are coarse wares, probably washed down from the summit, and appear to be of various prehistoric periods. Settlement appears to have been densest on the SE tip of the promontory, just under the largest outcropping, which provides some shelter from the weather. On the top of the crest there is a structure with a square foundation, possibly a lookout similar to that at Troullos (site 15.03). Traces of walls of several other ancient structures on the crest. Many sherds on the summit but fewer than below. Sherd scatter continues around to the NE side of the promontory but is more sporadic there and to the W. Very few sherds in the valley; much of it must have been silted in since antiquity, when the water line must have been higher. Farther up the valley there are several mounds of stones which might indicate the existence of former structures. LH III coarse ware very common;

LBA wares, some possibly earlier; Archaic and 6th c. pottery. This site appears to have been an extensive settlement commanding the bays of Spathi and Kalidonichi and using both valleys for agriculture. The use of both bays for anchorage assures protection from most winds. This is probably the site referred to by



Ill. 9. Map of Region 23. Contours are at 20 m. intervals

Caskey (1972 : 358) and Coleman (1977 : 158) as Sykamia or «Akroterion Sykamas», since the identification cannot be confirmed at Sykamia. The site indicated on Coleman's map (pl. 1) corresponds with the southern promontory of the bay of Spathi which separates it from Kalidonichi. Also see Psyllas 1920 : 309, site 20.

22.04. *Parameria, above Kalidonichi ravine.* Two sites or one continuous large site. Large rectangular foundation built of large even blocks of schist stone under modern stable and house walls of more recent construction, now used as a stable. Ancient structure appears to have faced E - W, approx. 10 × 10 m. Sherds are sparsely scattered over an area of approx. 100 m. Some Classical, Archaic. Undiagnostic coarse wares. About 400 m. to the SE and below this structure, sherd material extends sparsely along the spur and ends below SE to W of another abandoned modern farm house. On the S side are a few intricate foundation walls made with small stones which may have belonged to earlier structures but are not datable. Much undiagnostic sherd material, very worn. Some obsidian flakes. Sherds are Hellenistic, Roman; no prehistoric observed. Habitation site.

REGION 23 (*ills. 2, 9*)

23.01. *Karia, Parameria.* Approx. 600 m. N of the church of Ay. Constantinos and at 370 m. el. Extensive site located on a spur overlooking the valley of Mantou, N of the source and fountain of Karia, which is a permanent water source. The site occupies the crest and the SE slope. Remains of walls and traces of at least three large buildings on the crest and the S slope. Retaining walls of ancient construction cover the slopes on the NW and the SW. Flat roof tiles, some incised. Dense sherd scatter. Most of the material is 6th - 5th cs., some MBA, 4th c. and early Roman. 1 small pyramidal loomweight, h. 0.043, base w. 0.031, late 5th c. 1 round loomweight with 2 holes, d. 0.069, Classical. Undiagnostic sherds, coarse wares of all periods except prehistoric.

23.02. *Karia, Parameria.* Approx. 100 m. N of church of Ay. Constantinos. Site on summit at 400 m. el. on N face of slope. Dense scatter of fine 6th and 5th c. sherds, radius approx. 15 m.

23.03. *Karia, Parameria.* S of the church of Ay. Constantinos, an old quarry site which has been built over with various farm buildings and complex enclosure walls for penning animals. One very weathered LBA pithos frag. with rope pattern decoration.

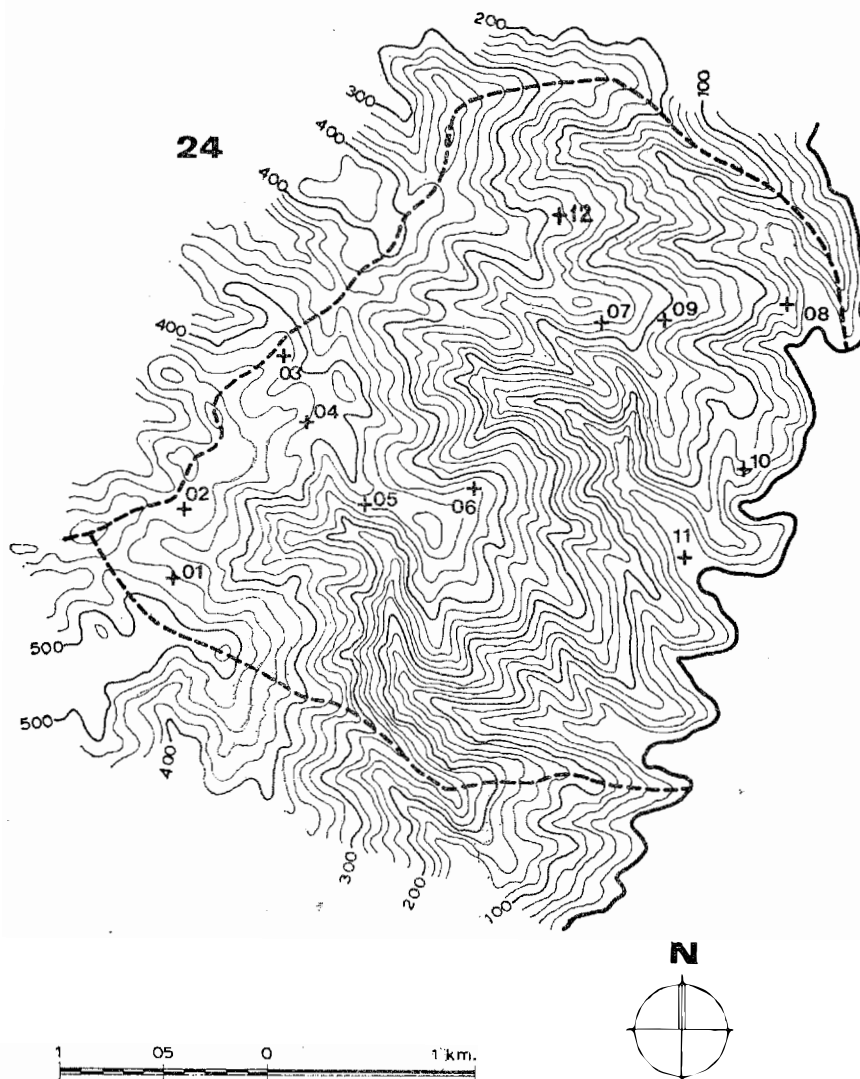
23.04. *Episkopi.* Small hill in the center of a basin situated S of Ay. Anna and SE of the hill of the windmills beyond Chora. Site of a Classical temple incorporated into a later church and monastery. Sherds are Classical, Hellenistic and late Roman. See Psyllas (1920 : 194 - 197 and 311).

