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SETTLEMENT IN THE MANI PENINSULA:

A STUDY IN HISTORICAL GEOGRAPHY

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1974

Ὁ τόπος μας εἶναι κλειστός, ὅλο βουνὰ
Ποὺ ἔχουν σκεπὴ τὸ χαμηλὸ οὐρανὸ μέρα καὶ νύχτα.
Δὲν ἔχουμε ποτάμια δὲν ἔχουμε πηγάδια δὲν ἔχουμε πηγές,
μονάχα λίγες στέρνες, ἄδειες κι' αὐτές, ποὺ ἠχοῦν καὶ ποὺ
τὶς προσκυνοῦμε.

Γιῶργος Σεφέρης
Μυθιστόρημα Ι'

Our country is a shut-in place, all mountains
And the mountains roofed by a low sky, day and night,
We have no rivers, we have no wells, we have no fountains,
Only some cisterns, empty; they ring and are to us
Objects of worship.

George Seferis
Mythistórema 10
(trans.Rex Warner)

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FACULTY OF ARTS

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SETTLEMENT IN THE MANI PENINSULA : A STUDY IN HISTORICAL GEOGRAPHY

By

John Malcolm Wagstaff

A review of the literature on Greek rural settlements reveals the general lack of historico-geographical studies tracing the evolution of settlement patterns in any part of the country. Demographic studies, however, suggest that over time the greatest densities of population have alternated between the lowlands and the physically difficult, often highland, parts of the country. The current phase is one of retreat from the difficult regions and relocation in the lowlands. This thesis examines the evolution of settlement patterns between c.3000 B.C. and c. A.D. 1830 in one of the regions (the Máni) associated with the opposite phase when population is alleged to have retreated from the lowlands. Settlement patterns have been reconstructed for six time-horizons in the period, their temporal position being determined by the availability of source material. Investigation of the sequence of reconstructions reveals a major change in settlement patterns between the sixth and thirteenth centuries A.D. Developments preceding and succeeding the break resulted from the almost organic growth in the number of settlements and spread effects. Examination of the socio-economic history of the region allows explanation to be advanced for the various elements of change and stability, colonisation and spread, apparent over time. Massive emigration is rejected as a causal factor. Particular use is made of catastrophe theory to simulate the way in which a radical change in settlement patterns could result from the operation of forces internal to the region. Finally, a number of hypotheses are advanced for testing in subsequent work.

Preface

The origins of my work on the Máni go back to a fascination generated by P. L. Fermor's book, Mani: Travels in the Southern Peloponnese, published in 1958. Although I now disagree with Fermor on many points, his book remains a wonderful evocation of a strange, harsh and dreadful, but attractive region. My imagination was seized and I decided to divert my growing interest in Greek rural settlements, already assisted by long vacations in the country financed by the Leverhulme Trust and the Ford (Dagenham) Trust, towards the Máni. In short, the towered Maniat settlements drew me; I wanted to understand their characteristics and their evolution. The opportunity was provided by studentships from the Greek Ministry of Education and the University of Liverpool, which allowed me to spend the academic year 1962-63 in Greece, mainly in the Máni itself. In presenting the fruits of my labours to date, I should like to record my gratitude to these bodies. My thanks are also due to the North Atlantic Treaty Organisation for a fellowship, which allowed me to study settlement in the neighbouring 'Elos Plain in 1967, and to the Royal Society for a grant from the 20th International Geographical Congress Fund which financed a study of deserted settlements in the Máni during 1970.

Many people have assisted my work in Greece over the years. In recording my debt and offering my thanks, I am conscious that not everyone can be named personally; I must apologise to those who are not mentioned and ask indulgence and forgiveness.

My gratitude is due to the University of Athens, where I was an auditor in the Faculty of Science during 1962-63, and to Professor P. Psarianos, Head of the Department of Physical Geography, whose nominal pupil I became. My associations with the Gennadius Library and the British School of Archaeology have always been pleasant and fruitful, and I am grateful to their staff for assistance and indulgence. I also record my debt to the Greek National Library. Special thanks must be extended to Mr. A. A. Pallis, who has always taken a kindly interest in my work and spared time to share his great knowledge of Greek affairs with me.

Amongst numerous officials in the Greek administration my thanks in connection with this study are due especially to Mr. P. Couvelis, formerly Director General of the National Statistical Service of Greece, for ordering the compilation of a Maniat abstract from the censuses of 1920-1951, and to Mr. S. Scandalis, Nomark of Lakonía in 1962-63, who facilitated my work in several ways.

Various expatiates working in Greece in 1962-63 helped with their time and experience; without them my faltering steps would have been even more difficult. I wish to thank them all, especially Dr. D. J. Burdon, then with F.A.O., Brigadier E.J.Snowball, military attaché, and Professor K. Thompson, of the University of California but seconded to the Centre of Economic Research.

In Britain, I wish to thank my colleagues at Durham and Southampton for bearing my Maniat fascination with indulgence and kindness. Special mention should be made of Professor J.H.Bird, who supervised my work at Southampton, Miss C. Delano Smith, (now at Nottingham university), Dr. V. B. Proudfoot (now at St. Andrews) and Dr. D. A. Pinder (Southampton) who between them have suffered most, but kindly discussed various aspects of my research and gave much practical assistance. I am also grateful to Professor S. A. Robertson, a Southampton mathematician, for clarification of "catastrophe theory". In addition, I owe a great deal to the patience of Mr. A. S. Burn and the Southampton Cartographic Unit, for they produced the maps and diagrams from my roughs, as well as to Mrs. Margaret Gamble for her care in producing the text.

Finally, it is a great pleasure to acknowledge my debt to my wife, who accompanied me on my first stay in the Máni, and to the Maniats themselves, especially the people of Yíthion, amongst whom we lived so happily. But for the friendship and hospitality shown by the Maniats, my work could scarcely have begun, let alone have reached its present state. The many-sided debt to my wife is incalculable.

Swaythling

St. Nikon the Penitent

1974

Note on Place Names

The transliteration of names from one language and script to another always presents problems. These are increased in historical studies, for different sources have employed different systems and not always with any degree of consistency. In the following chapters, the westernised forms of Greek settlement names current at a particular period have generally been used, without any attempt at further standardisation. This brings the reader closer to the sources and the period concerned; difficulties from period to period can often be resolved by speaking the names out loud. In Chapter 4 however, an effort has been made to standardise all place names, using the spelling of settlement names in the 1961 census and a slighly modified form of the transliteration scheme suggested by R. A. Dawkins (The Transliteration of Modern Greek, Annual of the British School at Athens, 15 (1908-09), pp. 214-22). The names of topographical features mentioned in this chapter are taken as standard and an attempt has been made to use these forms throughout. It should also be noted that in dealing with antiquity I have employed a standardised Latin form for place names, derived from H.Kiepert's Atlas Antiquus (12th ed., 1898), so that misleading identifications with later names can be avoided.

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CHAPTER 1 : THE RETREAT OF SETTLEMENT : A MAJOR PROBLEM IN GREEK HISTORICAL GEOGRAPHY

The Problem Stated

The majority of settlements in Greece today is found in the difficult parts of the country, the mountains and islands. The same districts have been losing population since at least the 1920s,[1] though in the case of congested districts like the Máni (Pelopónnisos), depopulation began earlier in the century. More than 70 per cent of the Greek population in 1961 lived at elevations below 200 metres, that is generally speaking in the mainland plains.[2] This change in population distribution is a complex phenomenon. It results partly from the destruction of settlements and the relocation of people which took place in the first half of the twentieth century, especially during the period 1941-50 when Greece was occupied by the Axis powers and Bulgaria and then became embroiled in a bitter civil war.[3] Change is partly explained by the settling of refugees on the plains of northern Greece between 1922 and 1926,[4] following the failure of "Greece's Anatolian Venture",[5] and it is also related to the phenomenal growth of Athens, itself stimulated by the influx of refugees.[6] However, changes in socio-economic conditions, initiated with the first phase of independence achieved by 1830, have been of basic importance. They have made the cultivated plains and the lowland towns, especially Greater Athens, very attractive to the mountaineers and islanders. Their living standards at home have steadily declined and become unacceptably low as the combined result of such developments as industrialisation, local population pressure and the ploughing up of winter grazing in the lowland. Relative security and independence are no longer countervailing benefits in conditions of relative internal peace and comprehensive administration from the centre. Accordingly, depopulation has produced many shrunken and deserted settlements.[7]

These relicts are still part of the total pattern of settlements in modern Greece which has its present form not so much because of the very

large proportions of the country composed of mountains and islands*, but as a result of deliberate movements of lowland population seeking refuge.[8] In antiquity most settlements in Greece were found fringing the lowland. The areas of the modern plains often appear to have been empty of occupation, an apparently remarkable position in view of their agricultural potential today, but one which may now be explained by their recent origin or modification as the result of alluviation during medieval times.[9] The peripheral but largely lowland distribution of settlements is believed to have continued, without serious modification on the national scale, down to the second half of the fourteenth century. As elsewhere in the Balkans after 1345, Turkish raids and the final Ottoman conquest of Greece were attended by devastation and slaughter which induced the surviving people to flee into less accessible districts, particularly the mountains.[10] One of the most important of the refuge districts is said to have been the mountainous and almost waterless peninsula of the Máni in the southern Peloponnisos.[11] It is further argued that here and in similar regions immigration led to some expansion of existing villages and the foundation of many new settlements in previously unoccupied territory, as the people were prevented from returning to the lowland by what are usually represented as the cruelties and capricious policies of an alien government. The corollary of settlement foundation would be changes in settlement patterns in the retreat districts.

Most studies of Greek settlement to date have ignored the questions raised by this familiar argument: whether desertion of the lowlands actually took place, when, where, for what reasons, and the effects which the refugee foundations had on existing settlement patterns, particularly in the retreat areas. A study by Antoniadis-Bibicou seems to be the only one so far published with some bearing on these questions.[12] Its methodology and conclusions are questionable, but it serves to highlight one aspect of the general problem. The author agrees that the period of the Turkish conquest in the fourteenth

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* Over 60 per cent of mainland Greece is mountainous and islands compose about 19 per cent of the total area of the country.

and fifteenth centuries constituted the major phase of settlement desertion before the destruction of the Greek War of Independence (1821-30). Her distribution maps, however, show that most of the allegedly deserted settlements were actually in mountainous districts. Verification is clearly needed. The majority of studies on Greek settlement have concentrated on different topics.[13] The most popular theme has been the recognition and classification of settlement forms or types, beginning with the work of Lord Rennell of Rodd[14] and Jovan Cvijić[15](Fig.1) but reaching its fullest and most recent elaboration in a study published by Beuermann (Table 1).[16]

Table 1 : Beuermann's Classification of Settlement Types

Temporary Settlements	Permanent Settlements
1. Winter Settlements 2. Nomadic Settlements	1. Clustered Villages compact, loose malachi[x], estate colonisation
	2. Street-and-Line Settlements
	3. Hamlets
	4. Isolated Farmsteads
	5. War or Defensive Settlements

x settlements which appear to have developed from the coalescence of originally separate groups of houses, each associated with a clan.

The morphological development of individual settlements, however, has been generally neglected, perhaps because of the difficulties posed by a lack of settlement plans from the past and the absence of detailed written surveys; period reconstructions can be attempted only by architectural and typological analysis. By contrast, some attention has been given to settlement pattern analysis. Generally, this has been conducted in terms

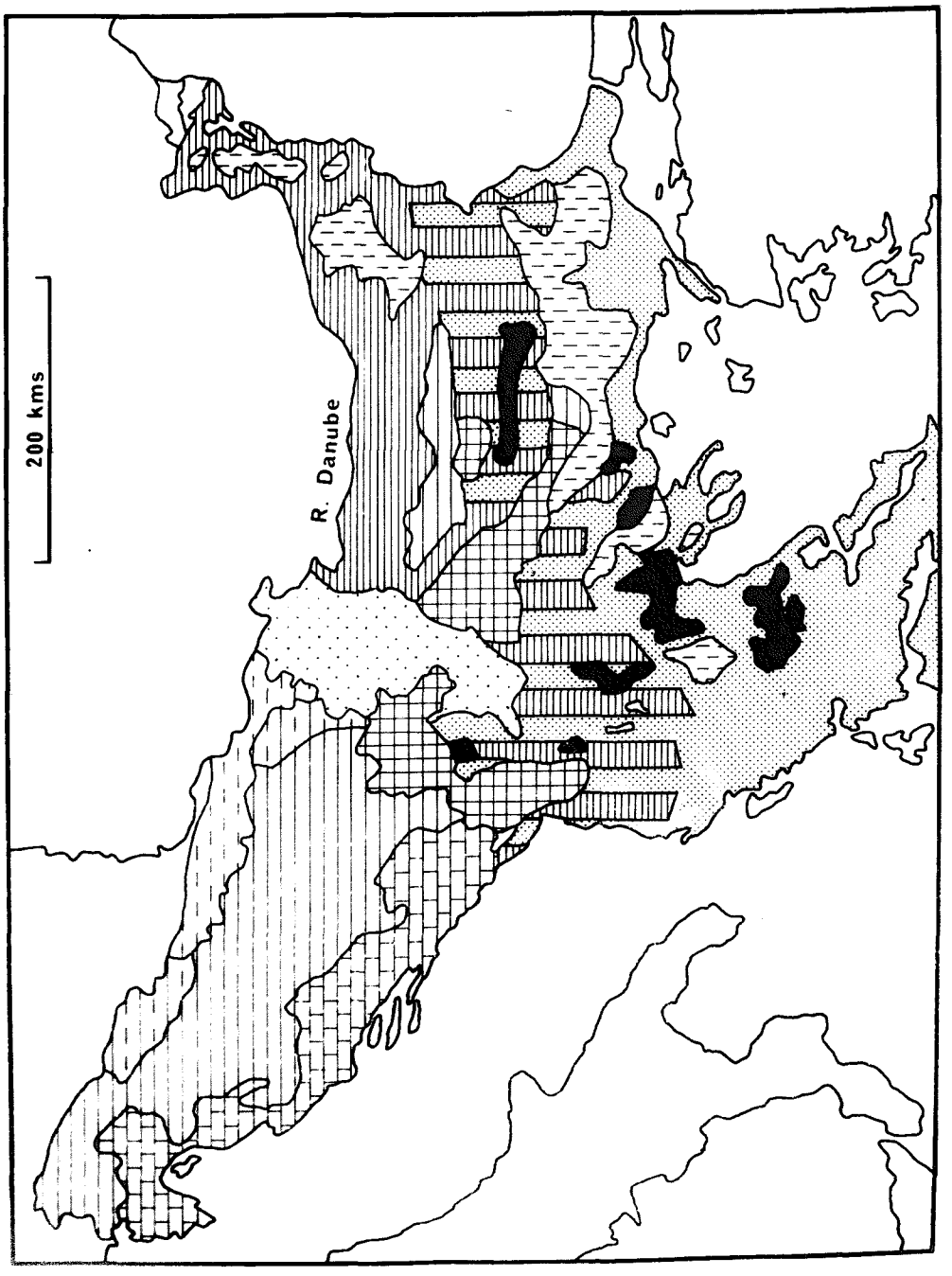

Figure 1: Distribution of Settlement Types, According to Cvijić

of their associations with particular types of terrain, height zones and water supply.[17] The geometry of settlement patterns, however, has not been investigated, partly because this is a comparatively new development within the study of settlement geography.[18] Although Kirsten described changes in the distribution of settlements in Central Greece and Attica,[19] little has been done to trace the long-term evolution of settlement patterns elsewhere in the country, despite its manifest importance to the understanding of the alleged retreat phase in the history of population and settlement in the country. The present study attempts to remedy the situation on a small scale.

The Investigation

The study outlined in the following pages has traced the development of settlement patterns in the Máni, one of the major retreat regions of Greece. It sought to establish what actually happened in the settlement history of the peninsula from the initial occupation before 3000 B.C. down to about A.D.1830. The period is sufficiently long for the development of the retreat process to be discerned, if it existed, and it is concluded by an event which may mark the beginning of the ebb tide, the period when people began to settle in the lowlands again. Scattered revolts, which coalesced into the War of Independence during 1821, removed the Turkish owners of large lowland estates from which the mountain communities had often rented land. The few Turkish farmers and tenants were also driven out. Squatter-rights and then formal legal titles were easily established during and immediately after the war. It was under these conditions that old kalyvia-villages* on the margins of the lowland and out towards the centres of the plains first became permanently occupied, a process already complete in some parts of the Peloponnisos by the end of the nineteenth century and initiating the slow death of many upland communities.[20]

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* Kalývia are literally "huts", and clusters of these temporary structures were used by people whose permanent home was in the mountains or some distant place when they were wintering their animals or engaged in farming. They were usually named after their parent village.

Although the Máni's customs, social organisation and reputation for fierce resistance to the Turks have generated a large literature, embracing the major European languages as well as Greek,[21] the region's settlements have not been systematically investigated. A few geographers have commented on the remarkable number of settlements (about 225) concentrated into an area of 493 kms.^{2}[22] The settlements are generally very small, often consisting of fewer than 10 gaunt, two-storey houses, whilst the population of the average oíkismos* in 1961 was about 135, one of the lowest in Greece.[23] The domination of many settlements by towers (Frontispiece) has occasioned much comment, and Beuermann even recognised the Wehrsiedlung ("War" or "Defensive Settlement") as a settlement type unique to the Máni,[24] though, in fact, towerless settlements were also found in the region during the early nineteenth century, as well as today.

As a region within which to examine the retreat process, the Máni has two main advantages. The first is that, since the early seventeenth century, several writers have quite specifically associated the region with the retreat of population,[25] particularly from neighbouring parts of the Peloponnisos and at the time of the Turkish conquest virtually completed about 1460. The second advantage is that many features of the present settlements are relicts from a past age. The characteristic towers, for example, were associated with a stratified society which went into decline in the period 1830-40 following the achievement of Greek independence and the slower integration of the Máni into the new kingdom. The region was one of the first on the Greek mainland to experience depopulation and

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* A lower order administrative unit, a subdivision of a kinótis (commune) or démos ("urbanised area"). The study region is divided into 150 oíkismí.

the continuing loss of people (Fig.2) has left behind settlements adapted to a relatively high density of population (average of 67.9/km.^{2} at the peak in 1907 compared with a national average of 41.7/km.^{2})[26]. Accordingly, examination of the settlement pattern ought to reveal something of past conditions in a more direct way than might be possible elsewhere in the country. However, the region's relative remoteness has meant that the available source material is relatively poor. Sources are discussed and evaluated in the next chapter. Chapter 3 outlines the methodologies developed to use these materials in the reconstruction of settlement patterns and the tracing of developments through time. A description of the region is postponed until Chapter 4 since it links directly with the results of the main investigation reported in Chapters 5 to 8.

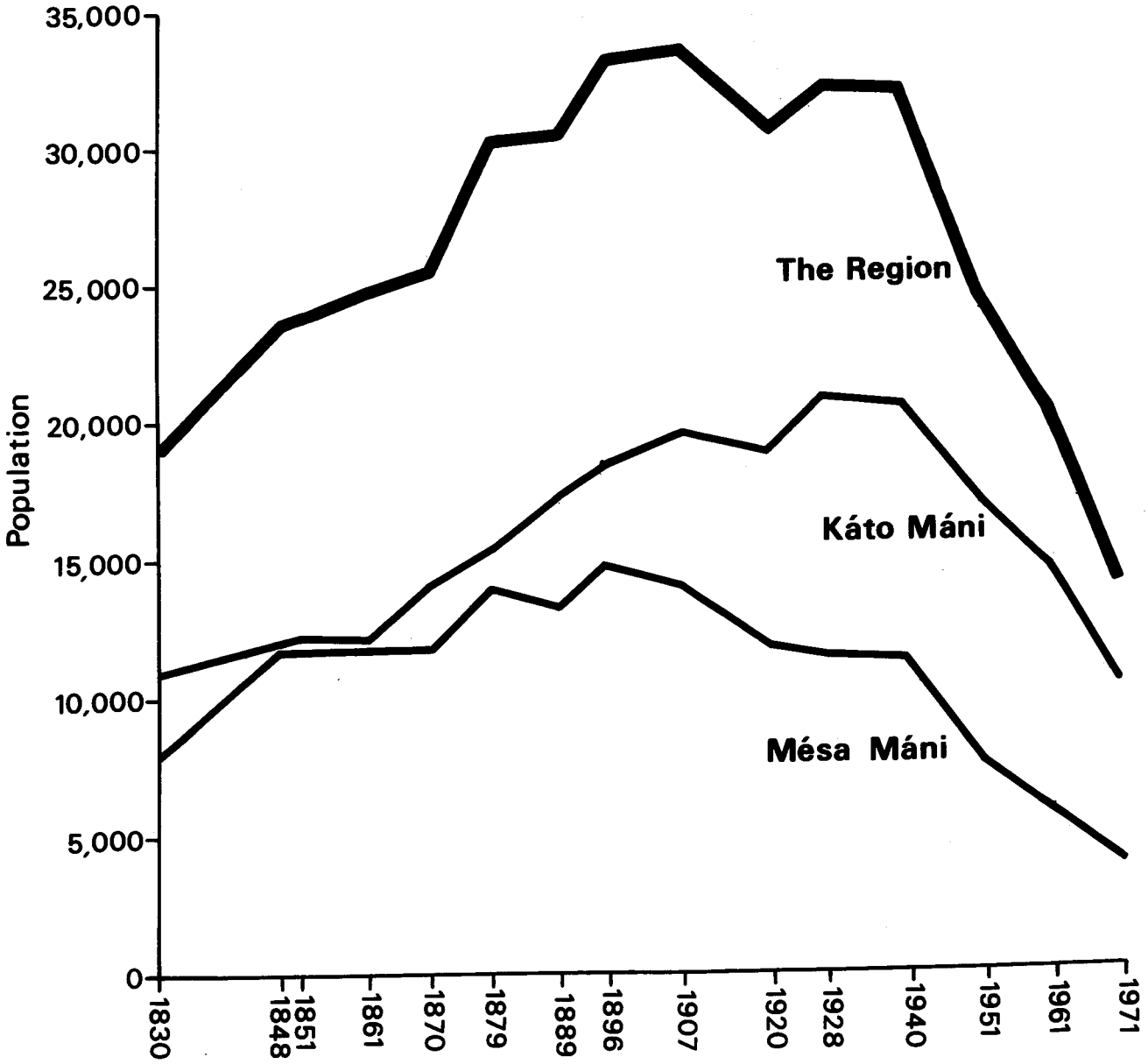

Figure 2: Population of the Máni, c.1830-1971

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CHAPTER 2 : SOURCE MATERIAL

Introduction

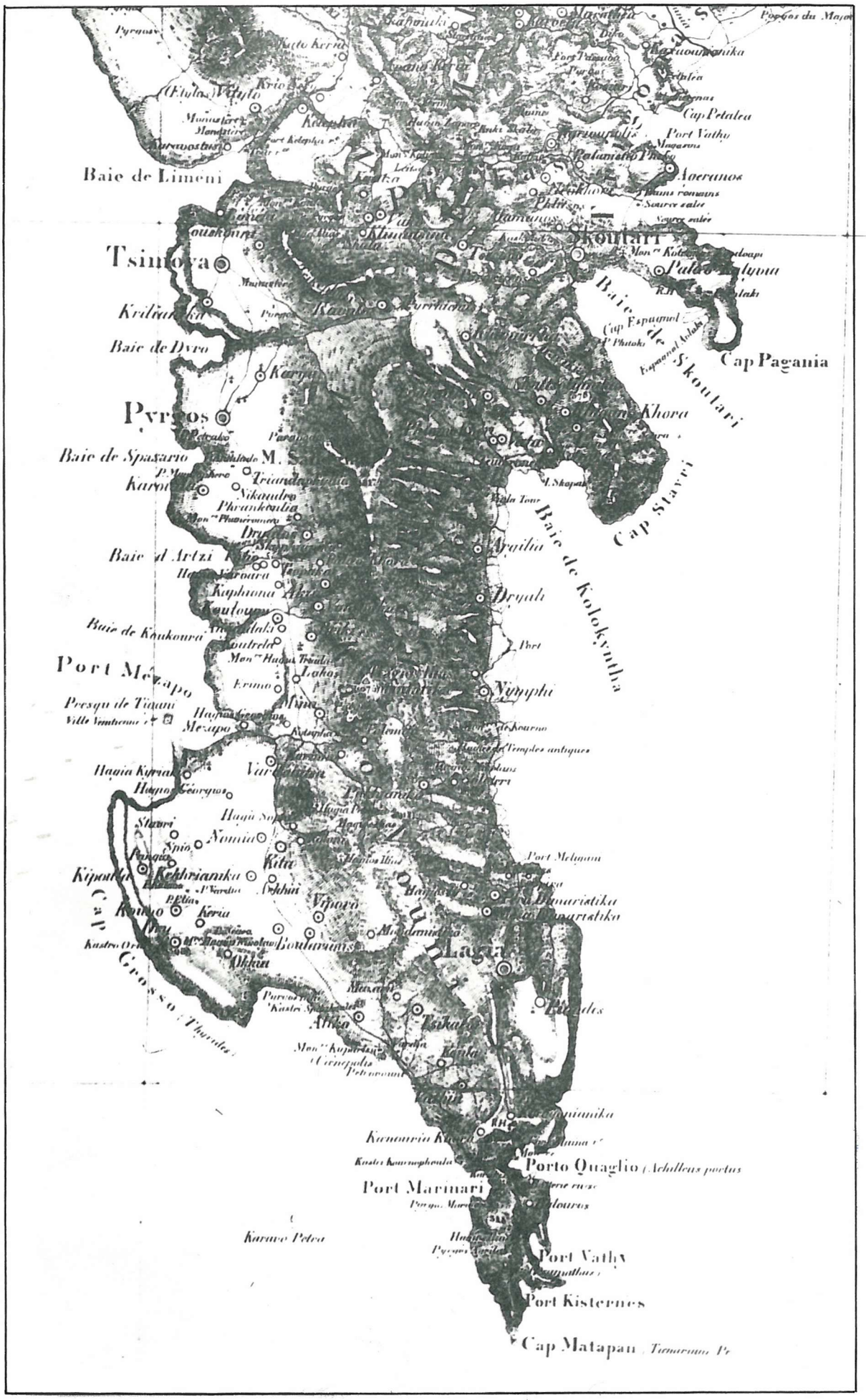
Developments in settlement patterns must be traced by historical inquiry. Success is dependent upon, first, the availability of information about the settlements in existence at particular stages in time and, secondly, upon being able to locate the settlements as accurately as possible upon maps of a scale suitable for worthwhile spatial analysis. Classic work in settlement geography, such as that of Demangeon, emphasised the influences exerted by social and economic conditions on settlement patterns.[1] This opinion has not been overturned by more recent research and theorising. Thus, any settlement may be viewed as the centre of an economic enterprise, or group of enterprises, and the form of the economy may have conditioned the distribution of settlements in a region and, to some extent, their detailed siting. Similarly, social organisation may find expression in the spatial arrangements of settlements and will certainly be influenced by their pattern. Changes in socio-economic structures might be expected to have repercussions on the geometry of settlement patterns and on the precise location of individual settlements. These heuristic considerations directed research towards the recovery of historical information which would allow the reconstruction of socio-economic conditions, as well as the recreation of successive settlement patterns in the Máni.

Sources for Reconstructing Settlement Patterns in the Máni

Early Nineteenth Century

The most reliable source of settlement information was produced immediately after the Greek War of Independence. It consists of a topographical map of the Morea (Peloponnisos) published on a scale of 1:200,000 and a population enumeration of the province.[2] Both were the work of the Commission Scientifique de Morée and its team of geographical engineers and surveyors sent to join the French expeditionary force in the Morea in 1829 with the responsibility for producing a study comparable with the monumental Description de l'Egypte.[3] The map is of first importance to the present study. Not only did it mark and name

Figure 3: The Máni Sheet of the Carte de la Morée



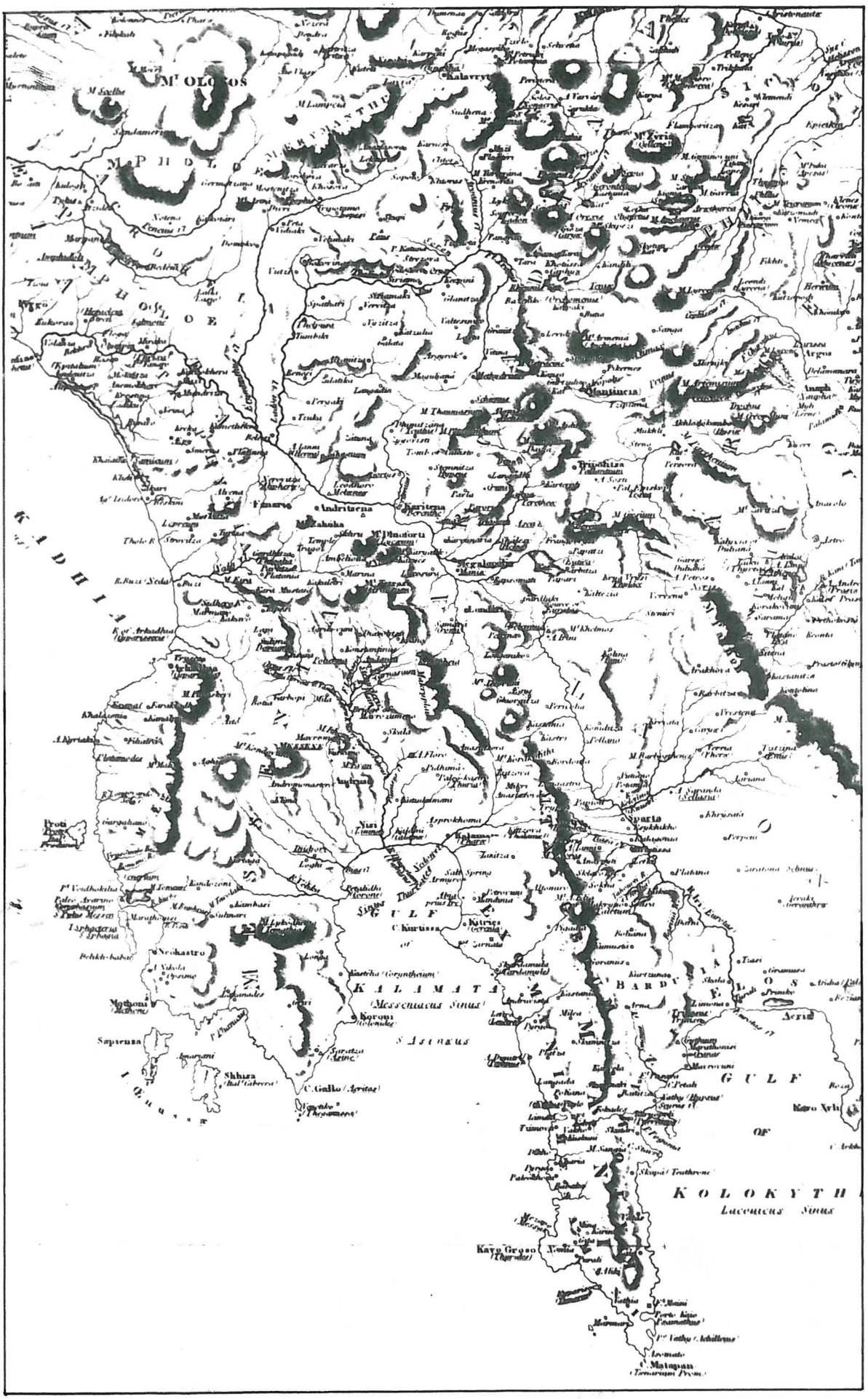
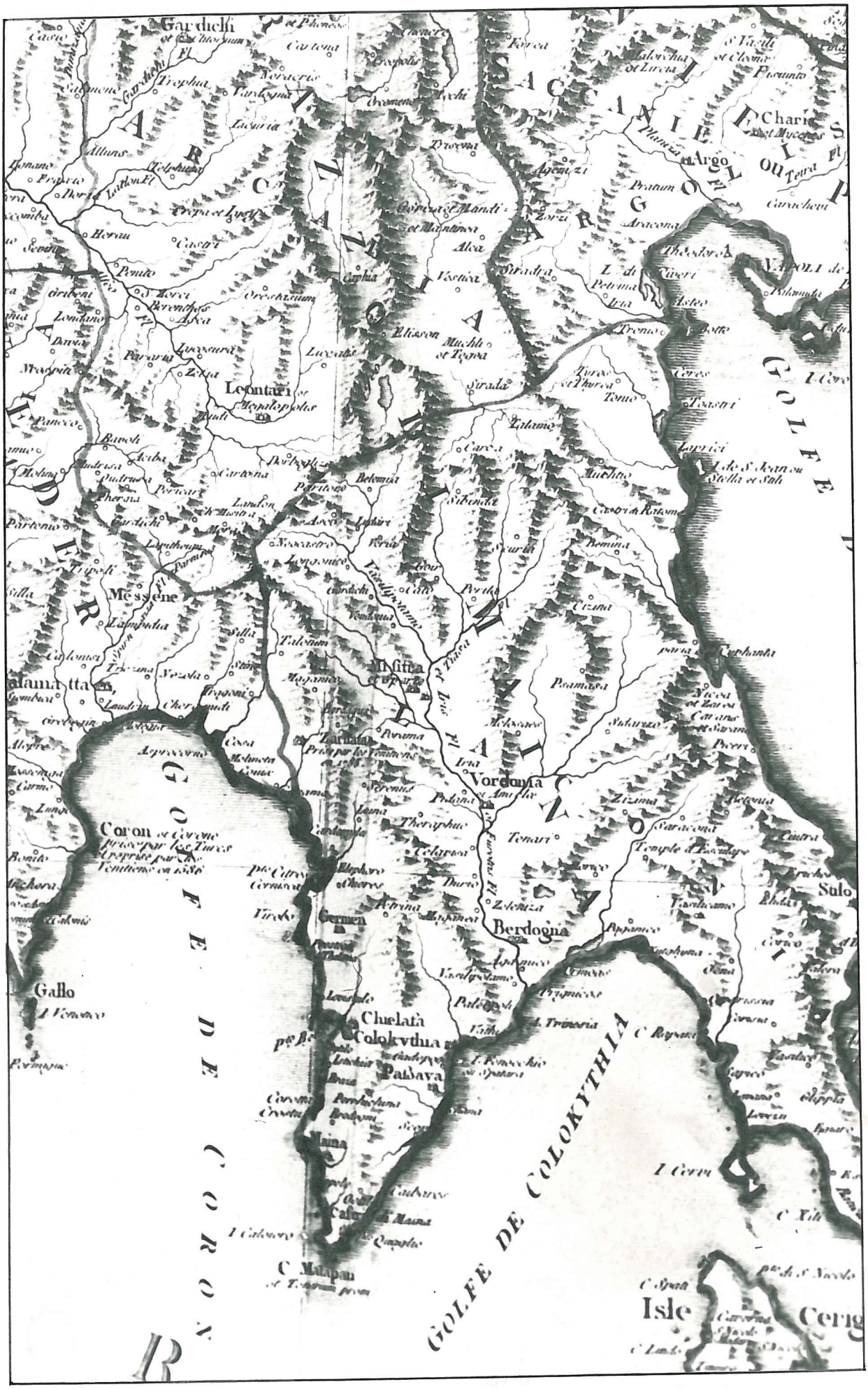


Figure 4: Part of Leake's Map of the Morea

Figure 5: Part of Barbié du Bocage's Map of the Morea

Figure 6: Part of Dupuis' Map of the Morea



settlements, but it also distinguished bourgs, villages, hameaux and pyrgi ("towers") and showed routes. A foundation in careful triangulation gives one confidence in the map's general accuracy,[4] whilst Leake, who had completed his own carefully prepared map about the same time, accepted the superiority of the Commission's work with only minor quibbles, mainly about the spelling of names.[5] Simple visual comparison with maps produced over the previous thirty years abundantly confirms his opinion. (Figs. 3, 4, 5, 6). Careful analysis of these earlier maps reveals a striking confusion of ancient, modern and probably fictitious names,[6] often inaccurately placed on coastal outlines borrowed from even earlier work. Such errors were inevitable to some extent because of the difficulties of surveying in Turkish dominions during the eighteenth and nineteenth centuries,[7] as well as the precarious economics of the map trade. Comparison of the Commission's map with more recent maps shows that the settlements are accurately located in the main, though the necessities of scale resulted in the plotting of the almost contiguous settlements of Apano- and Kato-Kouloumi and Apano-and Kato-Dry as single settlements - a convenience which is maintained in the present study. The eleven settlements which are marked on the map but not mentioned in the enumeration have also been retained, since it is probable that their populations were included under neighbouring settlements. There was another minor discrepancy between the map and the enumeration. The former showed a settlement called Bulouros which should almost certainly be identified with the place called Porto-Quaglio in the enumeration. None of these discrepancies raise serious problems, and the Carte de la Morée forms the basis for the study of settlement pattern change in the Máni over the whole period from 3000 B.C. to A.D. 1830.

Apart from providing a kind of check on the map, the contemporary population enumeration has been used in an attempt to understand settlement clustering. It is not clear from the introduction to the published tables how the original data were collected. Various statements made there, however,

may be taken to imply that information was furnished by local 'arkhóntes ("primates", "leaders" or "elders"), who would have been in a position to provide it because one of their responsibilities under the Turkish raj was to divide communally assessed taxes amongst the various families in their villages. The Maniat figures were all in number of families and are clearly estimates, as is shown by recurring figures and aggregated totals for three pairs of settlements.[8] Average family size for the Morea, computed at 4.75 persons by the Commission, must be used as a multiplier to derive actual population. When this is done, the resulting total of 29,037 for the whole of the Máni is remarkably close to the estimate of 30,000 given to Leake at Marathonisi in 1805 and not very different from the 34-36,000 suggested by Pouqueville but ultimately derived from British estimates of 1813.[9] The context of an immediate post-war situation makes the correspondence suspect, but may indicate that the Commission's figures are sufficiently accurate to be used for the limited purposes required by the present study.

A rather curious Greek source which became available about the same time as the results of the Commission's work in a partial transcription and translation published by Leake is " a poetical description of the Mani".[10] This was written by a Maniat school teacher called Nikitas Niphakos (c.1750-1810).[11] The poem has 314 lines composed in the popular dekapenta-sílavas metre[12] used for such famous Greek classics as Digenis Akritas and Erotokritos. After a brief general account of the region, the poem moves into a descriptive catalogue of some 117 villages which occupies about a third of the work. This seems to have provided Leake with a check-list of the settlements in the Máni, but he soon discovered that there were more names and that the poem was an imperfect guide.[13] It is an interesting and amusing source, but of little practical value to the study of settlements. However, the description of the harsh life of the Kakavoulites, which concludes the poem, gives some useful insights into socio-economic conditions in the south of the region, even if the picture is a somewhat exaggerated outsider's view.

Late Seventeenth Century

Moving backwards in time, the next source which provided information with which to reconstruct Maniat settlement patterns was Antonio Pacifico's Breve Descrizzione Corografica del Peloponneso o' Morea,[14] published a few years after the conclusion of the brilliant campaigns of 1685-87 by which Venice had conquered the Morea from the Turks. The book is not unlike an early systematic regional geography, with its lists of mountains and rivers, brief descriptions of the four Venetian provinces and an outline of ancient history. In the first edition, the account of the territorii composing a province was followed by a list of settlements. Similar lists appeared in the second edition but consolidated into an appendix.[15] Attribution of this list to the engineer, Guisto Albergheti, "supraintendente al Catastico di Morea", immediately indicates that it was drawn from the official work of the cadastral survey set up by the Serene Republic in 1687 to make a census of the population, properties and resources of the newly acquired Kingdom, as well as to assess taxes, establish land titles and distribute state land.[16] Taken as a whole, the second list is certainly more complete than the lists in the first edition of Pacifico's book. For example, names for Corinthia were included, whereas they were absent from the first edition.

There are grounds for suspecting the accuracy of the list, despite a greater number of names and its official origin. First, minor discrepancies exist between the first and second editions of Pacifico's work. In the first edition, 48 names were assigned to Territorio Maina Bassa[17] (roughly the region studied here), whilst the second edition listed 38. Imprecise delimitation of the Venetian territorii may be at fault since most of the 10 settlements can be traced in the second edition's list for Territorio di Zarnata (roughly 'Exo Máni), though some cannot be found at all. More serious is the appearance of 8 names in the first edition which cannot be traced in the second edition, even though 4 of them can be tentatively identified with settlements appearing in later sources. Finally, comparison with an early seventeenth century list (below) suggests that the

Venetian surveyors did not note the names of all the settlements inhabited c.1700. The list in the second edition of Pacifico's work contains 70 names under the Maniat territori. Another 8 can be added from the first edition to give a total of 78. This compares with a minimum of 125 for the whole of the Máni given in the early seventeenth century source. The difference of 47 might be explained by desertion resulting from the Turko-Venetian War of 1685-87 and the plague which accompanied its later stages and, apparently, remained virulent longest in the Máni. However, a Venetian document of about 1702, which clearly has the same official origin as the lists in Pacifico's second edition, records only 14 deserted settlements in the whole region, whilst giving a total of 69 inhabited places.[18] Thirty-three settlements are still unaccounted for. Many of these appear in the Commission Scientifique's work and, though reoccupation after a phase of abandonment is possible, there seems every reason to suppose that Venetian information on the Máni was inaccurate. An independent check might have been provided by the Turkish survey of the recaptured province made in 1715, but this was not available for consultation.[19] Nonetheless, some use will be made of Pacifico's lists in Chapter 7, but they will not form the basis for a discussion of settlement patterns around 1700.

Early Seventeenth Century

The early seventeenth century source mentioned above is one of a group of documents produced as a result of the attempt by Charles de Gonzague, Duc de Nevers (1580-1637), to involve the Máni in his bid to revive the Greek Empire with himself as Emperor, a position to which he did have some claim.[20] The documents include an Agreement made between the Duke and the Maniats about 1612, the substance of which is contained in an undated document and a memorandum dated 1615;[21] a group of letters from the Maniats to the Duke, three written in 1612 and the other apparently in 1618;[22] two sets of Instructions to the Duke's agents who visited the Máni in 1618;[23] and the three reports (Documents A, B, and C) apparently produced by Philippe de Chateaurenault and Petros Medikos on their return.[24] Associated with these are the text of a speech on the Maniats delivered by the Duke at Tours in 1619, and an anonymous memorandum of the same date,

probably intended for the French king.[26] It is the third report (Document C),[27] which is of prime concern here.

The document was headed, in Italian, "The number of hearths (fuochi) in the villages from Calamata as far as the Cape of Mayna (Matapan) returning through Colochitia as far as Passava, in the above mentioned territory ...". Then followed a list of 125 settlements, accompanied by a note of the number of "hearths" in each and occasionally by a qualitative statement about the settlement, for example, "Chariopoli, the bishop's seat". The total numbers of settlements and "hearths" were given at the end of the list and an estimate of 10-12,000 combattenti calculated. This list was followed by another one of "38 villages which are in the vicinity (vicini) of Braccio di Mayna, in the mountains, under Turkish rule, from Passava and Bardugna castles as far as Londari, called Christianopoli". Although no estimate of the number of "hearths" was given, some of the settlement names were followed by descriptive notes which indicate, for example, that Londari was a "Turkish town", despite its alternative name of "Christianopoli" in the heading, and that Bisbardi had an Albanian population (Albanesi). The whole document concluded with a statement that there were many other unnamed villages in the mountains which were prepared to take up arms with the districts of Braccio di Mayna.

There is no indication in the document itself of the way in which it was compiled. Buchon suggested that Petros Medikos, a Maniat, was responsible.[28] But how did he obtain his information? A likely explanation is that, either directly or indirectly, Medikos gained access to Turkish daftar-i (statistical registers). This is suggested in two ways. Most of the settlements listed in the document lie within or just beyond the traditional frontiers of the Máni. The distribution may suggest, like the headings, that they belonged to a single administrative district. It is these same settlements for which the number of "hearths" was given. The number of "hearths" or "households" was one of the types of information periodically enrolled in the daftar-i by Turkish administrators.[29] If the argument is correct, then, the data in Document C may be judged to be reasonably accurate. However, omission of at least two

Daftar are concerned

settlements, Mari and Zygos, which are mentioned in Letter IV of the Nevers's sources[30], indicates some degree of error in the source, but its extent cannot be gauged. The methods used to reconstruct a settlement pattern from the Nevers' data will be outlined in the next chapter.

Middle Ages

No similar source seems to be available for any earlier period, though something may be learnt about the late second century situation from a combination of material in Pausanias' Description of Greece and the results of archaeological surveys. Some 24 Turkish daftar-i exist for the Morea for the period after c.1500,[31] but these have not been transcribed from the siyâget script, half cipher and half shorthand, in which they were kept and so were not available for study. Byzantine praktiká, abstracts from official cadastral surveys of a province made for the owners of larger estates, do not appear to have survived from the southern Pelopónnisos, unlike Macedonia,[32] and so that potentially rich source of information is dry. Some settlement names, however, can be gleaned from a variety of documents originating during the Middle Ages. For example, Venetian lists of places won and lost in the Morea during the Turko-Venetian War of 1463-79 scarcely constitute a full list of settlements in the province, though they note a few places in the Máni.[33] A list of hearths belonging to the different fiefs in the Principality of Achaia, compiled in 1391, noted the association of 40 hearths with Le Meyne,[34] but did not otherwise locate them. The revenues granted to Nicolas Acciaiuoli in 1336 came from settlements on the west side of the Máni, but the place names cannot be regarded as indicating the totality of settlements in the region.[35] Altogether, 13 names have been discovered for the study region from these sources, though not all of them could be identified with later settlements or otherwise accurately located.(Table 9). A few more names can be added from Albanian and Slav place names which, if genuine, must have originated in the fifteenth century and sixth/eighth centuries respectively (p. 132).

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The broad pattern of settlement before the middle of the thirteenth century is probably indicated by the distribution of Byzantine churches in the region, but not the precise location of any settlements. Not all the possibly medieval churches have been studied by scholars competent in the subject, partly because the simplest churches are often difficult to distinguish from secular buildings, almost impossible to date and intrinsically uninteresting to the study of evolution in church architecture or wall painting. Those churches which have been discovered and assigned definitely to the Middle Ages are comparatively few in number and confined to the western part of the region.[36] Even these are not necessarily related to secular settlements in any direct spatial sense. At least two of them belonged to monasteries and, though both are close to settlements today, there is no information about their original relationships. Several other churches are situated well away from modern settlements and, though such a situation might suggest settlement desertion in England, there need not have been close spatial relationships to settlements at all in Greece. Church-building is encouraged by the prayers said specifically for the founders at every celebration of the Orthodox Liturgy[37] and, though it is true that the Liturgy cannot be celebrated by a priest alone,[38] the requirement of a congregation could have been met by having a celebration only on the feast of the patron. In any case, Maniat churches were clan rather than community property in the early nineteenth century,[39] and this may have been the situation in the Middle Ages, thus casting further doubt on any hypotheses about churches and settlements being spatially related. Once this is accepted, the conclusion is inevitable. There is practically no information with which to reconstruct settlement patterns between the late second century and the early seventeenth century.

Turkish

Cartographic Sources

Reference should be made to one obvious but discarded geographical source - maps. Although some names have been identified in medieval portolans,[40] the associated portolan charts proved as disappointing as later charts and maps, and largely for the same reasons. Portolan charts were drawn for the specific

purpose of helping navigation and, in consequence, tended to mark only a few prominent, generally coastal settlements. There is no way of knowing whether these are genuinely contemporary names because of the various strata of information which were built into portolans over the years.[41] Thus, Maina is frequently named, but there is no sure way of knowing that a settlement or fortress of that name actually existed when a given chart was prepared. The plotted location varied so enormously, too, that its position in the region is also uncertain. Those charts which cover the Máni were drawn at scales which were far too small for them to show more than a few names, unlike Spratt's splendid nineteenth century charts of Crete.

Two groups of later charts and maps were studied specifically to see if collectively they could form the basis for period reconstructions of settlement patterns in the Máni. The first group covered the period 1686 to 1717[42] and the other 1569 to c.1630.[43] Overall distortion of the peninsula's shape was common to all the maps considered. (Figs. 7 and 8). This arose generally from compression due to the use of inaccurate coordinates, especially in the longitude component.[44] The detail of the coastline was usually schematic rather than accurate, perhaps reflecting ignorance arising from the difficulties of navigation around the Maniat coast, a preference for the direct route across the Gulf of Messinía and probably the small amount of navigation in the Gulf of Lakonía. But all the maps mark a number of settlements in a region roughly delimited by Kalamáta and Mistrá in the north and the Xýli peninsula in the east. There were 54 names in the first set of maps and 71 in the second, though individual maps had space for comparatively few names. Variations in the number and spelling of names were common, but these could often be reconciled by filling all names into a matrix.[45] Identification of the names with known settlements of earlier or later date proved difficult or impossible. Many of the place names were taken from such ancient authors as Strabo and Ptolemy, though sometimes they were also given a modern identification. These identifications were frequently erroneous, but, even where they were correct, it is not clear whether the site was still being occupied. This would be

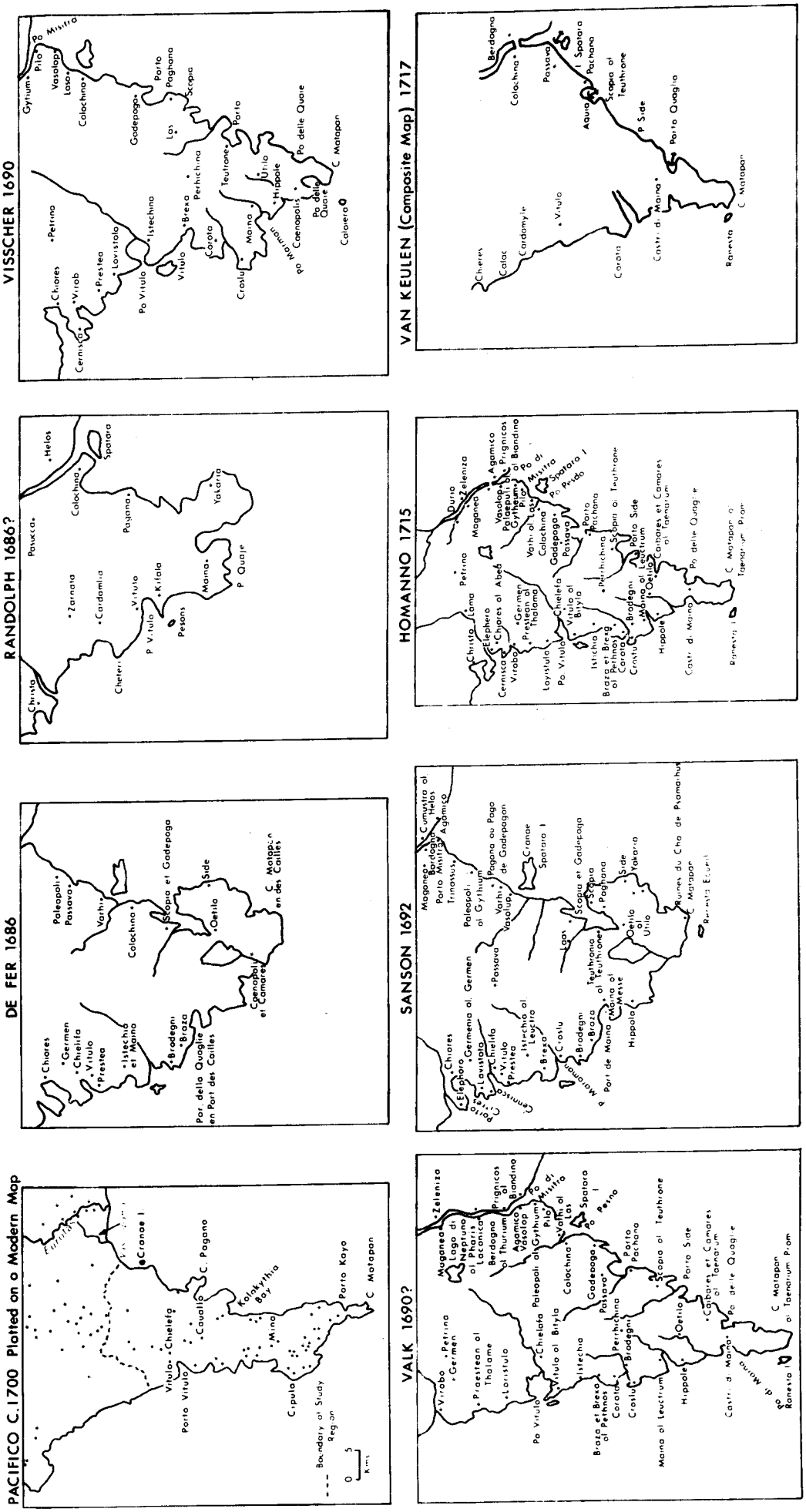

Figure 7: Comparison of Maps Published 1686-1717

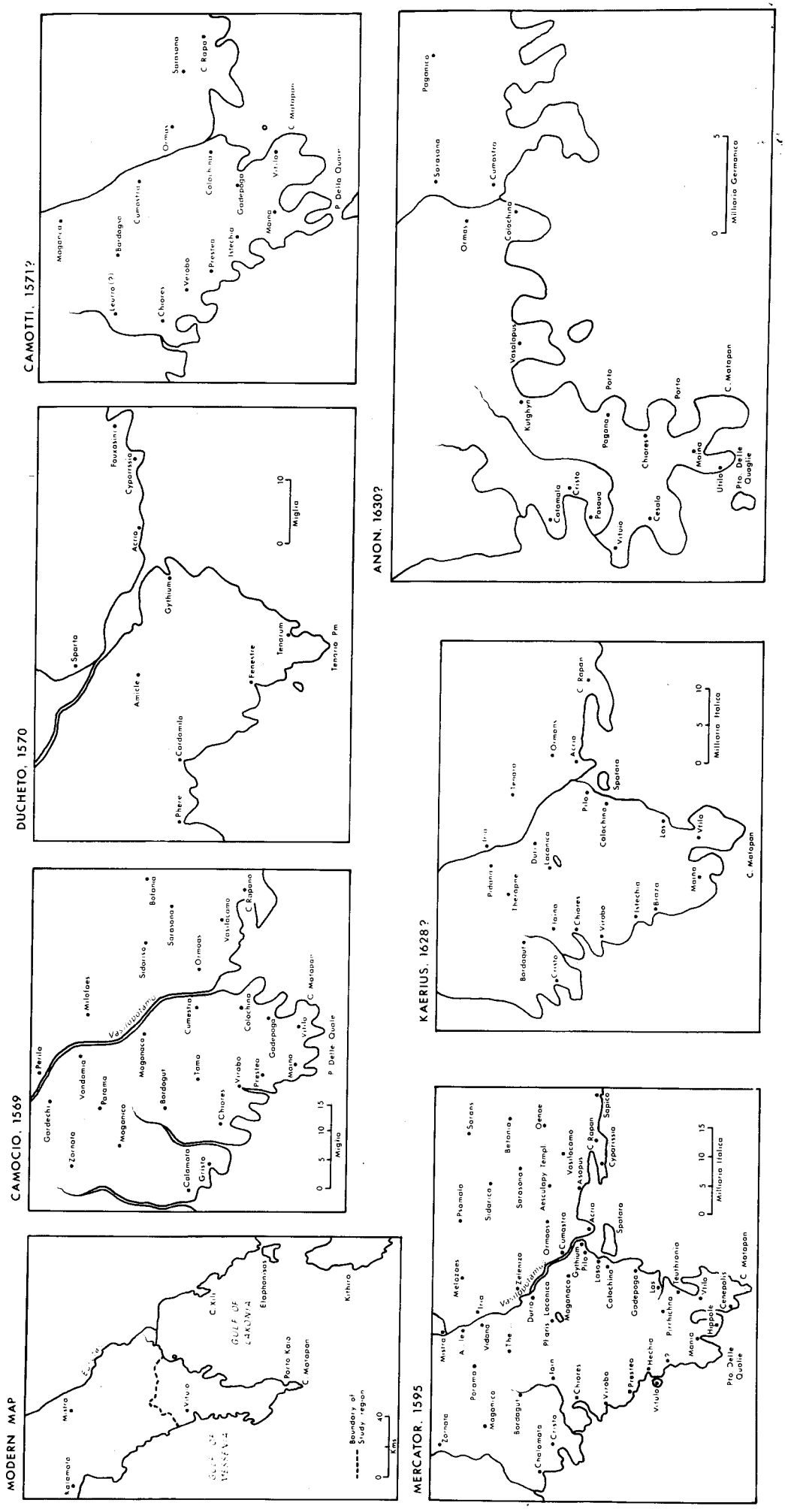

Figure 8: Comparison of Maps Published 1569-c.1630

crucial information in tracing the history of occupation on a site such as that of ancient Gythium / early modern Marathonisi / modern Yíthion. The ancient site is often identified, correctly, with Palaeópoli, a rather dispersed suburb of the modern town, but did some form of occupation continue there during the sixteenth and seventeenth centuries and before the foundation of Marathonisi some distance to the south in the eighteenth century? There is no certain way of knowing from the cartographic evidence. Other names appear to be genuinely contemporary with the maps, but the various sources often disagreed about their location, partly because of the small scales on which they were plotted. This is not too serious where names can be identified with settlements known from, say, the early nineteenth century, but it becomes serious in other instances. For example, three names from the second set of maps can be identified with names in the Nevers' list (Table 2), but these settlements cannot otherwise be identified.

Table 2 : Comparative Names

Map Names	Nevers' Names
Braza	Bragia di Cholochitia
Colochina	Castro di Cholochitia
Gadepoga	Giorgicio-poulo di Cholochitia

The mapped locations are so inaccurate that they cannot be accurately placed. These names are associated with a settlement variously known as Colochina and Cholochitia which, from its size and use as a regional name in the Nevers' document, was obviously an important centre (pp. 55f). Yet, there is no agreement in the cartographic sources on its location, though other evidence indicates that it should probably be identified with modern Kótronas. But was it Kótronas, or one of the other large settlements in the neighbourhood, such as Phlomokhóri, Váta or Loukádika? These and the other problems mentioned above are sufficient to make the cartographic evidence almost impossible to use

in reconstructing settlement patterns for any period.

Antiquity

No maps of Greece are known to have survived from antiquity, but the Description of Greece compiled about A.D. 174 by Pausanias provides some information on settlements in the Máni. The work is a kind of tourist guide which, after the experiments of book one, follows a systematic plan in presenting material. An outline history of each of the traditional regions of central and southern Greece preceded an ordered description of its capital. This was followed in turn by a description of the surrounding territory arranged as itineraries along the principal roads leading outwards from the capital.[46] Places are mentioned for two reasons. Some were named because they contained some notable ancient monument or some important work of art. Others were mentioned because of their associations with a peculiar custom or belief, or some notable figure from the past, human or divine. Clearly, then, Pausanias is unlikely to have mentioned all the settlements existing during the late second century. This is especially the case with the Máni, since his description suggests an itinerary involving a coasting voyage from Teuthrone around Cape Taenarum (Matapan) and then northwards (Fig.9).[47] Nonetheless, the list of 16 probable settlement names identified with the region is the fullest to have survived from antiquity. Strabo (c.64 B.C. - A.D.19) mentioned seven,[48] whilst six were listed in the so-called Geography of Claudius Ptolemy[49] and four or five appeared in that other famous compilation, the Periplus of Scylax.[50](Table 3).

Modern scholars and travellers have put considerable effort into identifying the names given by Pausanias with ancient remains found in the Máni. Using the evidence of distances in stadia and the topographical detail provided by Pausanias in conjunction with the direct testimony of coins and inscriptions found locally, almost all the sites have been identified.[51] The identifications are now generally accepted. However, archaeological exploration has produced a number of Roman-period sites which cannot be assigned ancient names, notably

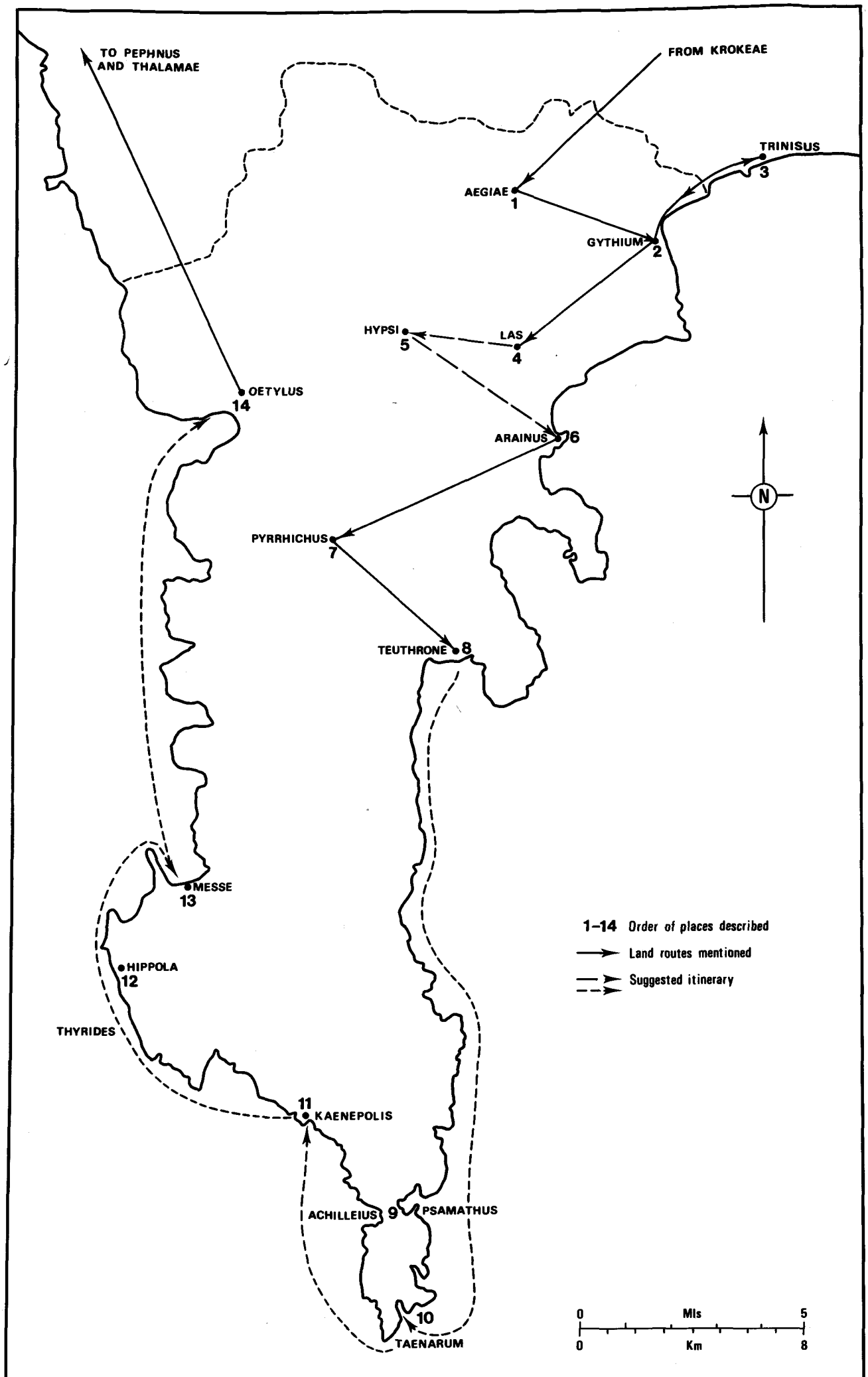

Figure 9: Schematic Representation of a Possible Itinerary in the Mâni from Pausanias

Table 3 : Place Names in Antiquity

Pausanias (c.A.D.174)	Ptolemy (late compilation.)	Strabo (c.7. B.C.)	Scylax (4th cent., B.C.)
Achilleus	-	-	Achilleus
Aegiae	-	Aegeae	-
Arainus	-	-	-
-	-	Asine	-
Gythium	Gythium	Gythium	Gythium
Hippola	-	-	-
Hypsi	-	-	-
Kaenepolis	Kaeni	-	-
Kranae	-	-	-
Las	Las	Las	Las
Messa	-	-	-
Migonium	-	-	-
Oetylus	Bityla	Oetylus	-
Psamathus	-	Psamathus	Psamathus
Pyrrhichus	-	-	-
Taenarum	Taenarum	Taenarum	?Taenarus
Teuthrone	Teuthrone	-	-

the temple and settlement site below Koúrno on the east coast and the miscellaneous traces of antiquity found near Kouloúmi on the western side of the peninsula.(Fig.10). The remains at Koúno in the 'Embros can be explained best by assuming that they belong to a settlement which developed subsequent to the abandonment of Hippola (probably 'Ano Poúla on the Makryna Ridge), which Pausanias himself described as ruined. More ancient sites probably remain to be discovered, despite some 150 years of exploration in the region. Ground exploration is extremely arduous in such mountainous terrain and small traces might be missed easily amongst all the loose stones, whilst even

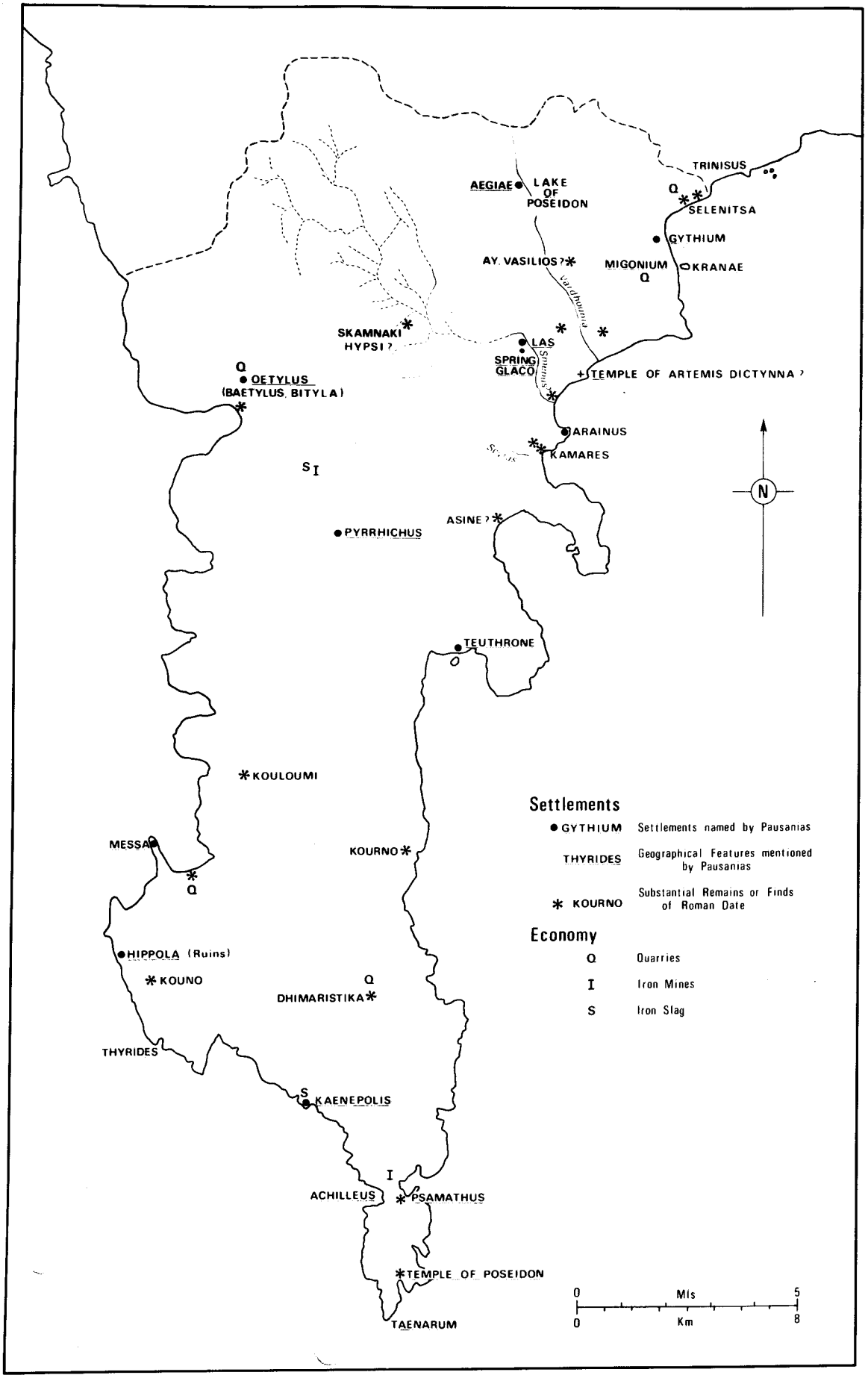

Figure 10: Settlements in the Study Region, c. A.D. 174

quite substantial remains have disappeared in a space of time as short as fifty years. Aerial photography almost certainly would produce valuable results, but its use has been circumscribed by official secrecy. R A F war photos

Traditional archaeological field work, initiated by Mrs. Waterhouse and completed by Mr. Hope Simpson, provided evidence for settlements in the Bronze Age.[52] The methodology was not described in the published reports, but internal evidence suggests that all the known ancient sites were inspected for traces of prehistoric occupation. Reference to finds in the Vardhoúnia valley and comments on the absence of prehistoric material from the area between ancient Las and Teuthrone, as well as from the Kritíri peninsula in the far south of the region, suggest that other localities were searched. The authors did not reveal how thorough their search had been, but it is unlikely that the whole area of some 493 kms.^{2} was covered. Indeed, recent finds in and near the caves of Dírou on the north-west coast of the Máni indicate that more prehistoric sites are likely to be found in the future.[53] A few of the Bronze Age sites already known have been identified with places mentioned in the Homeric Catalogue of Ships, possibly a genuine survival from the Mycenaean age.[54] A few Homeric sites have been located through Pausanias' place names alone and prehistoric occupation has yet to be proved by excavation. Clearly, the data for this distant period are very incomplete and inaccurate, but, since they indicate something of the beginnings of settlement pattern development in the region, they must be considered in this study. Even more uncertain are the data about socio-economic conditions for this and other periods in the past.

Source of Socio-Economic Information

Fixed points around which to search for socio-economic information were provided by the dates of the sources used to reconstruct settlement patterns. The main interest was in conditions during a period extending for a generation either side of the settlement pattern date, in the crude belief that this would provide sufficient contemporaneity in reconstruction, whilst

widening the net sufficiently to obtain useful information. Attention was also given to the periods in between the key dates, so that significant changes could be isolated, should they occur at all. A large volume of material had to be sifted, partly as a result of this fundamental decision but partly also because of the long span of time encompassed by the study. An additional complication was the scarcity of full sources for any single time-horizon and the need to cast about widely to find snippets of material which could be fitted into a larger jigsaw puzzle. The amount and scope of material consulted to produce just one or two facts will be evident from the lists of primary sources grouped in the bibliography under period headings. Each source was critically evaluated in an attempt to appreciate its value and limitations, as well as to understand its contents. This is elementary practice, but it is surprising how often errors of interpretation have crept into the secondary sources, suggesting faculty scholarship.[55] Many of the items listed in the bibliography under secondary works have a bearing upon the evaluation exercise, though some were consulted to facilitate a better understanding of the historical periods concerned.

Several of the primary sources of socio-economic information have been mentioned in the previous section. The enumeration produced by the Commission Scientifique was particularly important since it provided data directly comparable with that contained in a Venetian document of c.1702 and Nevers' Document C of c.1618. Other source materials will now be discussed under the headings Published Documents and Literary Sources.

Published Documents

There are several reasons for the basic decision to use only published materials for this study. Achievement of the basic objective of studying settlement pattern evolution over some 5,000 years precluded the time-consuming and often fruitless searching of the inadequately catalogued collections in the major archives in Athens, Istanbul and Venice. In any

case, the usual problems of palaeography and diplomatic were compounded by the need to study documents of widely different age, provenance and language. Useful unpublished material almost certainly exists in Istanbul,[56] for example, but the effort required to obtain it was considered disproportionate to the likely return, for even the published material from that other great repository, the State Archives in Venice, has generally proved disappointing for present purposes.[57]

Some collections of Maniat documents have been published, at least in part. Anapliotis has edited 16 documents covering the period 1729-1831 from the papers of the Koutiphari clan, to which the first Bey of the semi-autonomous region belonged. They consist largely of bills of sale, marriage contracts and wills.[58] Sixty-four documents belonging to the Servi Katsirgis family were published by Skopetas, and cover the period 1547-1830. Bills of sale are again prominent in the collection, but other items are also found, including an important agreement about the payment of wergeld.[59] A third group of documents owned by a branch of the once important Grigoraki clan has been published for the period c.1810-12 and consists of letters, treaties and firmans relating to the appointment of Theodoro Zanetakis as Bey.[60] Unfortunately, all three collections emanate from the northern Máni, and there is considerable doubt about the extent to which socio-economic conditions there were the same as those in the more southerly districts. Fewer documents from the southern parts of the Máni have been published, possibly because they have not survived. Some of the 129 letters from relatives in the Máni to kinsmen in Zante, published by Vagiakakos, come from this part of the region, but they are not as useful as they might at first appear.[61] A more difficult source is provided by extracts from a notebook kept by a folk-doctor in southern Mésa Máni over the period 1715-1763, but, through references to injuries, it gives some first hand impression of the feuding endemic in the district.[62]

also place-names in Texts

Most of the surviving Maniat sources appear to be unpublished. They include the archives of other locally important families, especially that of the main branch of the Grigoraki clan which gave three Beys to the Máni. This is currently being prepared for publication by a member of the clan, T. Tzortzakis, and is believed to contain some 1500 items ranging from account books to decrees and letters.[63] The National Archives in Athens hold a considerable amount of Maniat material, especially of nineteenth century date, whilst other documents may be found in the Library of the Greek Parliament and possibly in the hands of old-established families in Kalamáta and Sparta.

A considerable amount of published material has come from western archives. The Venetian archives have proved comparatively fruitful, though the documentary references to the Máni are generally scattered, few and often very brief. Amongst the more important are reports relating to Maniat treachery in the face of the rapid and bloody Turkish advance through the Morea in the summer of 1715 and an appeal to the Republic by the people of Vitylo in 1690.[64] Reports of the provveditori generali from the period 1687-1715 contain brief, almost passing, references to the region,[65] as do a few of the earlier materials published by Lamansky.[66] Sixteenth century notorial records of insurance claims studied by Tenenti shed a tiny ray of light on Maniat trade at that time. Medieval sources from the Venetian archives have been published by several scholars, but, though they do contain material of Maniat reference, it is often very slight.[68] The same is true of the major medieval chronicles, including the Chronicle of the Morea,[69] and of that important early source, de administrando imperio, compiled by the Emperor Constantine Porphyrogenitus for the instruction of his son.[70] Information is gleaned from all these sources with difficulty. It is tantalisingly fragmentary, frequently ambiguous and often hard to interpret.

Other archives have produced Maniat material, including those of Spain, but particular mention must be made of the Naples ardhives. Not only has this repository produced a fourteenth century grant of revenues from the Máni,[71] but it has also yielded several of the documents associated with the Nevers' venture. Simple content analysis of the Reports by the Duke's agents and especially of the Maniats' letters has produced interesting, though incomplete and possibly controversial information about various aspects of society.

Finally, mention should be made of various ancient inscriptions which have been found in the Máni. These not only confirm the location of the region's poléis, but also reveal something of their political relationships under Roman influence and, in the case of Gythium, something of the economy.[72] Practically nothing is available from earlier times, though some inferences perhaps might be made from the material recovered in excavated sites elsewhere in southern Greece, including the Pylos Tablets.

Literary Sources

The literary sources are much more specific, but require greater evaluation than directly located materials, whether archaeological or documentary in the pure sense. The most important single set of sources is provided by travel accounts. These survive from the Middle Ages, though most of the early writers had little or no direct experience of the Máni and either mentioned it in passing or simply repeated gossip collected in neighbouring towns. Ciriaco of Ancona (1391-c.1455) was possibly the first west European to traverse the region (Fig.11). Unfortunately for our purposes, his interests in the region were largely antiquarian, though he mentioned things of social and economic reference, such as governors at Vitylo and Caropolis and the growing of vines and olives.[73]

Travel accounts become more numerous in the eighteenth and early nineteenth centuries, and several of their authors actually visited the Máni, despite the risks from its ferocious inhabitants and the apparent lack of

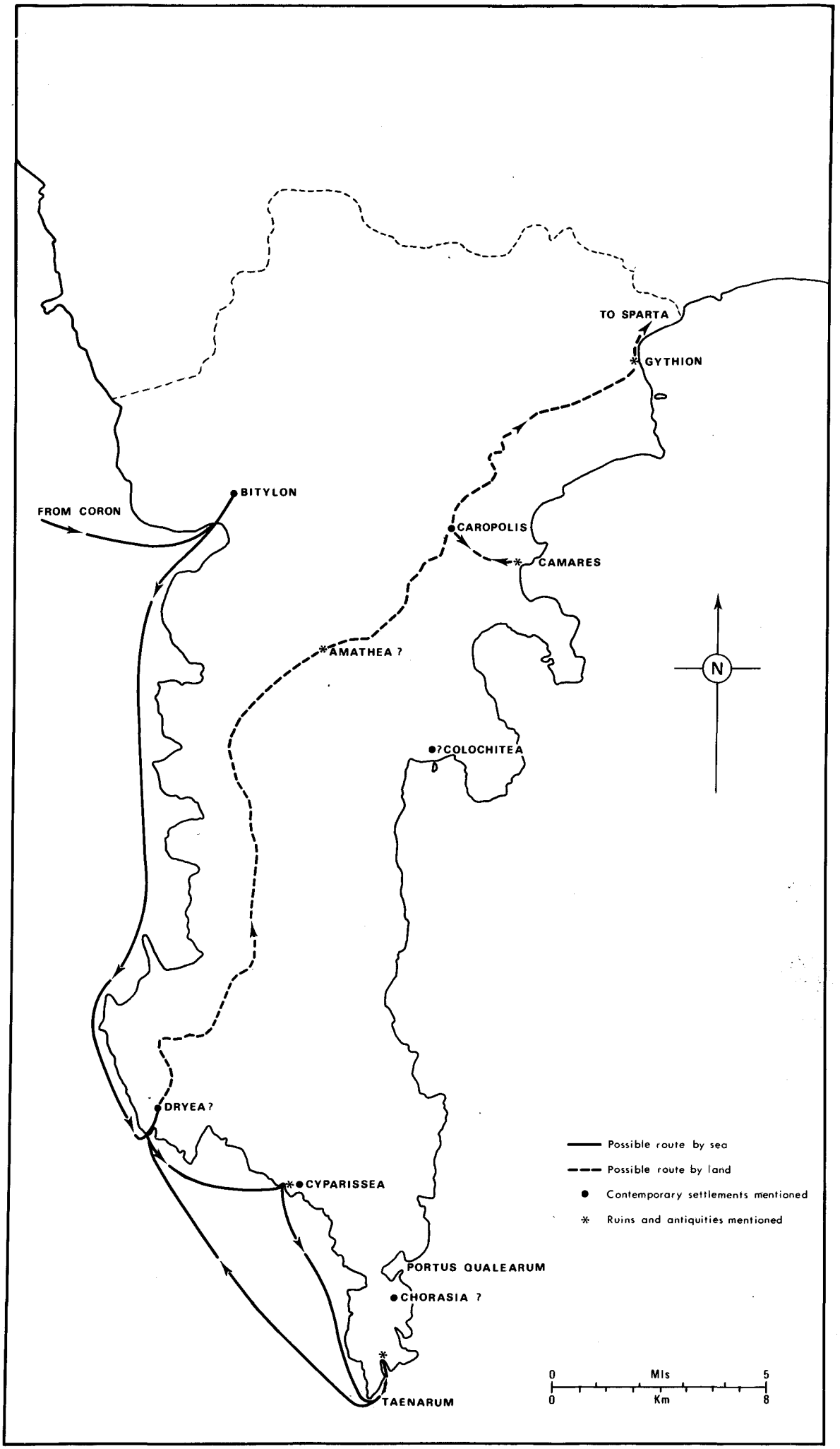

Figure 11: Itinerary of Cyriacus of Ancona, October, 1447.

attractions.[74] Their interests were largely antiquarian, like Ciriaco's, but several of them commented on what they saw in the region as they rode along and recorded some of the information given to them about the region's society and economy by their guides and hosts. Foremost amongst this set of travellers were William Martin Leake (1777-1860) and the third Earl of Carnarvon (1800-49). Leake was in the study region between 2 and 16 April, 1805 as part of a secret military mission in support of Britain's Turkish allies, and published a well-received, detailed account of his visit some twenty-five years later. A man with a talent for accurate observation, who spoke the language, Leake travelled across the region from Marathonisi (Yíthion) to Tsimova ('Areopólis) and then down to Cape Matapan and back to Tsimova before going on to Kalamáta. (Fig.12). No other traveller had been so far into the region since Ciriaco of Ancona in the fifteenth century, and no one had recorded so much about it. Lord Carnarvon got as far as Kítta in 1839, but the details of his itinerary are obscure from the version of his journal edited by his son thirty years later.[76] Nonetheless, the discussion of social mores in the southern Máni has been recognised subsequently as "very significant"[77] and has been much quoted. Less importance can be attached to the observations of men like William Gell (1777-1836), despite his contemporary reputation in most circles,[78] and the rather cranky Stephanopoli,[79] or to the second hand reports of Spon and Wheler,[80] but their accounts contain the occasional valuable piece of information. The material in two books by the person calling himself Le Sieur de Guilletière is particularly suspect since he was exposed as a plagiarist by Spon,[81] though it is far from entirely useless in the absence of the original sources.

The travel accounts can be supplemented to some extent by information from a number of systematic accounts of the Morea. Particularly useful, though not always accurate, is Pouqueville's Voyage en Morée à Constantinople and its English translation.[82] This is a grand compilation made from materials collected whilst Pouqueville was held prisoner for seven years at Tripolitza following his capture by corsairs whilst on his way to France from Alexandria

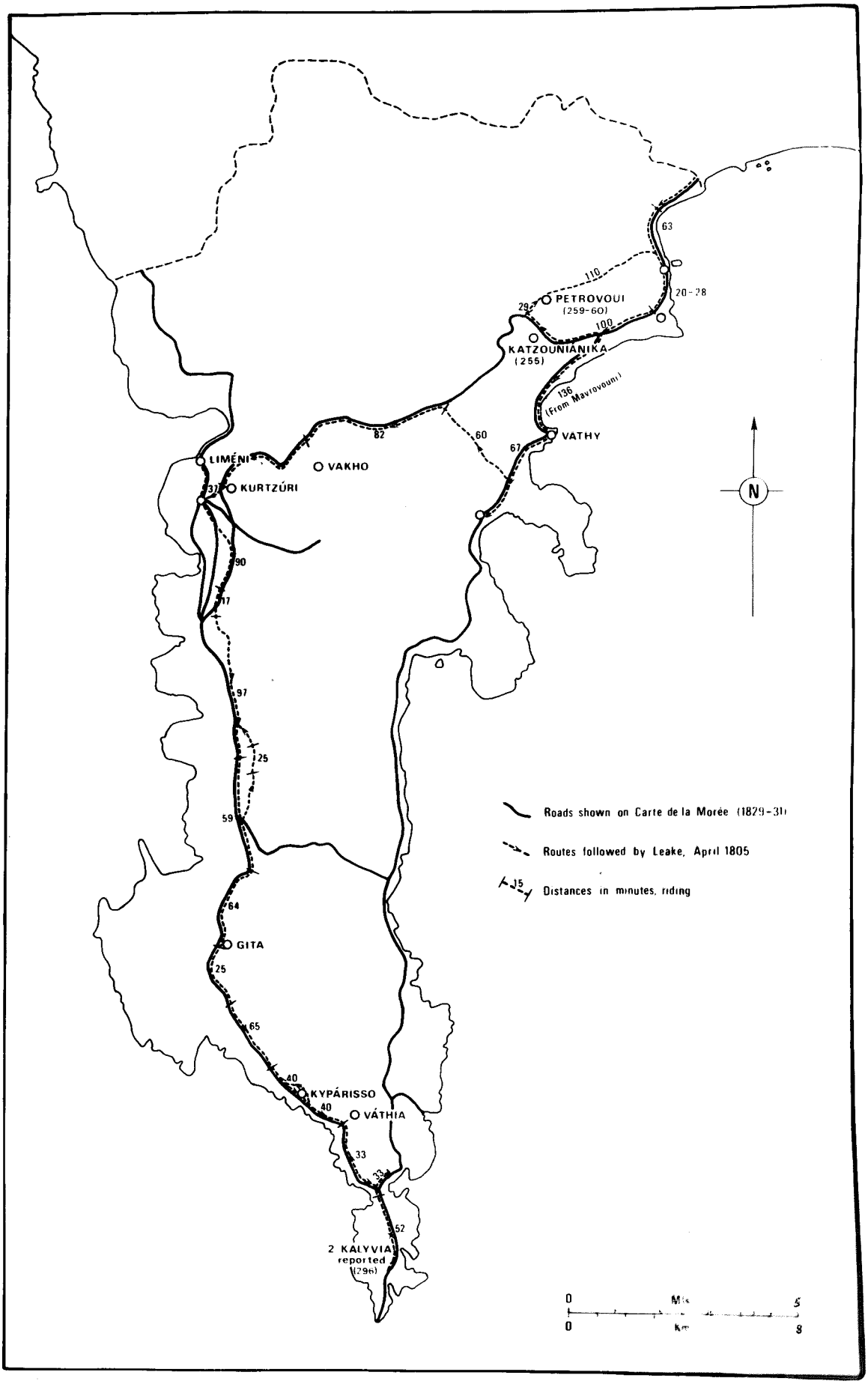

Figure 12: Leake's Routes and Travel Times in the Study Region, April, 1805

during the French occupation of Egypt. Its value is considerable if approached with caution and checked against near contemporary material such as that provided by Leake and, in some instances, by the Sicilian traveller, Xavier Scrofani.[83] Something approaching a hundred years earlier, the Franciscan friar and Cosmographer to the Republic, Vincenzo Maria Coronelli (1650-1718), published a brief description of the region in his popular compilation on the Morea and Negroponte.[84] The information is clearly not the result of first-hand observation, since Coronelli scarcely left his native Venice after a brief visit to Paris, but despite some inaccuracies, where they can be tested the data seem reasonably accurate. Similar remarks may be made about the bulk of Antonio Pacifico's Breve Descrizzione Corografica del Peloponneso o' Morea, which is arranged in a similar way and may indeed be based on Coronelli's book, and about Bernard Randolph's brief description of the region published a short time before, particularly since practically nothing is known about the author apart from the fact that he also produced several maps and may have travelled in the Levant during the 1670s.[85]

A number of ancient authors apart from Pausanias mentioned places or events which can be located in the Máni, but even the fullest account, Livy's description of the Roman siege of Gythium in 195 B.C.,[86] does not reveal much about socio-economic conditions. One of the difficulties is that the ancient texts were not produced by Lacedaemonians and their authors were very imperfectly informed about conditions internal to the Spartan state. Accordingly, it is not until after Spartan power had been broken at Leuktra (371 B.C.) that the perioecic status* of the Maniats is revealed by local inscriptions and by Pausanias' list of the members of the League

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* Perioeci were "the subjects of a Greek state, living in the outlying districts, who possessed their own communities, local self-government and local rights of citizenship, but were always under the domination of a greater state, to which they were obliged to render various services". H. Michell, Sparta, (Cambridge, 1964) p.64

of Free Lakonians. Once this has been established, something can be inferred from the current literary sources about local self-government through the poleis (the powers of the three ephors, for example)[87] and about social relationships within the polis-territories. Reliable information, however, is as hard to establish for the Hellenistic and Roman periods as for any other.

Scarcity of definite information on socio-economic conditions is one of the great drawbacks to studying the Mani. It arises fundamentally from the region's position. Although the Mani occupied a strategic location in the Mediterranean basin which was of interest to several great powers in the past (pp.70-2), it was always distant from the centres of political power. Access was not particularly easy and the region contained no great resources of vital minerals or cultivable land. Accordingly, no state needed to set up an elaborate administrative structure for the region, even if this had been possible, and, accordingly, it is not until the period of semi-autonomy from about 1776 to 1830/1840 that much documentation exists. The Maniat data which can certainly be collected for earlier periods were produced almost incidentally and are very fragmentary. Pieces have to be fitted one to another as closely as they will go, often with a great deal of interpretative discussion. Even then, the jigsaw puzzle contains great holes and many stray pieces are left because they cannot be fitted in anywhere or cannot be handled by the methodologies developed for this study.

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3. J.B.G.M. Bory de Saint-Vincent, Relations du Voyage de la Commission Scientifique de Morée, Vol. 1, (Paris and Strasbourg, 1836), Introduction.

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7. R. Walpole (ed.), Memoirs Relating to European and Asiatic Turkey and Other Countries of the East ..., (2nd ed. London, 1818), p. x.

8. Recurring figures include 12 (8 times) and 20 (7 times). The pairs are: Nymphi and Driali, Apano- and Kato-Kouloumi, Apano- and Kato-Dry.

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22. Texts : Buchon, ibid., pp.269-74, 286-87.

23. Texts: Buchon, op.cit., pp.277-79; Παπαδόπουλου, op.cit., p.123.

24. Texts: Buchon, op.cit., pp.280-86

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33. Table 9; Appendix V , items 13, 14, 15 and 16.

34. Appendix V, item 10.

35. Appendix V, item 8.

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42. Appendix I.

43. Appendix II.

44. These conclusions are based on a study of the coordinates for the key locations of Cape Matapan and the mouth of the Vasilópotamos river at the head of the Gulf of Lakonía as presented in the various maps and charts under review and the modern charts and Mediterranean Pilot. A set of sixteenth century coordinates was also studied and compared with modern data: Giacomo di Castaldi, I Nomi Latini tratti dell'Antico Greco e i Nolgari Hora Nominati, di Tutta la Provincia della Grecia, (? Venice,1560). Castaldi probably used the Azores or the Cape Verde Islands (about 26°.00' W of Greenwich) as his prime meridian and his longitudes for the key locations are at least 4' in error.

45. Appendices I and II.

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48. Strabo, VIII.4.4, 5.1-3.

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55. Some examples emerge in Chapter 7.

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CHAPTER 3 : METHODOLOGY

Settlement Pattern Reconstruction

The study of settlement pattern evolution requires the reconstruction of patterns at convenient dates through the time period concerned. This exercise was attempted in the study region for c.1830, c.1700, c.1618 and the late second century A.D., as well as for the Early and Late Helladic phases of the Greek Bronze Age. Reconstruction took place on maps drawn to the scale of 1:100,000. Not only was this the scale of the best topographical maps available,[1] but it is also the smallest scale at which all or most settlements in a region can be shown with some degree of accuracy. In addition, the British Staff maps used the traditional names for settlements instead of the Hellenised forms which have been gradually substituted since the beginning of the century for many official purposes. Identification of earlier versions of the traditional names was thus facilitated, and settlements could be located with reasonable accuracy. Use of the same scale throughout the investigation was important, for it gave the study a consistent spatial framework and simplified comparative studies over a long period of time.

Assembly of the settlement pattern from the Commission Scientifique evidence was comparatively easy. Once established, it provided a base from which to work retrogressively into the past, a method which was also adopted for reconstructing socio-economic conditions since it has several strengths as a research method.[2] By working backwards through time, the fuller source material and greater amount of direct, factual information of recent periods is allowed to inform the study of the more distant past, for which material is often scanty and generally less reliable. At the same time, the procedure recognises that data are uneven in availability and quality. Lacunae cannot be glossed over in a way which becomes almost inevitable where a temporal sequence is adopted with its compelling logic. The retrogressive method also

helps to avoid the gross error of *post hoc, propter hoc*.[3] As Leontief has emphasised, the avoidance of this error is particularly important to sound historical analysis.[4] There is the danger, though, of assuming that earlier conditions resembled later ones, unless there is specific evidence to the contrary, and of falsifying explanations by seeking to interpret antecedent situations in terms of the consequent ones. Hopefully, a counter has been provided in the text by discussing settlement pattern evolution within the correct chronological framework.

Sauerwein's identification of 81.2 per cent of the names in the whole of the Morea from the second edition of Pacifico[5] greatly eased the same task for the more limited region of the Máni. Broadly, the method was to take each of Pacifico's names and try to find the same or similar name in the Commission Scientifique's data and subsequent sources. The task presented similar problems to those encountered in trying to identify the early seventeenth century names from the Nevers' source, Document C.

Two general and several specific problems may be noted. The general problems were raised by transliteration and the change of names over time. Italian was used in the two headings of Document C, and would seem to have been the language for the transliteration of settlement names from the Greek. It was, of course, the language of the Venetian cadastral authorities at the end of the seventeenth century. Direct transliteration appears to have been attempted by the Nevers' source in most cases, and it is interesting to observe that the Italian ch-sound has been used to render the Greek X and sometimes K, perhaps indicating that the letters had a soft sound when pronounced in the Maniat dialect of the early seventeenth century, as they have today. The transliteration, however, was neither rigorous nor consistent throughout the lists. Italian descriptive terms were placed before or after a settlement name in several cases, for example, Paglia Gianizza and Gliaci-nova grande. Sometimes the Greek was partially translated, as in San Constantino, but this was not a practice followed consistently for

the Greek forms, Agio (Ἁγίος) and Agia (Ἁγια) are also found. In one case, the Greek appears to have been translated completely as Villa della Madonna di Chelmont; largely in consequence, the settlement could not be identified.

Changes in settlement names presented a much more considerable problem. Although some settlement names preserved a recognisable form down to the early nineteenth century, for example, Ardouvista in Document C appeared as Androuvista in the enumeration and map produced by the Commission Scientifique de Morée, other settlement names have lapsed or disappeared over the last 140 years (Eg. Cutifariagni, Nericista and Nixovo) and are difficult or impossible to identify.

A number of more specific problems were encountered in seeking to identify settlements listed in Document C. Although Gianizza can be identified directly with a settlement called Gianitsa c.1830, the suggested identifications of Paglia Giannizza and Panagia di Giannizza were not so obvious (Appendix III). Both settlements must have been located in the same general area as Gianizza itself to bear the suffix. Paglia is the Italian word for "straw", and it seems reasonable to identify Paglia Gianizza with a kalývia (Greek: "huts") settlement, consisting of a number of cane and straw huts occupied seasonally. Such a kalývia settlement is clearly a dependency, and this was often indicated by a possessive form of the parent's name,[6] where it was not called simply the "kalývia of such-and-such".[7] The next stage, therefore, was to identify Paglia Gianniza with early nineteenth century Gianitzanika. By a process of elimination, Panagia di Gianizza can be identified with Kato Gianitsa, a settlement, like Giannitzanika, which was marked on the Carte de la Morée of c.1830 but not listed in the enumeration. There did not appear to be a settlement called Pagagia in the vicinity either c.1700 or c.1830 which could have been a rival candidate.

A similar process of reasoning was followed in locating most of the settlements whose names were completed by the phrase di Cholochitia in Document C. Two of these settlements, Gogonia and Vatas, could be securely identified with early nineteenth century settlements (Gonéa and Vata) found in the tmíma of Kolokythia, and which have continued in occupation down to the present. It seemed fair to suggest that the other di Cholochitia settlements must have been located in the same general area. On this basis, tentative identifications have been made for Castro di Cholochitia, Haitofoglia, Scurta and Voucholia, but not for Afungia and Giogicio-poulo.

Scurta may be Skopá Island, which lies just off the modern settlement of Kótronas and contains a number of ruins, possibly of medieval date. Foglia means "leaf" in Italian and the name Haitofoglia may be a partial translation of the name of one of the two modern settlements which derive their names from plants in the phrýgana ("garrique") - Phlomokhóri ("Mullein-village") and Riganókhora ("Marjoram-village"). Phlomokhóri was preferred in the end because the settlement contains a substantial, probably medieval, church at its centre. The identification of Voucholia is even less certain, and was made on the rather unsatisfactory basis of similarity in sound between Voucholia and Loukádika, a settlement which appeared in the enumeration and on the map prepared by the Commission Scientifique. With 80 "hearths", Castro di Colochitia was the largest of this group of settlements, whilst the first part of its names means "town" or "castle" (κάστρο),[8] but identification was a little problematical. Probably Castro di Cholochitia was the same place as Colochina/Colokina/Colocythia marked on contemporary maps, and probably lay in the later tmíma of Kolokythia and in the vicinity of Kolokythia Bay. Local people sometimes call the peaked hill which dominates Loukádika as "The Kástro", which might point to the former existence of a castle there and thus justified an alternative use of the Greek word, kástro. But no traces of fortification were found when the site was inspected, whilst the loose cluster of about

30 houses, ruined and occupied, is probably insufficient to justify calling the settlement a "town", even in the Greek context. A better candidate is early nineteenth century Kotronaes, modern Kótronas. Not only has it been the largest settlement in the district since at least the early nineteenth century, but it is also located near to the only reasonable anchorage in Kolokythia Bay, a little to the east of Skopá, so that it could be identified with confidence as the port referred to by various late seventeenth century sources. The settlement today is a fairly compact nucleation, containing about 180 houses, with a core of old property near a church at a short distance from the shore, and lies on or very near the site of ancient Teuthrone. Its regular street system and possession of a number of shops[10] give the settlement an almost urban appearance similar to that of many of the semi-urban communities[11] recognised in the modern census. There is no evidence for the length of time that the settlement has had these quasi-urban characteristics but, taken with the other evidence, they point to Kótronas as the most likely candidate for Castro di Cholochitia.[12]

These few examples will have made clear both the nature and the complexity of the identification exercise; the full results are given in Appendix III. The procedure was essentially pragmatic and involved sifting through a range of sources and considering a number of possible identifications before gradually eliminating the more unlikely ones. Similar slow and tedious methods were used in the attempt to identify names in medieval sources, as well as the names from Pacifico which had been left unidentified by Sauerwein. Less success was achieved. Partly in consequence, very few medieval settlements are known from the region. Fortunately, much of the identification work had already been done for the places mentioned by Pausanias and listed in the Homeric Catalogue of Ships (pp. 112f). All that remained to be done was to check the accuracy of these identifications, plot the sites and create the distribution map.

Statistical Analysis

The reconstructions produced in the ways outlined above were essentially point patterns in which the settlements were conceived as having no dimensions. Although the earliest patterns were so simple that they could be described verbally, the large number of points in later patterns could only be satisfactorily described in some more objective way. Objectivity was also desirable in making comparisons from one period to another. Quadrat analysis and nearest neighbour analysis seemed to offer the necessary techniques for this.

Quadrat analysis depends upon being able to grid an area with appropriately sized squares and count the number of points in each quadrat. The data can then be transformed into a frequency distribution which can be used to indicate the degree of regularity in a pattern.[13] A large number of quadrats containing a small number of settlements indicates a scattered distribution of points. The absence of points from a great many quadrats, or the concentration of a large number of points in a very few quadrats clearly indicates a clustered pattern. The choice of quadrat size, though, is crucial, since different sized meshes will give different results. A 1 kilometre square was felt to be adequate for this study since it matched the scale of the map and had a side which was less than the mean distance apart of settlement points in the reconstructions.[14] Unfortunately, a comprehensive, regular figure, such as is normally used for applying the technique,[15] could not be fitted to the Máni and a rather irregular figure was all that could be devised. This distorted the analysis. Although the results highlighted the fact that much of the peninsula was empty of settlement throughout time, despite the alleged pressures on it as a refuge, not enough confidence could be put in the technique to justify using these consistently throughout the formal presentation of this study. They have been used only occasionally to strengthen interpretation based on nearest neighbour analysis.

Nearest neighbour analysis yields a statistic expressing the difference between an observed (or actual) pattern of points and one that is totally random. This is obtained by calculating the mean distance between points which are nearest neighbours ($\bar{D}obs$) and comparing that figure with the mean which would be obtained if the same number of points was distributed randomly. The ratio is expressed as

$$\bar{r}E = \frac{\bar{D}obs}{2\sqrt{P}}$$

where P represents "the number of points per unit of areal measurement" or $\frac{N}{A}$, and $\bar{D}obs$ the observed mean distance of nearest neighbour points.[16] Should the observed pattern approximate to random, the values of $\bar{r}E$ will fall close to 1.0. Non-random patterns give results ranging above 1.0 towards 2.15., for a regular pattern of points achieved when the points are organised on a lattice of equilateral triangles, with each point equidistant from six others.[17] Values from 1.0 to 0 represent patterns tending towards complete agglomeration. Both extreme values, 0 and 2.15 are very unlikely to be found in practice, and inspection of any nearest neighbour statistic does not readily reveal the direction in which a trend is operating. A simple and elegant method has recently been devised which allows the trend to be read off a graph showing the range of randomness possible with a given number of points in the population.[18]

Nearest neighbour analysis allows the objective description of the pattern of settlements existing at a particular time, and facilitates the comparison of the samples from the time continuum. However, several sources of error may be recognised when the technique is applied to the study region. The most basic is the plotting error characteristic of all mapping.[19] Plotting error, which varies according to the scale of the base map, does not appear to have been considered in published work using nearest neighbour analysis, though it must have had some effect upon the results presented. On the scale of 1:100,000 used for the present study, the plotting error is about 238 metres which is sufficient to prejudice the smaller

There are many distances measured between nearest neighbour points in the Máni. The error is likely to be randomly distributed through both the data set for each time sample and through the whole time-continuum concerned, so that it is not as serious as it appears, and might be regarded as constituting an allowable experimental error.