23.05. *Area between Episkopi and Ay. Anna, E of Chora.* Church of Ay. Antonios, beyond the easternmost windmill and on the E side of the Chora - Kato-meria road. A foot-path leads to the SE and the Sotira area below the last windmill. Roman sherds near the foot-path below the church.

REGION 24 (*ills. 2, 10*)

24.01. *Kastanies.* Small spur E of the Parameria road and N of the road to Ellinika. Quarry at lowest point, below a spring, now dry. Above spring, an ancient wall can be traced for approx. 20 m.; the lower course is a retaining wall, and the upper forms the N wall of a building (probably a temple) of which

there are other traces. Dense scatter of sherds (Classical, Hellenistic and predominantly Roman). Traces of smaller walls. Roof tiles with slight curvature and bricks. Psyllas refers to "ruins of an ancient village, white Parian stone and elements of an ancient shrine,, at this site (Psyllas 1920 : 309, site 24). A temple and a small settlement site.



Ill. 10. Map of Region 24. Contours are at 20 m. intervals.

24.02. *Parameria*. At the beginning of the road to Parameria near a small wooded hill on the SE side. Sparse sherd scatter (Neolithic, Archaic—7th c.), some undiagnostic coarse wares.

24.03. *Agios Nikolaos, Parameria.* Church located on the NE side of a ridge just below the watershed. In front of the church is a small marble base decorated with a cymation above and below, with the lower portion of a relief from the same piece of stone. Probably Roman. To the NW the rock is cut vertically and has a small niche of the type used for ancient votive offerings. Below is a sparse sherd scatter, including black glazed wares. A small country shrine.

24.04. *Parameria.* North of the house of I. Mesare and near the curve of a ridge turning from the N to the E. On the slope just below the crest and overlooking the ravine of Psathi. Walls of house include dressed stones from a Hellenistic fortification. This structure must have been located on the same site as the house.

Sparse sherd scatter of coarse wares, domestic wares and storage vessels. Hellenistic and possibly Classical. Frag. of the thigh of a marble statue, approx. life-size, possibly transported from elsewhere. This must have been a small fortification site serving the neighborhood, which is confirmed by a sporadic sherd scatter 300 - 400 m. along the S slope of the crest toward the E; coarse wares and domestic wares, Classical and possibly Hellenistic.

24.05. *Elliniko, Parameria.* On the same ridge to the E of the previous sites and below them on a very abrupt slope descending to the ravine and with a limited view is a building (ill. 13) pres. to the roof. It is built of very large stones, max. 1. 3.50 m. This is an ancient structure which was altered for use as a goat stable. In front of the structure and below it, are Classical and Hellenistic sherds. Noteworthy is a black glazed frag. incised with the letters ΝΘ. A country shrine.

24.06. *Tria Maderika.* On the same crest is a fountain on the N side farther E. Near the fountain frag. of an early Archaic pithos with circle and line motif. Approx. 50 m. above is a limited but dense sherd scatter including Archaic, Classical and Hellenistic material and a frag. of an early Archaic pithos w. stamped decoration. Frag. of a crucible and frag. of iron or other metal. Over a wider area up to the watershed, sporadic coarse wares, Classical and Hellenistic, and possibly Archaic. Possibly traces of small buildings, which may indicate sparse habitation; the area with the denser sherd scatter may be the site of a metallurgical installation. Psyllas mentions "ruins of an ancient village,, at Tria Maderika (1920 : 311, site 42).

24.07. *Christos, Parameria.* Saddle to the S of a hill immediately below the summit covering an area of 1.5 - 2000 m². Dense sherd scatter. Considerable quantities of obsidian tools and waste. Traces of small structures. Frags. clay with straw imprints, possibly from prehistoric wattle and daub structures. Sherds include Neolithic (?), EBA (?), MBA and LBA. In a restricted area, some black glazed Classical sherds and a pyramidal loomweight. Some frags. of Hellenistic and Roman storage vessels. This site is located on the summit above one of the two ravines which join to form the ravine of Sykamia below. There is a water source on the N side at the base of the hill. On the crest of the hill and above the settlement are traces suggesting a prehistoric cemetery. This is a very important prehistoric settlement, while the black glazed sherds may indicate the presence of a later shrine. One or more houses must have been located here in the Hellenistic, Roman and possibly Classical periods,

24.08. *Psili Ammos*. Classical site on summit between bays of Kalidonichi and Psili Ammos. Sparse sherd scatter, black glazed sherds. Underwater at about 5 m. from the shore is the upper part of a large Classical amphora with a potter's mark or grafitto. Probably fallen from the summit; no traces of a shipwreck.