A second source of error arises from the elongated shape of the region, for this form minimises any tendency towards clustering apparent in the distribution of points.[20] All that can be done here is to recognise the tendency and attempt to correct it by taking the figure for reflexive pairs into account since this is really some measure of clustering.

With these errors recognised and allowed for in the interpretation, nearest neighbour analysis was used to describe settlement patterns reconstructed at particular dates and compare one with another to examine change.[21] It was also used as a search technique, because it was felt that the existence of nearest neighbours and of groups of nearest neighbours (nearest neighbour structures) might point to spatial relationships which are the result of more than chance. Results from the study of reflexive pairs are particularly suggestive of this possibility since they often arise from reciprocal effects in the placing of points.[22]

But settlements cannot be regarded simply as geometrical points on a plane surface. They have size and extent, and they occupy particular sites within situational niches in a wider region. Settlement form and morphological development are not considered in this study because data are insufficient until the early nineteenth century. It is important, however, to consider site and situation in the analysis of regional point patterns. Contemporary information about site is largely unavailable, since travellers and administrators were not interested in such mundane matters. Nonetheless, data can be made available if two assumptions are made. First, one can assume that named settlements have occupied broadly the same site throughout their

recorded existence. Some shifts of site are known to have taken place in the Máni and these will be noted in the appropriate place, but by and large stability seems probable once a settlement was founded, even if settlements may have moved around on their sites as a result of periodic destruction and frequent rebuilding. The second assumption follows from the first. One can assume that the site of any settlement in the past was the same as the place occupied by the settlement bearing the historical name today. Making these assumptions allowed the topographical characteristics of every site to be described and prepared the way for the next stage of analysis. Each site was fitted into a seven-part classification carefully defined by standard geographical terms (Appendix IV). This was done by generalising each particular assemblage of topographical conditions in terms of one relief form, such as a ridge or a knoll. Elevation was not measured in the field because of the difficulties of making barometer traverses from fixed points in such a rugged terrain, especially when so few spot heights had been accurately fixed. Instead, settlement heights above 100 metres were derived from the contoured map of Lakonía published in the Atlas of Greece and those below 100 metres from British Staff maps.[23]

The classic tradition in settlement geography has stressed the important effects of water supply on settlement patterns in arid and semi-arid regions.[24] Ancient authors, especially the architect and former soldier, Vitruvius, were very particular about the type of water sources desirable for a settlement[25] and, in the absence of much direct Maniat evidence from antiquity, these views have been taken into account in suggesting likely sources. Very few of the later documents or literary works made any reference at all to water, even the Reports of the agents of the Duc de Nevers, despite specific instructions to investigate the subject.[26] In the absence of strictly contemporary information, data about modern water supply was collected in the field and is used in later chapters on the assumption that the sources of domestic supply in the past are unlikely to have been very different. This use of modern data to inform past situations, whether about siting or domestic

water supply, can be justified theoretically by the uncertainty principle. Recast in geographical terms, the principle recognises that the collection of precise spatial information must involve some inaccuracy over precise time. In the present case, exact information about the qualities of place at particular periods can be secured only at the cost of precision over the time for which the information was correct.

Situation was given a little more attention by contemporaries, but they rarely recorded enough information with precision for it to form the basis for analytical study. Situation was thus examined in a similar way to site. The general situation of a settlement was appraised in the field, but, to sharpen the analysis, frequency counts were made later of the number of settlements lying in particular slope and altitude zones. These were felt to epitomise situation in a general way and thus facilitate statistical analysis. The slope zones were devised by constructing a simple combined morphological and average slope map. The average slope component was derived using the simple method devised by Raisz and Henry to construct their map of southern New England.[27] For the present study, data were taken from the contoured map in the Atlas of Greece and the British Staff maps. Morphological detail was added from these maps and from detailed field work.

In order to establish the characteristics of settlement distribution between the different height and slope zones in the region, use was made of the Chi-squared test. This measures the discrepancies between expected and observed frequencies.[28] It was thus possible to distinguish whether settlements appeared to be distributed according to the relative sizes of the different height or slope zones or whether there was a degree of unexpected concentration, perhaps suggestive of some relationship between the qualities of the preferred situation and the number of settlements. The nature of any such relationship was then open to further exploration. This required a thorough knowledge of the region's topography, a sketch of which is provided in the next chapter.

The Máni is treated there as the home of man, and no attempt has been made to provide a comprehensive description of the region's physical geography. Use has been made of historical material as seemed appropriate. An ecological approach informs the later chapters in which changes in settlement pattern are examined. Use is made of the ecological terms colonisation and spread employed by Hudson to describe the forms of change that can be detected over time.[24] Change itself is viewed as a continuous process, a temporal unfolding of spatial structures, rather than as a series of shifts resulting from historical accidents. The process of change is conceived as consisting of mechanisms and causes. Mechanisms are the ways in which patterns can be seen to change (spread, competition) or to be perpetuated (equilibrium). Causes are the social, economic or physical conditions which formed the perceptual environment of men and either required action or were met with inertia, as the case may be. Casual situations are rather difficult to reconstruct for the Máni because of the problems over historical data, but the basic characteristics of the physical setting can be described as the necessary stage and backdrop for the human drama, unfolding over more than 5,000 years.

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8. Carlo du Fresne, Domino du Cange, Glossarium de Scriptores Mediae et Infirmae Graecitatis, (Paris, 1688; répression du Collège de France, 1943).

9. Appendix II

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11. Places with 2,000 to 9,999 inhabitants, National Statistical Service of Greece, Statistical Yearbook of Greece, 1966, (Athens, 1967) p.13

12. But Colokhina was identified quite specifically with ancient Gythium by Le Sieur de la Guilletière (A.G.Guillet)

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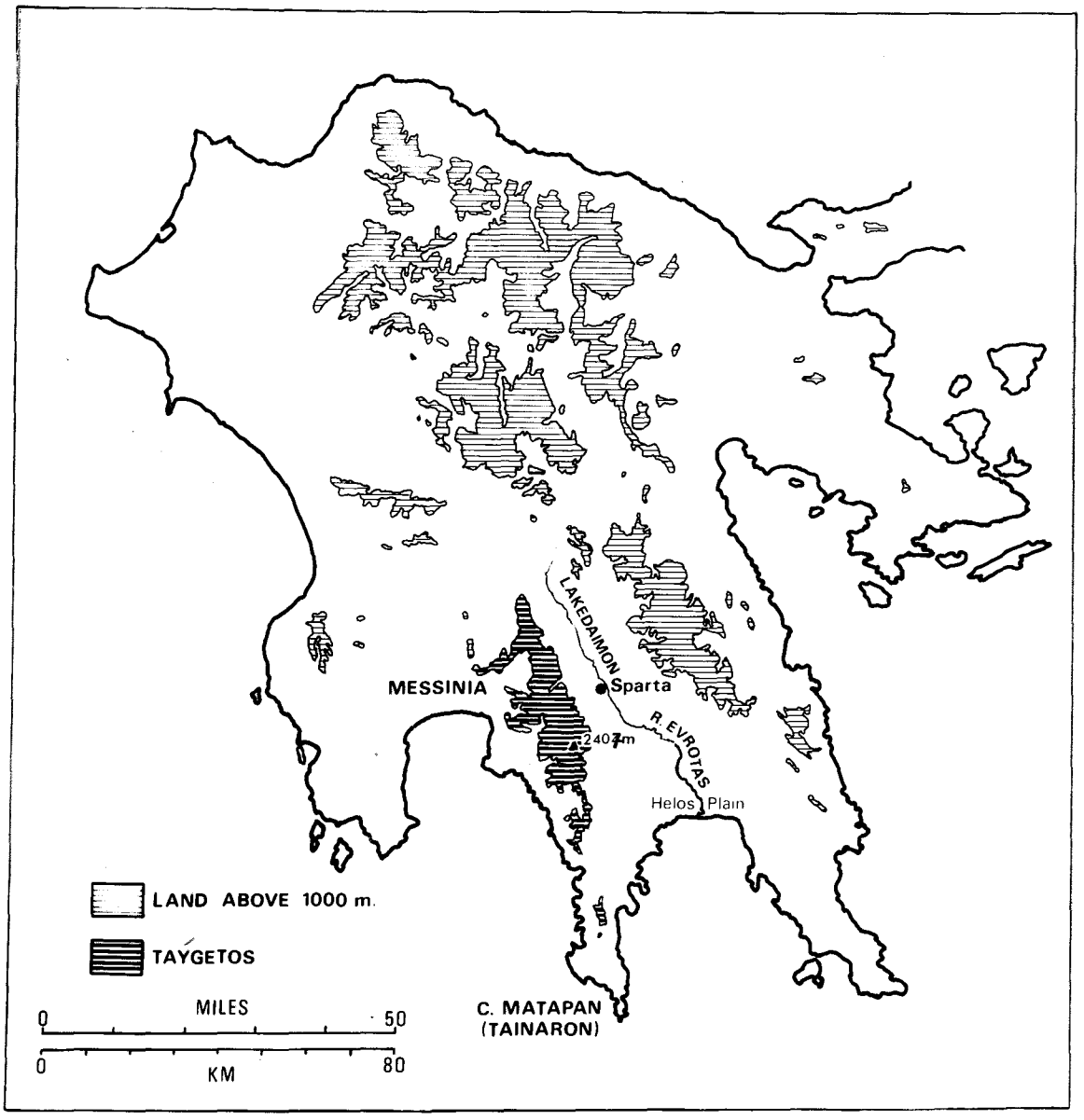

Figure 13: Taygetos Mountains

CHAPTER 4: THE MANI

Introduction

"A mighty mountain rises high above Moréa,
its place is in Lakonía, a place just like Pieria.
Taýgeton they called it, the ancient Spartiátai,
but Makrýnon 'Elían say the modern Maniátai.
Down from there some lesser mountains run,
right down unto the cave upon Cape Matapan.
And to these mountains there the ancient Spartiáti fled,
the same who are today as Maniátai bred." [1]

Put more prosaically, the Máni (ἡ Μάνη) is the region formed by the western and southern parts of the Taýgetos range of mountains (Fig.13). It is the middle one of the three peninsulas which project into the Mediterranean Sea from the Pelopónnisos (the Morea), and ends in Cape Taínaron (or Matapan). Although people outside the region, who generally feared its inhabitants, called the southern district Kakavounía ("Evil Mountains") or Kakavoulía ("Land of Evil Counsel"), the Maniats themselves traditionally recognised three major sub-regions (Fig.14) - 'Exo Máni ("Outer Máni"), with its northern frontier on a disputed line between the head of the Gulf of Messinía and the crest of the Taýgetos Mountains; Mésa Máni ("Inner Máni"), extending from the mountain crests to the sea over much of the south-western part of the peninsula; and Káto Máni ("Lower Máni"), forming the eastern side of the region from the hills at the head of the Gulf of Lakonía southwards to the Kritíri peninsula which ends in Cape Taínaron.[2] This study is concerned with the core of the Máni formed by its last two subdivisions which have been more or less fossilised into the modern 'eparkhíes* of Yíthion (Káto Máni) and Oítilon (Mésa Máni). Collectively, they will be referred to as the study region when the Mani would appear ambiguous.

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* originally "provinces" but now subdivisions of nómi and therefore similar to English "hundreds" before the nineteenth century reforms.

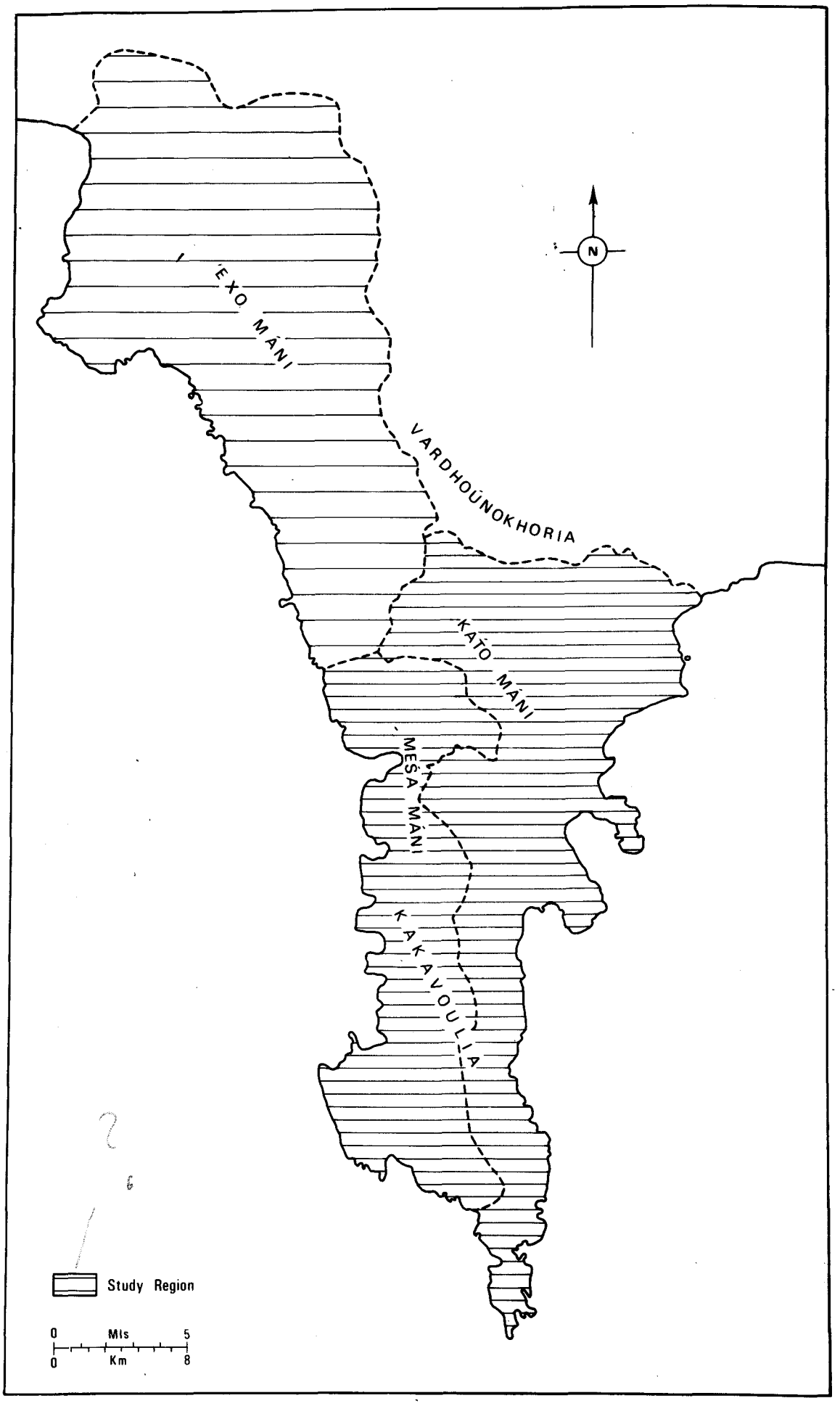

Figure 14: "Traditional" Subdivisions of the Máni

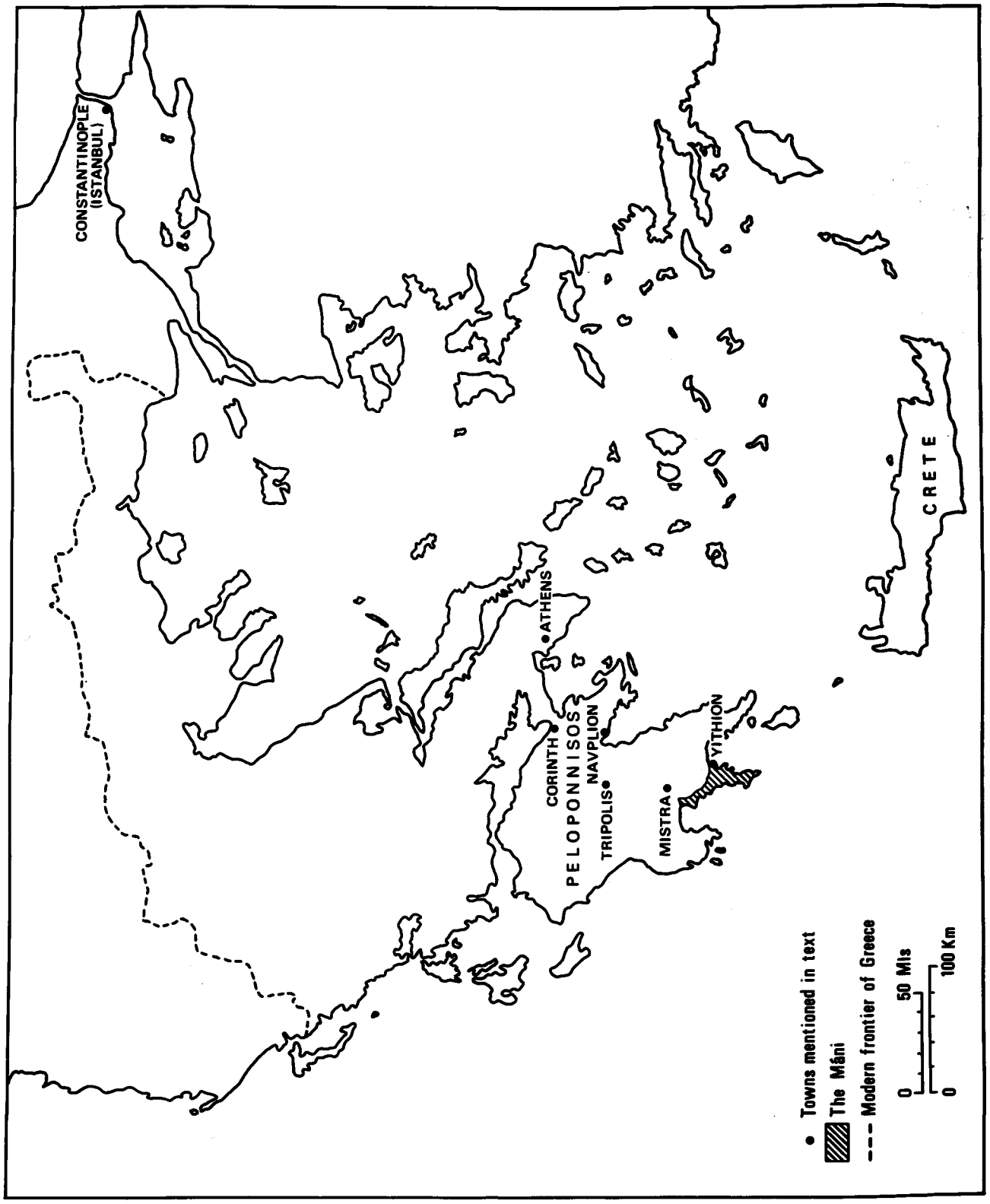

Figure 15: Position of the Máni in Greece

Position

Position meant that the region was remote but never completely isolated, of great importance in Mediterranean strategy and well within the zone of Mediterranean climate. As the southernmost district in mainland Greece (Fig.15), the Máni was distant from the imperial capital on the Golden Horn and from provincial administrative centres in the Morea, variously situated at Corinth, Navplion (Napoli di Romania) and Trípolis (Tripolitza). Access to the regional centre of Lakonía, whether ancient Sparta or later Mistrá, was arduous but, at about 12 hours' ride from Yíthion (Marathonisi) by horse,[3] it was by no means difficult.

The Mediterranean Sea is often conceived as having western and eastern basins, but a third one may also be recognised. This lies between Calabria and Sicily in the west and Crete (Candia) and the Cyclades Islands (the Archipelago) in the east (Fig.16). On several occasions in the past, this central basin has been a "zone of strife", and never more so than in the sixteenth and early seventeenth centuries when Spain and Turkey came into conflict. The Máni peninsula projects into the basin and would have been then more or less in the disputed contact zone between the great empires. Following the success of the Holy League at the battle of Lepanto (7 October, 1571), an attempt was made to raise rebellion in Lakonía, whilst a Spanish force may have seized the Maniat fortress at Passava c.1601, as the Venetians had taken and demolished the new fort above Porto Kaío some thirty years earlier during the Turko-Venetian war over Cyprus. Spanish viceroys in Sicily continued to intrigue with the Maniats, as did the Duc de Nevers from about 1612 to 1619, and the Turks retaliated by repressing savagely all signs of revolt on land and cruising off the Maniat coast.[4]

The strategic value of the region had begun earlier than the great-power clash between Spain and Turkey, and in some respects outlived it, for the region lies at the junction of two important sea routes. The major east-west route in the Mediterranean crosses the central basin between the

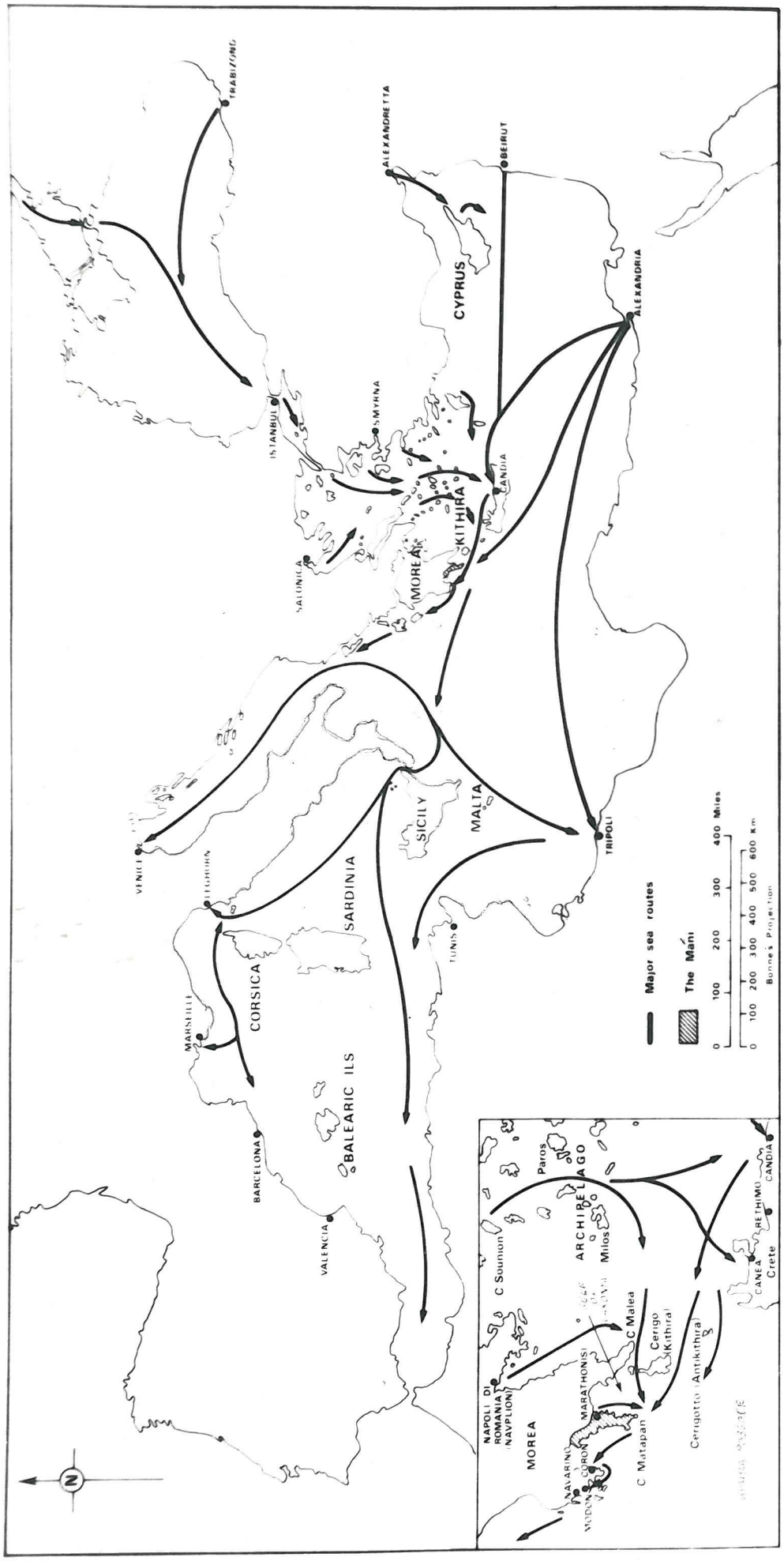

Figure 16: Position of the Máni in the Mediterranean

mainland of Greece and Crete. It is divided by the islands of 'Elafónisos, Kíthira (Cerigo) and Antikíthira (Cerigotto), and stabbed by the windswept capes of Taínaron and Maléa. The Kíthira Passage was extremely hazardous in the days of sail. Massive seas and fierce winds tear through it in the winter season, as Homer knew, whilst sudden squalls sweep down from the mountains on either side[5] and could easily disable even the largest sailing ships. It was at these moments of disaster that pirates moved into view from their hiding places around the islands and in the narrow bays near Taínaron.[6]

Off Taínaron a second route joined the seaway. This came down from the Adriatic Sea and the Ionian Islands to Messinía, and then cut across the Messinian Gulf where ships were exposed to sudden squalls descending from the steep cliffs of the western Máni. Between Cape Grósso and Taínaron they ran the risk also of foundering on sunken rocks. Despite the hazards, this route was vital to Venice, which not only possessed considerable commercial interests in the "gorgeous East", but also ruled the wealthy islands of 'Evvia (Negroponte) and Crete for several centuries after the fall of Constantinople to the Fourth Crusade (1204), drawing from them much of her corn supply. Control of the route partly explains why Venice was interested in the Máni for so long and how she came to rule it between 1465 and 1479 during her expansionist phase under the unwitting protection of the Turk.[7] It also helps to explain how so much of Maniat trade fell within the Italian orbit during medieval and modern times, though there were important trading contacts with the Archipelago and Istanbul to the east.

Climate, Vegetation and Resources

Position also determined the region's climate, which, in turn, shaped its natural vegetation and potential land use. Analysis of the available, largely qualitative information has suggested only minor changes in the climate of southern Greece during historical times. In the absence

of clear evidence to the contrary, modern data are taken to provide a picture of the general climate over the 5,000 years covered by the settlement investigation.[8]

Most of the climatic data have been taken from the island of Kíthira since only precipitation statistics are available for the one local station at Yíthion. They show that the Máni has the normal Mediterranean pattern of climate of hot summers followed by generally mild winters (Fig.17)[9]. But the graph does not adequately describe either the fierce heat and painful glare flung up from the limestones and marbles which form so much of the region's ground surface, or the bitter cold often brought by northerly winds blowing off the snow covered Taýgetos and Párnon mountains and which send people huddling around their charcoal braziers and explain the presence of fireplaces in the older houses.

Winds are a great curse to the region. Sudden squalls swoop down from the mountains and over the cliffed coastline, making the waters around the peninsula treacherous, especially to small sailing craft, but a joy for pirates. Westerly gales have been a greater problem for the inhabitants. Although the position is not accurately shown by the Kíthira data (Fig.18), because of the shelter provided to the island by the Máni itself, westerly gales are of great frequency and considerable strength. House roofs, which are traditionally pitched and made of massive stone slabs or Roman tiles, have to be weighted down with lines of stones, particularly on the exposed western side of the peninsula. Olive trees are stunted and bent, whilst the inhabitants told Leake in 1805 how the wind often destroyed their crops.[10]

Drought is another serious problem, despite a moderate mean annual precipitation of between 535.0 mm (at Yíthion) and 914.4 mm (at Kíthira). Most precipitation is received as rain between October and March (Fig.17), though the higher mountains are frequently snow capped, and the summers are markedly arid, with only the prickly pear cactus (Opuntia ficus-indica) appearing to flourish. Amount and duration vary greatly from one year to

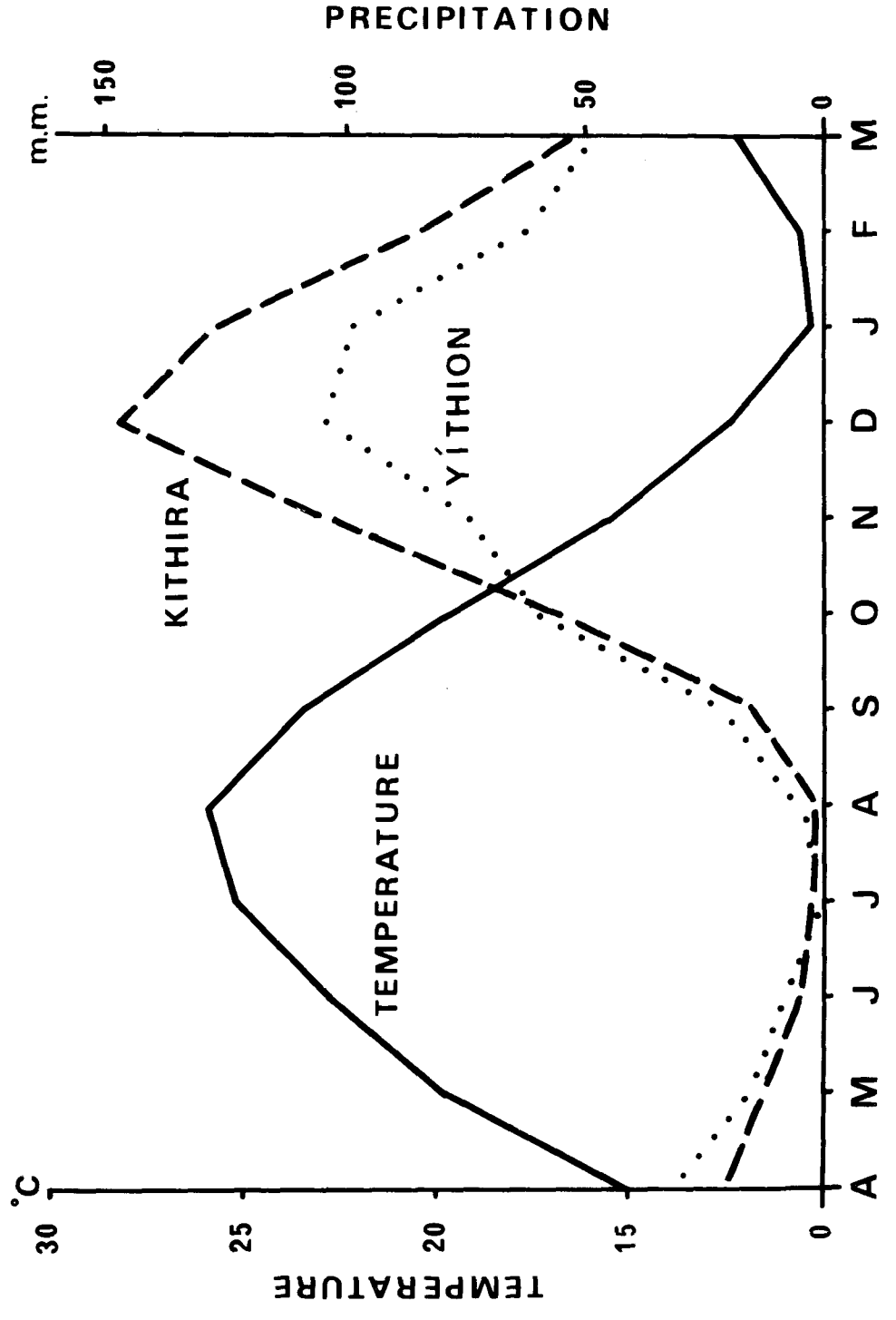

Figure : Climatic Data

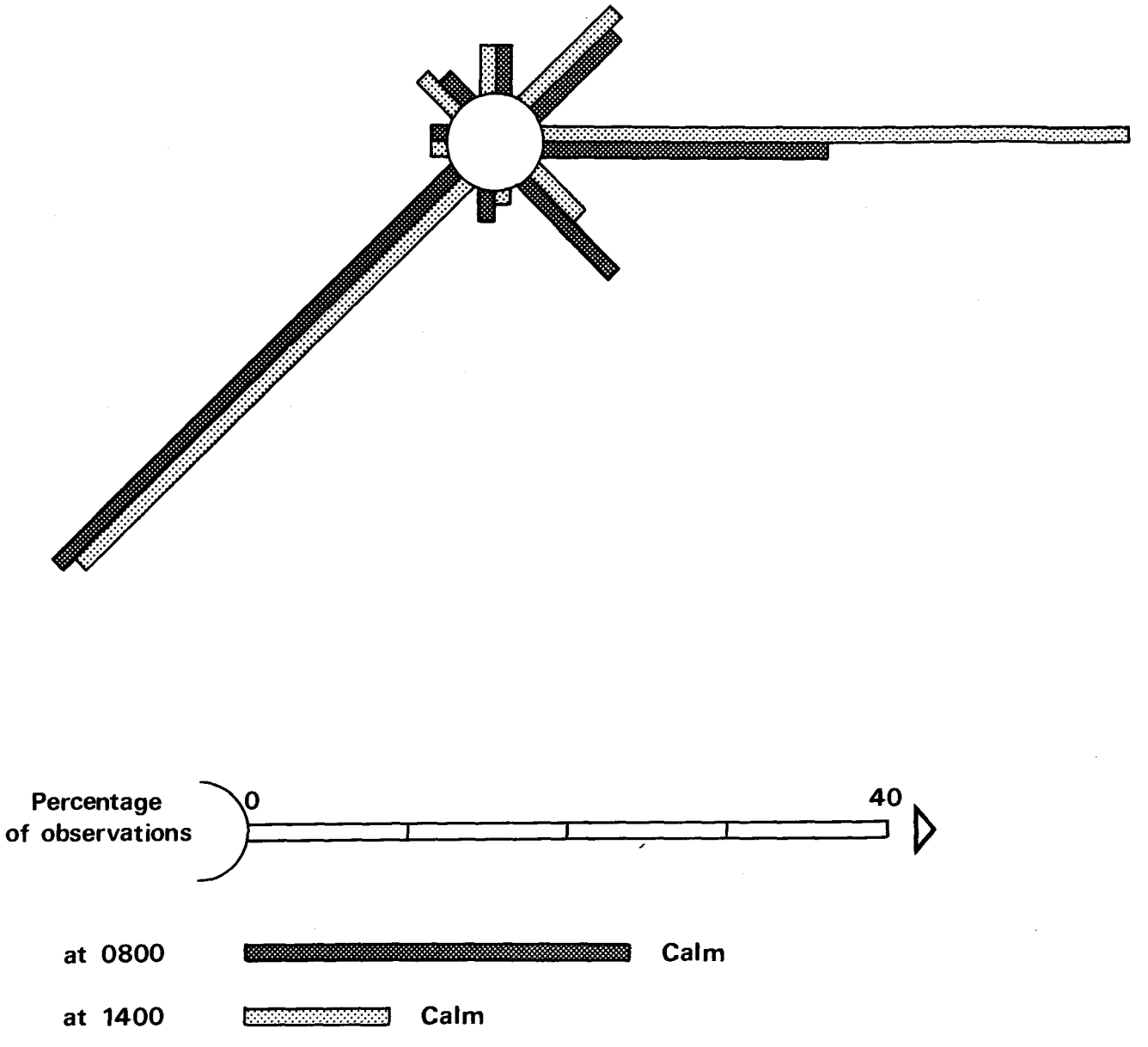

Figure 18: Mean Annual Wind Directions at Kithira

the next. In 1961 water tankers were necessary to supply the population, who normally depend upon rain water stored in cisterns. Lack of rain in April means a poor harvest in some years, thus possibly explaining the need to import cereals in the 1770s, a period when the region was considered to be self-sufficient in most years.[11]

Natural vegetation and man's use of the land are adapted to these semi-arid conditions. Open Mediterranean forest may once have been characteristic of the region away from the exposed western coasts, but most of it has vanished. Three modern settlement names contain the element drý ("oak", "oak-tree") and are found in southern areas from which woodland is now totally absent (Fig.19). Philippson's land use map of the Morea and the account of his travels in the Máni show that woodland was more extensive in 1889 in the north-east than it is today, and noted a small amount on the east coast which has completely disappeared.[12] Woodland survives today only in rather scattered patches in the north of the region. Valonia oak (Quercus macrolepis or aegilopus) is the most widespread tree, and in the eighteenth and nineteenth centuries, if not before, supplied the valonia (acorn cups used in tanning and producing a black dye) which formed such an important part of the region's export trade. Prickly or kermes oak (Quercus coccifera) is also common in the surviving woodland, but fir (possibly Abies cephalonica) is confined to the higher slopes of the northern mountains. Bushes of kermes oak (prinári), however, are important constituents of the phrýgana ("garrique") which, after generations of burning, clearance, cultivation and reversion, has replaced woodland over the greater part of the region. Prinári produced the gall-nuts (used to produce a fine scarlet dye) shipped from the region around 1800 and perhaps used for dyeing in the region during antiquity, whilst the aromatic shrubs supported the bees whose honey and wax were also valuable exports in the early nineteenth century.[13]

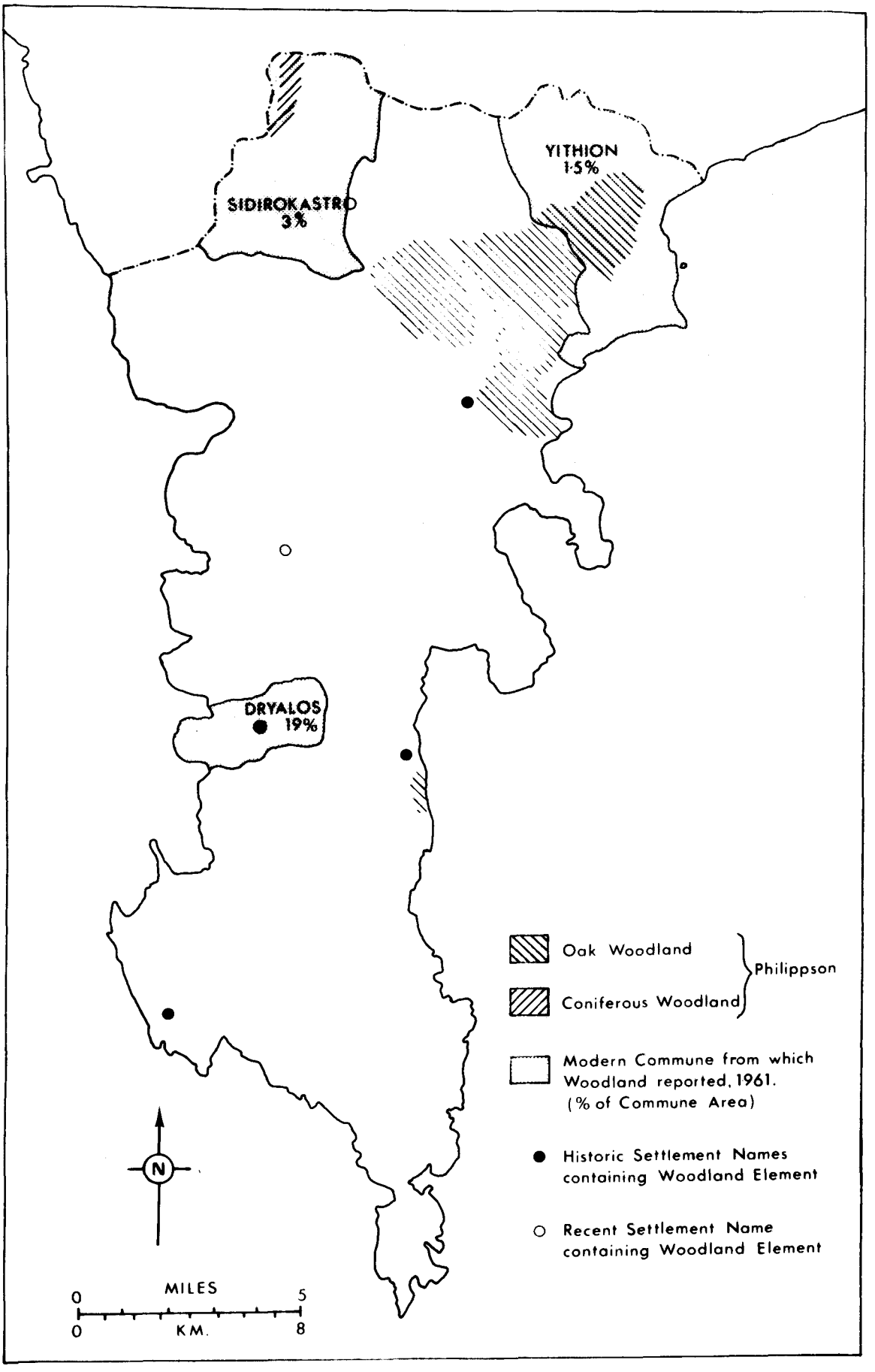

Figure 19: Distribution of Woodland in the Study Region

Phrýgana may have been maintained by changed soil and water conditions following initial clearance some time in antiquity, as well as by the continuous foraging of women for kindling, but animal husbandry probably played some part. Although thorny and dry for much of the year, the assemblage contains plants whose leaves and shoots can be eaten by goats and the hardy local sheep. It is rather surprising, though, to discover that Philippson thought that there was little animal husbandry in the region at the end of the nineteenth century compared with other mountainous districts of the Morea.[14] His conclusion is supported by modern data, for in 1961 the region nourished the relatively small figure of 17,880 goats and 17,844 sheep.[15] Few references were made to animals in the available historical sources. Leake saw 50 sheep and 12 oxen being driven into a yard in Tsimova one evening in April, 1805, and was told that the wealthier Maniats occasionally supplied the Morea with cattle. Conversely, Leake was also told that the Maniats imported cheese, a statement which might suggest that herding was of little importance to the early nineteenth century regional economy.[16] Pig-keeping might have been something of an exception, though based on kitchen refuse thrown into the yards rather than upon the resources of the phrýgana and woodland. Certainly, Rodd was of the opinion that pigs did very well on lupins, widely grown in the region in the nineteenth century,[17] and singlíno (a form of smoked pork) is still a popular winter dish with Maniats. The relative unimportance of more conventional forms of herding may be in sharp contrast to the situation in antiquity. Pausanias's travel guide shows that Apollo was widely worshipped in the region, especially under the guise of Carneius ("The Ram").[18] Apollo was especially associated with the care of flocks and herds, and it seems likely that pastoralism was once important to the local economy. Decline may have resulted from severe degradation of the pastures by overgrazing, or more likely, from shifts in the economy which are now difficult to trace.

Subsistence crops were selected to fit into the climatic regime and parallel the plants found in the natural vegetation. Although Leake, and Leroy before him, mentioned wheat and barley,[19] the main cereal crops were probably millet and maslin. Leake mentioned the importance of kalambókki (probably millet here),[20] whilst millet and maslin together occupied 14.6 and 3.1 per cent of the cultivated land in Oítilon and Yíthion 'eparkhíes respectively in 1961.[21] Both were once very widespread in the poorer districts of Greece, and have the great advantages as far as the Máni is concerned of being tolerant of high temperatures and very efficient in their use of moisture. They may have been rotated with lupins (lupinus albinus) in the past to keep the land in continuous use,[22] and lupins, which are well adapted to the Mediterranean climate, were once found practically everywhere in the region. Towards the end of the nineteenth century, Philippson even called lupin seeds "the staple food of the Maniats", since they were cooked and eaten by the Maniats in the same way as peas and beans[23] - crops which were mentioned by Leake.[24]

Vines and olives are more normally associated with the Mediterranean region than lupins because of their drought resistant characteristics, and both were found in the Máni. Historical references to vines are scarce,[25] but sufficient to indicate that they were cultivated on a small scale, perhaps to produce the sharp rosé drunk in parts of the region today. Olives were only mentioned occasionally, too, but the tenth century comment that the Maniats drew "their comfort" from them and the importance of olive oil in trade statistics for about 1800 together suggest that oleoculture was long significant in the region.[26] In 1961, olives covered 18.1 and 9.6 per cent of the cultivated areas of Oítilon and Yíthion 'eparkhíes respectively making the Máni one of the most important olive-growing districts in Greece.[27] However, this dominance of the cultivated land may be a fairly recent development, perhaps related to massive population growth in the region. The normally scrupulous Philippson commented in 1889 that "only in recent decades has olive cultivation gained ground".[28] The implications of this

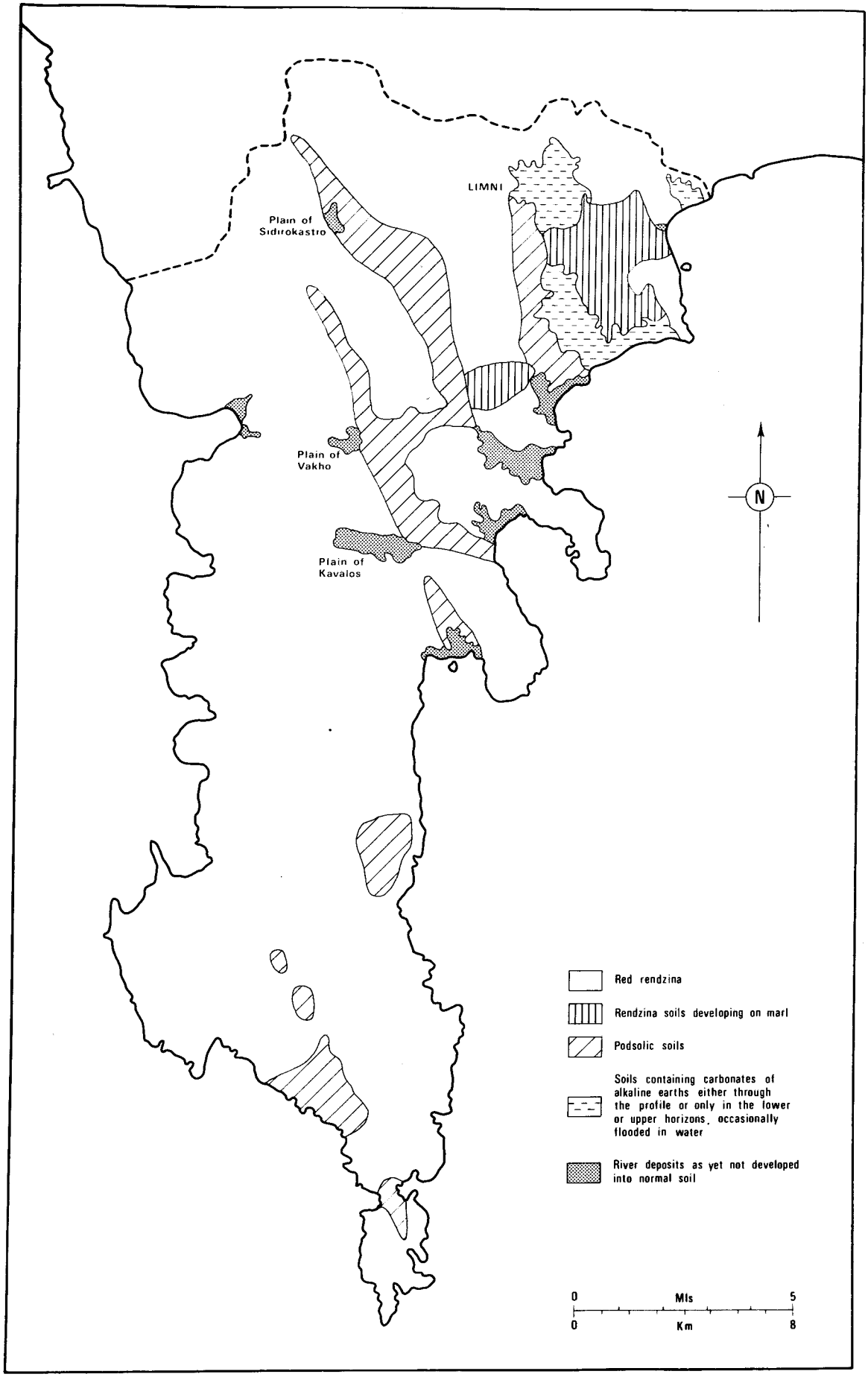

Figure 20: Soils of the Study Region

statement might be that olive groves were rather scattered in the region before this and that there had been some contraction since the fifteenth century, when remarks by Cyriaco of Ancona suggest that they were widespread[29], the decline perhaps resulting from local wars caused by population pressure on limited land.

In 1961, only about 28 and 26 per cent of the total area of Oítilon and Yíthion 'eparkhíes were cultivated.[30] Abandoned terraces indicate that even in the recent past there was more land under crops, but at all times the amount of land which could have been cultivated must have been limited. Abundant manpower could produce expensive investment in terraces, but fundamental restraints were imposed by the type of soil and the type of terrain. Rendzinas are characteristic soils over most of the peninsula (Fig.20).[31] They are stony and, though clearly eroded now, must always have lacked depth in this region of steep slopes and very hard rocks. Exceptions would be provided by the scattered hollows and basins of the mountains.