24.09. *Dardiza*. Slope of a spur N of a small ravine which ends at Psili Ammos. Location of an abandoned stable. Dense sherd scatter, mostly undiagnostic coarse wares, but some LBA. Possibly a small farming and animal breeding installation.

24.10. *Vatala*. S end of spur with low double summit. At the summit, ruins of a small circular tower, pseudo-isodomic (the side joins are not vertical). Ext. d. 7.40 m., max. pres. h. 1.30 m. Sherds include Classical and Hellenistic, and also some MBA and LBA. At the foot of the hill and relatively close to the shore is a well. In prehistoric times it was probably a small farm site and possibly a lookout site continuing in use up to recent times. Psyllas refers to the ruins of an ancient structure and a round tower (1920 : 309, site 21).

24.11. *Sykamia*. In the valley, relatively close to the shore. Some prehistoric sherds and an obsidian tool. Possibly washed down by the rain from site 24.07.

24.12. *Parameria, Church of Sts. George and John* (16th C.). Obsidian flakes on S side below church. No diagnostic sherds except late medieval glazed wares.

REGIONS 31, 33 (ills. 2, 11)

31.01. *Profitis Ilias area*. "*Chalasti ekklesia*,". Near the Chora - Katomeria road to the NE of the summit of Profitis Ilias. A shrine located near the road is dedicated to Ay. Ioannis Prodromos. To the NW of the shrine is the ruin of an apsidal church, partially below present ground level. The structure is corbel-vaulted and constructed in typically Byzantine style. Some of the stone ceiling beams (all intact) are dressed stones which appear to be looted from an ancient structure. The apse incorporates pieces of Parian marble. A stone with a dedication to Apollo is built into a niche on the N side of the apse. These stones must have come from a Classical temple on this site, since it is unlikely that they were brought down from the summit of Profitis Ilias. The fields around and to the S of the church on the other side of the foot-path are full of sherds, mostly undiagnostic coarse wares; some 5th and 4th c.

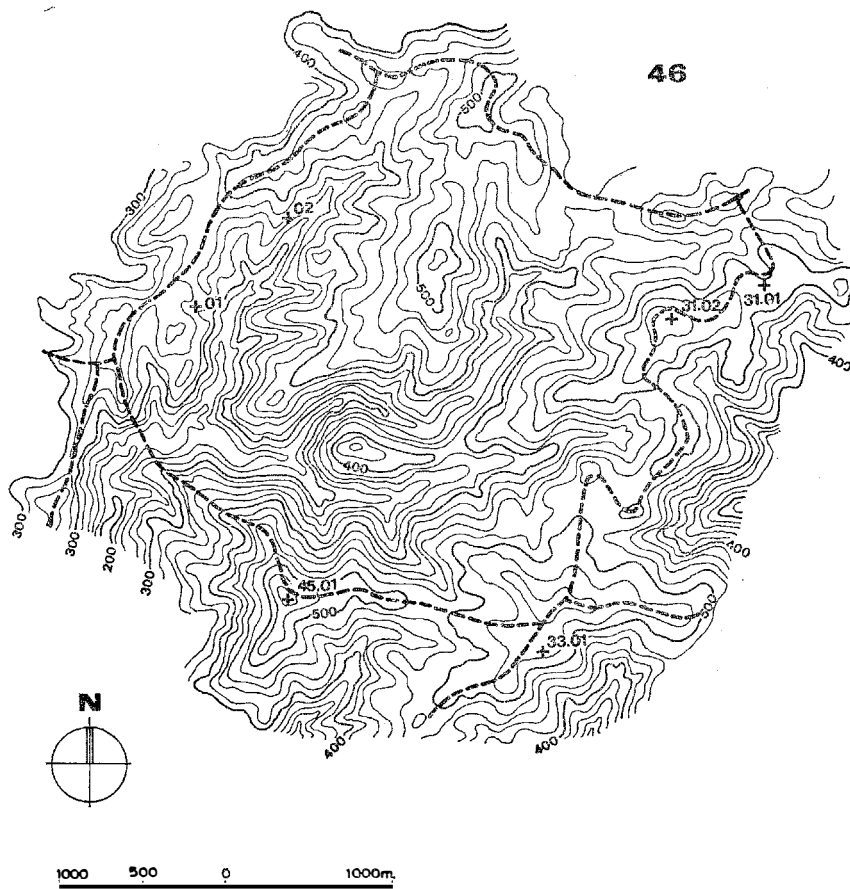
31.02. *Profitis Ilias, summit at 561 m. el.* Classical stones incorporated into church walls and dependent structures. Temple to Zeus. Great quantity of sherds in the church yard and surrounding areas of the summit, mostly Classical. Site covers the entire summit, which is the highest peak on the island.

33.01. *Ellinika*¹.

1. Welter 92 - 93.

REGION 44 (ills, 2, 12)

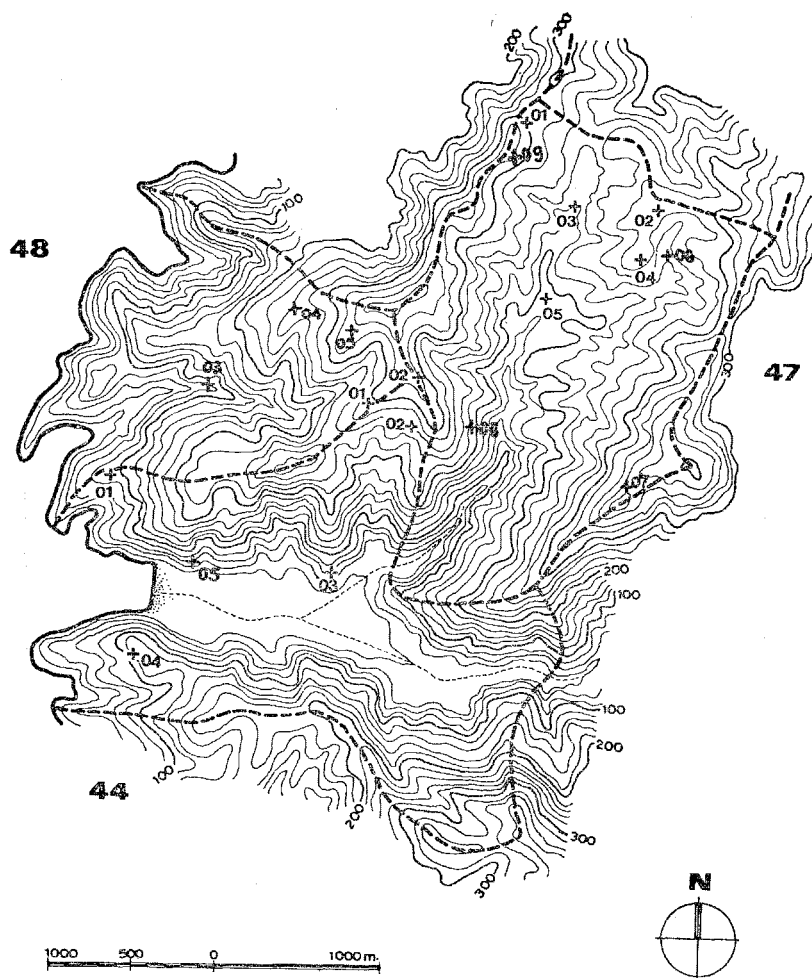
44.01. *Vroskopo, S side.* Crest of promontory on N side of Pisses bay, overlooking Pisses and Vroskopo. Traces of a tower. Few Classical sherds and obsidian waste. Possibly a lookout site. Psyllas mentions a tower and other structures at Pygania which may correspond to this site (1920 : 301).



Ill, 11. Map of Region 46 with parts of Regions 31, 33 and 45. Contours are at 20 m. intervals.

44.02. *Pisses, Psaropirgos, Tourkos area.* Slope between Ay. Marina and Pisses overlooking Vroskopo. The summit is called Tourkos. At the end of the road from Ay. Marina, a footpath leads to the NW. Midway between the road and the church of Ay. Giorgios on the crest of the hill to the NW are the remains of a Hellenistic tower. A modern house, now abandoned, and its dependent stru-

ctures, which are still used as stables is built over the base of the tower. Many of the stones of the tower are incorporated in the wall of the house. The stables and pig sties on the S side of the house are built directly into the S wall of the tower, which is partially preserved here. Sherd material all around this house and especially dense around houses with threshing floor on opposite side of foot-path SW of the tower. Hellenistic. Mentioned by Psyllas (1920 : 302, site 9) and Welter (1954 : 88, ill. 24, site 16).



Ill. 12. Map of Regions 44, 47 and 48. Contours are at 20 m. intervals.

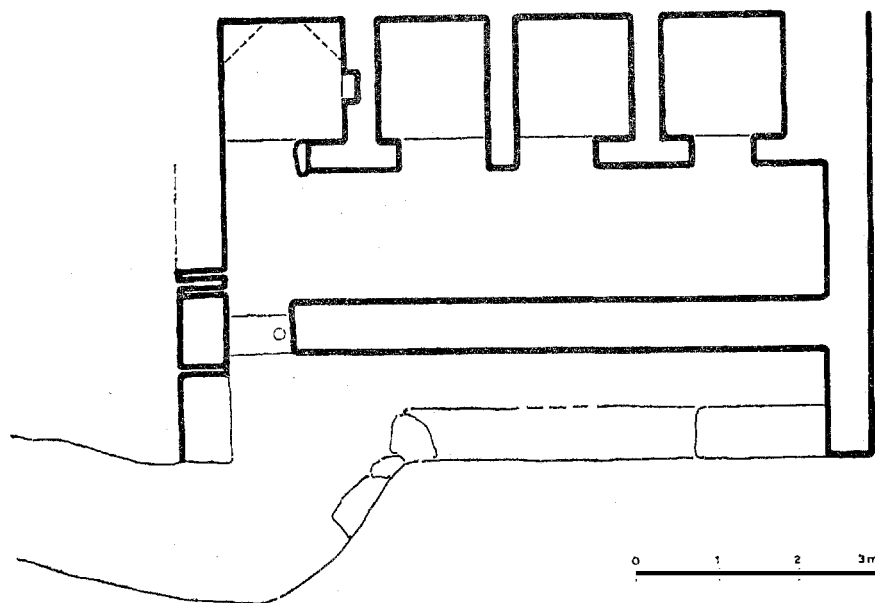
44.03. *Pisses Valley*. Low hill with rounded summit on N side of valley approx. 200 m. W of permanent water source and path leading to Ay. Marina to the N. Overlooks the valley of Pisses up to the ravine of Ay. Anargiroi on the E

and the bay on the W. Sherds (LBA, 5th c. and Roman) cover the entire hill. This is undoubtedly a small settlement site consisting of several buildings. Arable land in the Pisses valley and the slopes on the N side of the valley. Water source nearby to the E.