Topography

As the opening lines of the poem by Nyphakis indicate, the Taygetos mountains run the length of the peninsula in a series of falling ridges and peaks, giving it a rather asymetrically-placed spine. (Figs.21 and 22). Along much of the eastern side of the Máni, the marble[32] mountains are precipitous and rugged, (Fig 23), with here and there areas of valley land and fragmented marine terrace which can be cultivated relatively easily. In the district of Malévri - broadly the north-eastern corner of the region - mountains of Tripolitza limestone and dolomite merge with undulating terrain shaped partly from schists and softer limestones and partly moulded from clays, sands and marls which give brownish-coloured rendzinda soils of moderate depth and relatively good agricultural land. This enclave of lower land ends abruptly against the dissected edge of the arid plateau

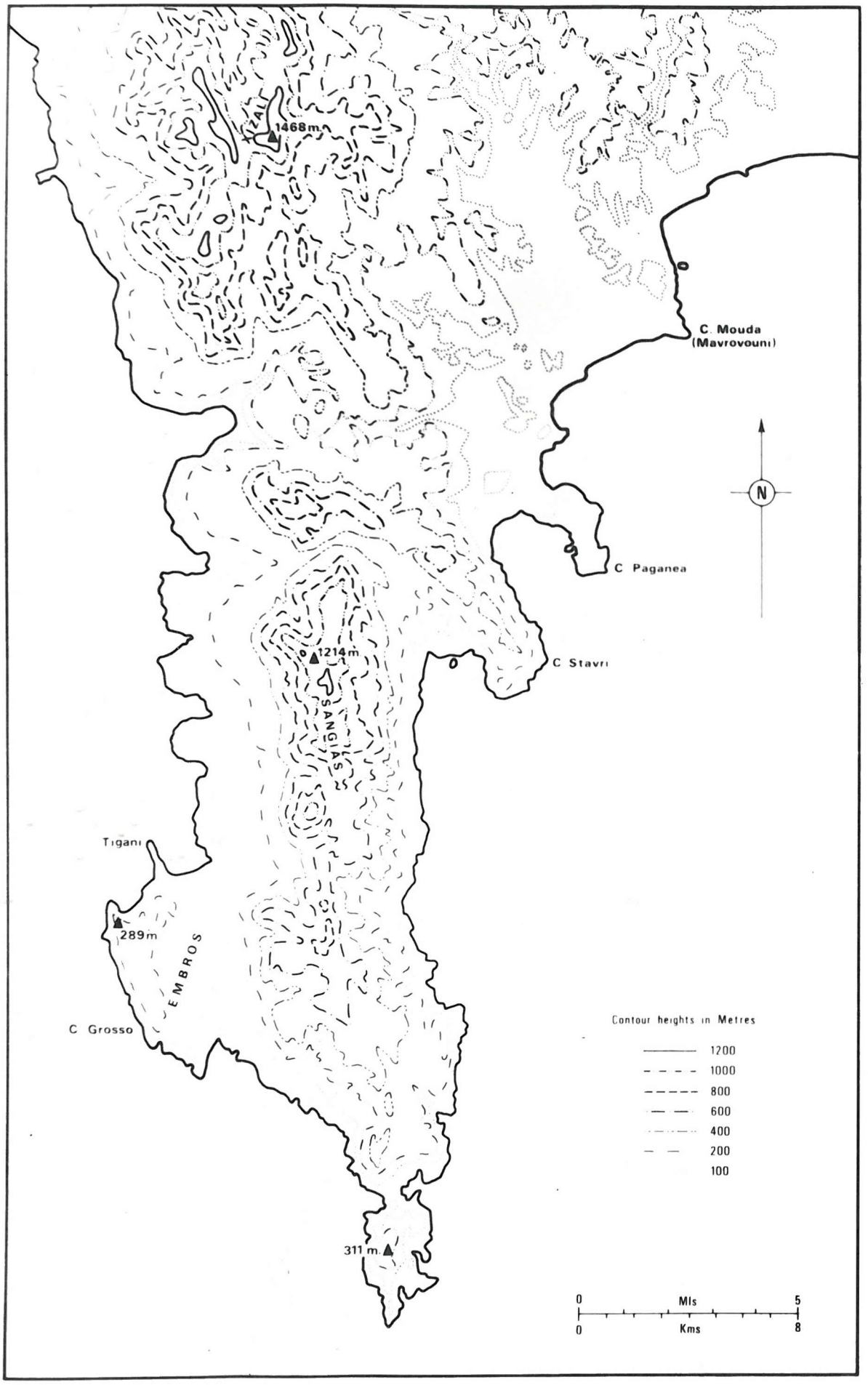

Figure 21: Contour Map of the Study Region

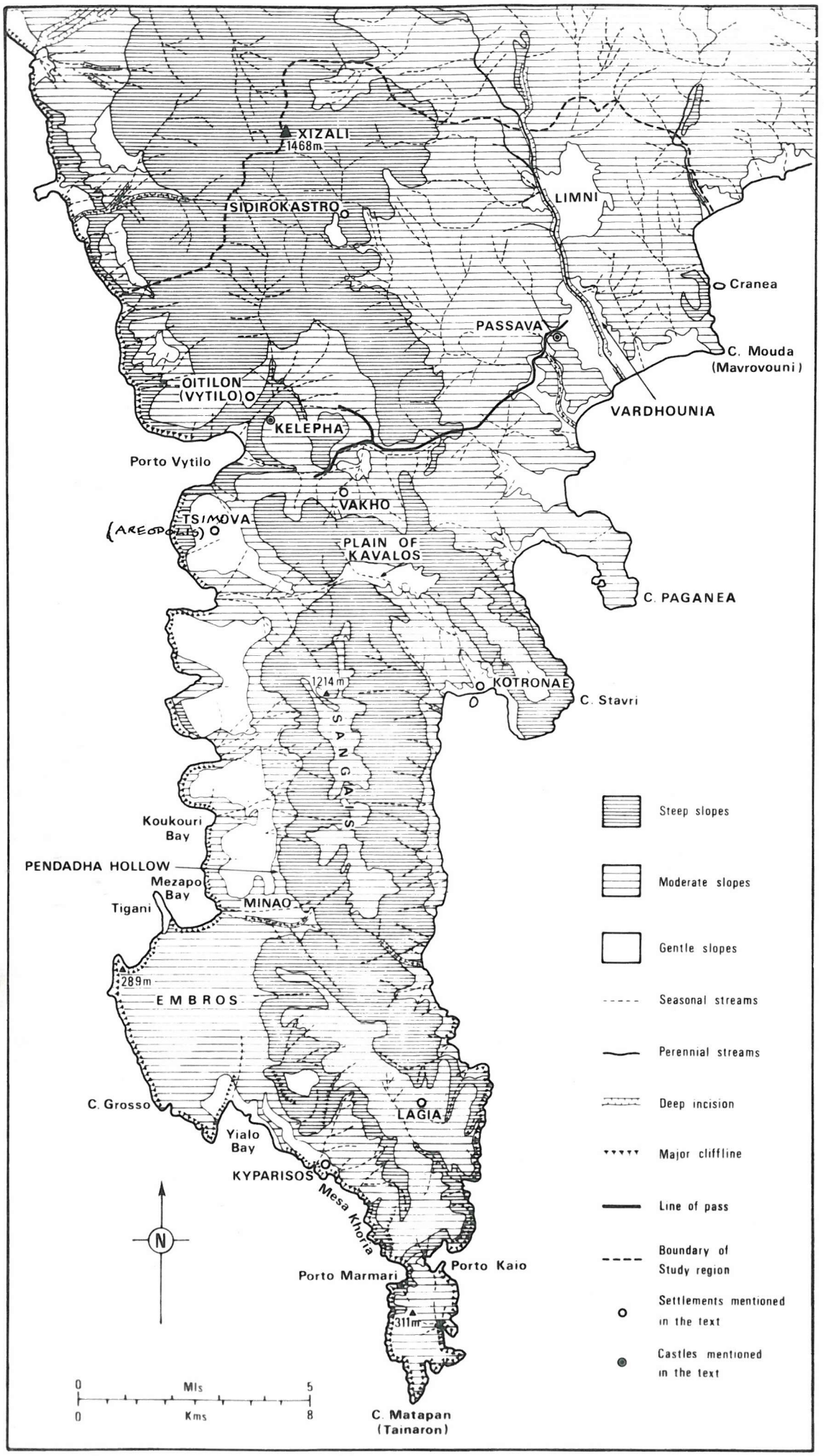

Figure 22: Physiography of the Study Region

Figure 23. East Coast, Looking North from Near Kokkála

of the Vardhoúnokhoria, which separates the Máni from the heart of Lakonía in the trough of Lákedaimon and from the marshy, dune-fronted 'Elos Plain lying about the mouth of the Evrótas river. The Vardouniots, many of them Muslim Albanians, were the fierce and long-standing enemies of the Maniats, so the north-eastern corner of the Máni was something of a frontier zone in modern times.

On their western side, the spinal mountains fall fairly abruptly (Fig. 24) to a high terrace which runs in discontinuous sections down practically the whole length of the peninsula (Fig.25). Communications between the two sides of the peninsula are afforded by a number of routes (Fig.22). Towards the south, a low col in the mountains affords a difficult and probably little-frequented route across the peninsula, while farther north access is provided through the narrow upland plain of Kávalos and its steep valley approaches. The most important east-west route lies farther north still, and follows a series of inter-connecting valleys known as the Mílolanghádha ("The Pass of the Mill"). It is defended at its eastern and western ends respectively by the medieval fortresses of Passavá and Kelephá. Despite the fortresses, though, the pass was forced on several occasions, particularly by the Turks. In fact, the Maniat mountains provided only relative security to the population. To the Venetians, predominantly a sea power, the Máni appeared to be the citadel of the Peloponnisos. It was a strong base from which to launch the conquest of the rest of the Morea, as the Republic showed in the late seventeenth century and as the Byzantine government appreciated in the mid-thirteenth century when negotiating the ransom of Guillaume II de Villehardouin.[33] At the same time, the region could provide a refuge capable of defence for some time against superior forces. Again, at least one Venetian governor appreciated this fact,[34] but the point was proved by the inept attacks on the region by Ibrahim Pasha's army in 1826 and the use of the northern mountains as a communist stronghold at one stage of the more recent Guerrilla or Civil War,[35] with its strong

Figure 24: Western Part of the Taýgetos Mountains in the North of the Study Region

a. North of Oítilon

b. West of Oítilon

c. Near Boularí

Figure 25: Marine Surface Zone

similarities to the War of Independence. But the Maniat mountains were never completely inviolate to a competent and persistent enemy. That particular myth is shattered by recalling the absorption of the entire region by Sparta during the eighth century B.C., the uncontrolled depredations of Macedonian and Boeotian armies in 338 and 370 B.C. respectively, the Frankish conquest completed by about 1248, when Passavá and Kelephá were built, the Turkish conquests of about 1500 and 1715, as well as successive Turkish expeditions into the region, perhaps the most notorious being in the 1770s when the Mání was the centre of a serious rebellion inspired by Russia.[36]

No traces of permanent occupation have been found so far in the mountains above about 800 metres, so it is reasonable to assume that the higher reaches have always been unattractive to permanent settlement. Indeed, the upper mountains seems to have been little used, unless there was some transhumance of sheep and goats in the past. Slopes here are generally steep, rugged and exposed, soils are thin and the winters snowy. Another largely negative area for permanent settlement has been the coast, though for different reasons. For much of its length the Maniat coast is steep or cliffed, so there are few locations suitable for settlements. Bays and inlets break the iron-bound coast, but some of them are so difficult of access from the interior of the peninsula that port development would be unlikely. This is especially the case with some of the inlets near Cape Taínaron, and occupation here has been related to such unusual activities as service in mercenary armies (during Hellenistic times) and privateering (in the 1790s).[37] The shape of the region means that internal communication is generally quicker by land than sea, given internal security or a system of safe conduct, while there seems to have been little in the way of fishing in Maniat waters to attract settlers.[38] What was probably a small amount of seasonal trade could be handled quite satisfactorily by skáles, landing places with perhaps a storehouse and tower to provide a minimum of facilities.

As a sporadic and chancy business, piracy required no large or permanent bases. It is probably not without significance that the reappearance of permanent settlements on the coast during the eighteenth and nineteenth centuries was related to a period of expanding trade for the region. On the other hand, a long coastline with bays and inlets meant that the region could be attacked successfully from the sea by regular naval expeditions, not piratical raids, as the Turks appreciated in the seventeenth century and especially in the 1770s when the Mání was detached from the Pashalik of the Morea and placed under the control of the Kapudan Pasha (High Admiral), who successfully campaigned against the region on several occasions thereafter.[39]

Away from the coast, some other physically difficult areas have seemed more attractive to settlements, especially in modern times. Valleys furrowing the east coast south of Kótronas (Kotronae) and some of the fragments of marine terrace there provided enough cultivated land to support a number of small settlements on the slopes above them. In antiquity, the main attraction of the district was provided by antico rosso, "a beautiful, hard, maroon or deepish purple marble" found near modern Dhimarístika, and the black stone of Taenarum which was esteemed "as much as many marbles".[40] Farther north, karstic basins in the vicinities of Pýrrikhos (Kávalos) and Sidirókastro contain comparatively deep and potentially productive soils which, in the former case, have certainly been exploited since ancient times. Water is also available, either from wells or from springs situated at the contact of limestones and schists. At the opposite end of the peninsula, in the Mésa Khória and the Kritíri peninsula, patches of dissected semi-metamorphosed rocks, largely schists, provide easily terraced and worked soils. (Figs. 26 & 27). In the Mésa Khória they have been cultivated in modern times from a number of settlements perched high on the hills above their fields but in antiquity they supported the coastal pólis of the Taenarians, with its focus originally at Taenarum but later at Kaenepolis

Figure 28: Mountains and Basin in the Mésa Khória

Figure 27: Terraces in Kritíri

(modern Kypárissos). An iron deposit near Porto Kaío may have provided additional attractions in ancient times, as may the famous temple of Poseidon near Cape Taínaron. Another iron deposit at Skála near Vákho[41] may partly explain the small concentration of settlements in that vicinity in modern times, though cultivable land was also available in a rather irregularly-shaped basin.

Judging by the numbers of settlements, much more attractive areas than those described so far were to be found in the north-eastern corner of the region, along the western side of the peninsula from Oítilon (Vytilo) to Cape Grósso and in the hinterland of Kótronas. A small patch of schists has been eroded behind Kótronas to form a series of valleys within the same mountain-fringed basin. In ancient times, the area supported the pólis of Teuthrone, and in modern times, it has nourished up to a dozen separate settlements.

Many more settlements have been found from at least the seventeenth century along the western side of the peninsula. Two areas have been of outstanding importance. The first is composed of the fragments of high terraces, probably of marine origin,[42] lying to the south of 'Areopólis (Tsimova) (Fig.2[2]). Considered as a single unit, the terrace zone measures 2 to 3 kilometres from west to east and falls in height from about 250 metres at 'Areopólis to about 120 metres west of Mínn, some 14 kilometres farther south. The southern-most fragment supports the greatest number of settlements at the present time and it is easy to see why. There are two major terrace levels here, separated by a low cliff so that the eastern section is lower than the western part. The lower level is bounded on the east by moderately steep slopes, partly masked with massive scree, and takes on a trough-like character. The Hollow of Pendádha,[43] thus, contains some of the deepest, stone-free and water-retentive soil in a region where soils are extremely thin and spreads of small stones are characteristic. Terrace fragments farther north lack this advantage, but almost flat if rocky land between the mountains and the sea cliffs does provide opportunities for cultivation. The labour to clear this land must

have been immense, for the cleared stones have been piled into great rough walls [44] which, whilst impeding movement and visibility, do provide the crops with some protection against the accursed wind. They are also a monument to population pressure in the past. Neither here nor around the Pendádha Hollow are there any natural sources of water because of local geological conditions and the people are dependent upon numerous cisterns sunk into the hard marble surface, covered with slabs and lined with mortar.

The other area in the Mésa Máni where settlements have been concentrated since at least the early seventeenth century, and which supported at least one pólis in antiquity (Hippola), is now known as the 'Embros ("The Foreland"), since it projects out from the rest of the peninsula as a great arc of rising ground (Fig.28). The 'Embros is composed of a number of sharply defined terraces, each tilting slightly to the west to give a depression before the next terrace rises above it (Fig.29). The whole flight ascends westwards through Katopángi from a now well-settled depression, known as Nikliániko, running along the mountain foot. Then it plunges directly into the sea from the narrow Makryna ridge (> 150 metres), part of which was probably the acropolis of ancient Hippola. The depressions and their relatively deeper, moister soils seem to have been the major attraction for settlers, though additional attractions may have been, possibly at different times, easily quarried poros on the north coast, the possibility of retreat behind the remodeled but basically prehistoric fortifications of the Tigáni ("Frying Pan"), and the near invisibility of many settlements from the sea. Stones and lack of water sources, though, make cultivation and general subsistence only marginally better than districts farther north. Indeed, the harsh life of the Kakavouliotes was one of the sub-themes of Nyphakis' poem and was briefly described by Leake and Carnarvon. About 1800, the children looked wrinkled and old before their time, probably because of malnutrition.[45] Famine was never very far away because of wind

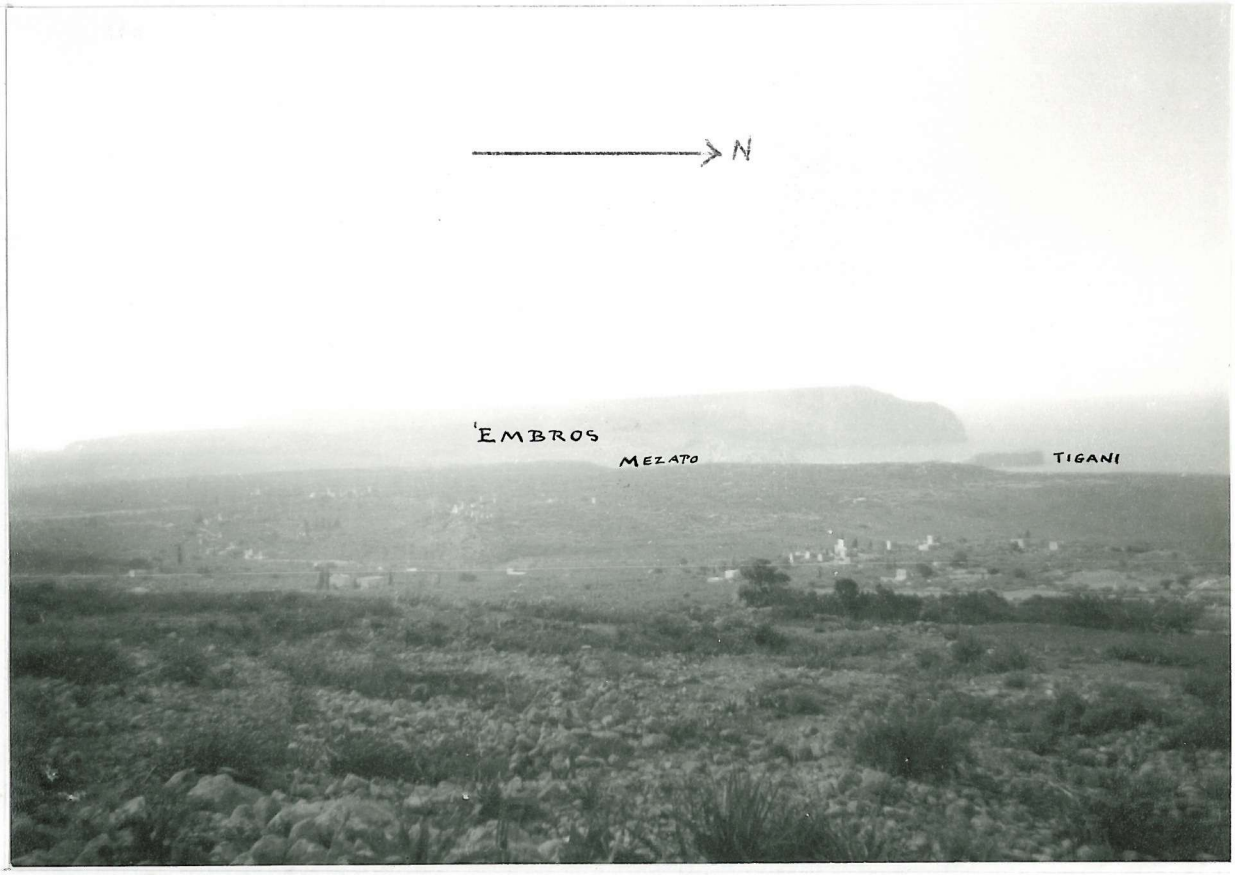

Figure 23: South End of the Marine Surface Zone with the 'Embros

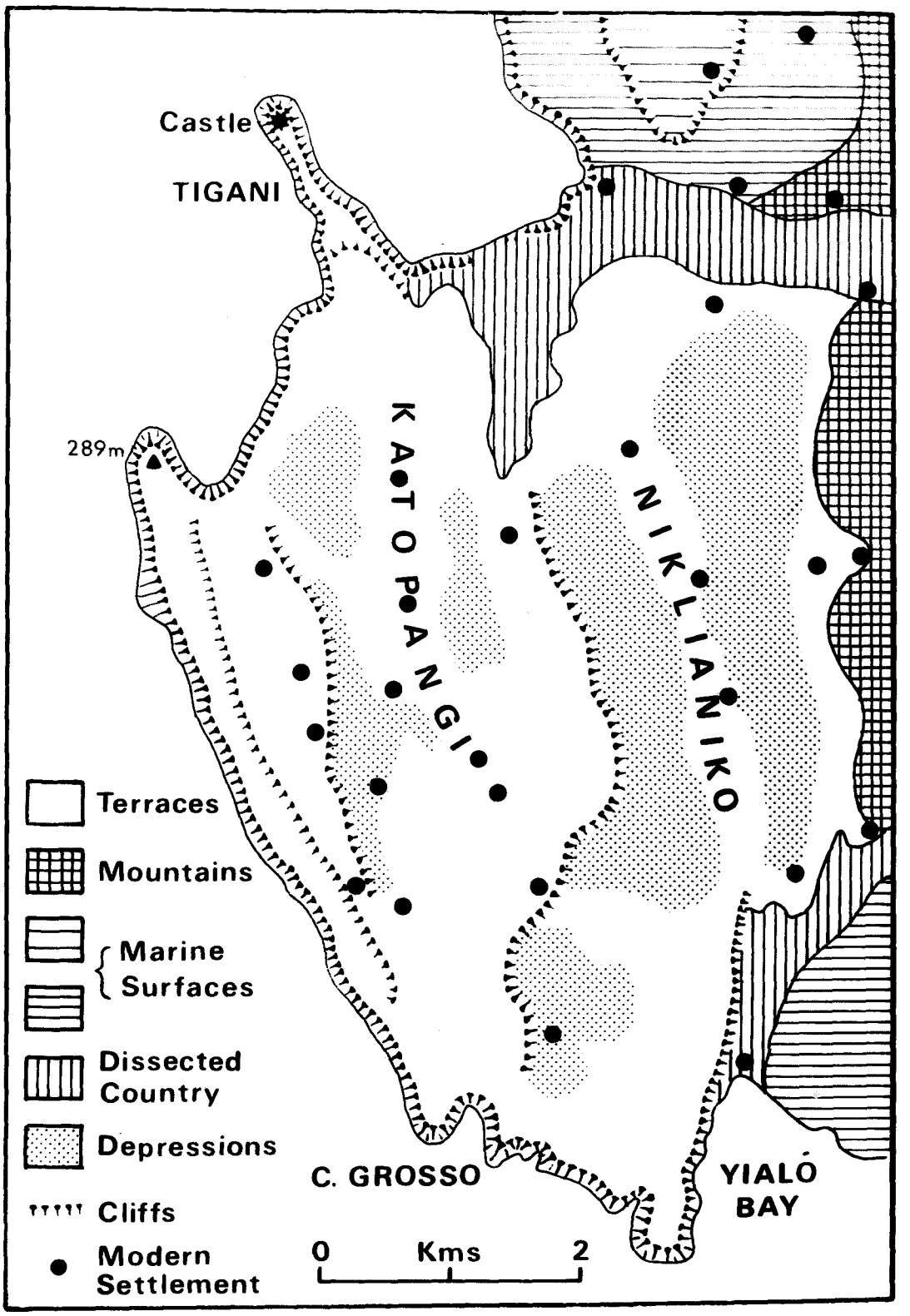

Figure 2?: The 'Embros

devastation and the occasional failure of the rains.

A more attractive environment seems to be afforded today by the arc of undulating country lying north of Cape Stávri between the mountains and the sea, with a focus in modern Yíthion (formerly Marathonisi; ancient Gythium) (Fig.30). Flat or round-topped hills are common here, separated by the relatively wide valleys of the Vardhoúnia river, the Turkovríssi and their tributaries (Fig.31). These contain at least a trickle of water throughout the year. A number of small plains have developed where the streams reach the sea, and there is a large alluvial tract inland at Límni (Fig.32). Wells are found here, as well as in the neighbouring valleys and coastal plains, and they probably supplied much of the drinking water in the past, as they do now. Leake saw the Vardhoúnia being used to irrigate maize on an estate near Mavrovoúni, and cotton was widespread in the coastal district during the early nineteenth century.[46] At that period, the hills supplied much of the valonia and gall-nuts exported from the region, almost exclusively through Marathonisi, and in some areas there were mulberry plantations supplying the basis for the region's silk exports.[47]

Despite the north east's apparent prosperity in the early nineteenth century, tracts of mosquito-breeding marsh were still widespread, and the available evidence suggests that recolonisation had begun in the area not long before the War of Independence began. There seems to have been a gap in settlement history between the late Roman period and the early eighteenth century, for the area contained the greatest concentration of settlements in the study region during the second century A.D. The physical environment seems to have changed between the two periods. Submerged walls at Yíthion and Skutári indicate a change in the relative position of land and sea of about 2.5 metres and 3.5 metres respectively since antiquity.[48] The existence of marshes and wide alluvial flats probably point to the build up of "younger fill" here, as elsewhere in the Mediterranean basin,[49] from late Roman times. Chapter 6 will argue that this deterioration in ecological conditions was a major factor in the abandonment of the area during early

Figure 30: North-eastern Area: Panorama

a. Vardhoúnia

b. Turkovrissi

Figure 31: River Valleys in the North-east Area

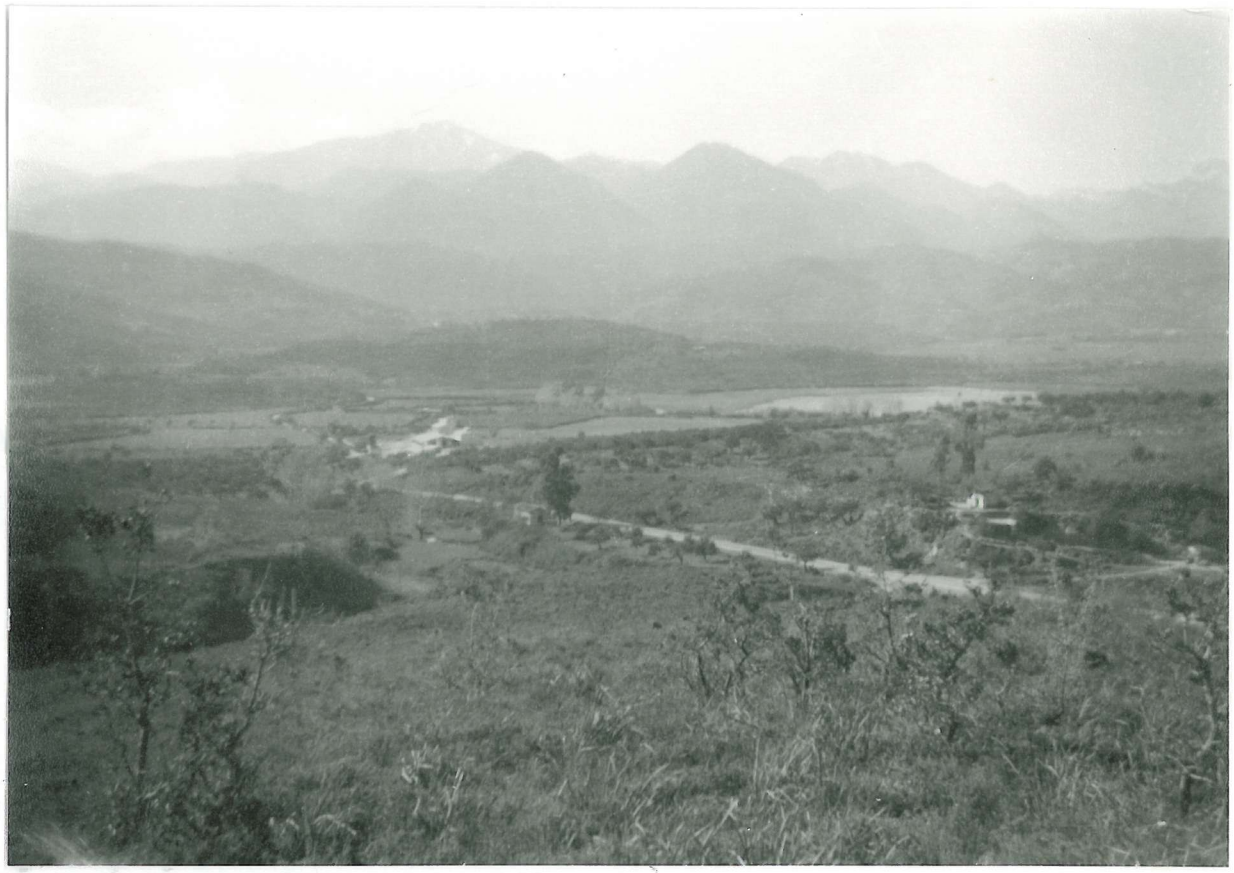

Figure 32: Flooding in the Vardhoúnia Valley Near Límni, Winter 1962-63

medieval times and an important reason for its apparent emptiness down to the eighteenth century. The area's attractions in the Bronze Age and Roman period seem clear from the number of settlements known to have existed there, and more may be buried under the "younger fill", but the quality of valley land is likely to have been inferior to that of to-day. Indeed, the prime reasons for settling the Maní at all in prehistoric times may have been more related to trade and communications than to the region's agricultural possibilities, which, to judge from the widespread veneration of Demeter and Dionysius, attested by Pausanias, were known to be limited. Initial colonisation and subsequent spread in antiquity are the themes of the next chapter.

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Μεγάλο βουνὸ βρίσκεται 'πάνω στὸ Μοριά
στὸν τόπο τῆς Λακωνικῆς, ὡσὰν τὴν Πιερία.
Ταΰγετον τὸ "ελεγαν οἱ παλαιοὶ Σπαρτιᾶται,
καὶ Μακρυνὸν τὸ λέγουσι, Ἠλίαν οἱ Μανιᾶται.
Εἶναι καὶ ἄλλα περισσὰ βουνὰ μικρότερά του
ἀπὸ τὸν κάβο Ματαπᾶ "εως 'κεῖ κουτά του.
Σ' αὐτὰ τὰ "ορη φύγανε, οἱ παλαιοὶ Σπαρτιᾶται,
καὶ εἶν' αὐτοὶ ποὺ λέγονται τὴν σήμερον Μανιᾶται.

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27. Kayser and Thompson, op.cit., 316.

28. Philippson, Der Peloponnes, op.cit., pp.226-27.

29. He used the term oliverferis villis, Sabbadini, op.cit., p.28.

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CHAPTER 5: SETTLEMENT ORIGINS AND DEVELOPMENTS TO c. A.D.174

The previous four chapters have put the problem of settlement retreat in context, discussed the source material available for tackling it in a particular region, set out the necessary methodologies and described the experimental setting (the region) within which settlement pattern change was investigated. The next three chapters outline the results of the investigation. Each deals with reconstructed patterns of points and sites, and attempts to explain the changes or stabilities apparent from one time-horizon to the next.

Origins

The earliest traces of human occupation in the Máni come from the cave of Alepotripa, near Pýrghos. Pottery from this site has been assigned to the late Neolithic period (4000 - 3000 B.C.), and the excavator reports more traces of occupation in this period from the immediate vicinity of the cave.[1] On the other hand, coarse pottery associated with fragments of obsidian recovered from the little island of Skopá, off modern Kótronas, has been assigned to the subsequent Early Helladic phase (3000-1900 B.C.), as have sherds picked up on a hill near Mavrovoúni and at Spíra. A plentiful scatter of obsidian on the island of Kranae, at Yíthion, has suggested occupation in the same period, though pottery of recognisable type was absent. Taken together, the available evidence points to occupation of at least 4 sites in the study region during the Early Helladic phase (Fig.33) and other traces may be found by more thorough search. It is assumed that the settlements were nucleated, as in later times, though size and form are unknown. The sites are found in gentle or moderately sloping terrain, at heights well below 100 metres (except for Spíra at about 100 metres) and situated on or very close to the present day coast. (Table 4). They form part of a coastal

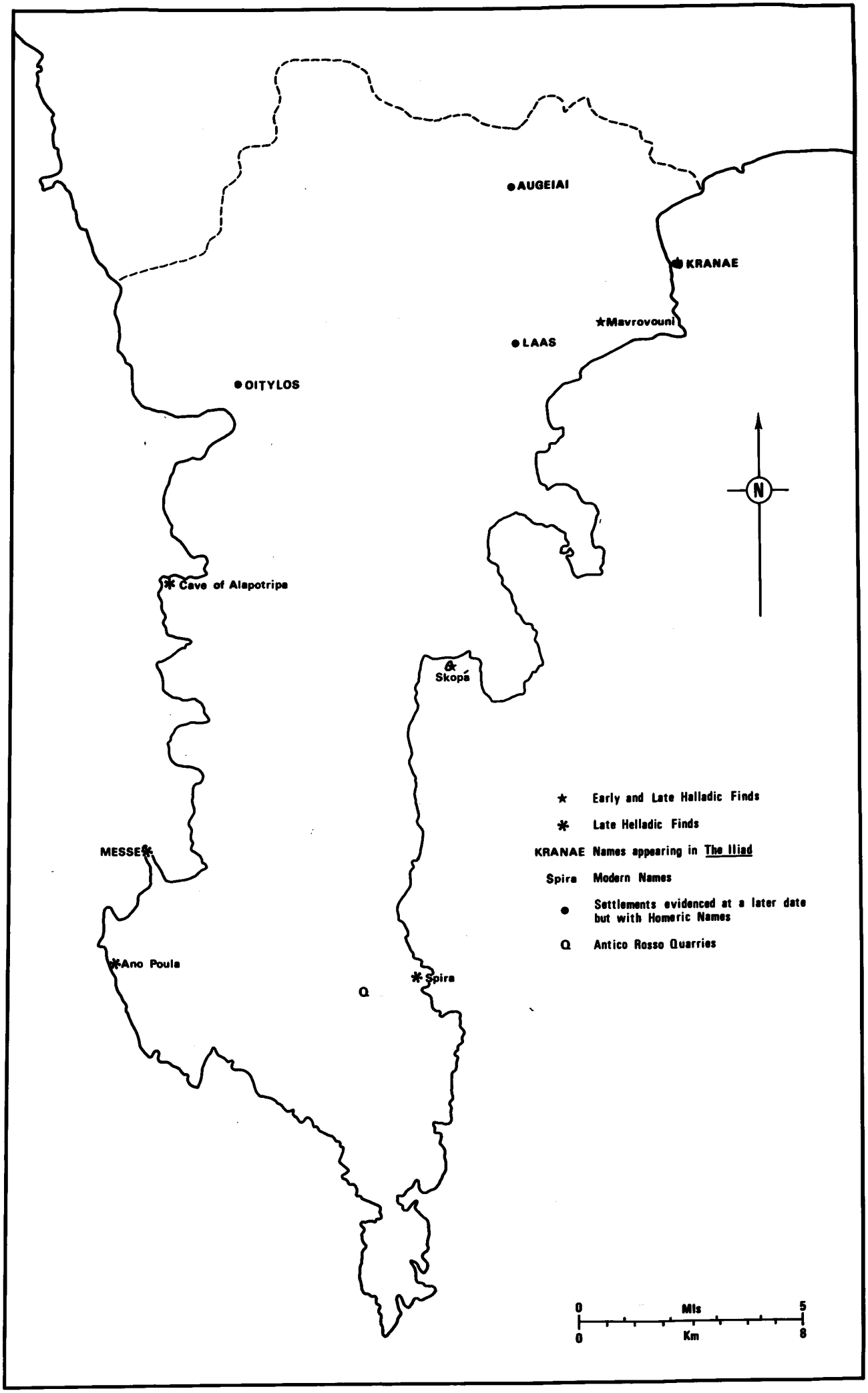

Figure 33: Bronze Age Sites in the Study Region

Table 4 : Comparative Settlement Data

Early Helladic to Roman Periods

Characteristics	Settlements					
	Early Helladic		Late Helladic		Roman	
	No.	%	No.	%	No.	%
Total Settlements	4	100.0	9	100.0	23	100.0
No. Within 0.5 kms. of Coast	4	100.0	4	44.4	13	56.5
Height Zonation (m)						
0 - 99	3	75.0	5	55.6	17	73.9
100 - 199	1	25.0	2	22.2	4	17.4
200 - 299	0	0.0	2	22.2	2	8.7
Sites						
Acropolis	0	0.0	2	22.2	0	0.0
Knoll	0	0.0	0	0.0	0	0.0
Marine Surface	0	0.0	0	0.0	1	4.4
Mound	1	25.0	2	22.2	5	21.7
Ridge	0	0.0	0	0.0	0	0.0
Shelf	0	0.0	1	11.2	5	21.7
Spur	1	25.0	2	22.2	4	17.4
Island	2	50.0	2	22.2	0	0.0
Valley Floor	0	0.0	0	0.0	6	26.1
Unclear	0	0.0	0	0.0	2	8.7
Terrain						
Gentle Slopes	3	75.0	3	33.3	10.0	43.5
Moderate Slopes	1	25.0	5	55.6	11.5	50.0
Steep Slopes	0	0.0	1	11.1	1.5	6.5

element within a pattern of settlements widely distributed over Lakonía.

The origin of this earliest known settlement pattern, and the reasons for the initial settling of the region, are obscure. Direct answers to our questions cannot be provided, especially since the origins of the Early Helladic pattern were probably influenced by the existence of older settlements, the distribution of which is unknown at present. Answers must be sought indirectly, through an examination of the situation of Early Helladic settlements in the study region, conducted within a framework provided by the small amount of knowledge which is available generally for the period (Table 5). The settlements were established on, or very close to, some of the recognisably better cultivable land in the study region, and it is reasonable to suppose that their inhabitants grew all or most of their own food. However, there are more productive areas in Greece and, even in Lakonía, The neighbouring 'Elos Plain provided a particularly productive tract, and its margins were comparatively densely settled in Early Helladic times. It seems reasonable to conclude, therefore, that settlements were not established in the Máni primarily because good cultivable land may have served to localise settlements once the decision to colonise had been made. Even allowing for some change in sea level, the coastal distribution of settlements appears significant. The Early Helladic settlements may have been founded by seaborne colonists, as Waterhouse and Hope Simpson suggested, and possibly by people dispossessed in the great social upheaval which the Eastern Mediterranean region appears to have experienced c.2,200 - 2,100 B.C. Proximity also suggests that the sea was important in the life of the settlements. Fishing may not have been very significant if later evidence for the relative poverty of Maniat fishing can be transposed to prehistoric times, but the people may have traded in rare stone, as in Middle and Late Helladic times,[3] for the southernmost habitation site is actually near to the source of antico rosso. An almost equal possibility is

Table 5: Summary of Socio-Economic Conditions in the Máni. c.3000 B.C. to c.A.D.1830

PERIOD	SOCIETY								ECONOMY			
	POPULATION			SOCIETY			ADMINISTRATION		AGRICULTURE	PASTORALISM	OTHER ACTIVITIES	TRADE
	TOTAL	IMMIGRATION	EMIGRATION	CLANS	STRATIFICATION	HOSTILITY	REGIONAL	PROVINCIAL				
EARLY 19 TH CENTURY c.1830	c. 18,859	? ALBANIANS TO VARDHOUNOKHORA c.1774-79	SEASONAL - MOREA PERMANENT - ISTANBUL	1/2 PER SETTLEMENT	KAPETANI CHIEFS PATRICIAN CLANS PLEBEIAN CLANS	1. AGON 2. FAMILY VENDETTA 3. FEUD 4. LOCAL WAR	GREEK STATE EPARKHIAS OF WEST & EAST SPARTA — CENTRE : NAVPLION KAPUDAN PASHA'S PROVINCE of ISLANDS BEY, BOÏOUK REGIONAL COUNCIL c. 8 ? ? KAPITANS BISHOPS ELDERS		SUFFICIENT FOR SUBSISTENCE WHEAT BARLEY KALAMBOKKI (? MILLET) VINES OLIVES MULBERRIES COTTON ? MASLIN	EVIDENCE FOR SHEEP & GOATS CATTLE PIGS	SPORADIC PIRACY SEASONAL LABOUR SERVICE IN HYRIOT SHIPS	ENGLAND, BARBARY, LEGHORN, VENICE, IONIAN IDS., CRETE, ARCHIPELAGO, ISTANBUL EXPORTS PRIMARY PRODUCTS HONEY, WAX, GALL-NUTS, VALONIA OIL, SILK QUAILS IMPORTS - CEREALS
LATE 17 TH CENTURY c. 1700	c. 15,000	FROM TURKISH OCCUPIED AREAS eg. CRETE (1660)	IATRIANI & STEPHANOPOLI TO ITALY (1670s)	?	KAPITANI IN N.	WAR 'TERRIBLE CLAN FEUDS' VENDETTA FEROCITY OF MANIATS	UNDER VENETIAN RULE, 1685 - 1715 BAS KAPITANOS — CENTRE : NAPOLI OI ROMANIA REGIONAL COUNCIL 2/3 TERRITORII BISHOPS KAPITANI PRIMATES VILLAGE : COUNCIL ELDERS PRIMATES		ASSUME SUBSISTENCE EVIDENCE ONLY FOR OLIVES	?	PIRACY, BUT DECLINE c 1680 - 1715 ? SLAVING	TRADE COMPELLED TO GO THROUGH VENICE DOGS MULES QUAILS
EARLY 17 TH CENTURY c. 1618	c. 13,940	FROM CERIGO & ? CYCLADES (16th cent)		NEVERS' LETTER IV	?	MARTIAL REPUTATION	PASHALIK OF MOREA ? SUBASHI + CADI BEY/BAS KAPITANOS — CENTRE : NAPOLI OI ROMANIA REGIONAL CENTRE BISHOP PROESTI 1566 - 1617 developing political & economic crisis in the Empire War on 2 fronts		CORN VINES OLIVES	LIVESTOCK, SINCE EXPORTS OF PORK & CHEESE	? PIRACY, but complicated by privateering ? FISHING	LEVANT, IONIAN IDS, CRETE, ARCHIPELAGO, VENICE, ITALY EXPORTS VALONIA WAX — SPORADICALLY HONEY — CEREALS GALL-NUTS ? SILK
MIDDLE AGES	SOME DEPOPULATION DUE WARS AND PLAGUE IN 1399 1348 927/28	ALBANIANS (STRADIOTTI) BEFORE TURKS, FROM MISTRA SLAVS	IONIAN IDS. SERVICE IN VENETIAN TERRITORIES CONSTANTINOPLE SPARTA	?	FEUDAL FEUDAL FEUDAL WITHIN VILLAGES	? STRIFE	VENICE 1465 - 79 RETTORE — PASHALIK OF MOREA DESPOTATE OF MOREA, 1262 - 1348 ? 2 LORDSHIPS — CENTRE : MISTRA BYZANTINE ACQUIRED 1262 - 1354 — PELOPONNISOS CENTRE: MONEMVASIA PRINCIPALITY OF ACHAIA, 1204 - 62 ACQUIRED, c. 1248 — CENTRE : ANDRAVIDA PELOPONNESIAN THEME c. 950 - 1204 1. PROVINCIA LAKEDAEMONIA, 1204 2. ARKONTA, 10th cent		CEREALS (? WHEAT, OATS, BARLEY, MILLET) VINES OLIVES	?	? PIRACY MERCENARIES	? VALONIA, SILK, IRON FOCUSED ON CORON
ROMAN LATE 2ND CENT c. AD 174	↑ PROBABLY INCREASE	SOME ROMANS FROM OTHER POLEIS		TRIBE CLAN CLAN	1 CITIZENS 2 FOREIGNERS 3 SLAVES LANDLORDS TENANTS	?	PROVINCE OF ACHAIA, after 146 B.C. LEAGUE OF FREE LAKONIANS 6 POLEIS, EACH WITH 3 EPHORS GEROUSIA ECCLESIA ECONOMIC PROBLEMS IN 3RD CENT. A.D. STABILITY, PEACE SPARTA (from 8th cent B.C.)		CEREALS OLIVES ? FIGS ? VINES	EVIDENCE V. INDIRECT	QUARRYING & MINING ? IRON SMELTING (for quarrying tools) ? WEAVING ? DYEING	EXPORTS STONE ? IRON SKINS ? WOOLLEN CLOTH
BRONZE AGE 1200 LATE HELLADIC 1600 MID. HELLADIC 1900 EARLY HELLADIC 3000	? ? ?	DORIANS ? MINYANS ? GK. SPEAKERS			FEUDAL	?	'KINGDOM OF MENELAUS' CENTRE : MAVROVOUNI ? ? ? ?		CEREALS } known elsewhere VINES & OLIVES } known elsewhere	SHEEP, GOATS } known elsewhere CATTLE, PIGS } known elsewhere	QUARRYING QUARRYING	EXPORTS ANTICO ROSSO TO CRETE & *ARGOLIS* IMPORTS OBSIDIAN from Melos

all green work ?

that the settlements were the eastern termini of portage routes across the peninsula, and that they developed as trans-shipment points. Kranae and Mavrovoúni lie at the eastern end of the Milolanghádha, whilst Skopá is situated at the end of a route through the mountains which used the Kávalo Plain. Both routes converge westwards towards Porto Vitylo where, however, no traces of Early Helladic settlement have been found. Spíra, a site situated now between two small bays and possibly similar in this respect to Minoan ports,[4] is at the eastern end of a steep but practicable route across the mountains to the Mésa Khória and particularly to the vicinity of later Kaenepolis. Early Helladic settlement is not known from the south-western terminal area, but, as in the case of Oítilos, survival might have been obscured by later habitation phases, and cannot be ruled out entirely. Portages may have been developed across the Máni for the same reasons that they appear to have been used along the western seaways of Britain. The Maniat coast is exceptionally dangerous. Its headlands are hazardous because of currents and sudden down-draughts, whilst working a small ship inshore around the coast of the peninsula would lengthen the whole journey, and would be very arduous. It is interesting that similar trans-peninsular routes appear to be picked out across Párnon, and may have been developed to avoid Cape Maléa, where early sailors encountered "blasts of whistling winds and swollen waves, as huge as mountains".[5] One of these routes is picked out by a line of settlements, and apparently led from the vicinity of later Epidauros Limera to Lakedaímonia, whilst the others may be evidenced by clusters of settlements at the base of the Xýli peninsula and opposite 'Elafónisos. Both suggest alternative routes westwards from near Epidauros Limera. The termini on the eastern side of the Lakonic Gulf may have been linked directly across fairly sheltered waters with the settlements near the western, Maniat coast.

Late Helladic Period

Although the origins of the Early Helladic settlement pattern are unknown, its main characteristics continued through until the second century A.D. and beyond. Definite traces of occupation in the next or Middle Helladic phase (c.1900-1600 B.C.) have been found only on Skopá, but continuity in culture might suggest the possibility of Late Helladic (c.1600-1200 B.C.) settlements originating in the previous period when the so-called Minyans appeared in Greece. Late Helladic settlements themselves are known from both archaeological and literary evidence (Fig.33). Considerable quantities of Late Helladic III or Mycenaean (c.1400-1200 B.C.) sherds were recovered from Kranae, and have been taken to indicate a fairly important settlement occupying about half the island. Similar material was found on the summit of a prominent hill near Mavrovoúni which had characteristic Mycenaean chamber tombs cut into its upper part. Late Helladic sherds also covered a wide area on another but lower hill about 300 metres to the north-east, perhaps suggesting the juxtaposition of a citadel and its village. The remains of two pithos burials were found on Skopá and assigned tentatively to either the Middle or Late Helladic periods. A few fragments of possibly Late Helladic pottery were found at Spíra and 'Ano Poúla, whilst some pieces of course ware from the seaward slopes below modern Oítilon may be of similar date.

The literary evidence comes from the Catalogue of Ships embedded in the Iliad, and which its recent editors argue contains a more substantial and accurate Mycenaean element than the rest of the epic.[6] Four place names have been identified with sites in the study region - Augeiaí, Láas, Mésse and Oítylos. Hope Simpson and Lazenby have identified Augeaí and Laas with the later settlements of Aegiae and Las respectively, thus

accepting suggestions advanced by Strabo, himself an Homeric scholar. They identified Oítylos, obviously enough, with the site of the ancient settlement of the same name, whilst Mésse they located on the Tigáni, where defensive walls contain Cyclopean masonry similar to that found at Tiryns. To these names from the Catalogue can be added Kranae, the place where Paris and Helen spent their first night. Pausanias first identified this as the island lying off modern Yíthion, and it has been accepted by most subsequent workers. As we have seen, the island has a considerable pottery scatter from the appropriate period.

Three elements are clear in the pattern from the available, but probably incomplete, data (Fig.33; Table 4). The first is the peripheral location of the settlements. The second and related element is an apparent association with the sea, which is particularly clear in the cases of Kranae, Skopá and Mésse, but also evident in that of Spíra, which lies within 0.5 kilometres of the coast. The third element is a limited amount of inland penetration, particularly obvious in the valleys of the north-east, where Láas is situated on the edge of the Turkóvrissi and Mavrovoúni and Augeiaí in the valley of the Vardhoúnia. A fourth element may be added, that of the general association of settlements with gentle or moderately sloping terrain, at elevations usually below 100 metres but never exceeding more than 200 metres.

Nearest neighbour analysis is not essential to describe such a simple pattern, but the results are instructive. If the whole area of the study region is taken as the basis for calculation, a value of 1.6 is obtained, indicating a pattern containing some degree of regularity. This appears to be contradicted by the value of 0.42, obtained by calculating on the area lying below 200 metres, which is indicative of clustering. Although the different results may arise from incomplete data and the shape of

the region, they do in fact draw attention to the clustered but fairly regular pattern made by 4 out of the total of 9 settlements which are situated in the low, generally undulating country of the north-east corner of the region where today fertile soil and good water are relatively abundant. Although sources of domestic water are not known directly, it is probable that Augeiaí, Kranae, Laás and Mavrovoúni utilised streams in their neighbourhood and that Oítylos and Skopá drew upon neighbouring springs. 'Ano Poúla and Mésse, however, are situated in such an arid area that they must have used cisterns to store rainwater.

The sites of the settlements are clear (Table 4). Augeiaí, Mavrovoúni and Spíra occupied hill tops, whilst Oítylos lay upon a hill slope. Laás and 'Ano Poúla are really acropolis sites, of the type described in Appendix IV, and Kranae and Skopá are islands now, though with a lower sea level they may have been peninsulas. A defensive element may be implied in the occupation of both elevated and peninsula sites. It is particularly clear in the fortified character of Mésse and possibly also of Laás and 'Ano Poúla, though in the last two cases the surviving walls are more recent than the Bronze Age. The possible defensive element in siting seems in substantial agreement with the character of settlements found in other parts of the Mycenaean world, and appears in harmony with the war-like and allegedly "feudal" nature of society, which archaeologists have reconstructed from all the material evidence currently available. (Table 5). By contrast, the settlement pattern for the next period where such an exercise is possible is consistent with peaceful and fairly stable conditions.

Roman Period

Various finds indicate that occupation continued in the study region after the apparent collapse of Mycenaean power towards the end of the second millenium B.C. The evidence, however, is not sufficiently complete to reconstruct even a fragmentary pattern of settlements until the last quarter of the second century A.D. It was then that the Lydian

Greek, Pausanias, wrote his Description of Greece and named places which, with the aid of his distances and finds of coins and inscriptions, have been identified with Roman remains extant in the region during the nineteenth century and even today. These identifications form the basis of Figure 34, but a number of unnamed Roman sites are also known and these have also been added to the map.[7] More probably remain to be discovered. Careful analysis of the brief descriptions provided by Pausanias and of the available archaeological data allow the recognition of different types of settlement site. In particular, an important distinction can be made between pólis-sites, where features associated by Pausanias himself with the "central place" of a city-state existed,[8] and non-pólis sites which lacked these features and in some cases were simply temples or other religious sites (Table 6). Only probable settlement sites have been included in the following analysis.

The basic pattern contains 23 points (Fig.34). Only 7 of these lie south of a line joining Porto Vitulo with Kolokythia Bay, whilst about half lie within an arc curving round through modern Kamáres and the probable site of ancient Hypsi to embrace the comparatively fertile and well-watered north-eastern corner of the region. Twelve settlements were situated on the modern coastline or lay within 1 kilometre of the shore[10] (Table 4). Although a rise in sea level of 2 or 3 metres seems to be evidenced by submerged ruins at Gythium and Skutári,[11] this cannot have made much difference to the general pattern, especially since Gythium, Kessa and Psamathus were specifically mentioned as ports by ancient writers.[12] All but 5 of the coastal settlements have the easterly or northerly aspects which the architect and former general, Vitruvius, (first century B.C.) thought healthy for coastal towns.[13] Inland penetration by settlements was largely confined to the valleys of the Turkóvrissi, probably the ancient Smenus, and the Vardhoúnia (Fig.34).

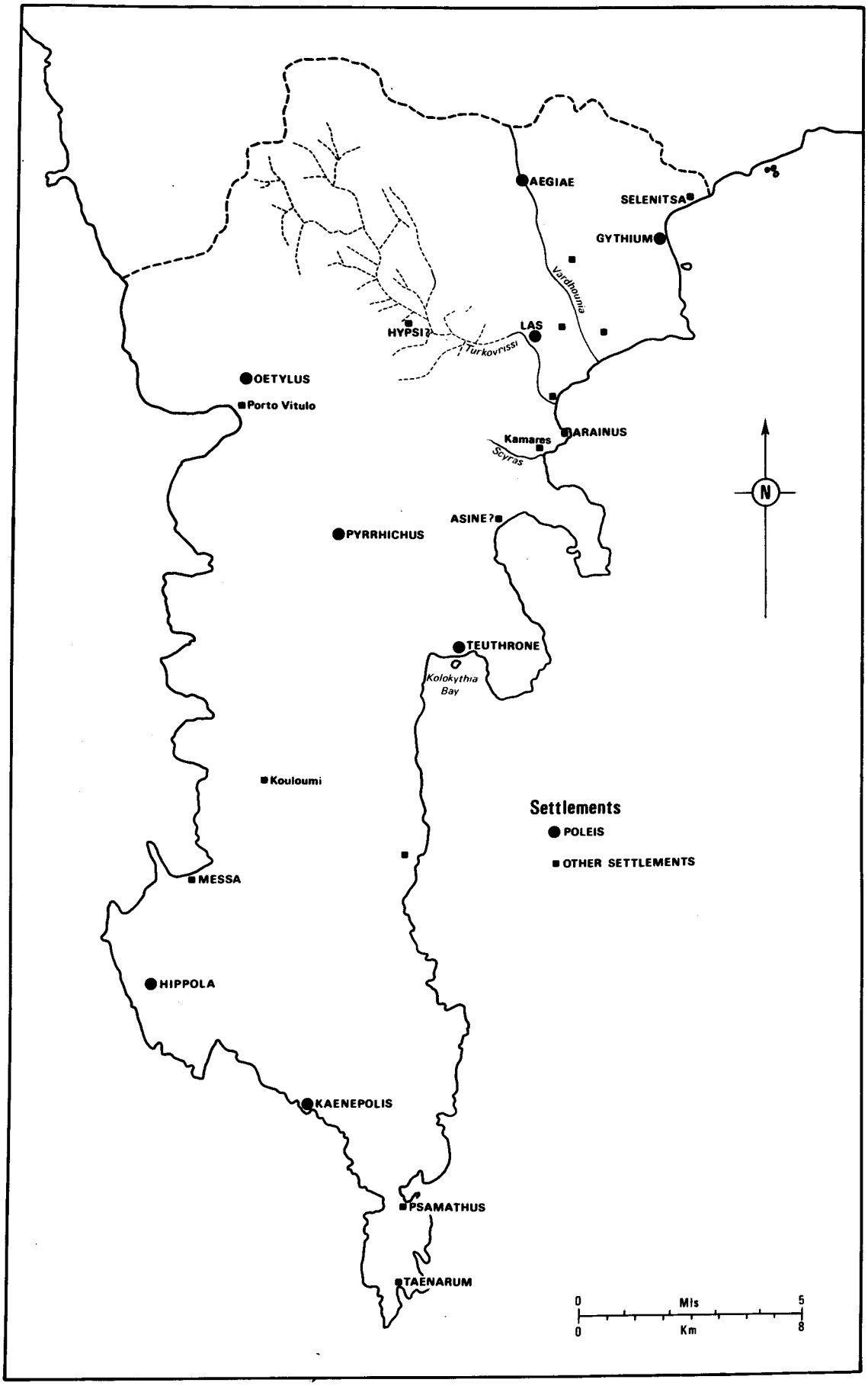

Figure 34: Settlement Types Found in the Study Region During the Second Century A.D.

Table 6 : Physical Features Considered by Pausanias as Indicating a Polis[9]

Name of Place	1	2	3	4	5	6	7	8	9
Aegiae						P	P		
Asine									
Gythium	P	P	A	A?		P	P	A	P
Hippola	A?						P		
Kaenepolis	A?	A??				P	P		
Las	P	A??			P	P	P		
Messa	A?								
Oetylus	A?	P				P	P		
Psamathus									
Pyrrhichus		P	P			P	P		
Taenarum						P	P		
Teuthrone	A?						P		

P mentioned by Pausanias
A known archaeologically and not mentioned by Pausanias
1 Acropolis
2 Agora
3 Public Water Supply
4 Government Offices
5 Gymnasium
6 Religious Objects (statues, etc.)
7 Temple 8 Theatre 9 Walls

Available archaeological data do not allow the centres of individual settlements to be located precisely, but they were markedly different from those of modern settlements situated in their vicinity. As a result, nearest neighbour analysis of the ancient settlement pattern yields only crude results. A statistic of 1.4 was produced for the whole of the study region and one of 1.7 for the area below the 400 metre contour. Both figures lie outside the range of random matching in the direction of a regular and hexagonal distribution. If these inaccurate results bear any relation to reality, explanation is again best sought in the concentration of settlements in the north-east, which is so apparent on the maps. Although precise sites cannot be clearly recognised because of the paucity of data, crude analyses (Table 4) show that locally elevated sites were predominant (68 per cent), thus to some extent meeting Vitruvius' requirement for a healthy position[14] and possibly indicating deliberate choice. However, a comparatively large proportion of the settlements occupied valley floors. All of these are on or near the coast. Vitruvius, and probably his contemporaries, believed that proximity to the sea would allow drainage and thus have rendered the settlements healthy, even if there were marshes in the vicinity.[15]

Height and slope information were more easily and satisfactorily obtained directly from maps (Table 4). The striking feature of the distributions is the large number of settlements situated in gentle and moderately sloping terrain (93.5 per cent) below the 100 metre contour (73.9 per cent). Testing of the observed slope and height preference by the Chi-squared test shows clearly that they are not what one might have expected from the proportion of the study area occupied by either the different categories of slope or the different height zones. In fact, the patterns point to a series of deliberate choices concentrating settlements in a particular environmental situation and one, moreover, clearly associated with the north-eastern corner of the region. Physical

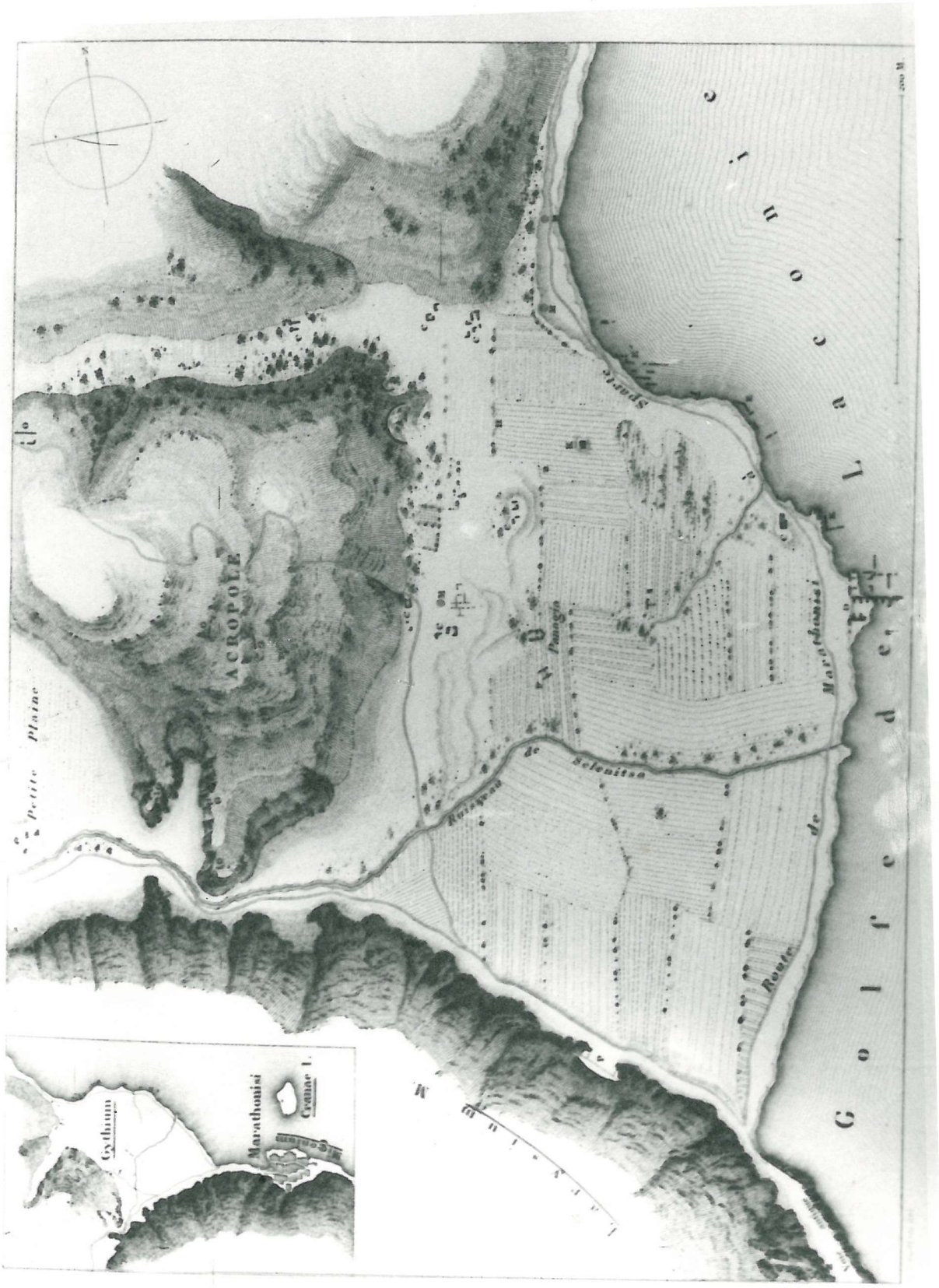

Figure 35: Remains of Ancient Gythium, as Seen in 1843

attractions were probably provided, on the one hand, by the fertile soils of the valleys, and, on the other hand, by the oak woodland, which covered the intervening hills to a greater extent than in later centuries. Perennial water, for domestic use and possibly for small-scale irrigation, was also available in the valleys of the Turkóvrissi and the Vardhoúnia as well as at Selenítsa. Another factor influencing the establishment of settlement in the north-east may have been the market offered by Gythium, which was much the largest and most important settlement in the region (Fig.35; Table 6).

Good cultivable land appears to have been an important factor in the situation of other settlements in the total pattern. The suggested site of second century Hippola is in probably the most fertile tract of the 'Embros, whilst the settlement near modern Kouloúmi would have had the use of the Pendháda Hollow, which contains the best soils throughout the entire marine surface zone of the west coast. Pyrrhichus was situated on the edge of a large upland plain, and Oetylus may have cultivated the small plains at the head of Porto Vitulo, in addition to the neighbouring slopes. The settlement below Koúrno, though situated in more difficult terrain than the others noted above, actually lies on a small plateau, within an amphitheatre of terraced hills containing some of the better land of the district. Teuthrone and Kaenepolis each lay at the seaward edge of schist embayments, where the soils are deep and water relatively abundant, and even Psamathus and Taenarum might have exploited small pockets of similar soils.

Although most settlements appear to be situated near cultivable land, a very significant relationship may be that between the poléis, apart from Gythium and Oetylus, and good arable land. Gythium is not as unusual as it appears at first sight. There are several small valleys in its vicinity and gently sloping land in the hills eastwards of the town, as well as in the neighbouring Vardhoúnia valley. All of these may have been cultivated in antiquity. At the same time, though, Gythium possessed additional sources of wealth in its port and the neighbouring quarries (Fig.10). Oetylus, on

the other hand, really does look the odd man out amongst the central places of the poléis, but it may have exploited a wider, if less fertile area than the other settlements of equivalent status, since there are no other poléis and fewer other settlements between it and Messa in the south and Pephoros (outside the study region) in the north; it might also have worked the iron mines in the vicinity of Skála (Fig.10).

Considerable care was taken in antiquity to provide a wholesome water supply, and Vitruvius considered the subject so important that he devoted a whole book of his treatise, de architectura, to it.[16] Pausanias reported that Pyrrhichus obtained its water from a well, whilst Teuthrone depended upon a spring. Archaeological investigation has shown that Gythium was supplied by an aqueduct, but probably the settlement drew much of its domestic water from wells and springs in the neighbourhood.

Table 7 : Possible Sources of Water in the Second Century

Possible Source	Number	Percentage of Total
Springs	5	21.7
Wells	3	13.1
Running Water + Springs (streams, aqueduct)	2	8.7
Running Water and Wells	4	17.4
Running Water, Springs & Wells	2	8.7
Uncertain	8	30.4
Total	24	100.0

We have no direct information about other settlements. Inferences must be drawn from modern conditions in their vicinity, bearing in mind the apparent preference in antiquity for spring and well water, in that order. Table 7 is constructed on this basis, but contains the ancient data indicated above.

Where a reasonable deduction can be made, most settlements (52.2 per cent) may have preferred to draw upon running water and springs rather than wells, but springs were the most preferred source.

As expected, the pattern seems to confirm the operation of water supply as a factor behind the concentration of settlements in the north-east corner, where most of these sources are found. It is a factor in the striking continuity which seemed to pertain over the 2,000 to 3,000 years separating the reconstructed settlement patterns of the early Helladic and Roman periods.

Continuity and Change (Fig.36; Table 4)

Continuity is so striking that it demands explanation. Unfortunately, evidence bearing upon the subject is scarce and much must depend upon the interpretation of the settlement patterns themselves. Some of the continuity apparent between the Early and Late Helladic periods can be accounted for by the occupation of all four of the Early Helladic sites in the later period. Direct continuity of this type may appear strange when it is remembered that a new culture, associated with Minyan ware, seems to have been intruded into Greece at the beginning of Middle Helladic times (1900-1600 B.C.). Possible explanations include the ability of the old sites to meet the requirements of new groups, intrusion of an aristocracy with no appreciable effect upon the local population, and the absence of any settling of Minyans in the region at all. There is little to choose between these explanations in the absence of virtually all information. At a later date, occupation may also have continued at Augeiaí and Cítylos, first inhabited in Late Helladic times, despite the break in culture which seems to have terminated the Mycenaean period in Greece, and brought the Dorians into Lakonía. The data are not as reliable as those for continuity between the Early and Late Helladic phases, but, if occupation was continuous, the explanations may have been broadly similar.

Maintenance of the coastal characteristic in the prehistoric and Roman pattern seems to point to trade as the obvious explanation. Rare stones, particularly antico rosso, were exported from the region, and the sea was the

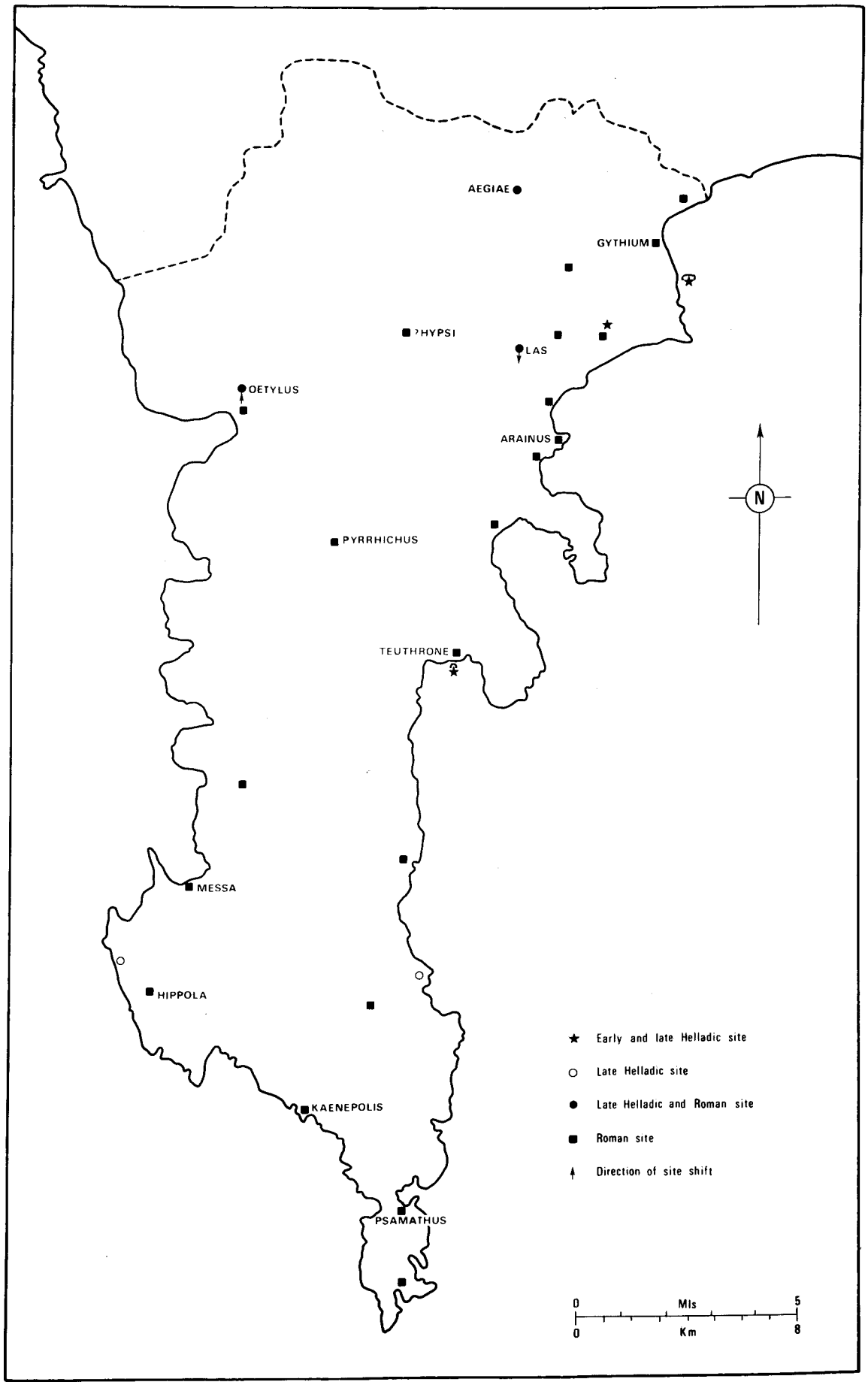

Figure 36: Development of Settlement Patterns: Early Helladic to Roman Periods

obvious medium for their transport. Porterage routes may have remained important, though this is perhaps doubtful, for ships became larger, more sturdy and capable of making voyages across the open sea, provided that care was taken in dangerous localities, such as Cape Maléa. An alternative explanation may lie in the limited amount of internal penetration and the principal direction which it took. Most of the cultivable land of the Máni is coastal, and inland penetration seems to have taken place from the coast and largely along the valleys of the north-eastern corner of the region, whilst the greater part of the peninsula remained absolutely empty.[17] The implication might be that the interior of the Máni was considered too inhospitable to settle, and that only the coastal areas offered any opportunities for making a living. This does not rule out trade, of course, for it might have remained the most compelling reason for living in what now appears such an arid and inhospitable region.

The availability of the most extensive tracts of fertile valley land and coastal plain in the north-east, despite physical changes in post-Roman times, may explain the concentration of settlement there. Perennial water may have been an additional attraction. Not only would it have allowed irrigation, but it would also have provided the kind of domestic water supply which the ancients naturally preferred because of its wholesomeness. Testing of the slope and elevation associations of the settlements in each of the three periods under discussion indicated that situations may have been chosen deliberately. Defence may have been one consideration, and its possible significance is particularly reinforced by the occupation of island (or peninsular) sites in the prehistoric period, and by the citadels of some of the Late Helladic and subsequent settlements. The threat may have been from the seaward, but might also have come from the land, given both the allegedly "feudal" character of Late Helladic society in Greece and the turbulence of the subsequent Dark Ages. However, it seems clear that defence considerations could not have been of prime importance in locating

settlements. The occupation of the upland plains and higher sites in general might have been evident had this been the case. Cultivable land and the coast appear to have been of more importance.

A period of 2,000 to 3,000 years is so long that changes in the pattern of settlement are to be expected. In fact, the degree of stability indicated above may be regarded as exceptional. The changes which did take place between the early Bronze Age and the Roman period, may easily be isolated from Figure 22.1 and Table 22.1.

The most obvious change was the increase in the number of settlements, from four in the early Helladic phase to nine at the end of the Mycenaean period and subsequently to 23 in the Roman period (Table 4). Increasing numbers were associated with a spreading movement, especially obvious in the north-eastern corner of the region (Fig.36), but sufficiently widespread over the peninsula for occupation to be found in about 25 per cent of the quadrats used to examine the distribution of settlements. A second notable change was the appearance of settlements on the western side of the peninsula in Late Helladic times, and the subsequent but apparently limited spread which developed there down to the second century (Fig.36). Although the increase in number of settlements was about 20 per cent greater than in the period between c. A.D. 174 and c. A.D.1618, it seems comparatively small, considering the long time span involved and the much more rapid build-up which apparently took place in the Middle Ages. A greater total may not have been reached for a variety of reasons, but an alternative explanation can be offered by the incompleteness of the settlement data. Systematic field research and the study of aerial photographs would probably produce more sites, but until then we must work with the information available.

Although some sites appear to have been occupied from Early Helladic through to Late Helladic times, and two Late Helladic sites were probably inhabited through to the Roman period, changes in siting were much more common, even where the same general area continued to be occupied for two or more periods. Thus, the islands and the Tigáni were deserted between the

Late Helladic and Roman phases, involving, in the case of Kranae, replacement by a settlement on the adjacent mainland which grew into Gythium. The original core of the pólis may have been on the citadel, but the settlement subsequently spread on to lower land lying to the east (Fig.36) and Pausanius implied that the acropolis was in ruins. Some time before A.D.174 a slight shift of site also seems to have taken place at Las, where the old citadel-site was abandoned in favour of a neighbouring valley. A similar change may have occurred at Hippola, where the acropolis seems to have been ruined in the time of Pausanius. A more drastic change might have occurred in the south of the peninsula when Kaenepolis replaced Taenarum as a political unit, though in rather obscure circumstances. Pausanias half preserved an ancient legend about the foundation of Gythium, which may indicate that Maniat experience was similar to that of other parts of Greece in the establishment of poléis and the foundation of "central places". The traveller recorded that Gythium had been founded by Apollo and Herakles after their strife together. Although the god and the hero were both subsequently associated with the Dorians and were widely venerated in the study region in Roman times, at Gythium each may have been the protector of particular groups of people established in two settlements, one possibly on the mainland and the other on the island. A joint foundation of Gythium certainly points to the synoecism of the pre-existing settlements, a form of union which was a common means of pólis foundation elsewhere in the Greek world.[18] Synoecism may have occurred in other districts of the study region.

These changes serve as a reminder that the regional patterns of change resulted from numerous individual decisions to found settlements and to establish them upon particular sites. Careful examination of the physical environment is reflected in the choice of deities worshipped at different places in the region (Table 8), and similar pains may have been taken over the choice of settlement sites. This suggestion seems to be confirmed by the significant results of Chi-squared tests on the height and slope associations

Table 8 : Gods and Demi-gods Worshipped in the Study Region in the Second Century

Deities	Localities	Aegiae	Gythium	Migonium	Las	Hypsi	Pyrrhichus	Teuthrone	Kaenepolis	Hippola	Oetylus	Taenarum	Nr. R. Scyras
Ammon			✓										
Aphrodite									✓				
Aphrodite Migonitis				✓									
Apollo			✓										
Apollo Amazonius							✓						
Apollo Carneius			✓		✓						✓		
Arion the Harper												✓	
Artemis Astratea							✓						
Artemis Daphnaea						✓							
Artemis Issoria													
Asclepius			✓		✓	✓							
Athena			✓										
Athena Asia													
Athena Hippolaitis													
Demeter			✓						✓				
Dionysius			✓		✓								
Heracles			✓		✓								
Hermes					✓								
Nereus			✓										
Poseidon												✓	
Poseidon Earth-embracer		✓	✓										
Praxidicae				✓							✓		
Sarapis													
Thetis													
Zeus													✓

of settlements. Unfortunately, though, explanation at the level of individuals is virtually impossible from the type of data available. Explanations can be sought only for changes apparent on the regional scale.

Increase in settlements, abandonment of island and peninsula sites and the spread of habitation in the region may be related. They certainly took place in the same period, between Late Helladic and Roman times, though nearly 1800 years is such a long time that they cannot be regarded as necessarily contemporaneous. Obvious explanations, which relate all three developments, may be growing insecurity and the influx of new groups, both possibly associated with the collapse of Mycenaean power and the settling of the legendary Dorians (Table 5). Archaeology has such a tradition of cataclysmic explanation that the investigator needs to be on his guard against accepting destruction and replacement as causes of change, just because they seem to leave obvious traces and are simple to invoke. In the absence of excavation, there can be no certainty about events in the Máni between c.1200 B.C. and the second century A.D. Insecurity, though, may be indicated by the citadel acropoleis found in the "central places" of pólis communities distinguished earlier. Some time after foundation, and before Pausanias wrote, an equally significant development had also taken place. As pointed out above, the citadels were largely abandoned and settlements developed at their feet. Peace may have reinforced the tendency, and led to the ruined condition of the citadels, but the basic reason for the growth of lower settlements may have been simply an increase in population of such proportions that it could not be accommodated on the high, cramped initial sites.

Population increase to a point where resources in the immediate vicinity of the original foundations came under pressure, may also form at least part of the explanation for the spread of settlements in the north-eastern area. New land had to be colonised. A widening economy, apparently typical of the early Roman period (Table 5), may also have been important, though the comparatively large market of the port settlement of Gythium must be taken into account. Unfortunately, no full chronology exists for any of the known

Roman sites. Accordingly, it may be possible that some of these settlements were original members of early poléis.

The appearance of settlements on the western side of the peninsula is equally problematical (Fig.36). Kaenepolis, Messe and Oetylus are associated with harbours; this may point to the importance of trade in their foundation. They may have been associated with the portérage routes which possibly existed in Early Helladic times, especially since evidence of occupation at Oetylus and on the Tigáni seems to be available from the Late Helladic period. On the other hand, the appearance of these coastal settlements could be related to the possibly greater use made of the Taínaron route after Early Helladic times, despite the risks experienced in these waters. Knowledge of the harbours of Acheilleus and Psamathus, at the base of Kritíri, well before the Roman period may perhaps indicate such a change. Even so, it might be significant that all the western sites known in Roman times, with the exception of Messe, were adjacent to some of the better cultivable land of that area. Kaenepolis lies at the coastal edge of the schist embayment of Mésa Khória, whilst lower Hippola (Koúno) is associated with a comparatively fertile hollow below the Makryna ridge in Katopángi. Oetylus is situated above a small and irregular coastal plain, and must have had access to the well-watered schist area lying a few kilometres inland of Porto Vitylo. The site found near later Kouloúmi actually lies in the hollow, subsequently known as Pendádha. Occupation may have continued in this vicinity after the Roman period, but the predominant impression of the Middle Ages is one of discontinuity and change in settlement patterns.

concept of spread by land sea

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2. Data about Bronze Age sites is taken from H. Waterhouse and R. Hope Simpson, Prehistoric Laconia I and II, Annual of the British School at Athens, 55 (1960), pp.67-108; 56 (1961), pp.114-78.

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6. The Catalogue is found in the Iliad, II, 494-759 (Maniat material in II. 582-85). R. Hope Simpson and J. F. Lazenby, The Catalogue of Ships in Homer's ILIAD, (Oxford, 1970), especially pp.76-79.

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9. The suggestions in Table 6 that Kaenepolis and Las may have contained 'agórai is based upon the presence of non-votive inscriptions which might have been erected in such public spaces. The suggestion that Hippola, Kaenepolis and Oetylus possessed 'acropóleis is based on topography - the fortified area on the Makrýna ridge above modern Kipoúla; the hill on the seaward side of modern Kyparissos; the high ground occupied by modern Oítylo, where sherds suggest that the ancient settlement covered the seaward slops. 'Acropóleis at Messa and Teuthrone are suggested on the basis of the fortifications on the Tigáni and the possible fortifications on Skopá.

10. Hippola has been excluded from the pattern. Despite its proximity to the sea, it is in fact excluded from direct access by the Makrýna ridge and the steep cliffs of Cape Grósso.

11. N.C.Flemming, Holocene Earth Movements and Eustatic Sea Level Changes in the Peloponnese, Nature, 217 (1963), pp.1031-32.

12. Pausanias III. 25.4 ; Strabo VIII.5.2.

13. Vitruvius, De Architecture, 1.4.

14. Ibid., 1.41.

15. Ibid., 1.4.

16. Ibid., VIII.

17. Quadrat analysis reveals that 99.5 per cent of the 1 kilometre squares covering the region were empty of settlement in the Early Helladic period, 98.5 per cent in Late Helladic times and 74.7 per cent in the Roman period.

18. D. Baker (ed.) The Politics of Aristotle, (Oxford, 1948), pp.5-6; W.W.Fowler, The City State of the Greeks and Romans, (reprinted London, 1910), pp.35-36.

That of a major problem

CHAPTER 6 : STABILITY AND DISCONTINUITY, c. A.D.174 to A.D.1618

Middle Ages

The sources are too fragmentary and unreliable for any accurate or complete pattern of settlement to be reconstructed between the late second and the early seventeenth century A.D. Place names and the pattern of princely and seigneurial castles in Lakonia suggests the possibility of permanent Slav settlements in parts of the region by the middle of the eighth century (Fig.37).[1] Venetian documents of some seven centuries later, a few place names and the late survival of Albanian speech point to the possibility of Albanian settlements, too, from the fifteenth century (Fig.38).[2] Other Venetian sources give a few more names and more can be gleaned from elsewhere, but they are not numerous and certainly not contemporaneous (Table 9). A more complete pattern seems to be suggested by the distribution of Byzantine churches in the region (Fig. 39), though wide differences in their age, as well as difficulties about using them as evidence, make severe reservations necessary (p. 23). The pattern of churches may reflect the broad pattern of settlements in some measure, but the location of individual churches does not indicate the existence of adjacent settlements at the dates of foundation. In fact, it is not until c.1618 that evidence is available in which sufficient confidence can be placed for a settlement pattern to be reconstructed.

Early Seventeenth Century

The interpretation of the Nevers' source, Document C, was discussed earlier (pp. 20-22), but it resulted in the identification of 61 settlements in the study region (Fig. 40). There were probably a few more, since 24 names in the original list (14.9 per cent) could not be identified. Nearest neighbour analysis of the reconstructed pattern produced a value of 0.93 which indicates a random distribution. This was confirmed when exactly the same value was obtained using the inhabited areas, which lie below 800 metres, as the basis for calculation and when examination of reflexive pairs produced values of 0.81 for the whole region and 0.80 for the area up to the 800 metre contour.

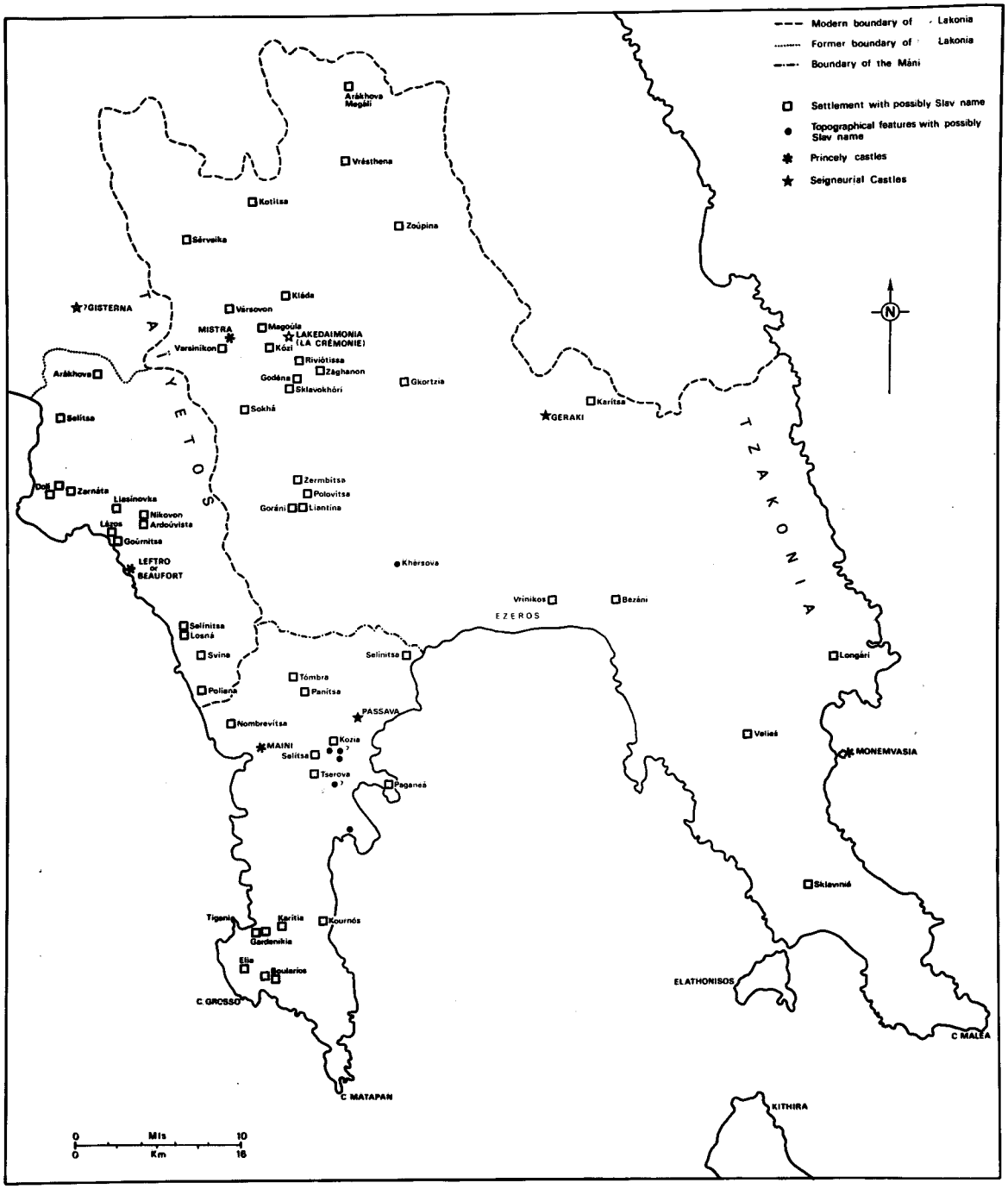


Figure 37: Distribution of Slav Place Names in Lakonia

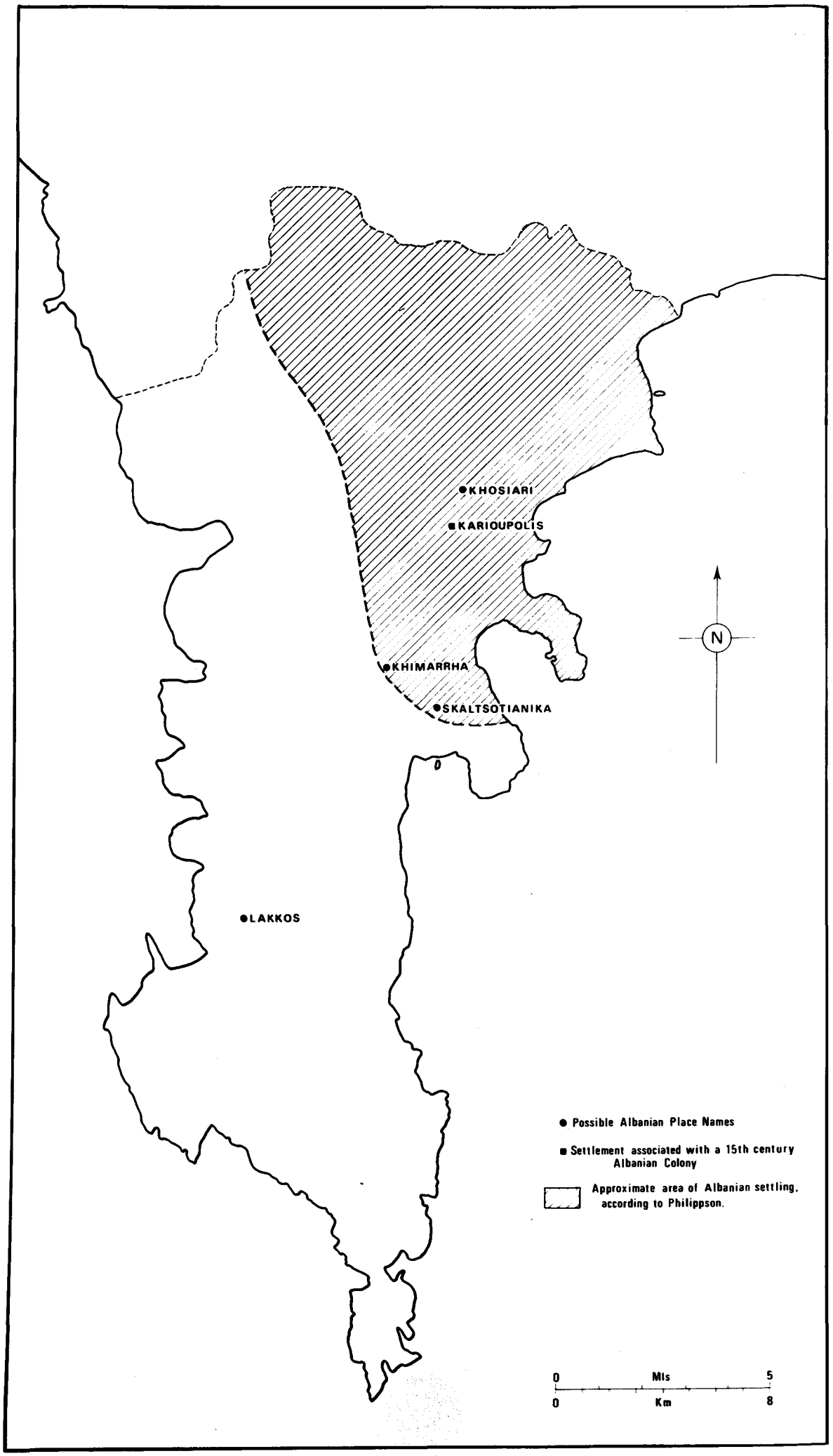
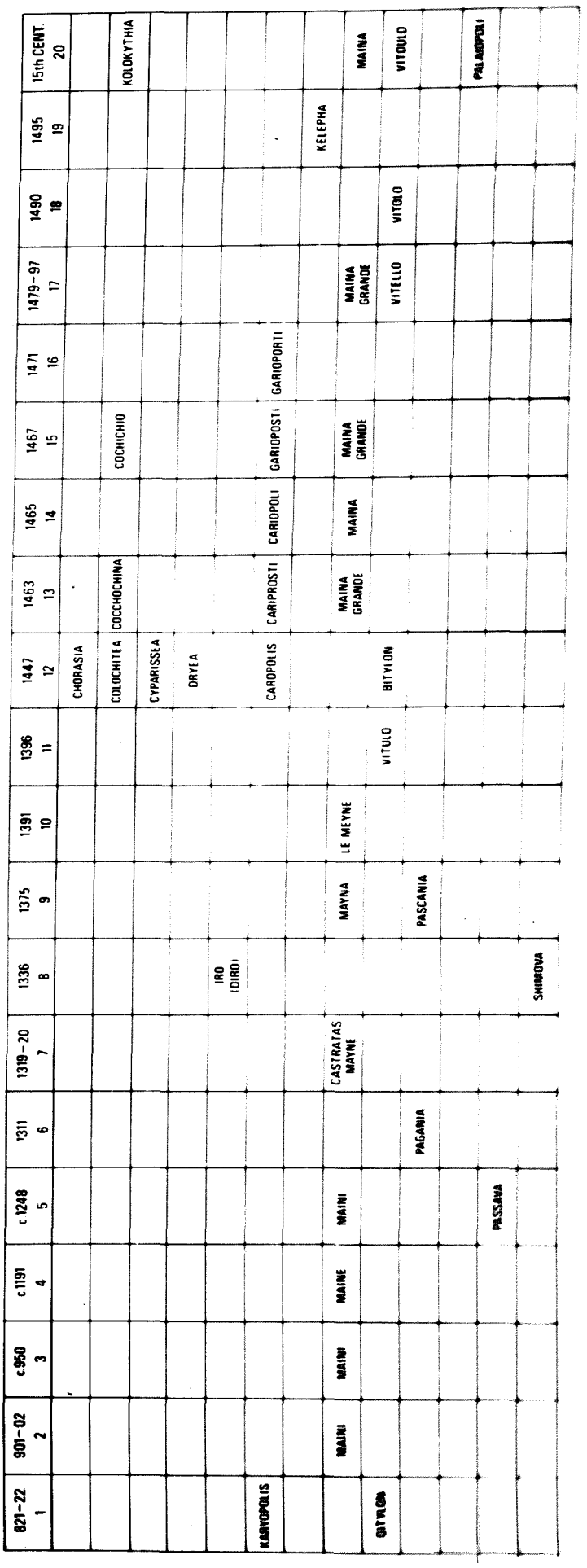


Figure 38: Albanian Settlement in the Study Region



821–22 1	901–02 2	c.950 3	c.1191 4	c.1248 5	1311 6	1319–20 7	1336 8	1375 9	1391 10	1396 11	1447 12	1463 13	1465 14	1467 15	1471 16	1479–97 17	1490 18	1495 19	15th CENT. 20
											CHORASIA								
											COLOCHITEA	COCCHOCHINA		COCHICHIO					KOLOKYTHIA
											CYPARISSEA								
											DRYEA								
							IRO (DIRO)												
	KARYOPOLIS										CAROPOLIS	CARIPROSTI	CARIOPOLI	GARIOPOSTI	GARIOPORTI				
																		KELEPHA	
	MAINI	MAINI	MAINE	MAINI		CASTRATAS MAYNE		MAYNA	LE MEYNE	VITULO	BITYLON	MAINA GRANDE	MAINA	MAINA GRANDE		MAINA GRANDE			MAINA
BITYLON					PAGANIA											VITELLO	VITOLO	VITOULO	VITOULO
				PASSAVA			SHIROVA	PASCANIA											PALAIOPOLI

Table 9: Medieval Settlement Names (Sources in Appendix V)

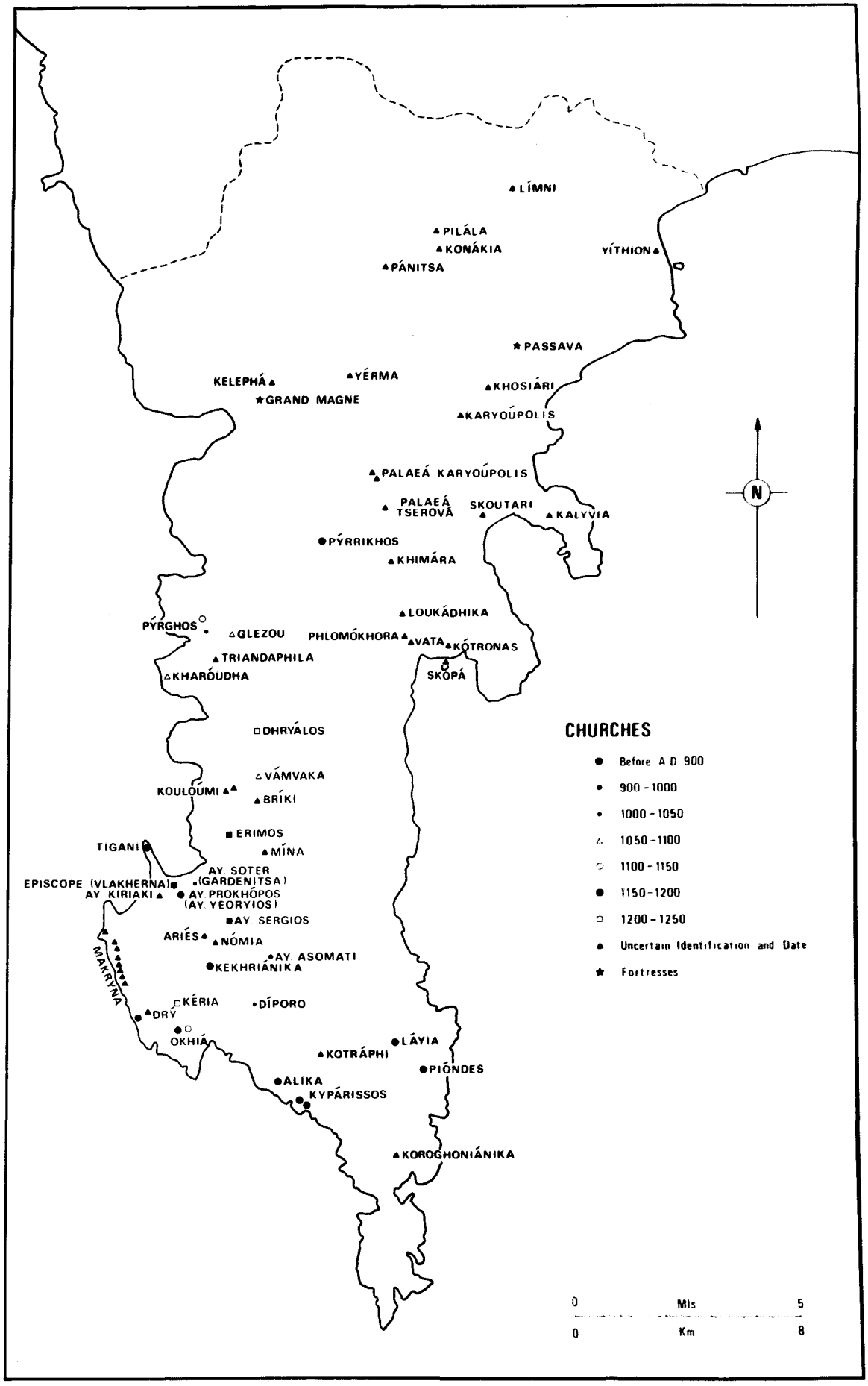


Figure 39: Medieval Churches in the Study Region

Figure 40: Pattern of Settlements in the Study Region, c.1618

The reflexive-pair values are greater than that for a perfectly random pattern of points (0.62) and Clark has suggested that such values might be due to one of two situations. They might arise from discontinuities in the physiography of a region, leading to a clustered or patchy distribution. Alternatively, positive values might result from the reciprocal effects of points upon each other.[3]

The appropriateness of the first explanation is clear in the Maniat context (Fig.41). Settlements were largely absent from four areas - the coast, the central mountains, especially from the 8.0 per cent of the region lying above 800 metres, from the Kritíri peninsula in the south, and, rather surprisingly, from the north-eastern corner. They were concentrated in gentle and moderately sloping terrain (Fig.41; Table 10) at intermediate heights (Table 10) along the flanks of the mountains, that is within a zone forming about 24 per cent of the region. Chi-squared tests suggest that these relationships were not the result of chance. Particular settlement clusters were found on the marine surface zone of the west coast, in the belt of country stretching from the 'Ambros into Mésa Khória and behind Kolokythia Bay. Not only are these separate physiographic units, they are also amongst the most physically favoured parts of the region with some of its better soils.