44.04. *Poiessa, Acropolis*¹.

44.05. *Pisses*. N. side of bay approx. 100 m. from the beach and at el. 20 m. Well on valley floor and modern houses nearby. Hillside above well and ground well covered with dense sherd scatter. On the hillside, the bed-rock is carved out to form platforms for bases of structures. The site extends at least 30 m. up the hill and 40 m. horizontally. Classical, Hellenistic and Roman sherds.

ILL 13. BUILDING AT ELLINIKO, PARAMERIA : PLAN



REGION 45 (*ills. 2, II*)

45.01. *Ay. Panteleimon*. The highest summit of the island after Profitis Ilias at 547 m. el. The summit has a topographic marker and forms a round pla-

1. Brönsted (*supra* n. 11) 27; Ross (*supra* n. 11) 133; Bursian (*supra* n. 11) 473; Savignoni (*supra* n. 11) 221; P. Graindor, *MB* 7 (1903) 291; Graindor 1914 (*supra* n. 12) 62; Kirsten (*supra* n. 15) 1270 - 1276; Maier (*supra* n. 11) 11 - 13, 15 - 16.

teau approx. 200 m. d. To the SW is a lower summit, the site of the monastery of Ay. Panteleimon and a tower which may be Venetian. On the higher site are the ruins of a small church. The plateau is encircled by ruins of a fortification wall 1.40 - 1.70 m. thick. Max. pres. h. on the N side approx. 1.50 m. It is built mostly with small stones, but includes some much larger stones. It has two faces, which are not parallel. Several perpendicular stones join with both faces. Much of the material from the destruction of this wall has accumulated to the outside. The perimeter of the wall measures approx. 200 m. and includes straight as well as some curved portions and in some places is built directly on top of rocks which form a natural fortification. There is an entry on the SE side. At present a small footpath leads to this spot, following a small crest from the saddle joining this summit with the monastery. The left jamb of the entrance, viewed from the exterior, is significantly wider than the right. Also visible is a long stone which could have been a threshold or a step. To the E are the traces of a horseshoe-shaped tower, which is 1.20 m. x 2.00 m. wide at the point where it joins the wall. Other such towers may be located at the corners; probable traces of at least one more to the S of the first.

The ruined church is closer to the W side. On the S side of the church there seems to be a deliberate grading. Adjacent to the E side of the fortification wall on the interior and 4 - 5 m. N of the tower are traces of a circular structure, possibly a cistern. The rest of the area must have contained structures, as shown by cuttings in the rock and small walls. Also visible N of the church are two sides of a four-sided storage bin of upright stones; there are ruins of what may have been a second bin.

Dense sherd scatter and frags. of obsidian throughout the enclosure. Outside the enclosure traces of one wall, very few sherds and frags. of an obsidian tool on the path leading to the entrance. Also on the exterior and to the S is a small semi-ruined structure which resembles a common type of Cycladic prehistoric built tomb, covered with stones and having a small "dromos". Traces of a second one next to it. The sherds are generally very worn: majority LBA, some MBA; few Classical and very few Roman.

REGION 46 (ills. 2, 11)

46.01. *Tou Photi*. On E side of road from Chora to Pisses and E of the church of Zoodochos Pigi. Base of a small Hellenistic tower partially pres. in the walls of a more recent structure now used as a stable. Hellenistic (Welter 1954: 88, ill. 24, tower 9; not located correctly on his map).

46.02. *Church of Ay. Apostoli*. S of Petrovouni on a small spur overlooking the upper reaches of the Kremmidi ravine. A foot-path leads to the church S from the hill of the windmills. The spur overlooks the valley leading to Ay. Anargyros Makrinous. Dense sherd scatter in the area around the church. Very worn sherds, undiagnostic for the most part, some late Roman. Flat roof tiles. May be the location of a shrine. Psyllas mentions architectural decorations belonging to a temple (1920: 311, site 44).

REGION 47 (ills. 2, 12)

47.01. *Ay. Nikolaos*. Church on the crestline overlooking Mavrambeli on the W and upper Milopotamos and Sklavonikola on the E. Remains of at least one structure in fields S of the church at 280 m. el. Sherds include some poss. LBA; mainly Classical and Hellenistic. May be a habitation or a tower site.

47.02. *To the NE of the tower (47.04)* are the remains of a 13th c. monastery (Psyllas 1920 : 198). One wall of a church with part of the curvature of the vault pres. In this area the sherds include late Roman combed ware, Byzantine and Medieval¹.

47.03. *Ay. Marina, Lakkos*. The stream bed between Ay. Marina and Flea serves as a foot-path between the two sites for some of its course. Approx. 600 m. N of Ay. Marina is a built well with a curved stairway on the E side of the path and the stream bed. This is a permanent water source. Looks like a LBA construction. No diagnostic sherds.

47.04. *Panachra*. Hellenistic tower situated on a spur at 100 m. el. N of Ay. Marina, SE of Ay. Nikolaos site (47.01) and S of the Sklavonikola region (47.04). Area of the tower is accessible by foot-paths from Chora and Ay. Marina along the crest. Large Hellenistic tower, approx. 12 × 12 m. at the base, lower courses in excellent condition; walls pres. to approx. 5 m. in some places. Entrance system pres. on S. Enclosed court on E. Exterior enclosure walls indicate that there were other, smaller structures associated with the tower. Modern structures on the W side built against the tower wall were once habitations, now used as stables. The tower commands a substantial area of arable land with gentle slopes, especially suited for vineyards and protected from the N wind. Dense sherd scatter around the tower. To the SE are many roof tiles in the field. To the W and N, sherds are mostly 4th c. and Hellenistic; terra sigillata of excellent quality, Roman, late 1st c.

47.05. *Ay. Marina*².

47.06. *Lakkos tis Panachras*. Spring and well in a small ravine below Panachra tower (47.04). Some Hellenistic and Byzantine sherds, badly worn and fragmented. Must have been a water source for the tower site and the later church and surroundings.

47.07. *Playia, Asprochorti*. Crest of ridge on the NE side of the valley of Pisses, of the abandoned mine, commanding views of Pisses to the SW Ay. Anargiros, Kaloyerado ravines to the SE. Site at el. 360 m. on a small saddle between two hillocks. A large, well, built rectangular foundation of dressed schist stones extends to the wall flanking the foot-path where it is preserved to approx. 1 m. h. Structure approx. 12 × 10 m., obscured by later building and fill. Traces of other foundations under and around a modern farmhouse on the site. Roof tiles. Sparse sherd scatter. Some Roman, Byzantine and medieval. One obsidian core.

1. Welter 92; E. Kirsten *RE* 21 (1951) Nachträge 1272; see Catalogue under sites 47.02, 47.04; Thomopoulos (supra n. 21) 128.

2. Brönsted (supra n. 11) 27; Ross (supra n. 11) 241; Koepf, *AA* (1890) 140; Savignoni (supra n. 11) 228 - 231; Welter 88 - 92.

The structure is most certainly ancient judging by the construction and the finishing of the stones (Psyllas 1920 : 302, site 10).

47.08. *Psaropirgos, Lakkos*. Spring and well with stairs descending into small underground cistern chamber. Located on the hillside at approx. 200 m. el. Sherds outside of well include Hellenistic amphora frags., badly worn.

47.09. *Ayia Marina - Ayios Nikolaos area, Pigadaki*. Near an abandoned farm house on the slope below Ayios Nikolaos at approx. 220 m. el. Spring and well in the side of the hill with stairs descending at an angle into a large, complex, dug out underground cistern chamber. A major water source for the area. Sherds outside of the well range from Hellenistic, Roman to modern.

REGION 48 (ills. 2, 12)

48.01. *Church of Ay. Giorgios, Psaropirgos*. Crest of the hill at 300 m. overlooking Pisses, Psaropirgos, Vroskopo. View to the NE as far as the summit of Paouras at Otzias. Dense scatter of sherds around the church and on the summit of a small hill to the SW. Traces of a structure on the hill. Frags. of Paleo-Christian columns near the church and on the hill. Sherds are Classical, some with black glaze. Poss. a habitation site and shrine.

48.02. *Crest of a hill, also at 300 m. el., SE of the church of Ay. Giorgios*. Views of Psaropirgos, Sklavonikola and Ayia Marina. Terraces and small plateaus of arable land in this region. The fields have regular slopes. Ancient terrace walls. Remains of a large rectangular foundation. Traces of smaller structures. Dense sherd scatter around the buildings, mostly Archaic. Frags. of 6th c. black glazed ware. Possibly a farm site of the Archaic period. May be related to site 48.01. Mounds of stones on the slope to the W of the foundation and due E above Psaropirgos tower (44.02). Traces of several ancient structures here near a modern cistern. Very dense sherd scatter over 50 m. d., mostly Classical and Hellenistic. Many amphora handles.

48.03. *Vroskopos, Perivolia*. On N side of the ravine, ca. 400 - 500 m. from the sea, permanent water source with a spring and cistern. To the W is a large wall, massive construction of blue-gray marble blocks; a foundation or a terrace wall but not a retaining wall running approx. 4 - 5 m. E to W along the face of a modern terrace wall. Very worn and fragmented sherds in area of wall, some Classical, mostly undiagnostic.

48.04. *Vroskopos*. Site 500 m. from Vroskopo bay at el. 260 m., NW of Ay. Giorgios (48.01). Three abandoned modern farm houses and outbuildings. Traces of earlier, more massive foundation walls around houses (not datable). Wine or olive press cut into bedrock, also undatable but unusual. Site is divided by the foot-path ascending from Vroskopo Perivolia and extends ca. 250 m. to the right and left of the path. Densest sherd scatter on the SE side. Sherds very fragmentary and worn. Classical, Hellenistic, Roman. Obsidian waste.

48.05. *Paouras*. Hilltop overlooking Vroskopo area at 300 m. el. on S side of Paouras, NW of Ay. Giorgios (48.01) near rock outcroppings (called Paouria). Very light sherd scatter on SE side of hill over a very small area, ca. 25 m. d. No traces of structures. A few undiagnostic BA coarse ware sherds, Obsidian waste. Frags. of Hellenistic and Roman combed ware.