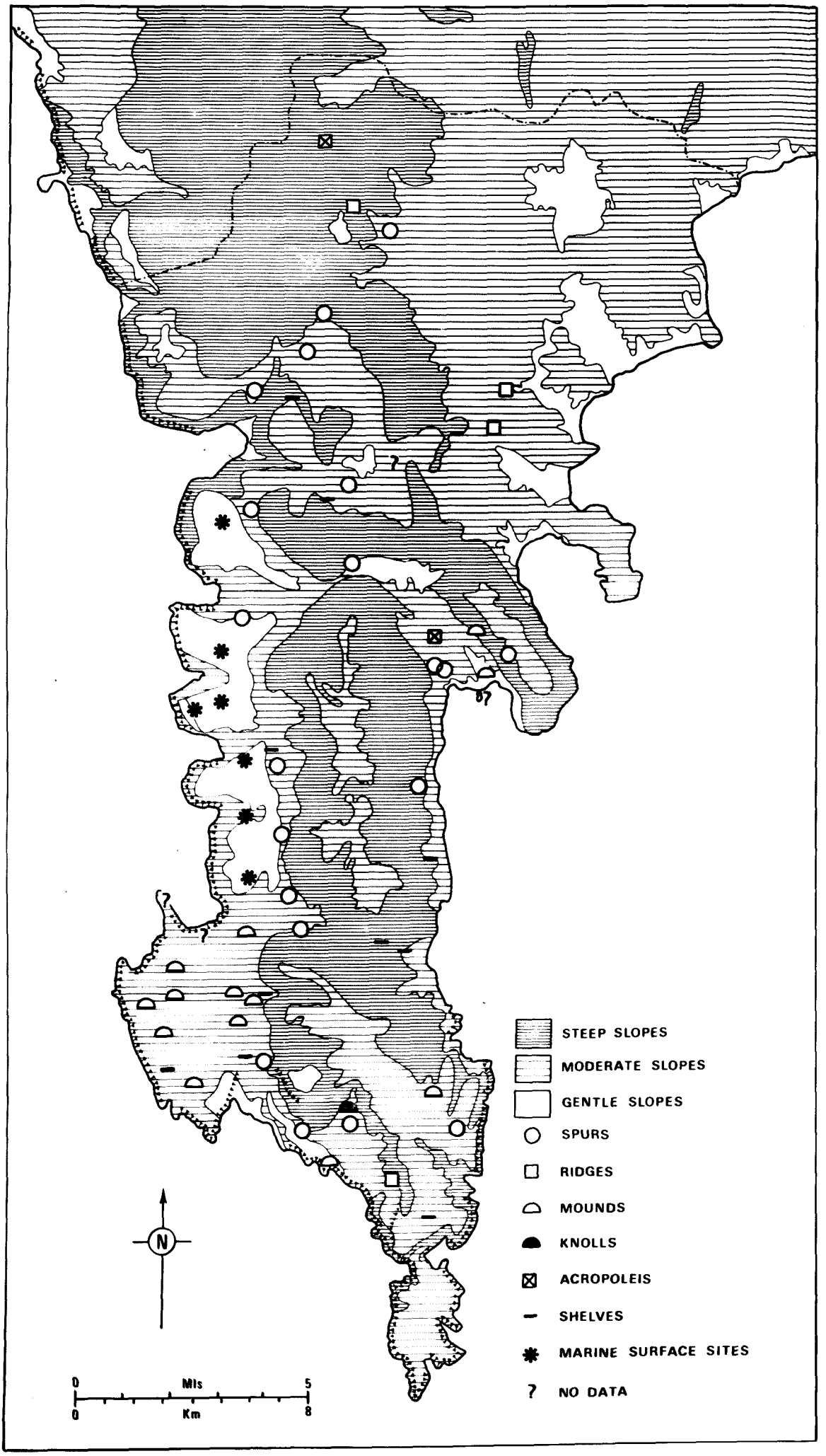


Figure 41: Settlement Sites, c.1618

Table 10 : Comparative Settlement Data, c.A.D.174 and c. A. D.1618

Characteristics	Settlements			
	A.D. 174		A.D.1618	
	Number	Percentage	Number	Percentage
Total Settlements	23	100.0	61	100.0
Number within 0.5 kms of Coast	13	56.5	5	8.2
Height Zonation (m)				
0 - 99	17	73.9	4	7.4
100 - 199	4	17.4	18	33.3
200 - 399	2	8.7	27	50.0
400 - 599	0	0.0	3	5.6
600+	0	0.0	2	3.7
Sites				
Acropolis	0	0.0	2	3.6
Knoll	0	0.0	1	1.7
Marine Surface	1	4.4	7	12.5
Mound	5	21.7	13	25.0
Ridge	0	0.0	4	7.1
Shelf	5	21.7	10	17.8
Spur	4	17.4	20	35.6
Valley Floor	6	26.1	0	0.0
Terrain				
Gentle Slopes	10	43.5	10	17.8
Moderate Slopes	11.5	50.5	33	57.8
Steep Slopes	1.5	6.5	6	10.6
Gentle/Moderate	0	0.0	1	1.7
Moderate/Steep	0	0.0	7	12.5

Table 11 : Sources of Water, c.1618

Source	No. of Settlements	Percentage of Total
Cisterns	42	75.0
Springs	6	10.3
Wells	3	5.2
Cisterns and Springs	4	7.0
Cisterns and Wells	2	3.5
Total	57	100.0

Most of them lacked running water, however, and this is reflected in the probable dependence of the great majority of settlements upon cisterns for their domestic needs (Fig.42; Table 11). It is all the more surprising, therefore, that settlements were absent from the undulating terrain of the north-east, where there are several comparatively well-watered valleys with fertile soils, and where most settlements were concentrated in the late second century.

The reciprocal effects of points upon each other are revealed by the existence of what might be called "nearest neighbour structures" (Fig.43). These are discrete entities discovered by the simple device of drawing lines to link nearest neighbours. Twenty-five such structures can be created for the early seventeenth century, with between 2 and 4 members each, and they were separated from one another by an average distance of 2.1 kilometres. Physical conditions clearly provided a basis for the structures. Separation generally resulted from the intervention of difficult terrain between the structures, for example, the steep slopes of the high mountains separating Structures 1 and 2, while internal unity was given to 20 of the structures by local terrain, as in the case of the fragment of marine terrace underlying Structure 7.

However, examination of the nearest neighbour

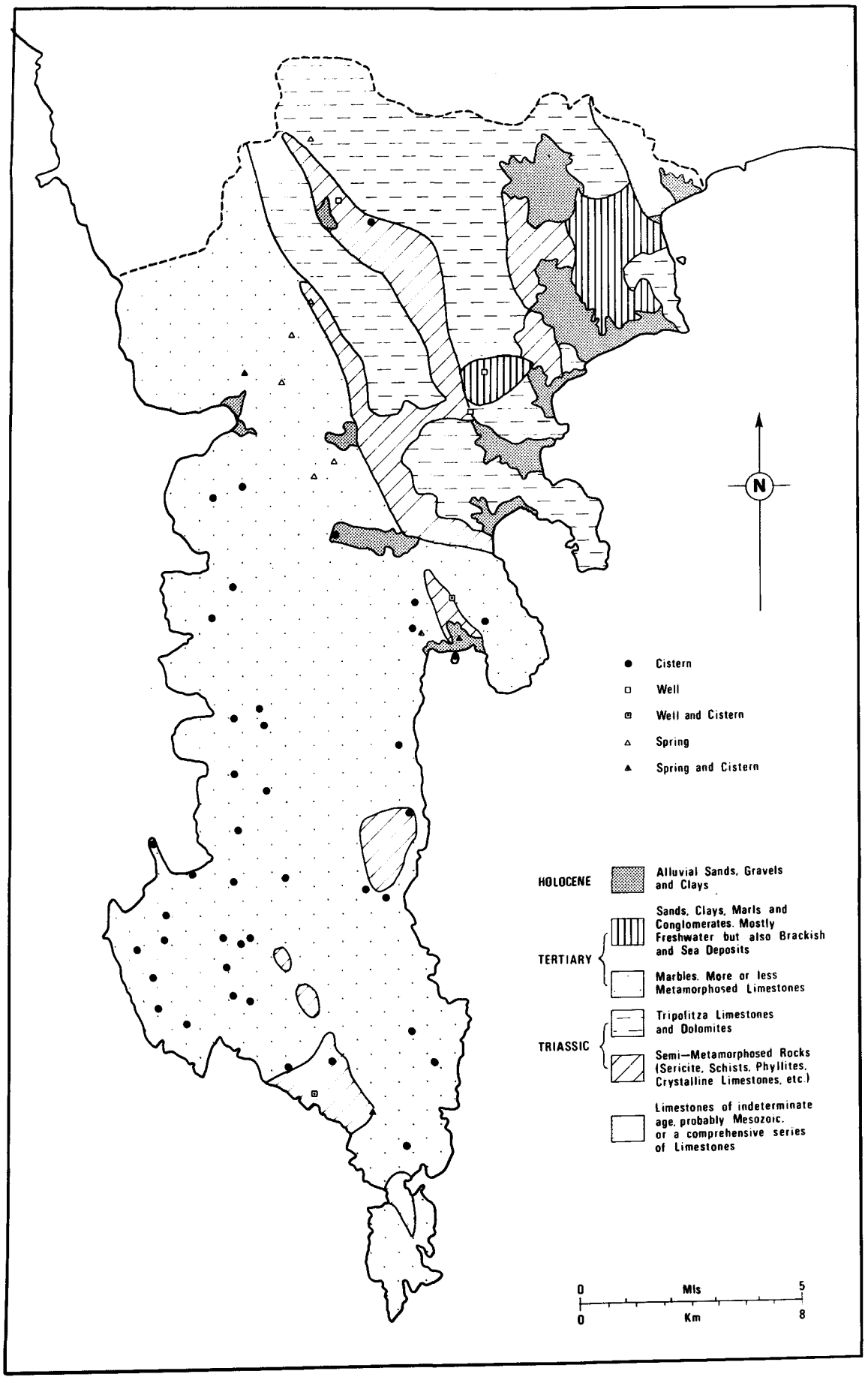


Figure 42: Water Supply, c.1618

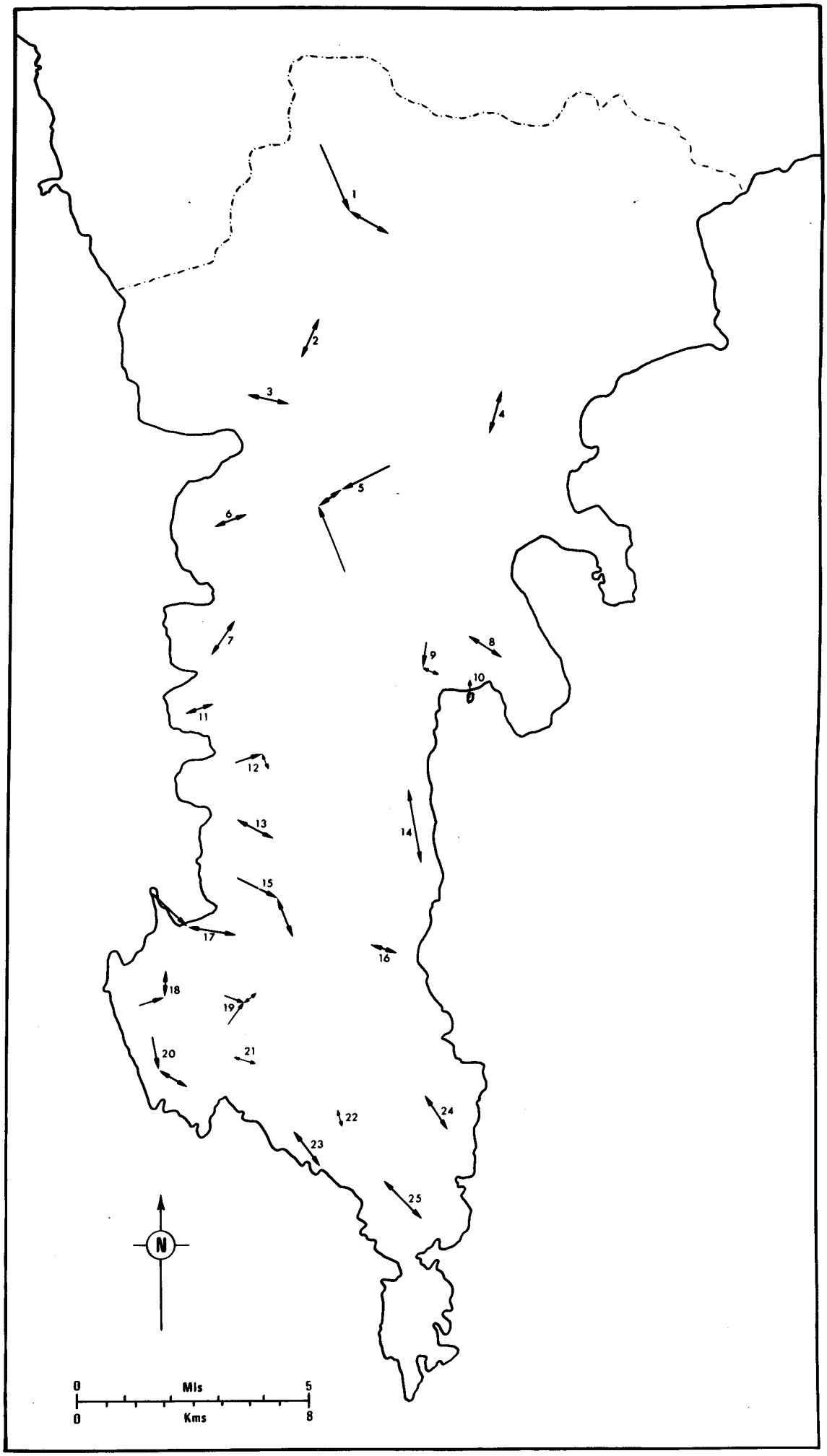


Figure 43: Nearest Neighbour Analysis, c.1618

structures in the light of place name forms and population size information contained in the same Nevers' source suggests that social, economic and political relationships existed between the members of each structure.

Table 12 : Names Indicative of Possession or Dependency, c.1618

Name	No. of Settlements
1. Charouda Chardiani	1
2. di Chorogou	1
3. di Chouchougliani	1
4. di Gardistia	1
5. di Vacha	1
6. di Condestauli	2
7. di Nicliani	5
8. di Cholochitia	8

All the structures were dominated by settlements which were at least 25 per cent larger than any other member (Fig.44), whilst 20 (32.8 per cent) of the settlements had suffixes indicative of dependency or possession (Table 12). Analysis of the suffixes is complex, and the "dependency structures" do not always coincide exactly with the nearest neighbour structures or with physically discrete territories. There was sufficient correspondence, though, to support the argument. The relationships between settlements were probably of the type normal between the constituents of feudal fiefs held by separate families, and involved dominance and

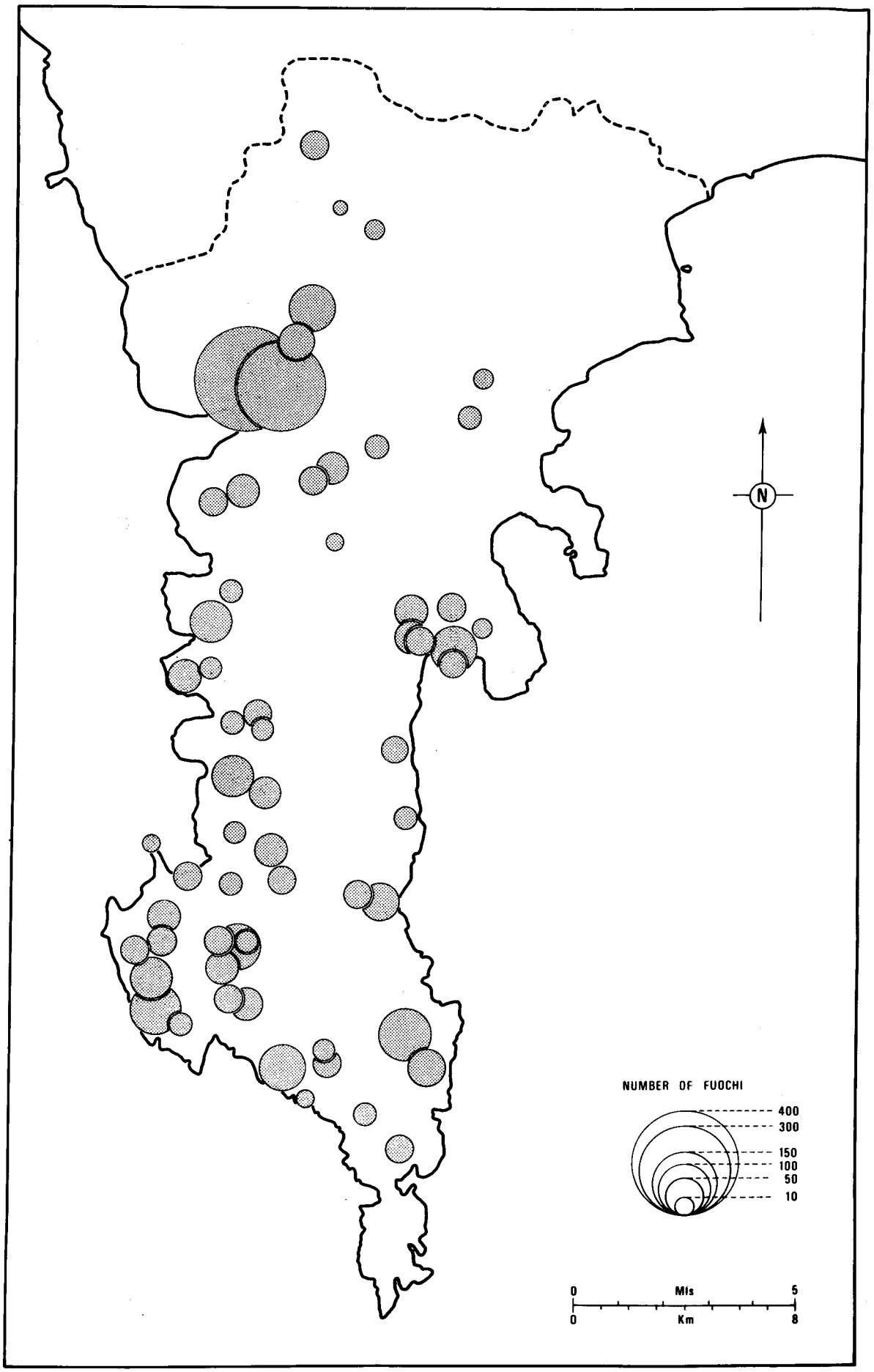


Figure 44: Settlement Size, c.1618

subordination of settlements, as well as differences in size of territory and numbers of settlements. The possibility of original mother-daughter relationships, which is most apparent in paired structures, whether of a place-name form or of a purely nearest-neighbour type, suggests a mechanism by which settlement locations were reciprocally affected. The location of a mother settlement would have affected the location of her dependent daughters and in turn their positions would have influenced the placing of any third generation settlements within a physically defined fief. Clearly, then, a case can be made for the shaping of the early seventeenth century settlement pattern by both physical facts and human forces.

Stability and Discontinuity

Comparison of the early seventeenth century patterns with those for the late second century (Fig.45) reveals two elements in the unfolding spatio-temporal structure of the region. A degree of stability is evident from continued occupation in the immediate vicinities of the ancient poléis of Kaenepolis, Oetylus, Pyrrhichus and Teuthrone. The dominant impression, however, is one of radical change, even of discontinuity. Settlements increased in number from 23 to 61 (Table 10). The total within 0.5 kilometres of the present coastline declined from 13 at the end of the second century to 5 in the early seventeenth century. More marked was the disappearance of settlements from the apparently well-endowed north-eastern area and their increase on the arid, high marine terraces of the west and south-west. Largely in consequence of these horizontal changes, the height zonation and site preferences of the settlements radically altered (Table 10). These characteristics of the spatio-temporal structure of settlement in the Máni raise two fundamental problems. One is the dating of the changes; the other is the reason for the particular form of unfolding observed.

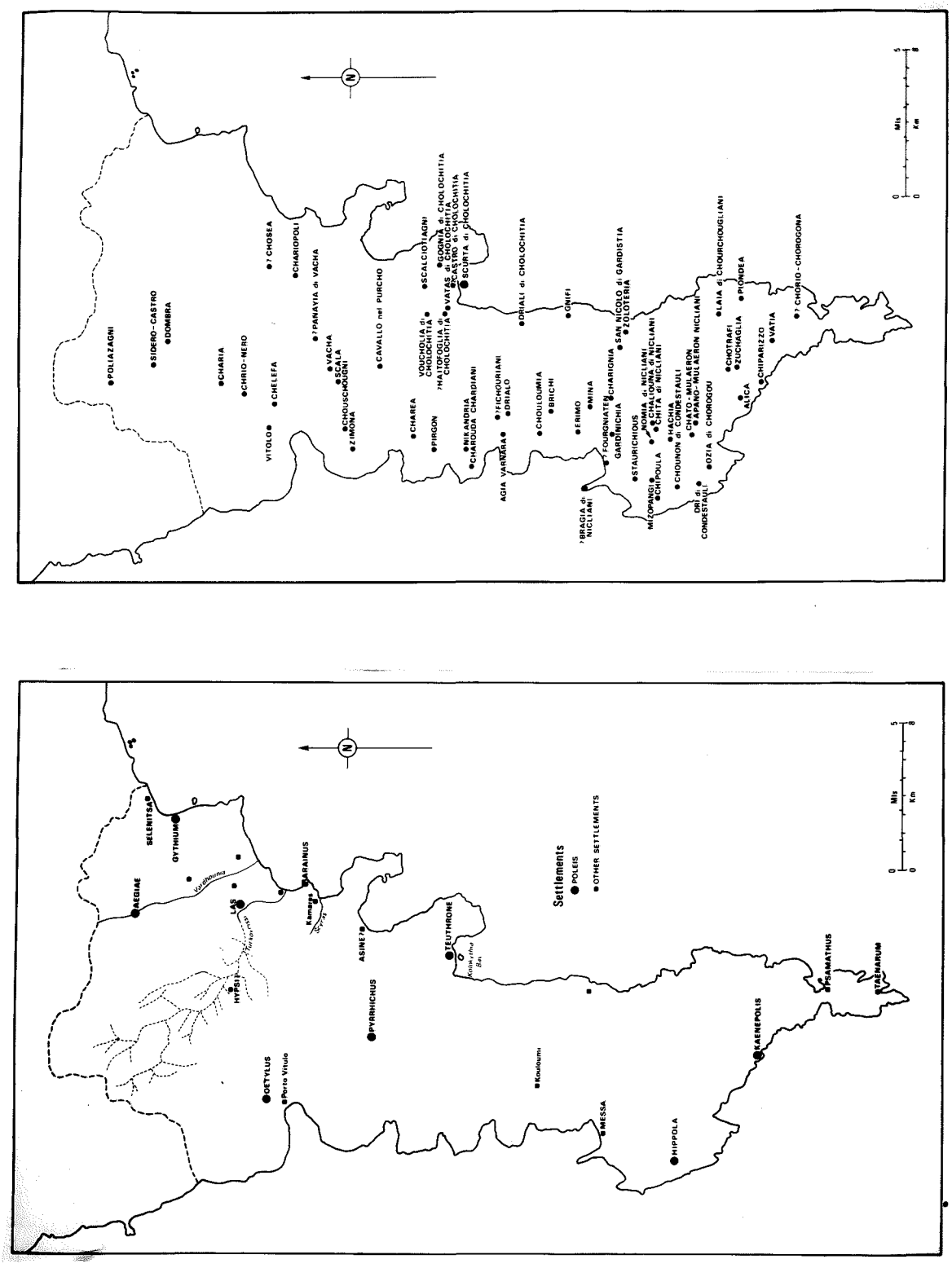


Figure 45: Radical Changes in Settlement Patterns

a. Roman Period

b. Early Seventeenth Century

Chronology

Change can be isolated a little more closely in time than the 1440 years lying between the two period reconstructions. Coins from the site of Gythium indicate that some form of occupation continued there at least until the reign of Constantine the Great (A.D.311-337).[4] Although the settlement was the most important in the region during Roman times, no mention was made of it in the treatise on imperial administration written by Constantine Porphyrogenitus in the tenth century, but drawing on older materials. The most important settlement in the region known to him was Maíni,[5] and, though the precise location is disputed, nobody has suggested that it should be identified with Gythium. Cyriaco of Ancona, who visited the ruins in the first half of the fifteenth century, made no mention of a contemporary settlement.[6] Although the evidence is rather negative, desertion seems probable and may have taken place before the tenth century. Occupation may have continued at Kaenepolis until at least the sixth century, when the port was mentioned by Procopius in connection with Byzantine campaigns against the Vandals,[7] whilst two early churches in the vicinity have been rather unsatisfactorily dated to the same period.[8] The account of his travels written by Cyriaco of Ancona mentioned a settlement in the southern part of the region called Cyparissea, which may be identified as early seventeenth century Chiparizzo and later Kyparisso.[9] This settlement lies in the vicinity of ancient Kaenepolis, and the change in name may indicate a break in the settlement history of the locality.

Taking the fragmentary evidence about Gythium and Kaenepolis together, it is possible that changes in the regional pattern of settlement were contemporaneous with the abandonment of these poléis. Setting the limits as widely as possible, this might have been between the sixth and fifteenth centuries. A degree of refinement can be introduced by reconsidering the evidence of medieval churches now found in Mésa Máni. The location of churches does not necessarily indicate the precise location of settlements, but it is obvious that their broad distribution in Mésa Máni is similar to that of early

seventeenth century settlements (Figs. 39 and 40) and that the densities of the two are greater here than elsewhere in the study region. The conclusion may be drawn that the building of churches was related to the change in settlement patterns. The earliest churches have been dated to the fifth or sixth century, and building may have declined after the completion of the Frankish conquest, c.1248.[10] The implication might be that the transformation of the settlement patterns had also taken place before the same terminal date, though the new pattern may have been reinforced by spreading. If these suggestions are correct, then the settlement pattern of the study region was transformed between the middle of the sixth century and the middle of the thirteenth century. Explanations must be sought which either arise from conditions in this period, or which, perhaps, culminated during it.

Simulation

Explanation for the particular unfolding of the spatio-temporal settlement structure of the Máni is rendered problematical by the existence of a major discontinuity. Historians of a previous generation were inclined to attribute similar breaks to some great disaster which virtually eliminated all traces of former settlement patterns and led to the creation of entirely new structures.[11] The Arab threat from Crete during the period 823/28 to 961 and the Slav settlings in the Peloponnese during the sixth to eighth centuries might be viewed as providing the required disasters here. However, there seems to be no written evidence for an Arab attack on any part of the Maniat coast, despite its proximity to the Great Island. Its comparative poverty is unlikely to have attracted the Muslim pirates, whilst continuity in the exposed situation of Kaenepolis/Kyparisso seems to deny the effectiveness of any seaborne attacks in relocating settlements. Some Slavs may have settled in the region, as the place name data appear to indicate, but no evidence has come to light for violent destruction at the crucial time. Indeed, the mountain location of most of the northern group of possible

Slav settlements and the peripheral position of the southern group with respect to the second century settlement pattern might point to peaceful penetration and the filling up of gaps in an already existing pattern. Evidence for intrusions of other alien people into the region between the sixth and the thirteenth centuries is virtually non-existant. Although the so-called Chronicle of Monemvasia mentioned several places to which people fled from Lakedaímonia before the advance of the Slavs, the Máni was not one of them, while an alleged evacuation from the head of the Laconic Gulf may have been copied from Strabo.[12] Although there were Frankish fiefs and two castles in the region,[13] the impact of the Latin conquest of the Peloponnese on the population and settlements of the Máni is unchronicled. The settling of people from the town of Níkli, near modern Trípolis in 'Arkádia, after its destruction in 1295 has been used to explain the seventeenth century place name di Nicliani and associated names and terms.[14] If correct, this migration would substantiate the hypothesis that the Máni was settled by refugees, and support the idea that they transformed the settlement patterns. Unfortunately, an alternative and more plausible explanation can be offered for the Nikliani,[15] and the whole dizzy structure is rendered void.

Negative arguments are always unsatisfactory, but there seems no evidence to support the hypothesis of an externally induced cultural break which might have produced discontinuity in the unfolding spatio-temporal structure of Maniat settlement. An alternative explanation might lie in forces indigenous to the region and internal to the settlement pattern itself. This hypothesis is particularly attractive since the evidence of both stability and discontinuity suggests that Maniat settlement behaved like a "structurally stable dynamical system"[16] between the late second and the early seventeenth centuries. Assuming the interpretation is correct, then the branch of topology known as catastrophe theory offers a theoretical simulation for the unfolding of the Maniat settlement pattern through time. The simulation must be explained.[17]

In geometrical terms, the settlement pattern existing in any region may be viewed by means of a quantity $\alpha(x,t)$, which measures the attractiveness for occupation of location x at time t. A relatively large number of settlements would be expected where α_t attained a maximum value, that is in the vicinity of those points x such that, for all nearby points y, $\alpha t(y) < \alpha t(x)$. A given maximum of α_t may vary its position continuously through time under the influence of a wide variety of continuously changing factors, or control parameters. It is even possible for a given maximum to disappear and a new one to appear elsewhere. Such changes would probably be accompanied by rapid changes in the controlled variables- settlement patterns in the present problem. The possibility exists, then, of continuous changes in the controls resulting in discontinuous changes in the controlled variables, even though the relationships between the controls and the controlled variables are described by continuous, or even differentiable functions. In topological terms, this means that a catastrophe has taken place. The concept involved here can perhaps be best understood by analagy: a catastrophe occurs when a continuous rise in temperature suddenly causes water to boil, or when an electrical circuit suddenly flips into a new oscillation.[18]

Returning to the Mani, it is clear that the greatest number of settlements was found in the north-east during the late second century, but in the south-west during the early seventeenth century. In other words, the value of α_t seems to have changed between the two periods. To simulate the changes which occurred, it is necessary to join the two districts by a line through the Milolaghádha and along the marine surfaces (Fig.46). This allows attention to be focused upon the variations along the line - a device which has the operational advantage of restricting the position variable x to a one-dimentional mathematical region. The line may be parametrised for the late second century by the real numbers x with $0 < x < 1$, taking $x = 0$ to lie in the 'Embros, $x = 1$ in the north-east and $x = \frac{1}{2}$ in the Milolaghádha, where conditions are too restrictive for settlements to have proliferated.

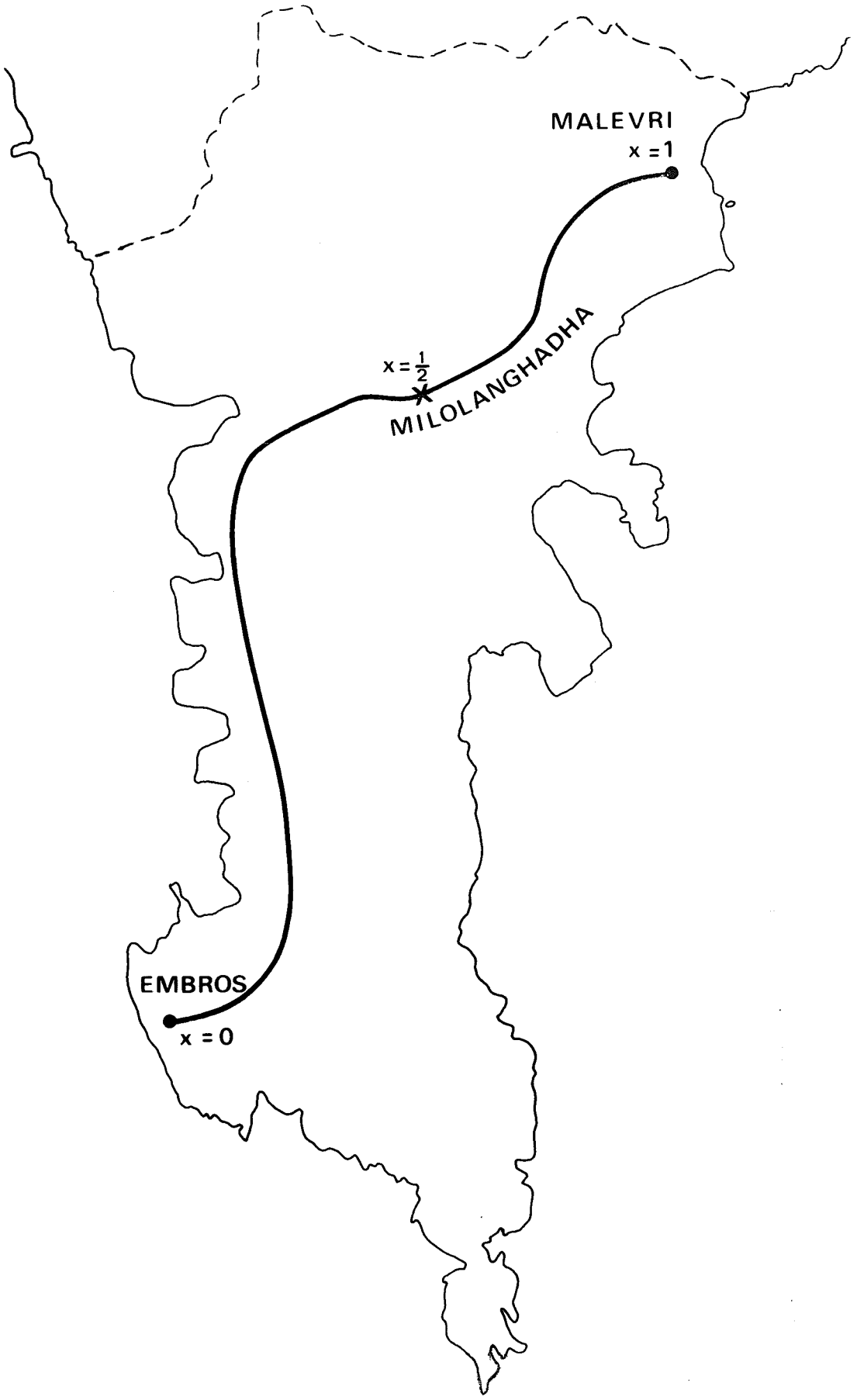


Figure 46: Arc Joining the Main Settlement Concentrations of the Late Second and Early Seventeenth Centuries

Parameters

Further application of the catastrophe model requires the isolation of control parameters affecting the attractiveness of the position variable, x. Special attention must be given to the north-east and the south-west, since these were the areas where α_t attained maxima at the terminal periods. The possibilities can be reduced to two-security and the availability of cultivable land.

The later Roman Empire experienced a decline in security by land and sea.[19] Although piracy and privateering increased, much of the Máni was probably protected from attack by its relative poverty and its cliffed coastline. In any case, it should be noted that a difficult coast is one reason for the lack of coastal settlements in the region, whilst the peninsular form may have been decisive. Sea distances are long and, when the number of settlements in the region increased, maritime communications would have declined in importance as too expensive in time and freight costs to be worthwhile. Land routes would have been much shorter and easier for internal communication. The limited external trade of the region was probably handled from skáles, rather than permanent settlements.

The small coastal plains of the north-east may have been more exposed to sudden raids from the sea, since landing would have been comparatively easy and the area contained more settlements, and relatively wealthy ones at that. Vandals harassed the coasts of the Peloponnisos from North Africa, Corsica and Sicily, and their king, Gaiseric (428-77) appeared off Taenarum on at least one occasion;[20] they may have provided the first real threat. Vandals may have been followed by Arabs, who were especially dangerous to the Peloponnisos after they had conquered Crete. They, in turn, may have been followed by Normans once Sicily had been seized (1060-1091) and Normans may have been responsible for the abandonment of early Byzantine Maíni which has been tentatively identified with the Tigáni.

More important, however, was the risk of attack by land from the north. The relative insecurity of "hollow Lakedaimon" had been exposed again when fir:

Goths and then Vandals swept down upon Sparta during the fourth and fifth centuries.[21] It would have been but a day or two's march to the vicinity of Gythium, and as in earlier centuries,[22] the intervening terrain would have offered little obstacle. Slavs may have entered the north-east corner of the Máni along much the same routes, across the Vardhoúnia hills or through the 'Elos Plain. The newcomers retained a rebellious independence on the fringes of Taýgetos through the tenth and into the thirteenth century.[23] Terrain conditions, as well as earlier and later historical experience, suggest that the north-eastern corner of the Máni could not have withstood a Frankish advance for long, and though few details are known, it was controlled by the castle of Passawa from about 1248[24]. The district must have remained insecure even after 1262 when the Máni became a Byzantine foothold in the Peloponnisos and the war was resumed.

Whilst the north-east was thus exposed to relatively easy attack, the west and south-west were comparatively secure from landward threats. The spinal mountains and the lengths of rocky marine surface had to be negotiated to reach them; advance could easily be impeded at several places, but especially in the narrower sections of the Milolanghádha.

Once the security factor had begun to operate on settlement patterns in the study region, it does not seem to have declined in strength over the next few centuries. Variation in the intensity of danger may have occurred, but for operational purposes this factor may be considered as a constant.

Geological and pedalogical conditions indicate that the north-east was probably the most favourable area for agriculture in Roman times. However, there was a phase of land abandonment within the Empire generally between the late second and the sixth centuries[25] which may have affected the district. Jones has estimated that between 10 and 15 per cent of the cultivable land of the Empire may have been abandoned,[26] and thought that, though the actual amount would vary regionally, much of it was

probably marginal for cultivation. References to the Máni are absent from the available sources, but it was probably affected by the trend.

Various explanations have been offered for this widespread phenomenon. The theory of manpower shortage lacks substance,[27] whilst the contemporary explanation of excessive taxation, though favoured by Jones,[28] cannot be tested in the Máni. A third explanation is afforded by what Jones called ecological deterioration. Although Jones argued against soil exhaustion as the reason for land abandonment,[29] Vita-Finzi has presented overwhelming evidence for a widespread character change in Mediterranean valleys, which began in the late Roman period and persisted through the Middle Ages.[30] This involved the aggradation of valleys and, in an area like the north-east of the Máni, may have produced extensive winter flooding, leading ultimately to the formation of the marshes which persisted until recent times. Marsh conditions, in turn, would produce a favourable breeding environment for mosquitoes, the existence of which is well-attested from Yíthion and the 'Elos Plain from the late nineteenth and early twentieth century.[31]

The causes of these environmental changes have not been finally established. Vita-Finzi has argued that the widespread nature of the phenomena must indicate climatic change, though conceding the important role of sheet wash resulting from unwise land use.[32] Work on western Turkey has suggested that intensive economic activity in the hinterland during Hellenistic and Roman times was responsible for the silting up of bays upon which such towns as Ephesus and Miletus had once flourished.[33] On a smaller scale, these developments may have taken place in the hinterland of Gythium.

The apparent wealth and size of the <u>pólis</u> centre in the second century suggest that Roman Gythium may have been the centre of considerable economic activity. Timber had probably been cut on neighbouring hills to supply the Spartan dockyard,[34] but in Roman times the intensity of cutting

may have been increased to build merchant ships. In any case, the ordinary demands of a large settlement for constructional timber and fuel, both industrial and domestic, are considerable and unrelenting; they could have deforested large areas of the north-east. At the same time, increasing amounts of land would have been required to feed a comparatively large, non-agricultural population. Sheet erosion may be expected to have developed on the hills of the north-east, once the tree cover was removed and cultivation initiated. Degradation of the hill land and aggradation and flooding in the valleys would result. The situation, however, was complicated by the 2 to 3 metre rise in sea level apparent at Gythium and Skutári, since this must have increased flooding but at the same time aided the spreading of silts brought down from the interior.

Deterioration in cultivable land may have been sufficient to disperse population from the Roman settlements of the north-east Máni and increase the value of inferior agricultural land elsewhere in the peninsula. Elevation may have spared the marine surfaces and the 'Imbros from the worst effects of change, whilst their stony soils came to be more highly regarded as offering at least a chance of subsistence within the home region.

Reassessment of the potentialities of the peninsula may have been assisted by further developments under the later Roman Empire. A generally deteriorating economic situation between the third and sixth centuries may have reduced the demand for luxury goods, such as the exotic stone produced within the region or very close to it.[35] This could have weakened the viability of some settlements in the region, especially Gythium. Sparta may have lost population and contracted physically in the third and fourth centuries, when the acropolis of the Roman town was fortified (after A.D.267), and again in the fifth century.[36] Events at Sparta may

have reflected changes throughout Lakedaímonia, where land abandonment may have been encouraged by the wintering of Alaric's Gothic army there in 395-96. Such changes in the hinterland may be expected to have affected Gythium's trade, and decay at Gythium would have had ramifications in neighbouring plains and valleys, which may have supplied its market. Rising sea level in this period may also have created difficulties for the port by progressively drowning harbour works. At the same time, ships may have been allowed to move up the Vasilopótamos, and perhaps the Evrótas, as far as modern Skála, thus depriving Gythium of such Lakedaimonian trade as was still available. As the town decayed, the prosperity of the whole north-east may have declined.

Application of the Model

Having suggested two dominant control parameters, it is now possible to see how they might have affected settlement patterns in the study region. When attractiveness (α_t) was greatest in the north-east, the settlement graph would look something like Figure 47a. On the other hand, if the danger from the north was sufficiently acute at any time to drive people into the relative security of the south-west, the settlement pattern should produce a graph similar to Figure 47b. At times when there was a threat and reasonable agricultural conditions in the north-east, the graph for α_t could be expected to have the form in Figure 47c, while deterioration in the agricultural conditions of the north-east and a withdrawal of the northward threat to security might produce a situation where neither the south-west nor the north-east enjoyed any particular attraction (Fig.47d).

These heuristic considerations strongly suggest that a useful geometrical model of the Maniat spatio-temporal structure unfolding between the mid-sixth and mid-thirteenth centuries is provided by the

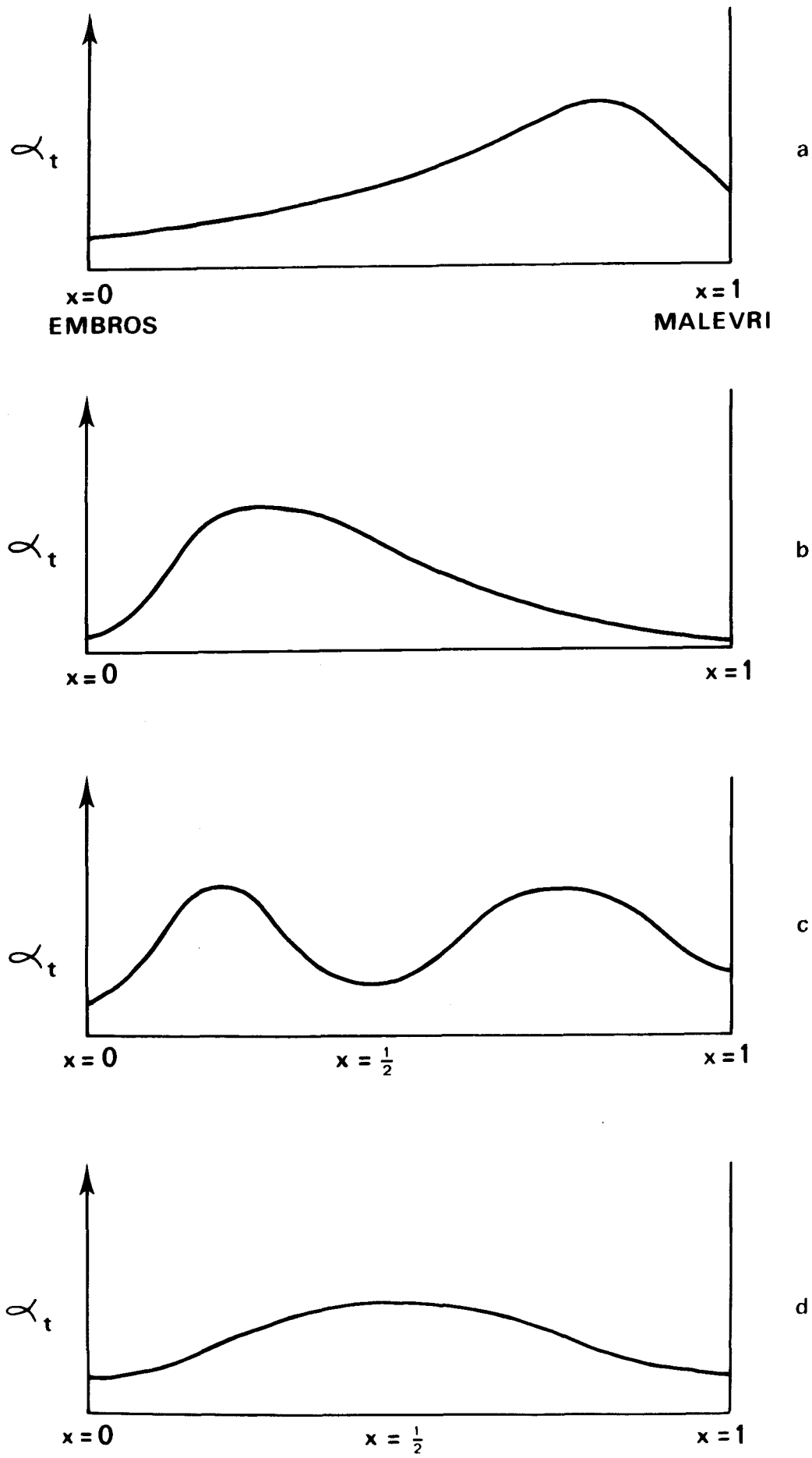


Figure 47: Graphs of "Attractiveness" ($\propto t$)

cusp catastrophe, which, according to Thom, is practically the only geometrical model applicable to the present problem.[37]

In terms of the cusp catastrophe, the position X of the maxima and minima of α_t may be related to the control variables D and F by the equation

$$2X-(D+F)X+(D-F) = 0$$

where D is the danger of landward attack and F the agricultural state of the north-east. Thus, the relationships of D and F change through time, the pair (D,F) parametrise the plane, and move the position variable X along a scale between 0 and 1. The three variables (D,F,X) together parametrise a smooth surface in three-dimensional space. That part of the surface which lies below the fold represents minima of α_t - locations where settlements are least likely to be found. Thus, the actual surface parametrised by the points (D,F,X), where X is at the maxima of α_t for given values of D and F, has the form shown in Figure 48.

Figure 48 indicates how the observed unfolding of the spatio-temporal structure could have been produced by a steady decline in cultivation conditions in the north-east, and with no appreciable variation in the security situation measured by D. In the model, the evolution of the pattern of maxima of X of α_t would run as follows. In the late second century there were two local maxima, one in the hinterland of Cythium and one in the 'Embros. As conditions deteriorated in the north-east, two local maxima could persist for quite a long time, but eventually the upper maximum would disappear, and only the lower, south-western, maximum survive. Around this time, a fairly rapid redistribution of settlements along the arc should be envisaged, with population from the north-east founding new settlements in the west and especially in the more favoured area of the 'Embros. Long before this situation developed, however, the south-west would already have become relatively more attractive than the north-east. However, it was only with the final disappearance of the local maximum in the north-east, that the catastrophic change in settlement

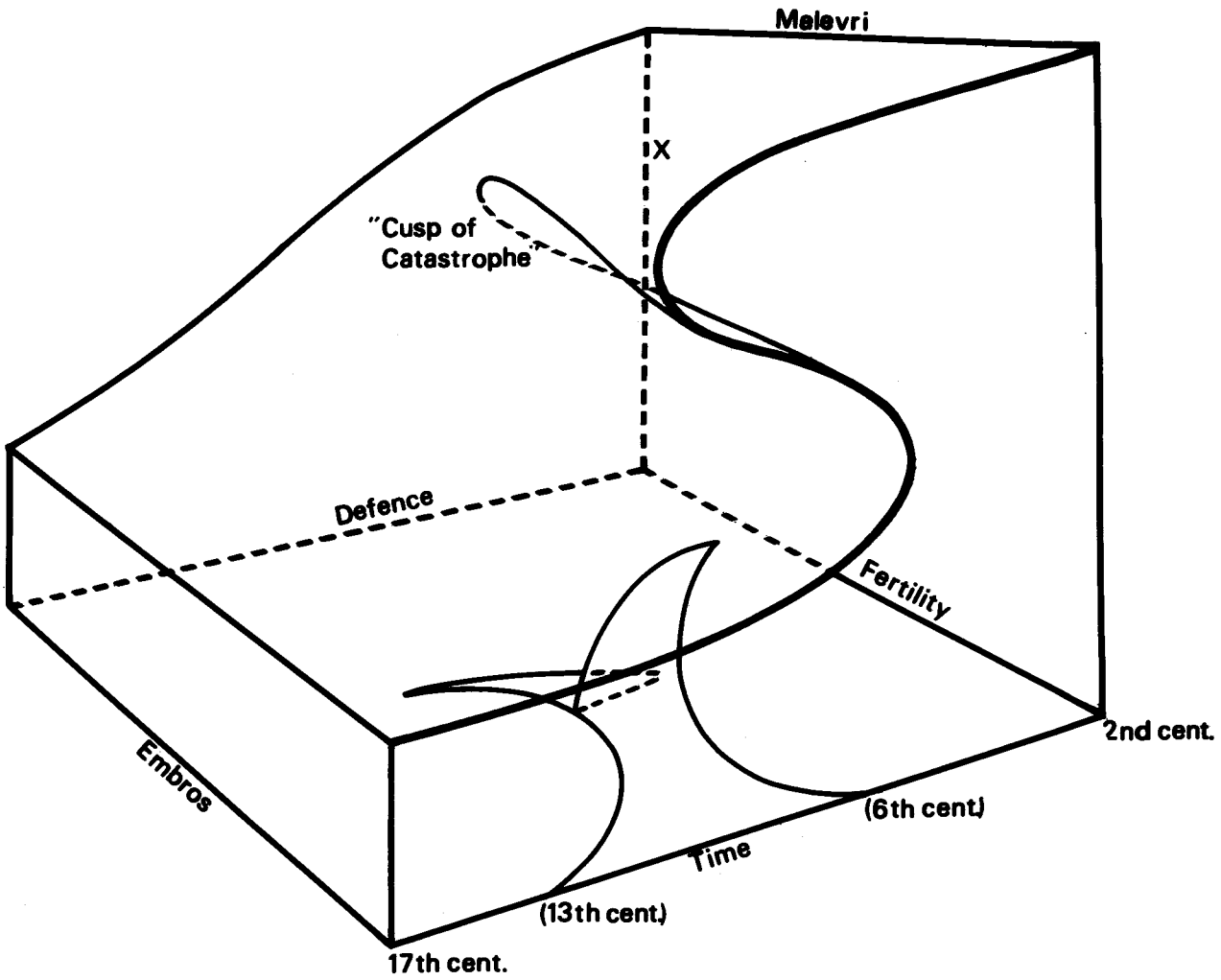


Figure 48: Catastrophe Graph for the Máni, Second to Seventeenth Centuries

patterns would occur - an event perhaps marked by the sudden appearance of the name Maíni in the records. Conversely, improvement in the attractiveness of the north-east was crucial to the developments in settlement patterns after c.1618. The great advantage of this topological model is that it provides a way of understanding how radical change could occur over time within a system, like a settlement pattern, as a result of processes operating continuously within it. More information about socio-economic change in the Máni is available for the period from c.1618 to c.1830.

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36. Traquair, Laconia II, op.cit.