TABLE INDICATING PERIODS OF OCCUPATION AT EACH SITE

SITE	NL	EBA	MBA	LBA	AR	CL	HEL	RO
11.01		?	?	?		x		
11.02	x			x				
11.03		?	?	?		x	x	
11.04							?	x
11.05						x	x	x
11.06		?	?	?				
12.01							x	
12.02		x		?		x	x	
12.03				x				
12.04							x	
12.05					x	x		
12.06				x				
12.07				?	x	x	x	x
12.08					?		x	
13.01						x		
13.02								
13.03								x
13.04							x	x
13.05								x
13.05				?		x	x	
13.07					x			x
14.01							x	
14.02						x	x	x
14.03						x	x	
14.04		x		?	x	x	x	x
14.05							x	
14.06						x	x	
14.07						?		x
14.08						x	x	x
14.09		?	?	?		x	x	
14.10		?	?	?		x	x	x
14.11		?	?	?		?	?	
14.12						?	?	
14.13				x	x		x	
14.14						x		
15.01			?	x			x	x
15.02		x	x	x	x	x		x
15.03		x	x	x				
15.04		?	x	?				
15.05	x							
15.06				x				
15.07				x	x	x		x
15.08								x
15.09				x		x		x

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SITE	NL	EBA	MBA	LBA	AR	CL	HEL	RO
15.10				x		x		
15.11		?	?	?				
15.12				x	x	x		
15.13				x	x	x	x	x
15.14		?	?	?		x		
15.15						x		
15.16		x						
15.17							x	x
15.18								x
15.19						x	x	
15.20						x		
15.21						x		
15.22				x		x	x	
15.23								x
15.24				x		x	x	x
15.25		?	?	?		x	x	
15.26							x	
15.27		?	?	?				
15.28					x	x		
16.01				x				x
16.02	x							x
16.03				x	x	x		
16.04				x				
16.05				x		x		x
16.06				x	x	x	x	x
16.07						x		x
16.08		?	?	?		x		
16.09					x	x		x
16.10					x			
16.11					?	x	?	x
16.12						x		
16.13						x		
16.14							?	x
16.15						x		
17.01								
17.02				x	x			
17.03						x	x	
17.04						x		
17.05	x					x		
17.06	x				x	x		
17.07							x	
17.08					x		x	
17.09				x	x	x		
17.10	?		x	x		x		
17.11		?	?	?				x
17.12					x	x		x

SITE	NL	EBA	MBA	LBA	AR	CL	HEL	RO
17.13					x		x	x
17.14					x	x		
17.15		?	?	?	x			x
18.01						x		
18.02					x	x	x	x
18.03								
18.04							x	
18.05					x	x	x	x
18.06					x			
18.07							x	
18.08					x	x		
21.01					x	x		
21.02					x			
22.01	x							
22.02	x			x	x	x		
22.03		x	x	x	x	x		
22.04		?	?	?	x	x	x	x
23.01			x		x	x	x	x
23.02					x	x		
23.03				x				
23.04						x	x	x
23.05								x
24.01					x	x	x	x
24.02	x				x			
24.03						x	x	x
24.04						x	x	
24.05						x	x	
24.06					x	x	x	
24.07	?	?	x	x		x	x	x
24.08						x		
24.09				x				
24.10			x	x		x	x	
24.11								
24.12		?	?	?				
31.01						x		
31.02						x		
33.01					x	x	x	
44.01		?	?	?		x		
44.02							x	
44.03				x		x		x
44.04					x	x	x	x
45.01			x	x		x		
46.01							x	
46.02								x
47.01				?		x	x	

SITE	NL	EBA	MBA	LBA	AR	CL	HEL	RO
47.02								x
47.03				?				
47.04							xx	
47.05								
47.06							x	
47.07								
47.08								
47.09								
48.01						x		
48.02					x	x	x	
48.03						x		x
48.04		?	?	?		x	x	
48.05		?	?	?			x	x

THE TABLE AND DIAGRAM (ill. 14)

The table summarizes the information contained in the catalogue; it presents the number of sites and the dates for which occupation is attested. Sites which cannot be securely dated are indicated with a question mark. If a site yielded obsidian but no diagnostic sherds, it is assigned to the Bronze Age as "probable". Obsidian may occur after the Bronze Age and may equally indicate Neolithic occupation, but our designation of "Neolithic" is based on the presence of identifiable Neolithic pottery. The Geometric period has been omitted from the Table and the Chronological Diagram (ill. 14) because only Geometric sites have been securely identified (cat. nos. 14.04, 15.07, 15.12, 16.05, 16.09, 17.10 and 21.02). We believe that other sites existed in the Geometric period, although we did not find incontrovertible proof for such dating, and therefore statements based on absolute numbers might be misleading.

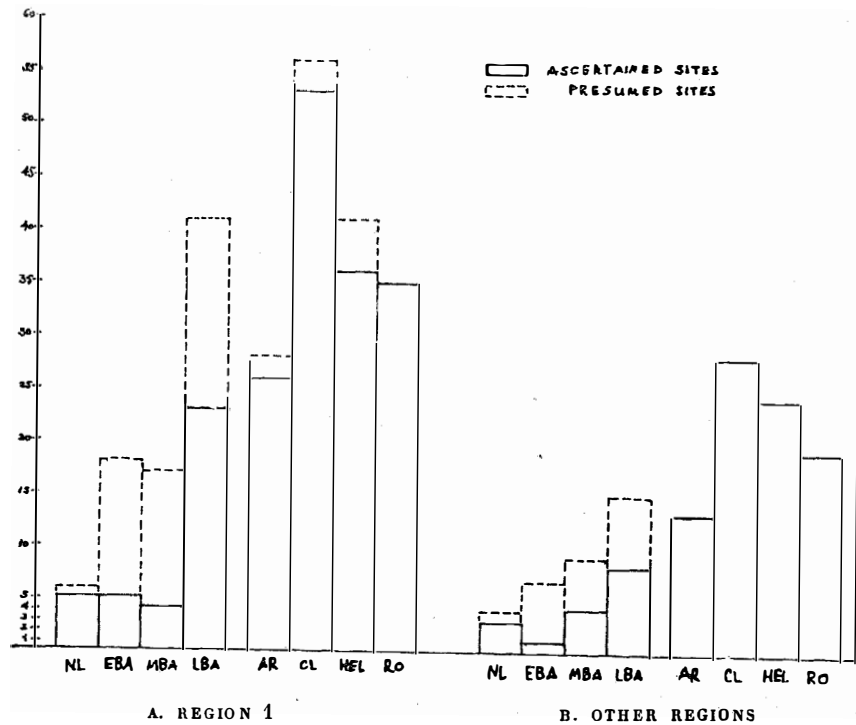
Each column of the table gives a synchronic picture of the occupation of the land, in terms of the sites known to us at present. It is certain that some of the sites assigned to one period did not exist completely contemporaneously, but the most reasonable diachronic summation which we can make without actually excavating can be derived from the comparison of a variety of synchronous aspects. Ill. 14 gives a numerical scale of the sites. On the left side are sites in region 1, ascertained and presumed, for each of the eight periods. Sites in other regions are plotted on the right side.

For the historical periods a comparison of the two diagrams suggests that the graph is valid; the profile is roughly the same for both. The quantitative sequence for these four periods in region 1 is 26 (28) - 53 (56) - 36 (41) - 35 (39) and for the other regions, 13 - 28 - 24 - 19. The major work in the other regions of the island remains to be done. But the similarity becomes clearer even by a conservative doubling of the figures of the second diagram, thus arriving at 26 - 56 - 48 - 38. We may therefore presume that the graph showing the relative number of sites during the four historical periods is correct.

C O N C L U S I O N S

Although the other regions are at present represented by fewer sites than is region 1, some correspondences are clear. The small number of Neolithic through Middle Bronze Age sites discourages statistical analysis. Taking into account the number of presumed sites (some on the basis simply of the presence of obsidian), the similarity

Ill. 14. CHRONOLOGICAL DIAGRAM OF KNOWN SITES



between the two diagrams lies in the significant increase of sites in the LBA. For the ascertained sites of region 1, the numerical relationship is 4 : 23, whereas it is 4 : 8 for the others. The diagrams approximate each other more if we include the presumed sites, thus yielding 18 : 41 and 9 : 15 respectively. For the three earlier periods comparison is virtually useless: the addition of just two more EBA sites would reverse the conclusions. The number of ascertained prehistoric sites remains about the same through the Neolithic, EBA and MBA periods and increases dramatically in the LBA. This change in at least the frequency of sites may be linked with increased trade among Crete, the islands, and the Greek mainland. If the significant increase in sites seen in region 1 during the LBA is not reflected in the other regions, then we may have an indication of the main commercial center of the island.

The statistics for historical periods can be explained by documentary sources. It is known that the island prospered in the Archaic times and suffered a decline in the Classical period¹. The greater number of Classical sites may, therefore, be indicative of a more dispersed pattern of settlement, one in which farmsteading and small-scale agriculture were the more characteristic economic patterns. A return to rural living may have been stimulated by the Athenian limitations on the export and commercial exploitation of iron oxide (*miltos*)², and by the relatively peaceful maritime situation brought about by the suppression of piracy.

The reduction in the number of sites in the Hellenistic period may well indicate a more unsettled environment. Instability is also reflected in the construction of a number of inland towers, of which only a few have a view of the coast, and which seem to have provided refuge for the surrounding inhabitants. A further reason for the decrease in sites at this time may be the general population drain in Greece, especially in poorer areas, as a result of increased possibilities for settlement and prosperity in the East. Thus, fewer Hellenistic sites may indicate a smaller population, yet the increase of sites in the Classical period does not in any way presuppose an increase in population. Political insecurity may account for the further reduction of sites in the Roman period. It is also probable that at least some of the farms of

1. For the history of the island see Bürchner (*supra* n. 1) 188 - 189.

2. *I. G.*, II. 546.

this period were inhabited by slaves. Small settlements of this sort are more difficult to identify because they leave fewer recognizable remains.

The major settlements were not initially in plains but on the slopes of the hills above; farmsteads and small communities follow this same pattern. Of prime importance is the fact that until very recent times arable land was not wasted. In fact, any surface that could have been used for cultivation was retraced and supported by retaining walls, representing a tremendous and continual investment of time and labour. Choice of location can vary from one period to another. For example, prehistoric sites at Akrotiri Otzias tend to be located on the southern slopes while sites of the historic periods are on the crest. Habitation sites are generally near water and on the slopes. Sites near ready building materials are obviously preferred, as are those in secure locations, usually high places with vistas. Heights offer other advantages. Shrines can be located on sites with spectacular views and geological formations which add to the dramatic setting; sometimes their location is determined by water sources or signs of earlier habitation. Fortified sites are often placed on peaks above or near arable land, with views of major approaches by land or sea.

It is premature to make any strict interpretations of the settlement patterns on Kea. The data accumulated so far raise many important questions, which will be more easily answered when our survey is complete.