37. Thom, op.cit., and advice of Professor Robertson.

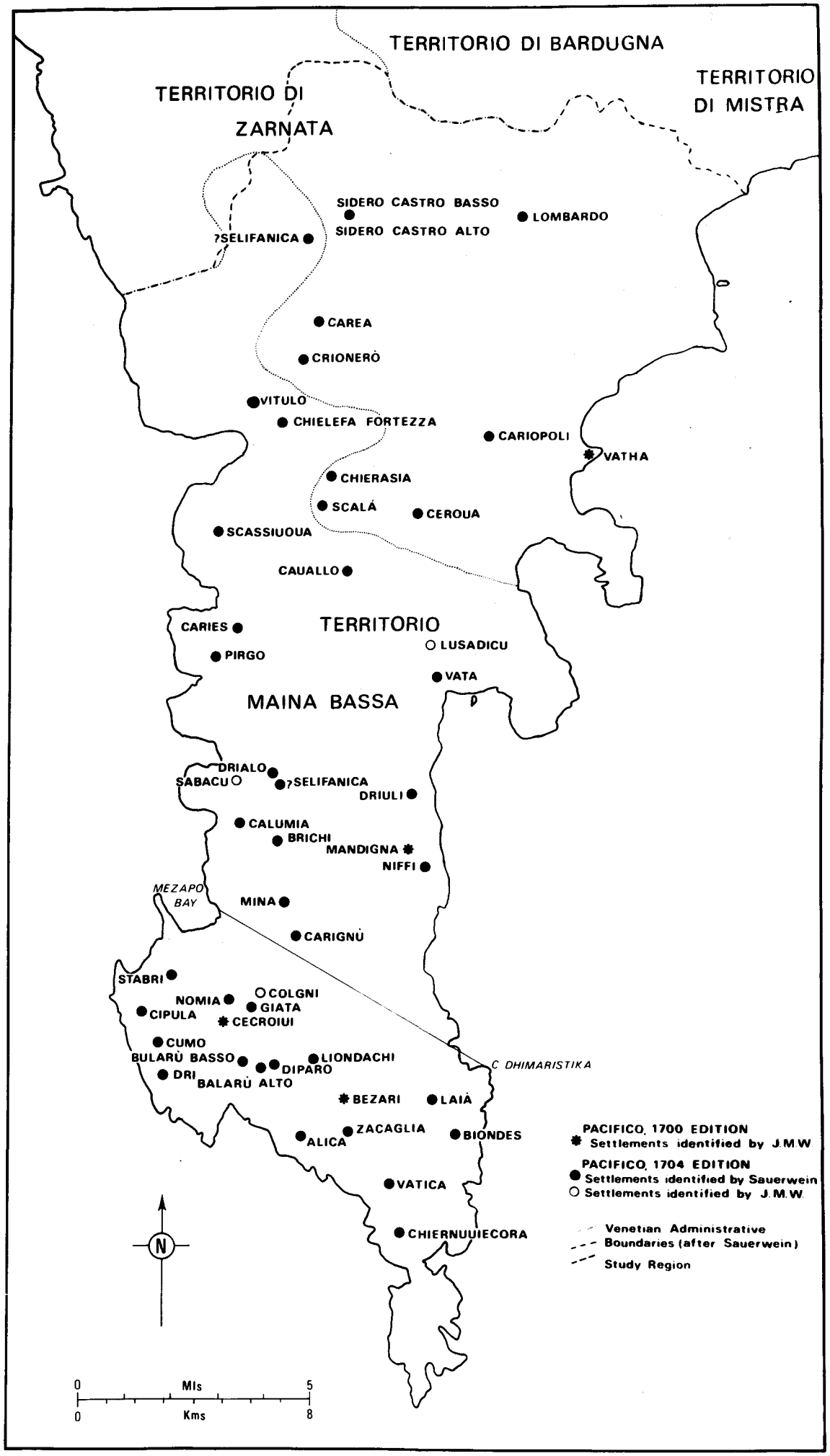

Figure 49: Settlements in the Study Region, c.1700

CHAPTER 7 : COLONISATION AND SPREAD, c.1618 to 1830

Early Nineteenth Century

Although the lists of settlements published by Pacifico in 1700 and 1704 allow a settlement pattern to be reconstructed (Fig.49), there are good reasons for thinking it is incomplete for the Máni, whatever the case may be elsewhere in the Morea (pp. 19-20). The map and population enumeration produced by the Commission scientifique de Morée more than a hundred years later provide much fuller and more reliable data.

Some 129 settlements existed in the study region c.1830 (Fig.50). Nearest neighbour statistics of 1.0 for the whole region and 1.05 for the inhabited zone below 800 metres indicate a random distribution. However, examination of reflexive pairs produced results of 0.49 for the whole region and 0.51 for the inhabited area, and these are much lower than the theoretically derived value of 0.62 for a purely random pattern. Some degree of clustering is indicated, and the nearest neighbour results have probably been distorted by the elongated shape of the region. The clustering of settlements is apparent in several ways. The mountains above 800 metres were unoccupied, whilst only 12 settlements (9.3 per cent of the total) lay within 0.5 kilometres of the coast. Most settlements were found on locally elevated sites along the flanks of the mountains (Fig.51; Tables 13 & 14) and at altitudes between 100 and 400 metres (Table 15). Just over 50 per cent of the settlements were found in the tmíma (administrative unit) of Maïni which covered practically the whole of the west coastal zone with its high marine terraces (Table 16) - about 38 per cent of the study region. Since Chi-squared testing suggests that these distributions are not the result of chance, it looks as if the repulsion of the higher mountains and the cliffed coastline forced people to establish settlements in areas of moderate altitude and moderate gradient which generally had the added advantage of possessing cultivable,

Figure 50: The Study Region c.1830, redrawn from the Carte de la Morée

Table 13 : Settlement Sites, c.1830

Type of Site (Appendix IV)	Number	Percentage of Total
Acropolis	4	3
Knoll	7	5
Marine Surface	15	13
Mound	24	19
Ridge	11	9
Shelf	21	17
Spur	41	34
Total	123	100

Table 14: Settlements and Slope, c.1830

Slope Category	Number	Percentage of Total
Gentle	18	15
Moderate	65	53
Steep	18	15
Gentle/Moderate	6	5
Moderate/Steep	16	12
Total	123	100

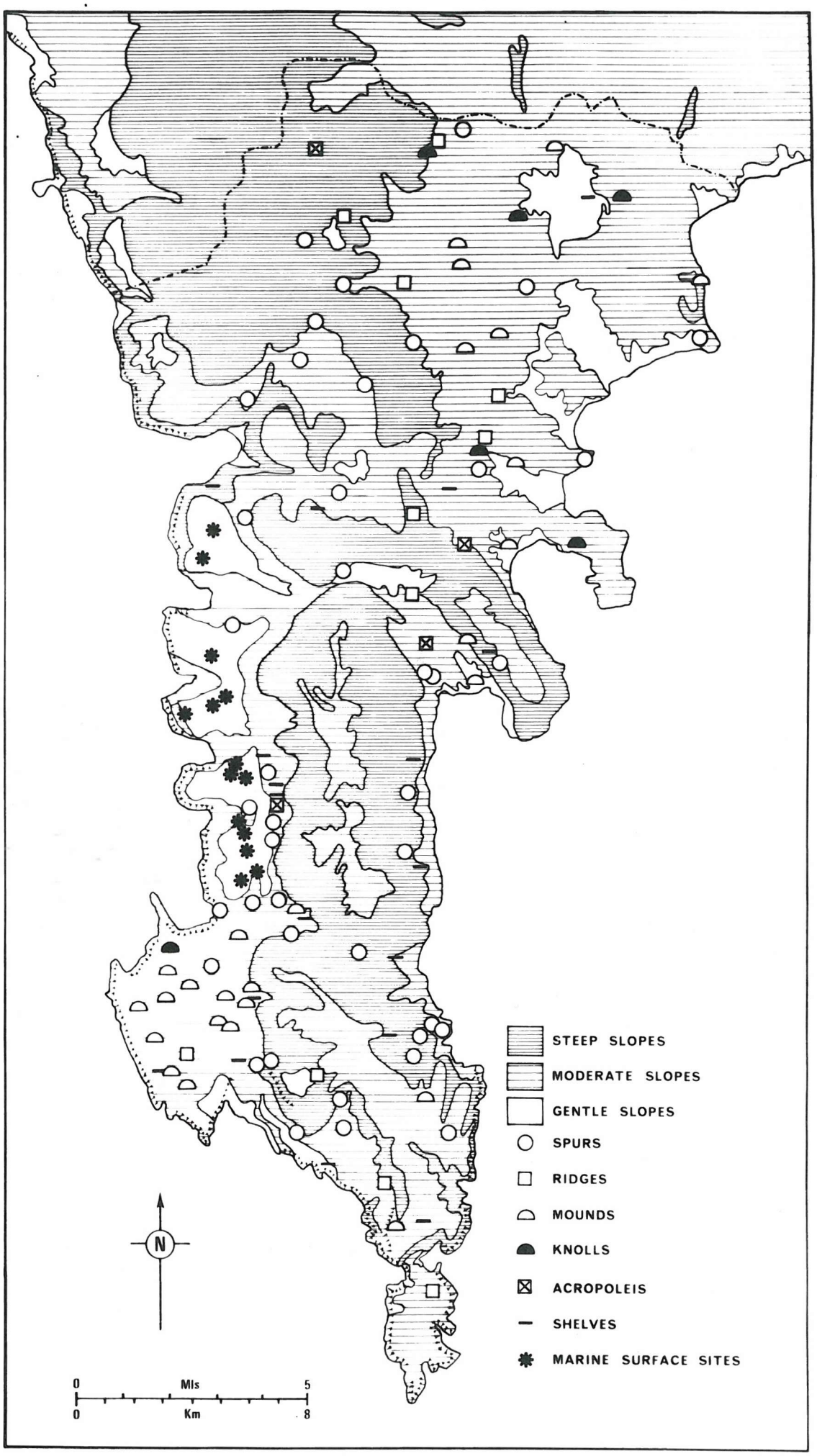

Figure 51: Settlement Sites, c.1830

Table 15: Settlement Elevation, c.1830

Height Zones (metres)	Number	Percentage of Total
0 - 99	14	14
100 - 199	36	34
200 - 399	46	42
400 - 599	8	7
600 - 799	2	2
800 - 999	1	1
Total	107	100

Table 16 : Distribution of Settlements by Tmíma, c.1830

Tmimáta	Area (km^2)	Percentage of Total Area of Region	No. of Settlements	Percentage of Total No. of Settlements.
Kolokythia	60.31	12	13	10
Lagia	49.88	10	13	10
Maïni	188.56	38	67	51
Malevri	133.89	27	20	16
Phocus	35.05	8	10	8
Trigonas	25.19	5	6	5
Region	492.88	100	129	100

if often stony soils. Water supply had little influence on the pattern, for the limited contemporary evidence and present practice show that most settlements depended upon rain water stored in cisterns (Fig.52; Table 17).

Table 17 : Sources of Water c.1830

Source	Number of Settlements	Percentage of Total
Cisterns	87	71
Springs	12	10
Wells	13	10
Cisterns and Springs	7	6
Cisterns and wells	3	2
Springs and wells	1	1
Total	123	100

Further evidence of clustering lies in the 35 nearest neighbour structures constructed for the early nineteenth century (Fig.53). As in the early seventeenth century, these tended to occupy discrete physical areas and to be separated from each other by difficult terrain. It is within the structures that settlement locations may have had reciprocal effects upon each other and so produced the negative reflexive-pair values noted above. This would be the case most particularly if the nearest neighbour structures substantially represented traditional social communities of the type recognised by Andromedas in the southern Mésa Máni and in which there was "mutual exclusiveness in clan and phratry affiliations, and in the solidarity of stratified groups".[1] Testing of these ideas is a little difficult, but two strands of evidence tend to support the hypothesis.

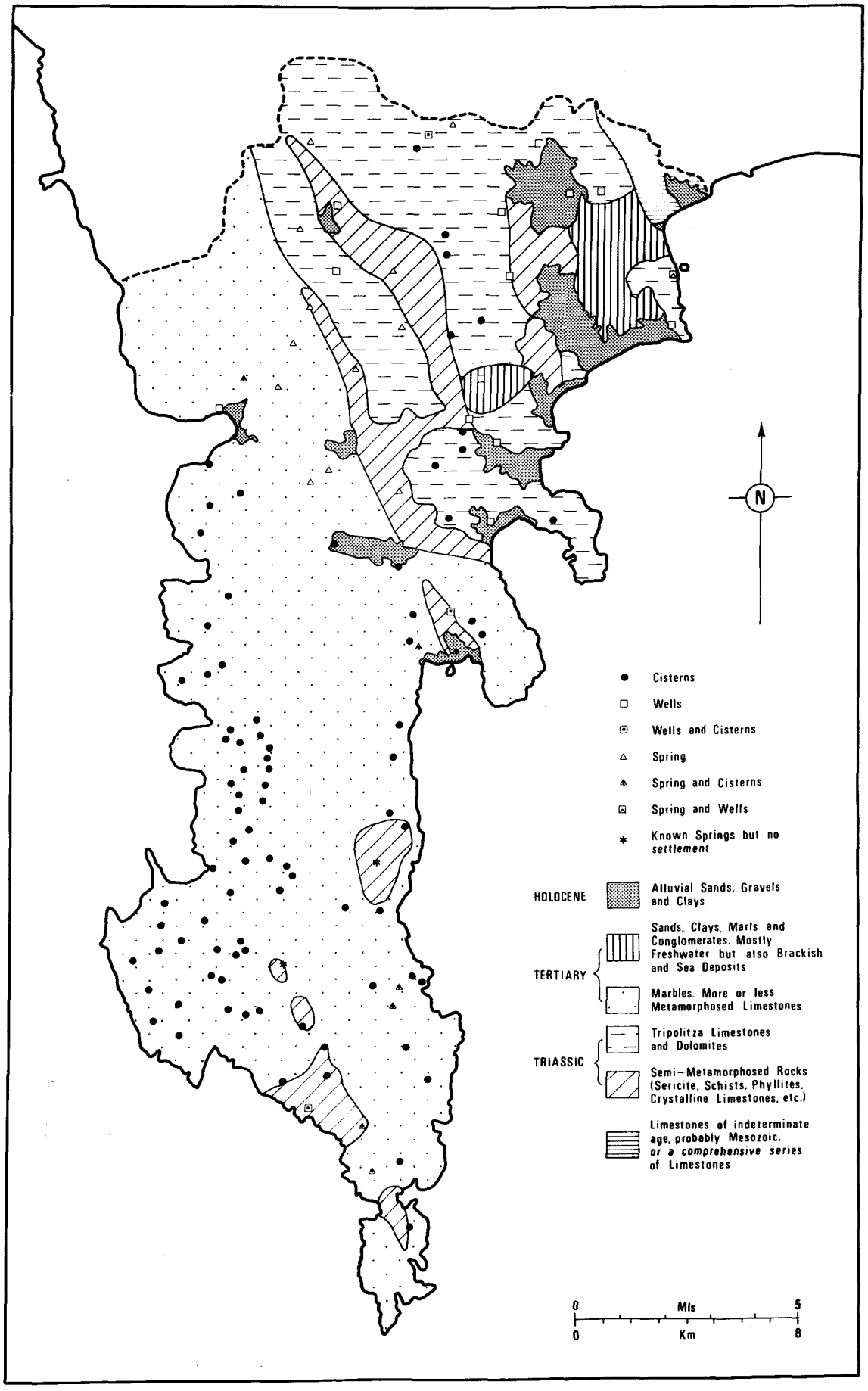

Figure 52: Water Supply, c.1830

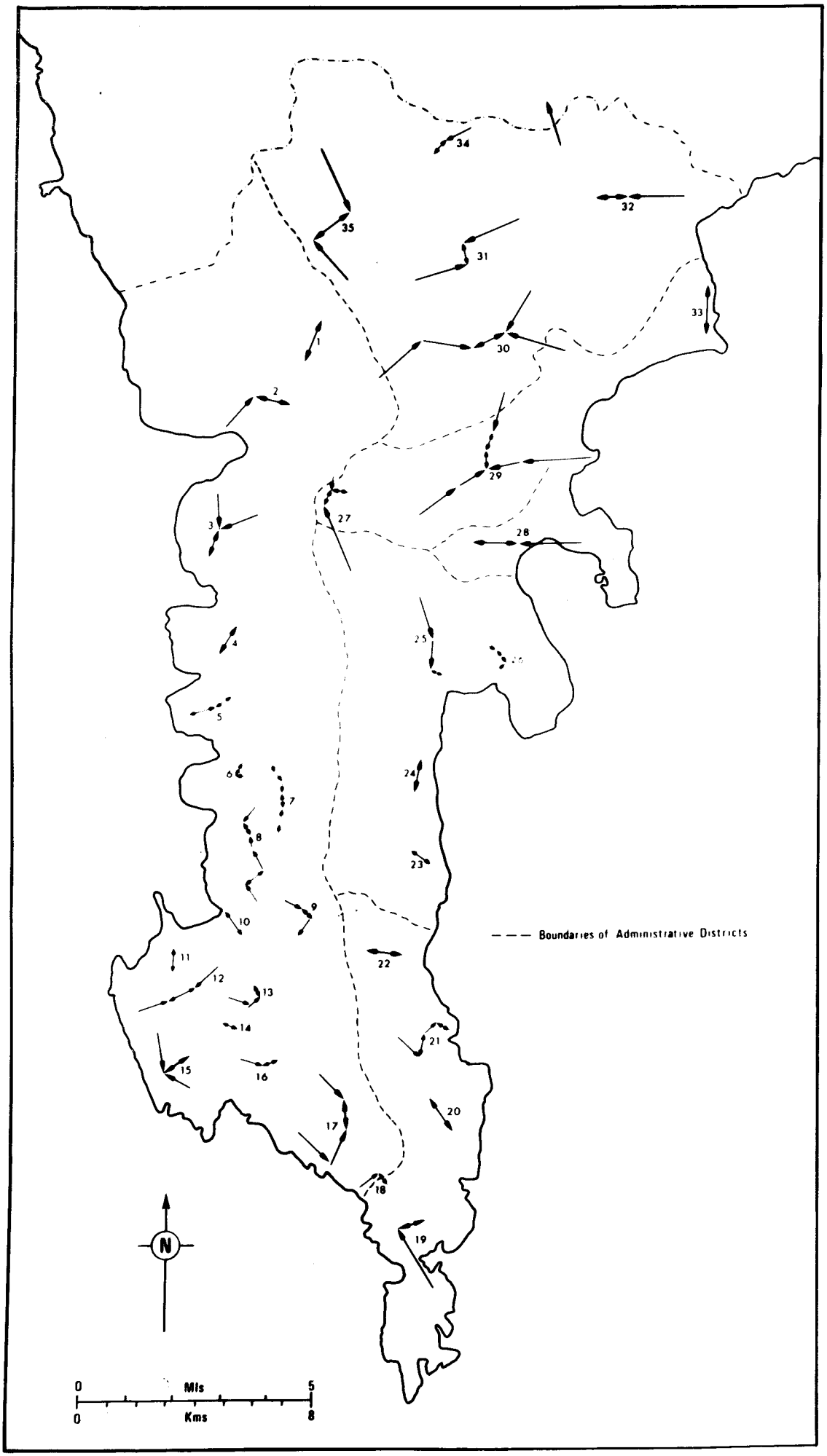

Figure 53: Nearest Neighbour Analysis, c.1830

First, there are two cases in which pairs of settlements were related by clan affiliations. The limited historical information on the reflexive pair, Mavrovouni and Marathonisi, on the north-eastern coast of the region (Fig.50) attributes their foundation to Tzanet Grigoraki, Bey of the Máni from 1782 to 1798, whilst the Grigoraki clan has been dominant in both settlements since at least that time. Tsimova and Limeni, on the opposite side of the peninsula (Fig.50), were similarly dominated by the Mavromikhali clan, and, whilst Tzanetbey had his castle of Melissi at Mavrovouni, Petro Mavromikhali (Bey 1815-21) had one of his residences at the little neighbouring port of Limeni.[2]

The second strand of evidence is the size relationships of settlements within nearest neighbour structures (Fig.54). All of the 31 structures where the populations of component settlements were given in the Commission's enumeration were dominated by one member which contained more than 28 per cent of the group's families. Eighteen were dominated by a settlement which contained more than 50 per cent of the population of the entire structure. This degree of dominance must indicate the exercise of some kind of power - social, economic or political - by the dominant over the rest of the group. In some cases, dominance might indicate that the smaller neighbours were actually daughter settlements recently founded by settlers from the centre, but in others the size of the largest settlement was clearly related to the concentration there of power exercised on a regional or sub-regional scale. The clearest example was the largest settlement in the region, Tsimova, which was the capital of the region during the rule of Petrobey Mavromikhali and contained 290 families c.1830. Just as the Máni as a whole was inhabited by a distinctive community, over which this remarkable man ruled, so at a lower level groups of Maniat settlements may have formed social microcosoms capable of producing new settlements within their own territories and, under certain circumstances, beyond them. The hypothesis is unproved, of course, but it will be used later in an attempt to explain changes in the

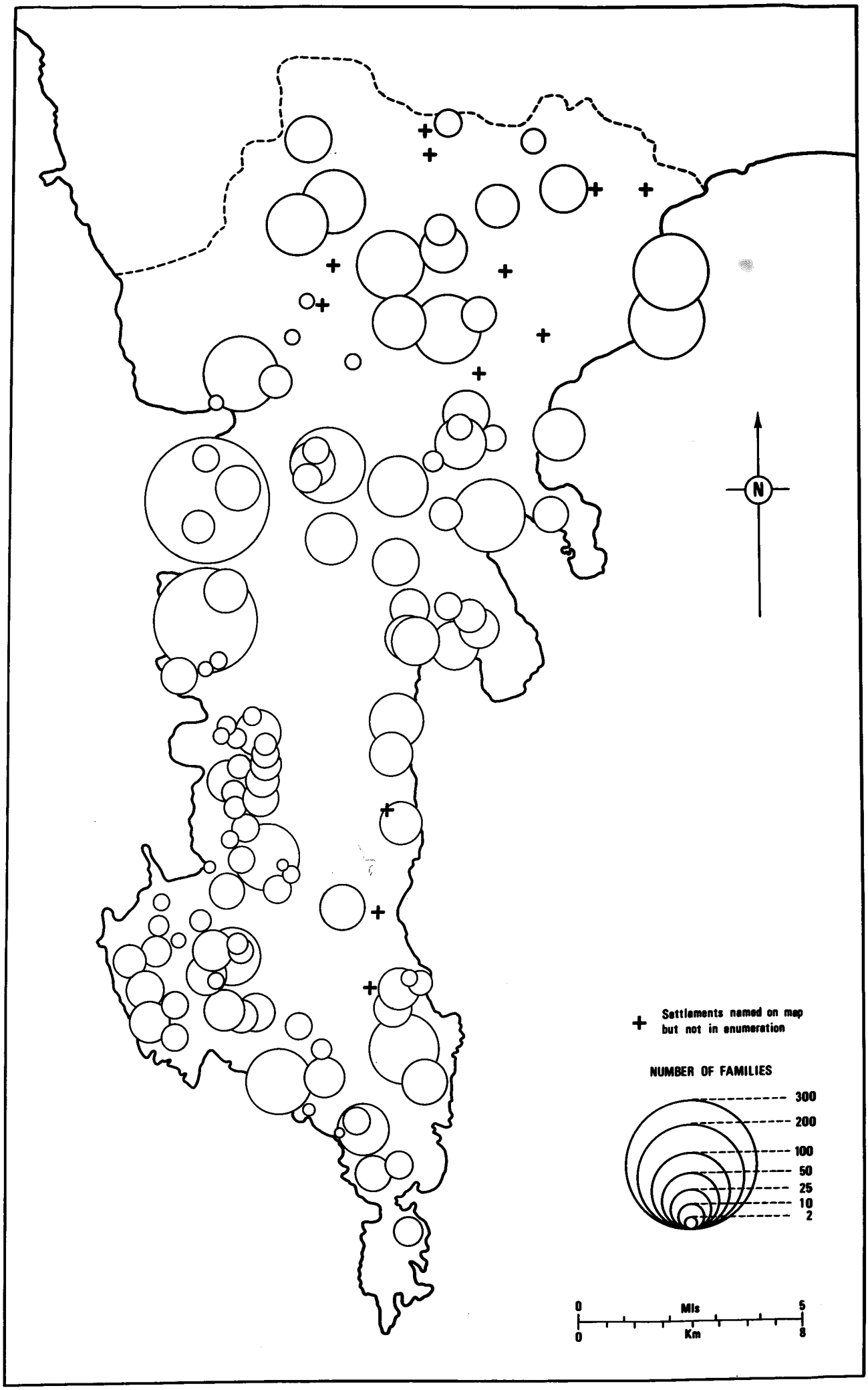

Figure 54: Settlement Size, c.1830

settlement patterns between the early seventeenth and the early nineteenth centuries.

Change

Changes are clear. Although a very large part of the study region remained uninhabited, between c.1618 and c.1830, the number of settlements more than doubled, from 61 to 129.[1] Examination of Figure 55 shows that the development, which this increase involved, was largely one which elaborated and extended the early seventeenth century pattern, rather than drastically changed it. Whilst this pattern of development is true for the region as a whole, it was especially marked in some districts. For example, the increase of settlements within Maïni tmíma happened in areas where settlements were already established and took the form of an infilling of the space between old settlements, wherever slope and elevation allowed. In-filling of this type confirmed the clustering apparent from the nearest neighbour statistics for c.1618. A few new settlements also appeared on the coast, notably Marothonisi, the region's leading port in the early nineteenth century.

The most significant development took place in the north-east corner of the region, especially in Malevri tmíma. Settlements reappeared there after a long period of desertion, indicating both the beginning of a recolonising movement, which was to continue into the nineteenth century, and the early stages of a reversal in the spatio-temporal structure outlined in the previous chapter. By contrast with Roman times, the new settlements were associated more with the hills of the area than its valleys and plains, though c.1830 some settlements were located on the fringes of the lowland.

The timing of these developments is important to an understanding of how they came about. Fortunately, a variety of evidence allows the period of growth to be roughly established. Pacifico's lists of c.1700, though incomplete, suggest that 9 settlements not traceable c.1618 had appeared

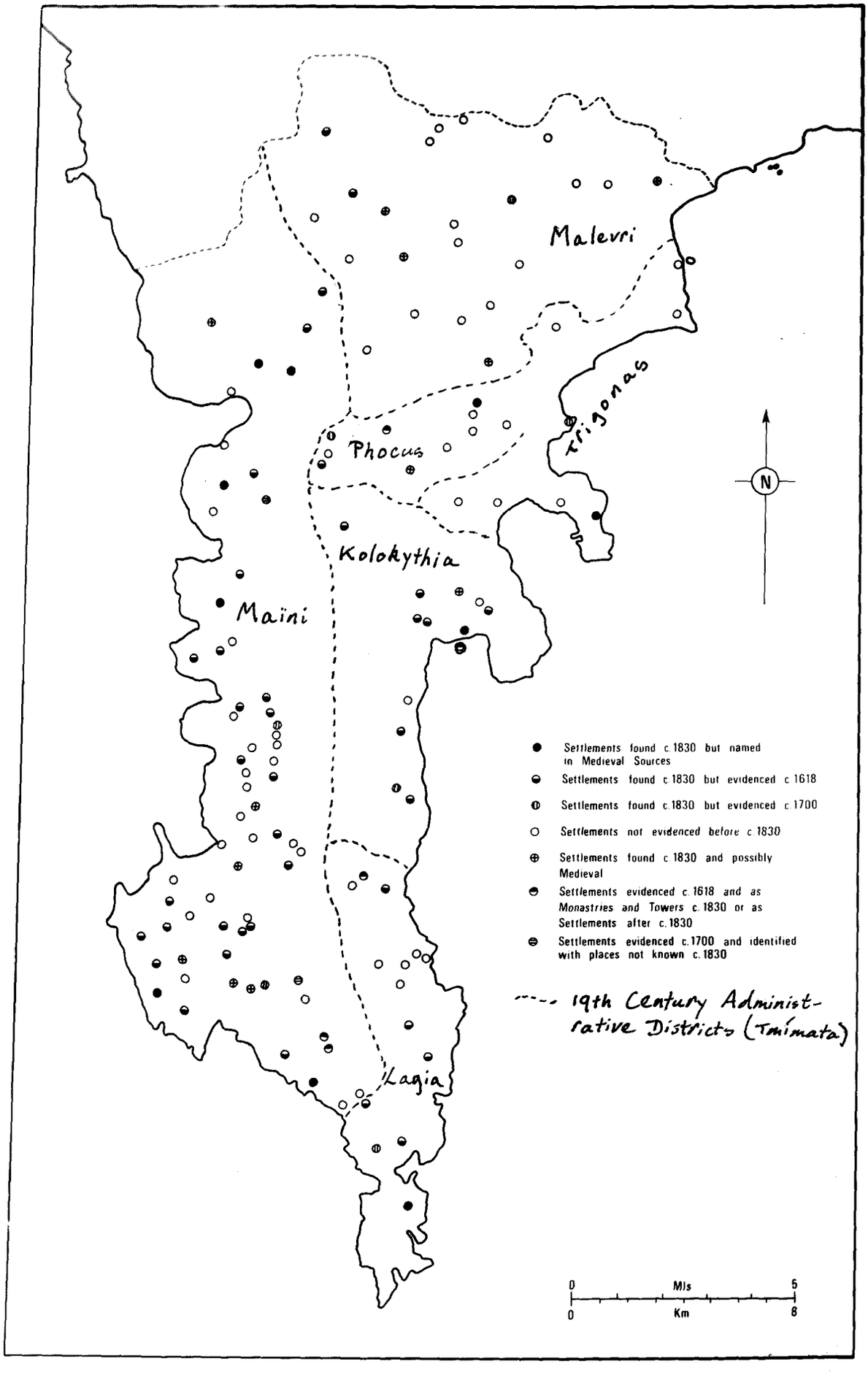

Figure 55: Development of Settlement Patterns: c.1618-c.1830

by the end of the century. Two of these were situated in the north-east, and perhaps allow the initiation of the recolonisation phase to be dated to the seventeenth century. Comparison of Pacifico's lists with names collected from the work of the Commission Scientifique shows that at least 57 settlements may have come into existence during the eighteenth century (Fig.55), suggesting that this may have been the major period of growth. The possibility is confirmed by other lines of evidence.

Mavrovouni grew up around the castle of Melissi, built by Tzanet Grigorakis towards the end of the eighteenth century.[3] Its nearest neighbour, Marathonisi, was in existence by 1795, but, as an important port and political centre,[4] appears to have grown rapidly in the early decades of the nineteenth century (Fig.56). Both settlements were associated with the Grigoraki clan, whose main centre was at Skutari earlier in the century. Skutari itself appeared after c.1618 and possibly after 1700, but was described as the scene of severe fighting during the latter stages of the Orloff Rebellion, 1770-74.[5]

Late foundation dates may also be suggested for three other settlements. At Skyphianika, the author was told that the settlement had been founded about two hundred years before his visit, that is around 1760. The oldest church at neighbouring Skamnaki was reported by local people to have been erected c.1786, whilst a stone built into the principal tower at Pilala records the date 1776 and the tower's owners proudly boast that it withstood a siege about the same time.

A final strand of evidence can be added to the thread. The mapping of settlement form by the Commission Scientifique allows 63.2 per cent of the new settlements to be recognised as hameaux and 28.1 per cent as villages. The proportion of hameaux amongst the new settlements was greater than amongst the universal set for c.1830, which was 50.1 per cent. A Chi-squared test suggested that the difference between the sub-set and the universal set was statistically significant at the 0.1 per cent level.

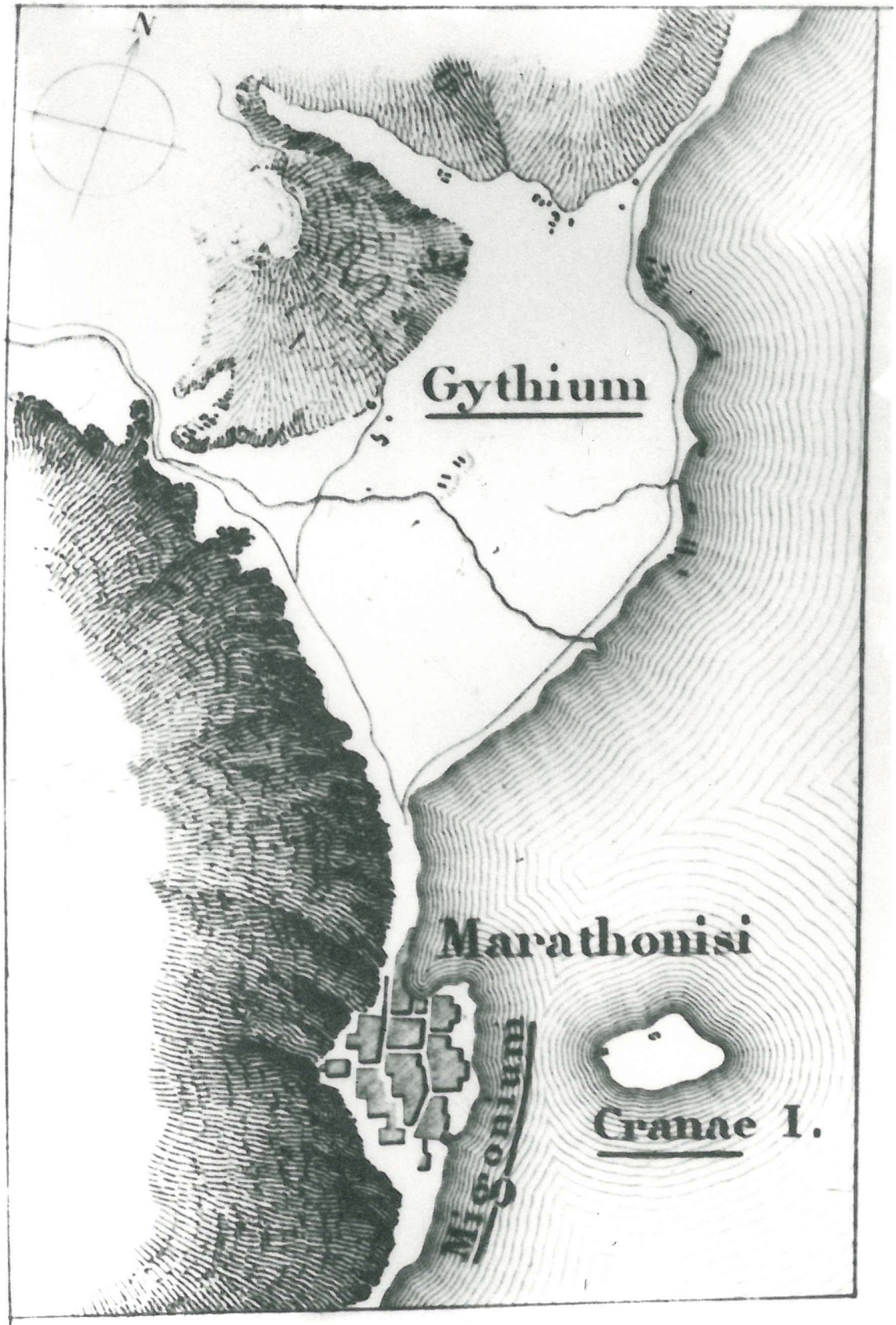

Figure 56: Plan of Marathonisi (See Fig. 35)

It might be argued from this result that those new settlements classified as hameaux (small, loose nucleations) must have been comparatively undeveloped. We might go further and suggest that they were comparatively undeveloped because they had only recently been founded, some by land-hungry groups and others by clans defeated in local feuds.

These individual strands of evidence are not particularly strong. Taken together, though, they do point to two things. Some settlements were probably founded between c.1618 and c.1700. The majority of new settlements, however, may have been established between c.1760 and c.1830, a view which is consistent with Leake's speculation that new villages may have arisen in the region between c.1795 and 1805.[6] Both the spatial and temporal patterns now have to be explained.

Mechanisms

Examination of nearest neighbour structures for c.1618 and c.1830 revealed the existence of spatially discrete systems and raised the possibility that the members of each system were not only functionally connected but also genetically related. These conclusions are supported by some correlation between nearest neighbour structures and rank-rise groupings, based on population, as well as by general clustering effect. It is, thus, possible to base an hypothesis upon nearest neighbour results which will at least serve to open the search for explanations for the developments traced in the period now under discussion. The hypothesis may be specified as follows:

1) New settlements were established from settlements already existing in their immediate neighbourhoods.
2) Since there were apparently 61 settlements c.1618, and these had increased by 68 before c.1830, each early seventeenth century settlement might theoretically have produced at least one daughter during the period. Some clearly must have produced more than one daughter settlement, whilst it is likely that some old settlements produced no satellites at all.

3) We should assume, given the agonistic character of Maniat society , that most new settlements would have only one parent.

4) The parent settlements might be identified by discovering which of the old settlements were nearest neighbours to new settlements.

To test the hypothesis it was necessary first of all to check the settlement information actually available. This revealed that the existence of 52 settlements could not be established before c.1830. The nearest neighbours to members of the set were then identified amongst those settlements which are known to have existed before c.1830. The pattern thus established might be modified if we included as potential parents all those possibly medieval settlements, the early foundation of which was supported by the analysis of place names not apparently recorded before the end of the study period. Those apparently medieval names found in the north-eastern corner were excluded from consideration, since settlement is not otherwise known in the modern period and the identification of medieval churches here is doubtful. However, supposedly early place names from the south-western part of the region were included, if their early existence was corrobrated by the existence of a securely identified medieval church, as at Gardenitsa (Vardenitsa) for example, which is possibly a Slav name.

Analysis revealed 17 cases where, for different reasons, the nearest neighbour relationship was unlikely to reflect the pattern of foundation (Fig.57). Elimination of the doubtful cases left 35 settlements whose genesis might reasonably be expressed by nearest neighbour relationships. The hypothesis of foundation from an older nearest neighbour can be tested by independent evidence in only two instances, but was found to be correct. Both of the settlements concerned are situated at the head of the Porto Vitylo. The origins of Karavostasi, which lies on the northern side of the bay, can probably be discerned in a reference to "Vitulo castello e Porto" contained in

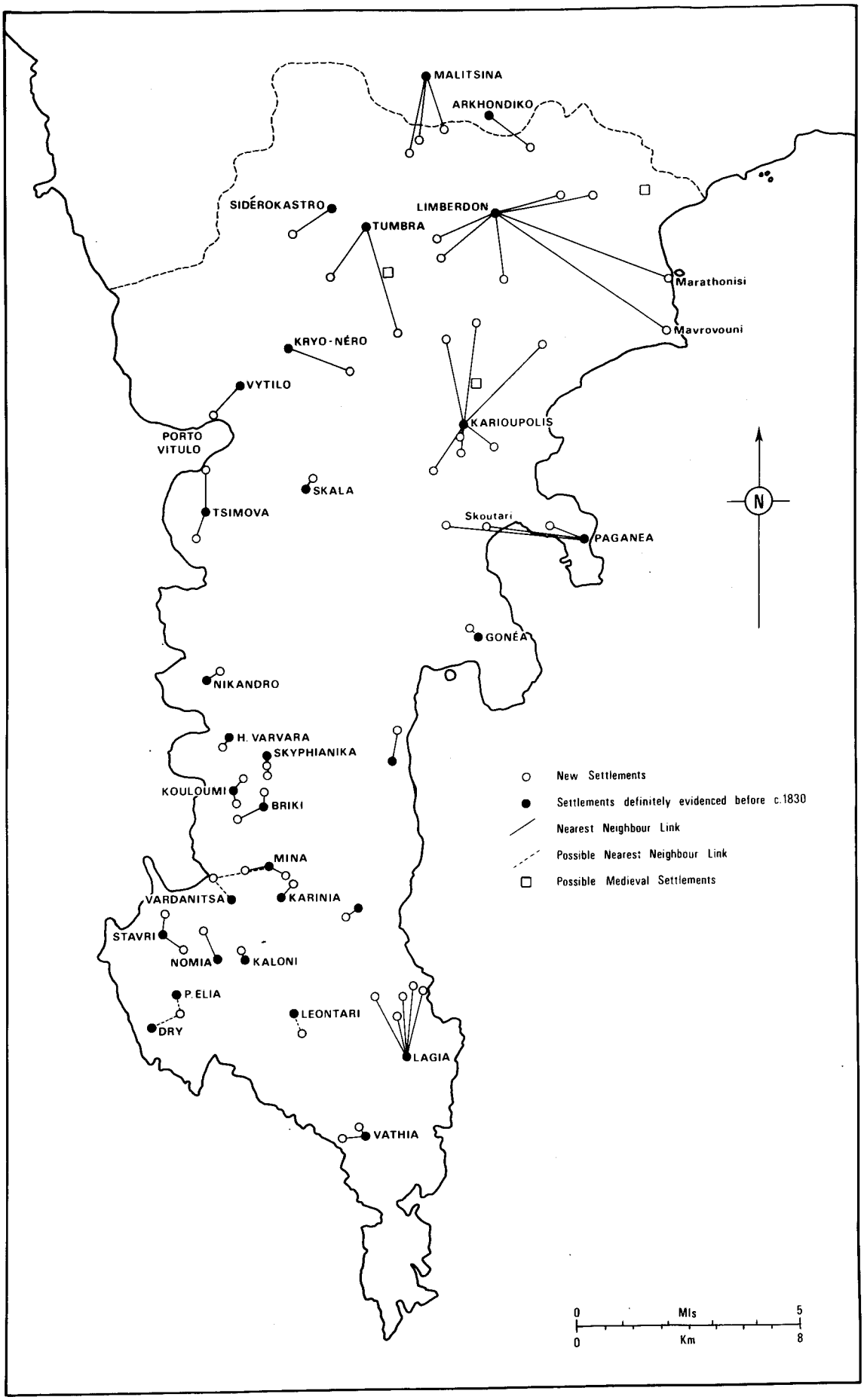

Figure 57: Nearest Neighbour Relationships of "Old" and "New" Settlements

the first edition of Pacifico's Breve Descrizzione Corografica, while memory of dependent status is contained in the form of the name employed in 1840, Καραβοστάσιον Οἰτύλου — literally, "The Ship-stop of Oítylon".[7] The settlement probably originated as a skála, around which a few permanently occupied houses were built. Limeni lies on the southern side of Porto Vitylo, and had Tsimova as its nearest neighbour. Leake's description of the settlement (Fig.58) and his departure from it by sea, as well as references to the port of "Djimova" in connection with British naval operations in 1827,[8] leave no doubt of the connection with Tsimova and its dominant clan, the Mavromikhali. In both cases, it is virtually certain that the ports were founded from the larger settlements, whose rival interests they served.

Similar generic relationships may have existed in the case of other settlements. Proof, however, has been impossible to assemble from the available sources. Several possibilities emerge from further consideration of the nearest neighbour structures themselves. Thirteen of the possible parent settlements appear to have founded only one daughter each (Fig.59). Eight old settlements may have established two satellites, whilst only one or two may have spawned three new settlements. Limberdon may have founded five new communities, excluding Mavrovouni and Marathonisi, whilst Karioupolis, a much older settlement (Table 9), may have produced seven daughters. All these probable developments seem in line with point 2) of the initial hypothesis.

Over most of the peninsula, possible daughter settlements were rarely founded more than 1.0 kilometres from their presumed parent (Fig.56), thus supporting the initial suggestion of in-filling. The patterns of possible foundations from 4 settlements in Maïni tmíma may allow the suggestion to be taken further for they may indicate the initial establishment of towers either to blockade rival settlements or to protect the founding community's own land. These possibilities

Figure 54: View of Liméni from the South, 1963

will be discussed later.

In the north-eastern area (Fig.57), three different patterns of foundation may be advanced, but not proved. Some of the new settlements may have been founded from such old-established centres across the "traditional" border of the Máni as Malitsina (known from c.1618) and Arkhondiko (first known c.1700). A second pattern appears to be roughly circular around Karioupolis and Limberdon, and gives the impression that much of the recolonisation of the surrounding areas took place without the hindrance of rival claimants to the land. The third pattern appears to involve the foundation of new settlements in the mountain fringes from Siderokastro and Tumbra, which were identified in the same terrain from at least c.1618.

The reasons for the various developments will be investigated later, but the nearest neighbour patterns and the other evidence seem to harmonise with the hypothesis advanced at the beginning of the sub-section, though they do not prove it. New foundations were largely made around and between already existing settlements, often close to them. Generally, only one or two daughter settlements were founded by each parent, but three or more satellites may have been established in the exceptional conditions of the north-east, where there was much empty space. However, the existence of deviant cases shows that daughter settlements might be established at a long distance from the parent. In several cases, the parent has not been discovered and future work might concentrate upon the collection of foundation stories from Maniat settlements.

Towers

So far, only part of the mechanism of change has been tentatively identified. The presence of 44 isolated towers (ξεμόνες) in the landscape at the beginning of the nineteenth century (Fig.50) offers a means of identifying another element of change. Fourteen of these

(31.8 per cent) were transformed in about a decade into settlements sufficiently large to merit government recognition as independent communities.[9] The recognition of this development may be a step in isolating a process operative before the War of Independence. Caution, however, must be exercised since the Máni underwent considerable social and economic change after Greek Independence, and settlement genesis may have been modified.

Field study of 48 out of the 57 settlements apparently founded in the study region after c.1700 (84.2 per cent) produced information relevant to the problem (Fig.59). Forty of the sample settlements contained one or more towers and only 7, or possibly 8, did not produce any traces of these characteristic structures. Where towers did exist, though, there was no way of dating them. They might have predated the rest of the settlement. Some of them, though, could have been built after Independence, possibly by nouveaux riches.

Towers are building dominants and associated with particular clans. They, therefore, had great influence upon the morphological development of the settlements where they are found.[10] Their generic relationship, however, is not always clear, even in the set of six settlements which may have achieved their maximum populations c.1830 and, a priori, may be presumed to have experienced least morphological change since the early nineteenth century. Examination of the internal structure of nine settlements of the total set under discussion was nonetheless revealing.[11] It showed quite clearly that either the whole settlement, or its component quarters, had grown up around a central tower, or adjacent to a dominant tower.

At this stage in the argument, the origins of isolated towers must be outlined. A few may have been built for coastal defence. Some, particularly in the north, were built as strongholds for powerful individuals and clans. Others, especially in Mésa Máni, were erected for the related

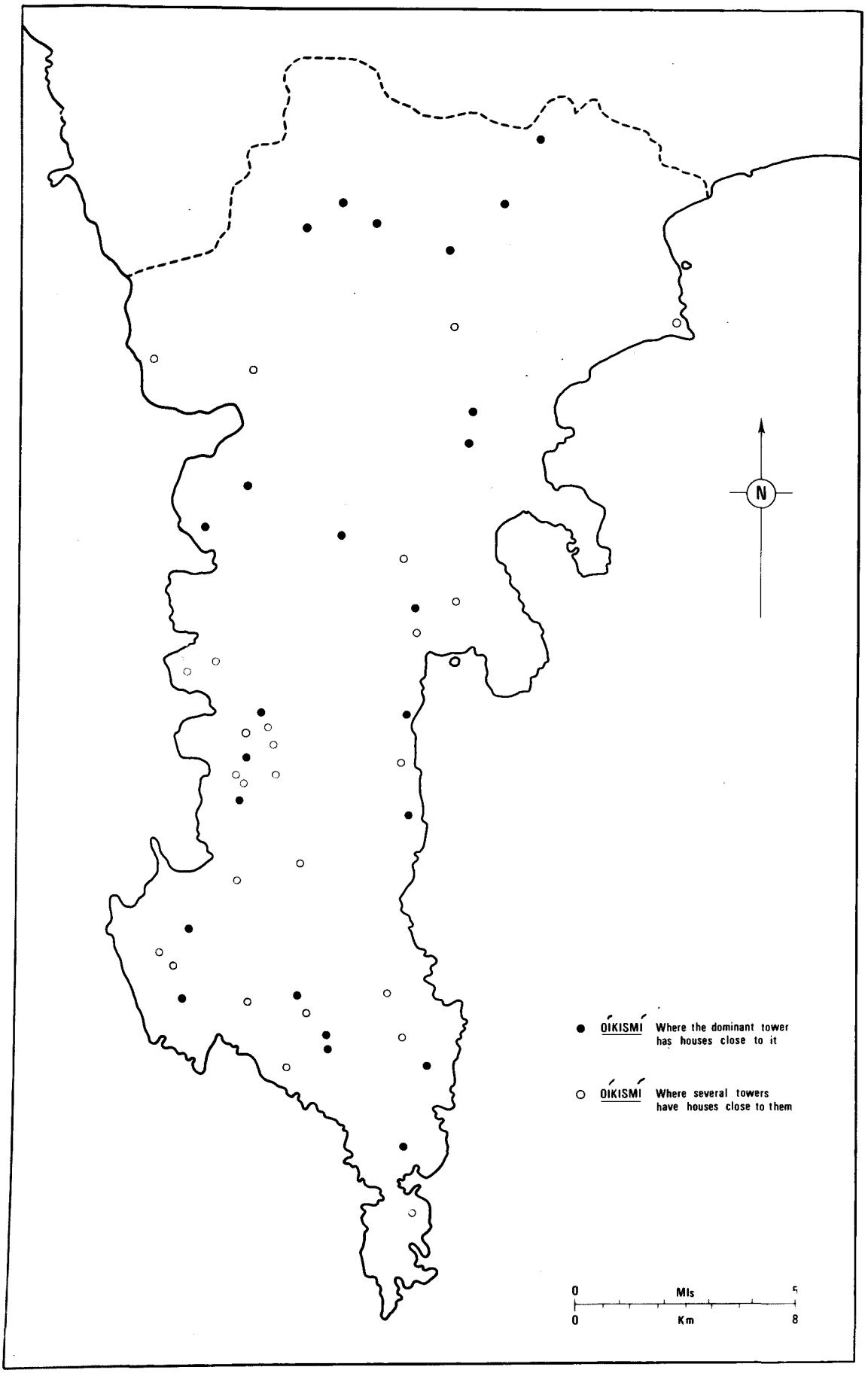

Figure 59: Relationship of Towers and Houses

purposes of defending clan land or blockading hostile settlements, and this was often apparent from their distribution as shown on the Commission's map (Fig. 50). Growth from an isolated tower, built for one or more of these purposes, into a nucleated settlement might have been accomplished in two related ways. The occupying family may have expanded in size by natural increase, unrelieved by emigration. Traditions of clan loyalty and patrilocal residence could mean that additional houses would have to be built near, or around, the original stronghold. The alternative means of development might be described as crystallisation or accretion. As Lord Carnarvon recognised in the 1830s, the mere fact of a family head deciding to build a tower could be sufficient reason for his kinsmen to gather around him.[12] The natural tendency operative in a clan society would be strengthened if construction threatened the existing power structure of a community, or the territory of another settlement. Crystallization about an isolated tower might also have resulted from the expulsion of a clan from its original home, as a consequence of defeat in war.

Crystallization of settlements around isolated towers may be paralleled by the growth of small, secular settlements around three of the monasteries known from the early nineteenth century. Unless these can be regarded as clan property, like the secular churches, the reasons for collecting around a monastery might be slightly different to those for accretion about a tower. Some settlements may have originated in this way between c.1618 and c.1830, but it is difficult to prove.

Causes (Fig. 60)

Possible mechanisms of change at work on settlement patterns between c.1618 and c.1830 are only part of the development process. Causes of change must also be sought. The tangled skein is difficult to unravel, but an obvious thread to start with exists in the form of population change, since population and settlements are so intimately connected.

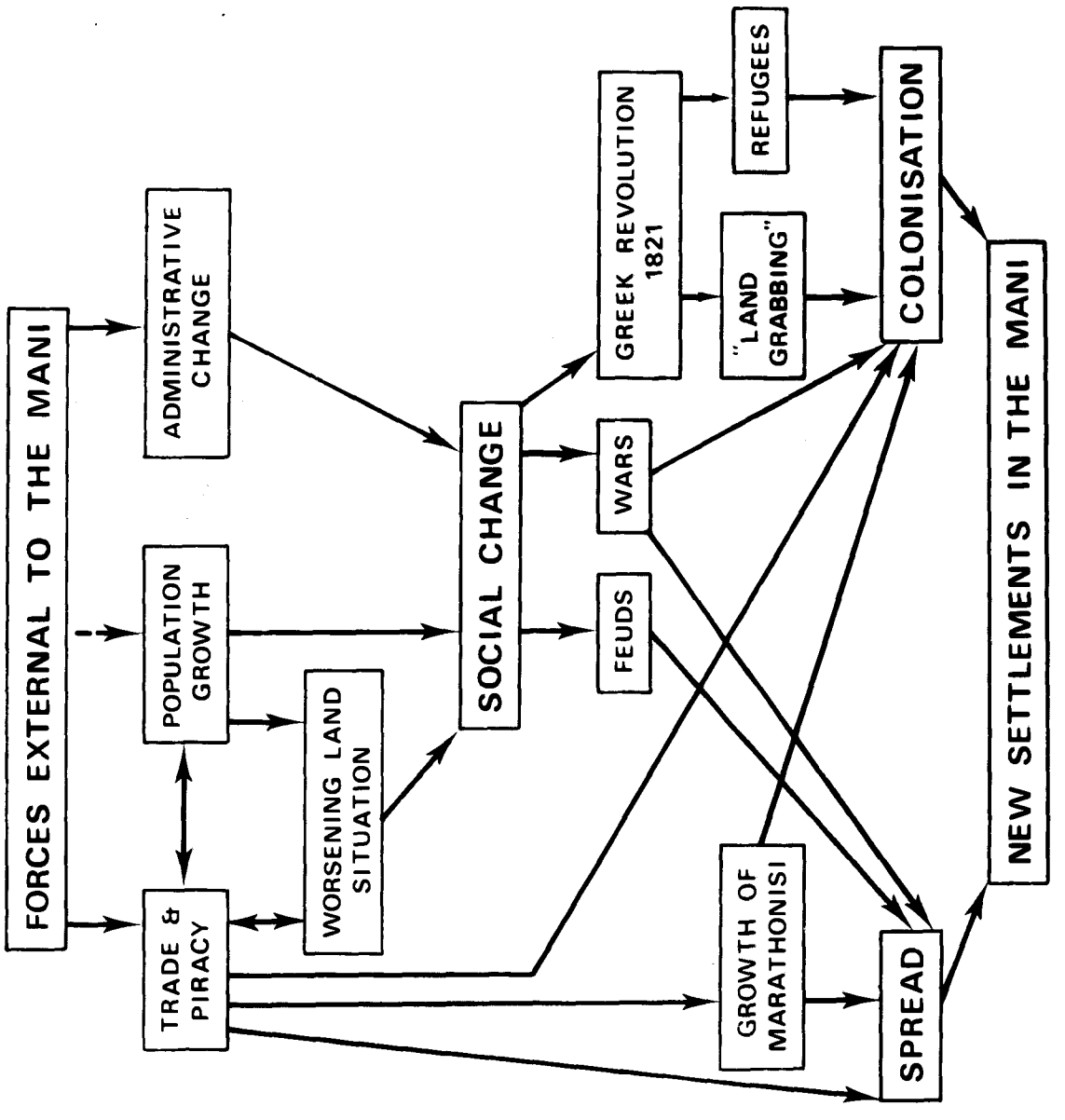

Figure 60: Causes of Changes in Settlement Patterns, c.1618-c.1830

Population (Table 5)

During the period c.1500 - c.1650 population seems to have grown throughout the Mediterranean lands[13] and the Máni might have shared in this. Between c.1618 and c.1700 the population of the study region increased by about 1,000 persons.[14] This would give an annual rate of growth of 0.08 per cent, and would be equivalent to the provision over the period of 5.2 new settlements with populations of 191 people, that is, the average size of settlement in c.1700. Population increased by about 3,000 people during the period c.1700 to c.1830, an average annual increase of 0.16 per cent. The rate of growth in this period would require the provision of 18.5 new settlements of the same size as the average in c.1830, that is, 162 people. The rates of increase are very low and although some immigration may have occurred, especially during the Venetian Period (1687-1715)[15], they seem sufficiently small to have been largely the result of natural increase within the region. Low levels may have been maintained by relatively large scale emigration from Vitylos between 1670 and 1676 and by at least seasonal and short-term emigration from the Kakavoulía during the early nineteenth century.[16]

The slowly expanding population may have been accommodated to some extentin two ways. Patrilocal residence itself would probably lead to the in-filling of spaces still existing within settlements and to some areal expansion. An alternative development may have been the establishment of "twin" settlements of the sort found in several places at the beginning of the nineteenth century and at Siderokastro about 1700.[17] When population expanded still further, the two settlements may have coalesced, as in the case of six of the nine settlements discussed above in connection with towers, and which seem to have begun as two or more small separate entities.[18]

At the same time as morphological solutions were being evolved, two other developments were taking place in the study region. The increase in the number of settlements over the period was larger than the number

theoretically required to accommodate the expanding population - perhaps 24 in theory, compared with 68 in actuality. Chi-squared testing of the relationship between the numbers of new settlements found in each of the early nineteenth century tmimáta and the numbers occurring in the same units c.1618 shows that there is more than a 99 per cent chance that the increases were not proportionate to the base number. In other words, more settlements were founded than we might have reasonably expected. The second development, which becomes apparent over the period, is a decline in the population size of the average settlement. On the basis of available figures, the average settlement contained about 229 persons c.1618. By c.1700 population had fallen to about 191 persons and c.1830 it had dropped to about 162. Decline over a period when the regional population appears to have been increasing seems odd. Taken with the evidence for what appears to be a disproportionate and unexpected increase in the number of settlements, it may be interpreted as indicating that the new settlements founded between the early seventeenth century and the early nineteenth century were very small, and could indeed have begun as single towers.

A third population-related development was also in train during the period, and may contain the key to the whole process of change. This was a probable worsening of the family/land ratio. There are no figures for the cultivated area at either c.1618 or c.1830, but, with reservations, some calculations can be attempted on the basis of 1961 statistics. In 1961 and perhaps around 1830, a total of 134,600 stremáta (13,460 hectares) were cultivated.[19] This would give a ratio of 37.2 stremmata per rural family of 4.75 persons in 1961.[20] Using the same sort of calculation with the population figures for the early nineteenth century, the average family then may have possessed some 34.9 stremmáta, though if it lived in later Yíthion 'eparkhía it might have worked 39.3 stremmáta and if it lived in Oítilon 'eparkhía it would have possessed 29.2 stremmáta. About 1618 the position may have been

better over the entire region, if we assume that the same total amount of cultivated land was in use, though under-enumeration may distort the picture. The average family in the region may have worked as much as 48.3 stremmáta, though in later Yíthion 'eparkhía, it may have possessed 111.8 stremmáta, and in later Oítílon 'eparkhía only 24.4 stremmáta. The crude nature of the calculations needs little emphasis. However, they do suggest very strongly that the general land position deteriorated over the period.

Deterioration in the family/land situation may have had important consequences. In classical formulations, it may be regarded as producing the clan warfare evidenced towards the end of the seventeenth century and more clearly from c.1800.[21] Somewhat paradoxically, the land situation may also have been responsible for the proliferation of settlements. The foundation of daughter settlements could be regarded as an "adaptive mechanism", released to prevent the development of what the ancient Greeks called stasis, a situation destructive of all forms of community life.[22] Specifically, the land situation may have generated settlements in several ways. Clans may have been forced to protect their property by building towers, which became the crystallization points for later settlements. War over land led to the defeat of some clans and their expulsion from an existing settlement. These clans had to establish themselves elsewhere, and probably collected around an existing isolated tower or upon unclaimed territory. Shortage of land in Mésa Máni may have stimulated the recolonisation of the north-eastern area, especially since the rate of settlement increase in Malevri tmíma, for example, was considerably larger than might have been expected, and must have been at least partly sustained from elsewhere in the study region or beyond it.

Increase in the number of settlements was not the only solution available to the problems of a deteriorating land situation and impending social disaster. It is necessary, therefore, to discover

Some evidence needed here

why this particular solution appears to have been adopted on such an apparently large scale and whether or not other processes were at work. The timing is also important and must be constantly borne in mind. To answer these questions, the developing socio-economic situation within which the settlements existed must be examined.

Administration (Table 5)

The first point to emerge from an examination of the administrative history of the Máni since Roman times is the long-standing tradition of localism. The region was remote from the varying provincial capitals of the Morea and after c.1500 was often in revolt. Following the Orloff Rebellion, in which the Maniats played an important role, their region was formally, but not completely detached from the Pashalik of the Morea and allowed a degree of local autonomy,[23] such as it had probably not enjoyed since early Byzantine times. Two consequences of localism and semi-autonomy appear important for the settlement history of the study region.

Although the north-eastern corner may have remained a frontier area and a "zone of strife" between the Christian Maniats and the Albanian Muslims of the Vardhounókhoria until the Revolution of 1821, no Turkish invasion was attempted through it between c.1776 and 1826. Indeed, after 1715, only one punitive expedition went through the area before Ibrahim Pash's final assault failed at Polyaravos, and that event took place at the end of the serious Orloff Rebellion. Freedom from major invasion and accompanying destruction may have removed one of the obstacles to extensive resettlement of the north-east, though other factors were also at work and will be outlined later.

A second effect of localism and the re-attainment of semi-autonomy may have been to allow the unbridled development of social traits perhaps already present in the study region. In particular, self-government may have allowed powerful men to pursue their economic and dynastic ambitions through local wars, secure in the knowledge that, unless they were mismanaged and affected vital Ottoman interests or involved foreign powers, Turkish intervention would be minimal and come only from the sea. At the same time, clan power may have been able to assert itself in a situation where agonistic relationships were normal and feuds were possibly exacerbated by a worsening land situation. Both developments affected settlements. Powerful men, like Mourtzines and Christea, and important clans, like the Grigoraki,[24] built towers and forts, as well as founded settlements, in the north-eastern area, no doubt from a need to strengthen, extend and defend their power. Isolated towers and possibly whole settlements may have been built in the same area, as well as in the Mésa Máni, in consequence of feuds and possibly to protect land or to provide a refuge in time of defeat.

Further changes resulted from the War of Independence. The initial sporadic revolts, which gradually coalesced into the war, led to the flight of the Turkish population and the seizure of their land by the rebels. Indeed, such a desired result has been argued as one of the basic reasons why the Greek 'arkhóntes launched the war in the first place.[25] Although Turkish estates were noted elsewhere in Lakonía by the observant Leake and probably formed most of the mulberry plantations still held by the state about 1840, as well as the 3,894 stremmáta ceded to the Royal Phalanx between 1835 and 1840,[26] there is no direct evidence for their existence in the study region early in the nineteenth century. Local tradition is firmly against such a possibility,[27] whilst the typical Turkish estate village recognised in northern Greece, the çiftlik, was absent.[28] On the other hand, a

large Greek estate did exist in the Vardhoúnia valley and belonged to one of the Grigoraki, whose descendents own it today, and Lord Carnarvon noted in 1839 that "a considerable part" of the area near Marathonisi was "national property".[29] Other estates may have existed elsewhere in the valley and in neighbouring lowland tracts. The existence of a Muslim population in the Vardhounókhoria and Turkish official contacts with the Máni through Marathonisi, might suggest that some land must have been owned by Turks - a Turk being a term signifying a Muslim who was not an Albanian. It was certainly a Maniat complaint in the early seventeenth century that some of their land had been confiscated by the Turks. If these suggestions are correct, then it is possible that Turkish property was seized by land-hungry Maniats at an early stage in the War of Independence. Some settlements may have been founded as a result, perhaps growing from the kalývia of squatters.[30] By contrast, refugee camps created in the vicinity of Marathonisi as a result of the depradations of the Egyptian army in 1825 and 1826[31] do not seem to have crystallised into permanent settlements.

Society (Table 5)

Several of the arguments for the processes of settlement geneais developed over the previous pages depend upon the character of Maniat society, as it has been revealed from sources clustering about the year 1800 or referring to "traditional", that is eighteenth-nineteenth century conditions. The important features were the role of clans in the socio-political structure of the region, the existence of social stratification, and the presence of an acute form of agon, expressed in vendettas, feuds and wars.[32]

Zakythinos believed that these "traditional" features of Maniat society were already apparent by the early fifteenth century,

and other scholars have made similar assumptions.[33] However, hard and reliable evidence is lacking. The hypothesis has usually been supported from a few enigmatic hints in the limited source material, made plausible by arguments of a general kind. Two sets of arguments may be recognised.

The first of these, which may be called the development argument, turns upon the idea that Morean society as a whole became more bellicose during the Middle Ages and that the Máni shared in the general experience. While supporting this line of argument to some extent, Zakythinos also supported a second hypothesis, namely the preservation of primitive social forms in the Máni. Although Morean society in general may have changed during the medieval period, Zakythinos thought that the rugged terrain of the Máni, the exceptionally harsh conditions of life there and the neglect of the region by central government all contributed to the maintainance of primitive habits amongst its population, presumably from antiquity,[34] though he did not say so.

Neither the development nor the preservationist hypothesis can be successfully sustained. Preservationist arguments are particularly open to refutation. Such allegedly primitive characteristics as the clan and the vendetta were weakened by the emergence of the pólis and the subsequent domination of the region by Sparta, but they were almost destroyed by the intrusion of Roman power into Greece.[35] In fact, we can follow Bloch in seeing the evolution of feudal forms during the Middle Ages as possible partly because the bonds of kinship, in which the vendetta was important, had become so weak, though they did not disappear completely. Instead, as Bloch also argued apropos of western feudalism, kinship ties recovered their significance when state control over the landholding structure became loosened.[36]

Development arguments look stronger and must be tested more carefully against the available medieval and modern evidence. Evidence for the nature of Maniat society in the Middle Ages is not particularly good. That for the existence of clans and vendettas comes mainly from the two accounts of Manuel II's visit to Vitylo in 1415 and is not only poor in quality, but also highly suspect.[37] Evidence for a semi-feudal structure in the region, by contrast, is more direct, more reliable and more convincing.[38]

The slight hints about the nature of society contained in generally more trustworthy sources from the period c.1500 to c.1800 support the idea of social change. They indicate, however, that the crucial period was much later than is often imagined. Equivocal evidence for the existence of clans in the Máni first appeared in a reliable source at the beginning of the seventeenth century, but increased in quality and certainty thereafter. Stratification also may be traced back more definitely to the early seventeenth century.[39] Vendettas are not evidenced until 1701[40] and then not very certainly. The impression gained is that the "traditional" aspects of Maniat society developed from about 1600 onwards. This could be illusory, since the quality and quantity of documentation also increases towards the early nineteenth century. However, a comparatively late date for the transformation from a semi-feudal society to a clan society, with all that the change means, is more consistent with the evidence than the alternatives of either a change complete by about 1600 and subsequent stagnation, or the preservation of social mores from very ancient times.

Transformation may have occurred, as Fermor and his major source, Dimitrakos-Mesisklis, have argued, because of the settling of various alien groups within an already inhabited region, especially after 1500.[41] Immigration, however, is unlikely to have been sufficiently

large scale for this to be the real explanation. An alternative explanation may be constructed which requires little in the way of injected stimulus. For as long as records exist, the relationships between Greek families have been agonistic.[42] In conditions where population was increasing and the family/land ratio worsening, kinship bonds are likely to have tightened their hold and extended their range. Clans may have developed over several generations by the branching off of families which needed to retain relationships with each other for mutual support. Solidarity was required by the socio-economic situation, with the result that the friction generated in normal relationships between individuals increasingly must have involved groups and tended to escalate into feuds. Stratification would develop at the same time because of the inequalities of family size and cultivable land, perhaps especially when the hold of a foreign aristocracy had been removed. However, where equal inheritance was the norm, patrician clans could only maintain status by acquiring new territory or new revenues, perhaps every second or third generation.[43] This need could have formed a powerful additional force generating feuds and transforming them into local wars.

Vendettas and feuds are essentially judicial processes, suited to a context where neither the state nor the local community can sustain their authority.[44] Whatever the situation in medieval times, there is no doubt that the severe crisis which afflicted the Ottoman Empire at the end of the sixteenth century resulted in a deterioration in the quality of administration at all levels and the exacerbation of centrifugal tendencies in the Empire's different regions. Local leadership and local systems of security and justice emerged to fill the developing vacuum, as ecclesiastical courts had earlier taken over secular jurisdiction because of the failure of the state courts to function adequately. The Máni probably shared in

these developments, but the granting of semi-autonomy in the 1770s allowed extreme adaptations to grow, producing in a relatively short time characteristics which are often thought of as "traditional" to the region.

Economy (Table 5)

The narrative quality and political or antiquarian concerns of many of the sources available for this study have meant that economic information is generally poor. Nonetheless, the material does show that the local economy retained two basic characteristics over a long period of time. It was underdeveloped and it was subservient to the needs of "imperialist" powers. The economic base lay in agriculture (Fig.61), even though crops were grown in marginal and difficult conditions. There was also some export trade - in the Roman period, rare stone, but by about 1800 largely natural and agricultural products. Much of the trade was with adjacent places in the central Mediterranean region, but from medieval times the region was linked firmly into a trading pattern dominated by Venice. However, final release from the stultifying effects of Venetian colonial policy, with the re-establishment of Turkish power in the region after 1715, may have proved partly responsible for an expansion of trade during the course of the eighteenth century. Growth was assisted by the rising demands of western Europe for industrial raw materials which the Máni was able to help satisfy (Table 18).

Table 18 : Maniat and Morean Exports, 1794-95[45]

Commodity	Exported from Morea (including Máni)	Exported by the Máni	Maniat Exports as a percentage of Morean Total
Olive Oil	14 Cargoes	10 Cargoes	71.4
Valonia	15 Cargoes	8 Cargoes	53.3
Hides	10,000	3,000	30.0
Cotton Yarn	8 cargoes	2 Cargoes	25.0

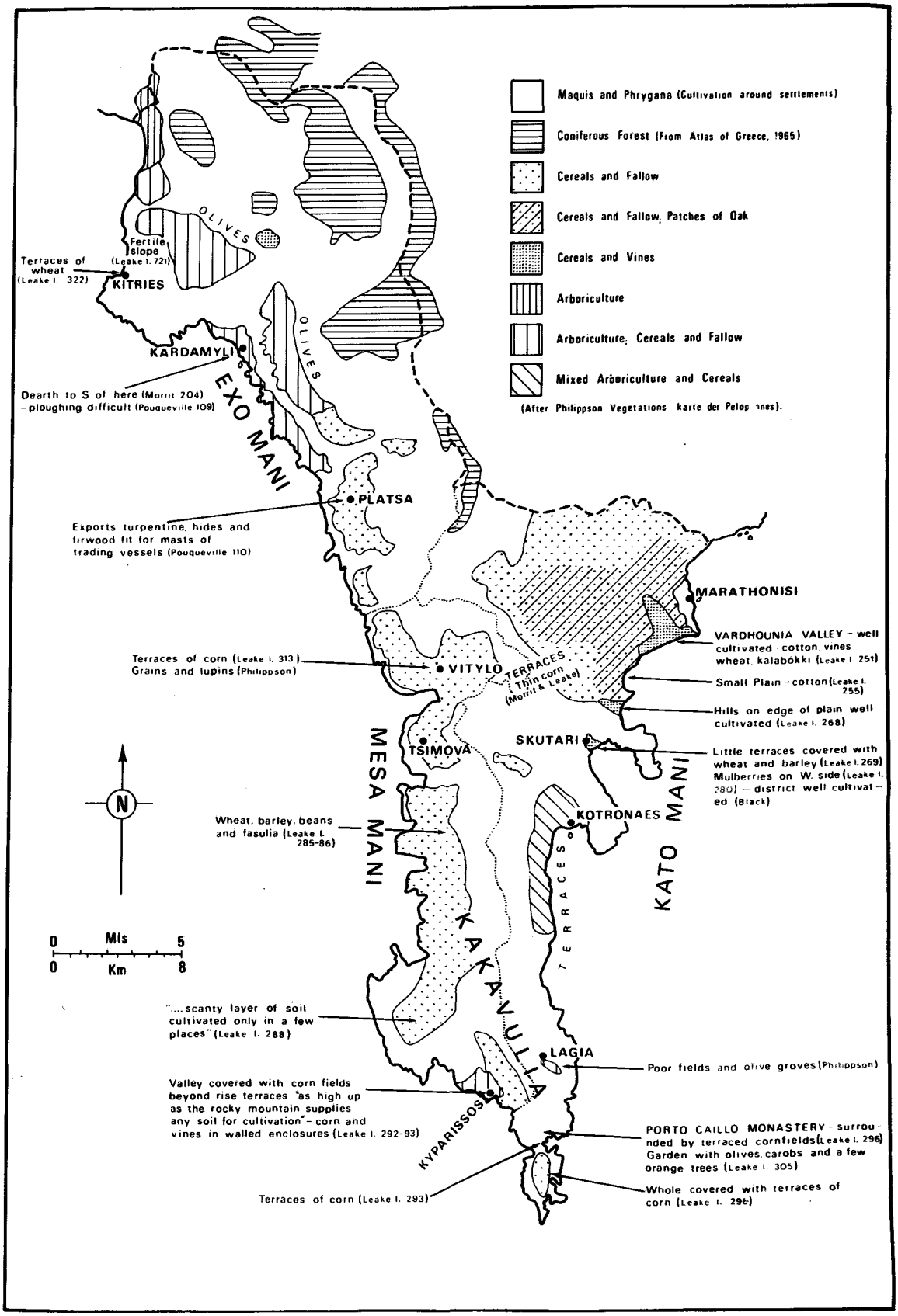

Figure 61: Maniat Economy, c.1800-30

Growth may have affected the various districts differently. The demand for valonia, much of which was shipped to Britain, may have been instrumental in the resettling of Malevri tmíma where scattered oak trees still survive, and partly responsible for the growth of a port near the best available roadstead, in the vicinity of ancient Cythium. Marathonisi, however, acted as the outlet not only for its immediate hinterland but also for Mistra[46], in the vicinity of which 42.9 per cent of the natural silk exported from the Morea in 1794-95 was produced.[47] The expanding trade of Marathonisi probably helped to concentrate population into the growing settlement. Although little cultivation seems to have been carried on in the vicinity of the town itself and food was imported from Candia and Cerigo[48], supplies must increasingly have been brought in from at least the neighbouring valleys and plains, as they are today. A market for food, as well as raw materials, might further stimulate the reclamation of land in the north-east and provide a support for colonising settlements. Reclamation itself may have been made easier during the course of the eighteenth century by the end of the post-Roman phase of aggradation and the resumption of down-cutting.[49] The reclaimed land, too, might have been of better quality than that abandoned centuries before for, as Vita-Finzi has pointed out for similar areas, slopes would probably have become gentler, whilst soils would have had a more loamy quality; land would certainly have been much easier to drain.[50] These developments may be summarised as a reversal of the situation existing between the mid-sixth and mid-thirteenth centuries.

Districts with poorer resources were probably affected rather less. The expansion of trade might help to explain the slight increase in the proportion of settlements found within 0.5 kilometres of the coast between the early seventeenth century and the early nineteenth century. At the same time, the increasing demand for the products of the phrýgana, such as valonia, gall-nuts and wax, together

In the north-east, colonisation from mountain-fringe villages and to some extent from the Vardhounokhoria may have predominated, but there might also have been some colonisation from further south, especially from the congested area of the Kakavoulía. From a standpoint over 140 years later, the reoccupation of the north-east may be viewed as a reassertion of the attractions of this fertile and well-watered area, compared with other parts of the study region. Basic to this were probably the improvement of the valleys and plains by renewed down-cutting, the absence of invasion and the growth of Marathonisi as an export port. During the eighteenth century then, the catastrophe graph moved in the opposite direction to the path followed between c.A.D.174 and c.1618.

Implies down cutting reclamation by drainage

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    iii. Karvela : 2 parts, each dominated by a tower, though a third tower also found;
    iv. Konakia; 2 parts, each dominated by a tower;
    v. Koutoumou (old settlement) : 2 parts, each with a tower;
    vi. Mavrovouni : settlement grouped on hillside near ruined fort of Melissi; several towers;
    vii. Neokhori : 2 parts, each dominated by a tower;
    viii. Pilala : large clan house (or fort) on edge of settlement;
    ix. Skyphianika : 3 parts, each containing a tower.

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CHAPTER 8 : MANIAT SETTLEMENTS AND THE STUDY OF GREEK RURAL SETTLEMENTS

Further Work on the Máni

The three preceding chapters have established the broad trends of development in settlement patterns in the Máni over a very long span of time and isolated some of the mechanisms involved. Attempts at causal explanation, however, have been confined largely to the formulation of a number of hypotheses. Although efforts have been made to weld these into a coherent whole, especially through the emphasis placed upon society and economy, as well as the physical determinants of livability, some of the hypotheses must be regarded as possible fragments of a wider whole, involving the socio-economic fortunes of Greece and the Mediterranean world.

Advance must now depend upon removing errors in the basic settlement data, and in tracing the development of patterns, or even the history of individual settlements, in finer detail than has been possible with the scale employed here. Special attention should clearly be given to the chronology of development and to the connectivity between parent and daughter settlements. Most scope lies in the period from the seventeenth century onwards. Locally produced documents of the period, such as those contained in the Grigoraki archives, can be expected to produce some information, when they become available to researchers. Searches must also be conducted in the Venetian archives because of the Republic's long and intimate connection with the region, whilst the Turkish archives are virtually untouched. A great deal might also be learnt from a sytematic collection of local traditions about settlement history and the origins of the founding fathers, before the oral sources disappear altogether. Sanders originally drew attention to the potentialities for such a study, whilst some fragmentary success has been achieved by the present writer in a few villages in northern Máni (p. 190) and the neighbouring 'Elos Plain.[1] In addition,

excavation of known prehistoric sites in the valley and plain areas may be expected to yield important, though probably mundane, information about the structure and economies of early settlements. A further and detailed archaeological survey, especially in the more difficult parts of the region, may produce a few more sites. Some attention must finally be given to physical conditions, especially to the evolution of valleys, such as the Vardhoúnia, which have been so important, negatively and positively, in settlement history.

The Study of Greek Rural Settlements

At this point in the study the Máni may appear to be an exceptional region. Not only is it a long, generally arid peninsula, but it also appears to have been less economically isolated than some landlocked mountain regions of Greece, and to have contained a "traditional" society in which traits found elsewhere in the country were perhaps taken to rare extremes. The drawing of conclusions applicable to the rest of Greece, therefore, might seem unwise. This is not the case. As stated at the beginning (pp. 6-7), the region has been widely supposed to have shared a retreat function with other districts, and it was the purpose of this study to examine the hypothesis. Moreover, the mountainous and peninsular character of the region is certainly repeated elsewhere in the country, and the culture has been in many respects extremely Greek.

Systematic historical investigation of rural settlements does not appear to have been attempted before, and most recent attention has been diverted elsewhere.[2] Many of the shortcomings of this study, especially in methodology, are perhaps characteristic of a pioneering work in which a reasonably secure factual base had to be laboriously established before transposition and geogrsphical analysis could be attempted. Nonetheless, the study has indicated the sort of results which might be obtained in better documented regions of Greece. It is also possible to offer a number of conclusions, which might be tested as hypotheses

elsewhere or, at least, might provide a stimulus to additional work.

The first conclusion to be drawn is that the retreat function of the Máni has not been clearly demonstrated. Although settlement numbers increased over time, whilst patterns altered, the observed changes cannot be attributed to the immigration of large numbers of refugees to the region. Nor can the few refugees who found their way to the Máni be regarded as providing a necessary catalyst for change. Change is more adequately explained by indigenous mechanisms. The whole concept of a retreat of settlement might, therefore, be cast in doubt. Careful examination of other alleged retreat areas is clearly called for.

Nonetheless, the abandonment of the valley and plain land of the north-eastern corner between the second and the seventeenth centuries might be interpreted as constituting a local retreat phase. The security considerations usually offered in explanation of such a process may apply here, but alternative explanations are more convincing. In particular, the effects of widespread erosion and aggradation in the Roman period and later seem of basic importance; but they must be tested elsewhere. Whatever the ultimate explanation of the radical changes in settlement patterns, it is clear that they took place in the Middle Ages, probably between the sixth and the thirteenth centuries. They were not the result of Turkish raids, or of the Turkish occupation, or even of the political chaos which preceded the Turkish triumph in the Balkans. Re-examination of such accepted and facile explanations is required.

Similarly, it is clear that in the Máni the reoccupation of abandoned valley and plain land began in the eighteenth century and not, as is so often implied, after the War of Independance. The War may have simply quickened an established trend. If the timing of the recolonisation phase can be pushed back for the Máni, then a pre-

Independence origin may be suggested for other districts of the Morea, where plains are more extensive and where the economic potential was so much greater. It is not without significance that a similar comparatively early trend may be seen in the neighbouring 'Elos Plain.[3] A crucial factor in reoccupation, however, must be the resumption of down-cutting, facilitating improved natural drainage, and making available extremely good arable land. The timing of this must be established. Reoccupation may have been preceded by the general upsurge of the Greek economy and the increase of population which can be established for the Second Turkish Period (1715-1821). Removal of the Turkish yoke may not have been so important as has sometimes been suggested.[4]

Blouet has recently challenged the widely accepted view that the concentration of population in comparatively large settlements in the islands and coastal districts of the Mediterranean region was a consequence of defence needs in a situation of flourishing piracy.[5] Re-examination of the same explanatory hypothesis apropos of deserted coastlines and inland patterns of settlement is also called for. The Maniat experience has shown that alternative and more basic explanations are more plausible than the piratical threat. For instance, the influence of a cliffed coast, the long sea distances involved in coastal movement around a peninsula and the poor development of trade were important in the Máni. It should also be remembered that massive slave raids, such as those carried out by the Barbarossa brothers, were confined to a particular period of time and, even then, were rather exceptional.[6] Coastal raids were made and captives were taken, but not all areas were equally exposed to the danger, nor was retreat from the coast the only possible response to the threat.

Revision of accepted ideas is similarly called for in the field of site choice. The occupation of elevated sites has often been attributed in Greece, as in the Mediterranean region generally, to defence

needs.[7] The possibility cannot be entirely ruled out for the Máni, but the types of site chosen for occupation and their elevation has more to do with the type of terrain available than anything else, even where site choice was a deliberate act, as seems to be the case. Classic explanations of settlement siting have assumed the deterministic influence of water supply. Again, however, the study of Maniat settlements shows that the influence was not necessarily as great as earlier workers supposed, and that, if it was important at all, could have operated in the direction of a dispersed rather than an agglomerated settlement pattern.

Finally, the historical study of Maniat settlements has demonstrated that simulation models developed in Sweden and the United States are probably inapplicable in southern Greece. The data are so inaccurate in detail that sophisticated statistical manipulation of the required type would be largely futile, even for fairly recent periods. At the same time, the inequalities of the physical environment suggests that the patterns of settlement and the random processes revealed by the North American and Swedish work, are unlikely to occur in southern Greece, where clustering in the more favoured areas is probable. Even more important, Maniat socio-cultural experiences, whilst having much in common with the rest of Greece, have been vastly different from those of Sweden or the United States. As Grossman recently pointed out, the currently available models are probably inappropriate outside the particular cultural framework for which they were devised.[8] In any case, model builders themselves admit that their constructs are descriptive, rather than causal.[9]

A different model must be formulated for Greece. This must fit a society in which kinship and agonistic relationships have been of long-standing importance. It should also take account of a distinctive settlement history. In the Máni, and probably in the rest of Greece, Hudson's ecological mechanisms of colonisation, spread, and competition

have not operated in the strict sequence envisaged, though their presence at different times is clear. Hudson conceded that two of the mechanisms might work simultaneously in the same region,[10] but he did not apparently visualise the oscillations which have been seen in the Máni. The north-eastern area of that region experienced a phase of colonisation, followed by limited spread, but these were succeeded by phases of abandonment, desertion, and then recolonisation. A model based upon catastrophe theory was advanced in Chapter 6 as a simulation of the mechanism involved in the marked discontinuity which study of Meriat settlement history has revealed. The same model may be used to simulate the changes before, and after the break, as well as to indicate the essential continuity between two patterns. Catastrophe theory should be applicable to settlement studies in Greece and beyond. It has the great merit of uniting effects, mechanisms and causes in a single, logical, explanatory structure.

if one admits

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APPENDICES

I. Name Correspondence from Maps Published 1686-1717

II. Name Correspondence from Maps Published 1569-c.1630

III. Identifications of Settlement Names in South-Central Peloponnisos, c.1618.

IV. Site Categories

V. Settlements and Fortresses Located in the Study Region and Mentioned in Medieval Documents - The Sources for Table 9.

APPENDIX I: NAME CORRESPONDENCE FROM MAPS PUBLISHED 1686-1717

No. of Names	DE FER 1686	RANDOLPH 1686 ?	VISSCHER 1690	VALK 1690? (1)	SANSON 1692	HOMMANO 1715? (2)	VAN KEULEN 1717 (3)
1				Agamico	Agamico	Agamico	
2							Aquia
3			Bordogna	Bordogna/ Thurium	Bordogna	Bordogna	Bordogna
4	Braza			Braza	Braza	Braza	
5			Brexa	Brexa/ Pethnos	Brexa	Brescia	
6	Brodegni			Brodegni	Brodegni	Brodegni	
7	Caenopolis + Camares		Caenopolis				
8				Caibares + Camares/ Taenarum		Caibares + Camares	
9		Cardamlia					
10					Cennisca	Cernisca	
11	Chielifa	Kifala		Chielefa	Chielefa	Chielefa	

No. of Names	DE FER 1686	RANDOLPH 1686 ?	VISSCHER 1690	VALK 1690? (1)	SANSON 1692	HOMMANO 1715? (2)	VAN KEULEN 1717 (3)
12	Chiores	?Cheteri	Chiores		Chiores	Chiores/Abea	Chiores
13			Corsta			Chirota	
14	Colochina	Colochina	Colochina	Colochina	Porto de Colochina	Colochina	Colochina
15					Colocythia		
16			Croslu	Croslu	Croslu	Crostu	Corolu
17		Helos	Cumastra		Cumastra/Helos		
18						Durio	
19					Elephero	Elehero	
20	Gadepoga		Gadepoga	Gadepoga		Gadepoga	
21	Germen			Germen	Germenia/ Germen	Germen	
22			Gytium				
23			Hippole	Hippole	Hippola	Hippole	
24	Istechia		Istechia	Istechia	Istechia/ Leuctra	Istechia	
25			Las		Laas		

No. of Names	DE FER 1686	RANDOLPH 1686 ?	VISSCHER 1690	VALK 1690? (1)	SANSON 1692	HOMMANO 1715? (2)	VAN KEULEN 1717 (3)
26						Lama	
27			Laso				
28			Lovistolo	Loristulo	Lovistota	Loyistulo	
29	Maganeo			Magmea	Maganeo	Maganea	
30	Maina	Maina	Maina	Maina/ Leuctrum	Maina/Messe	Maina/Leuctrum	Maina
31				Maina, Casti di		Maina, Castro	Maina, Castri di
32	Oetilo		Utilo	Oetilo	Oetilo/Vtilo	Oetilo	
33			Paghana	Pachana	Paghana	Pachana	Pachana
34		Pagana			Pagana/Pago di Gadepalon		Paghana
35	Paleopoli			Palaeopoli/ Gythium	Paleopoli/ Gythium	Palaeopoli/ Gythium	
36	Passava	?Pasucca		Passava	Passava	Passava	Passava
37			Perhichina	Perrichina		Perrhichina	
38			Petrina	Petrina		Petrina	

No. of Names	DE FER 1686	RANDOLPH 1686 ?	VISSCHER 1690	VALK 1690? (1)	SANSON 1692	HOMMANO 1715? (2)	VAN KEULEN 1717 (3)
39			Pharis Laconica				
40			Pilo	Pilo		Pilo	
41					Porto Misitra		
42	Prestea		Prestea	Prestean/ Thalame	Prestea	Prestean/ Thalama	
43				Prignicos/ Biandina		Prignicos/ Biandina	
44	Scopia		Scopia	Scopia/ Teuthrone	Scopia	Scopia	Scopia/Teuthrone
45	Side				Side	Side	Porto Side
46			Teuthrone		Teuthronia/ Teuthrone		
47					Trinassus		
48	Varhi			Vathi/Las	Varhi	Vathi/Las	
49			Vasolup	Vasolup	Vasolup	Vasolup	
50			Virob	Virob		Virobo	

No. of Names	DE FER 1686	RANDOLPH 1686?	VISSCHER 1690	VALK 1690? (1)	SANSON 1692	HOMMANO 1715? (2)	VAN KEULEN 1717 (3)
51	Vitulo	Vitulo		Vitulo/ Bityla	Vitulo	Vitulo/Bityla	Vitulo
52		Yakaria			Yakaria		
53		Zarnata					
54				Zeleniza	Zeleniza		

* Vathi/Las indicates identification with an ancient settlement made by the cartographer.

De Fer, La Morée et les Isles de Zante, Cefalonie, Ste. Maure, Cerigo ... (Paris, 1686).

J.B. Homanno, Peloponnesus hodie Moreae Regnum ... (Paris, 1707).

J. van Keulen, Nieuwe Paskaard van t Tweede Gedeelte der Middelansch Zee, Tusschen t'I. Malta en Alexandretta; Paskaart vande Zee-Kusten van Cilicia, Calabria, Graetia en Morea; Archipelagusche Eylanden, (Nieuwnburg, 1717).

B. Randolph, Morea, olim Peloponnesus, (London, ? 1686).

Sanson, La Morée et les Isles de Zante, Céfalonie, Ste. Maure, Cerigo ..., (Paris, 1692).

G. and L. Valk, Regnum Morae accuratissime divisum in provincias ... unà cum insulis Cephalonia, Zacyntho, Cythera, Aegina et Sidera, (Amsterdam, ? 1690).

N. Visscher, Peloponnesus, hodie Morea ... (Amsterdam, 1690).

1. Gerard Val(c)k; 1650/51-1720; map engraver and publisher in Amsterdam (Bagrow, p. 276).
2. J.B. Homanno: 1663-1724; cartographer working in Nuremburg.
3. Gerard van Keulen: fl. 1704-26; member of family firm of cartographers founded by his father, J. van Keulen (fl. 1678-96) (Bagrow, p. 254).

APPENDIX II: NAME CORRESPONDENCE FROM MAPS PUBLISHED 1569-c.1630

No. of Names	Camocio 1569	Ducheto 1570	Camotti 1571?	Mercator 1595	Kaerius 1628?	Anon. 1630?
1				A...le		
2		Acria		Acria	Acria+	
3				Aesculpay Templ.		
4		Amicle				
5				Asopus		
6			Bardogso			
7				Betonia		
8	Bonfonica					
9	Bordogut			Bordagut	Bordagut	
10					Braza	
11	Calamata			Chalamata	Calamata	
12		Cardamila				
13				Cenepolis		
14						Cesala
15	Chiores		Chiores	Chiores	Chiores	Chiores

No. of Names	Camocio 1569	Ducheto 1570	Camotti 1571?	Mercator 1595	Kaerius 1628?	Anon. 1630?
16	Colochina		Colochina	Colochina+	Cholochina+	Colochina
17	Cumestra		Cumostra	Cumastra		Cumastra
18		Cyparissia		Cyparissia		
19				Durio	Duri	
20		Fauxasini				
21		Fenestre				
22	Gadepoga		Gadepoga	Gadepoga		
23	Gardechi					
24	Gristo			Cristo	Cristo	Cristo
25		Gythium		Gythium		
26				Hippole		
27				Iain	Iaina	
28				Iria	Iria	
29			Istechia	Hechia	Istechia	
30						Kutghyn
31					Laconia	

No. of Names	Camocio 1569	Ducheto 1570	Camotti 1571?	Mercator 1595	Kaerius 1628?	Anon 1630?
32				Las	Las	
33				Laso		
34			Leuno(?)			
35	Mogonaco		Maganca	Maganaco		
36	Moganico			Maganico		
37	Maina		Maina	Maina		Maina
38	Milofaes			Milozaes		
39				Mistra+		
40				Oenae		
41	Ormoas		Ormoas	Ormoas	Ormons	Ormoas
42						Pagana
43						Paganici
44	Parama*			Porama		
45						Pasaua
46	Perila					

No. of Names	Camocio 1569	Ducheto 1570	Camotti 1571?	Mercator 1595	Kaerius 1628?	Anon. 1630?
47		Phere		Pharis Laconica		
48					Pidana	
49				Pilo	Pilo	
50				Pirrhichna		
51	Prestea		Prestea	Prestea		
52				Psamala		
53	C. Rapano		C. Rapa	C. Rapan	C. Rapano	
54				Sapico		
55				Sarans		
56	Sarasona		Sarasona	Sarasona		Sarasona
57	Sidariso*			Sidarico		
58		Sparta				
59	Tama					
60		Tenarum			Tenara	

No. of Names	Camocio 1569	Ducheto 1570	Camotti 1571?	Mercator 1595	Kaerius 1628?	Anon. 1630?
61				Teuthronia		
62				The...	Therapne	
63	Vasilocamo			Vasilocamo		
64						Vasolapus
65				Vidana		
66	Virobo		Verobo	Virobo	Virobo	
67	Vitilo		Vitilo	Vitulo		Vituio
68	Vondomia*					
69				Vtilo	Vtilo	Utilo
70	Zarnata			Zornata		
71				Zeleniza		

+ Symbol on the map suggesting greater relative importance.

* Settlement identified by Giacomo di Castaldi as the modern (1560) equivalent of an ancient settlement.

Anon., Morea una cum adjacentibus Insulis, Graecia et universo Archiplago, (? Augsburg ? 1630)

G.F. Cammocio, Morea Peninsula, (Venice, 1569).

G.F. Camotti, Morea (? Venice, ? 1571)

C. Ducheto, Peloponnesus nunc Morea (? 1570).

P. Kaerius, Morea olim Peloponnesus (Amsterdam, ? 1628).

G. Mercator, Morea olim Peloponnesus, (? Duisberg, ? 1595).

APPENDIX III: IDENTIFICATIONS OF SETTLEMENT NAMES IN SOUTH-CENTRAL PELOPONNISOS, c. 1618

(names arranged in the order of the Roman alphabet)

Index No.	Settlement Name c. 1618	Pacifico c.1700 (from Sauerwein)	Commission Scientifique c.1830	Modern
First List (1)				
1	Afungia di Cholochitia			
2	Agia Varnara		? H. Varvara	? Ἁγία Βαρβάρα
3	Alica	Alica	Alika	Ἄλικα
4	Altomira		Altomira	Ἀλτομυρά
5	Amigdalia			
6	Arachova		Arakhova	Ἀράχοβα
7	Ardouvista		Androuvista	? Χώρα
8	Azomati			
9	Bragia di Nicliani		?? Tigani	
10	Brichi	Brichi	Briki	Μπρίκιον
11	Brinda da Gacizza		Brianda	
12	Castagna		Kastania	Καστανέα

13	Castro di Cholochitia		? Kotronaes	? Κότρωνας
14	Castro di Zarnate	Zarnata Fortezza	Fort de Zarnate	
15	Cavallo nel Purcho	Cauallo	Kavalos	(Κάβαλου) πύργιχος
16	Celisti di Ardouvista		Sélistia	Σελίτσης
17	Ceria di Ardouvista		Tséria	Τσέρια
18	Chaliouna di Nicliani	? Colgni	Kaloni	Καλονιοί
19	Chambros			
20	Charea	Carea	Karya	Καρέα
21	Charia	Caries	Kéria	Χαρία
22	Charignia	Carignù	Karinia	Καρύνια
23	Chariopoli	Cariopoli	Karioupolis	Καρυούπολις
24	Charouda Chardiani		Karouda	Χαρούδα
25	Chaspotegni	? Chospontinus		
26	Chelefa	Chielefa Fortezza	Kélépha	Κελεφά
27	Chiparizzo		M. Kyparissi	Κυπάρισσος
28	Chipoula	Cipoula	Kipoula	Κηπούλα
29	Chita di Nicliani	Giata	Kita	Κίττα / Κοίτα

30	Chorio-Chorogona		? Korogonianika	? Κορογονιάνικα
31	Chosea		? Khosiari	? Χωσιάριον
32	Chotrafi			Κοτράφιον
33	Chouloumia	Calumia	Kouloumi	Καλοῦμι / Κουλούμιον
34	Chounon di Condestauli	Cumo	Kouno	Κοῦνος
35	Chouschougni		Kouskouni	(Κουσκούνιον) Σωτήρας
36	Chrio-nero	Crionerò	Kryo-Néro	Κρυονέριον
37	Cocha di Mantinea		? Mandinia	? Μικρά Μαντίνεια
38	Crimignmo di Ardouvista			
39	Cutifariagni		Koutiphari	Θαλάμαι
40	Dolus, detto Chorio	Dolus da basso	Dolous	Δολοί
41	Dombra		Tumbra	(Τόμπρα) Προφήτης Ἠλίας
42	Dri di Condestauli	Dri	Dry	Δρύ
43	Driali di Cholochitia	Driuli	Driali	Δρυαλί
44	Drialo	Drialo	Dryalos	Δρύαλον
45	Erimo		Erimo	Ἔρημος
46	Fichouriani		?? Phrankoulia	? Φραγκούλιας

47	Fourgniaten			? Φουκαλωτο
48	Gacizza-Megali		Mégali-Gaïtsa	Χώρα Γαϊτσῶν
49	Gardinichia		Vardanitsa	Γαρδενίτσα
50	Gianizza	Gianizza grande	Gianitsa	(Γιάνιτσα) Ἐλαιοχώριον
51	Gianizza, Paglia		? Gianitzanika	(Γιανιτσάνικα) Φαράι
52	Giorgicio-Poulo di Cholochitia			
53	Gliaci-nova		Gliata	Γλιάτα
54	Gliaci-nova grande			
55	Gnifi	Niffi	Nymphi	Ἔξω Νύμφη
56	Gognia di Cholochitia		Gonéa	Γωνέα
57	Griciagni			
58	Guio-chori		? Xerokhori	Ἔξω Χώριον
59	Guio-chori di Chosma	? Cosma		
60	Hachia		Arkhia	
61	Haitofoglia di Cholochitia		? Phlomokhori	? Φλομοχώριον
62	Ismia			
63	Kambos di Zernata		Kambos	Κάμπος

64	Laia di Chourchougliani	Laià	Lagia	Λάγια
65	Langada		Langada	Λαγκάδα
66	Langada, Apano		Langada	Λαγκάδα
67	Lazona di Plazza		Loutsana	(Λουτρά) Πηγή
68	Lentigni	Leftignì		Λεπτίνι
69	Lozariagni			
70	Mantinea		Mandinia	Μεγάλη Μαντίνεια
71	Mavro-Iagni			
72	Milea, Apano)	Milizza	Milia	Μηλέα
73	Milea, Chato)			Κάτω Χώρα
74	Mina	Mina	Mina	Μίνα
75	Mizopangi		Pangia	Πάγκια
76	Mos Sabatiani		Somatiani	Σωματιανά
77	Mulaeron Nicliani, Apano	Bularù alto	Apano Boularious	Άνω Μπουλαριοί
78	Mulaeron, Chato	Bularù basso	Kato Boularious	Κάτω Μπουλαριοί
79	Nericista di Gacizza		Nerinda	? Ανατολικόν
80	Nikandria		Nikandro	Νικάνδρειον

81	Nio-chori		Néokhori	Νεοχώριον
82	Nixovo di Ardouvista		Nikovos	? Ζαχάρια
83	Nomia di Nicliano	Nomia	Nomia	Νόμια
84	Nomiciagni		Nomitsa	Νομιτσῆς
85	Orova di Zernata	Aroua	Horova	Ὄροβα
86	Ozia di Chorogou		Okhia	Ὄχια
87	Palavista		Polovista	Πολοβίτσα
88	Panagia		?? Palaeo-Panagia	Παλαιοπαναγία
89	Panayia di Gianizza		? Kato Gianitsa	
90	Panayia di Vacha			?P. Panayias
91	Pigadia		Pigadia	Πηγάδια
92	Piondea	Biondes	Piondès	(Πιόντες) Ἀκρογιάλιον
93	Pirgon		Pyrgos	Πύργος
94	Pirgon	Pirgo	Pyrgos	Πύργος Διροῦ
95	Plazza grande		Platsa	Πλάτσα
96	Poliana di Sigo		Polyana	Πολιανή
97	Poliazagni		Polyzaravo	Πολυάραβος

98	Porastia di Rugusci			
99	Prastio		Prastion	Προάστιον
100	Precista di Ardouvista			
101	San Constantino			
102	San Nicolo di Gardistia		P.H. Nikolaos	Άγιος Νικόλαος
103	Scala	Scala	Skala	Σκάλα
104	Scalciotiagni		Skaltsotianika	Σκαλσοτιάνικα
105	Scurta di Cholochitia		? Skopa I.	
106	Selizza	Selisma	Sélitsa	(Σέλιτσα) Άνω Βέργα
107	Sella		? Selitsanika	?(Σέλιτσα) Κάτω Βέργα
108	Sidero-castro	Sidero Castro	Sidérokastro	Σιδηρόκαστρον
109	Staurichious	Stabri	Stavri	Σταυρίου
110	Stio Subatiani		? Somatiani	?Σωματιανά
111	Tagariani di Plaza		Trakhéla	Τραχήλα
112	Vacha		Vakho	Βαχός
113	Vatas di Cholochitia	Vata	Vata	Βάτα
114	Vatia	Vatica	Vathia	Βάθεια

115	Viglistico			
116	Villa della Madona di Chelmont			
117	Villa nuova in Gacizza		? Biliova-Gaïtsa	? Κέντρον
118	Vitolo	Vitulo	Vytilo	Οϊτυλον
119	Voucholia di Cholochitia		? Loukadikha	? Λουκάδικα
120	Zatena			
121	Zigarismeni			
122	Zimova		Tsimova	Ἀρεόπολις
123	Zinignani			
124	Zoloteria		Soloteri	Σολοτερίου
125	Zuchaglia	Zacaglia		Τσικκαλιά

Second List (2)

126	Agia Paraschevi			
127	Agio Nicolo	San Nicola	H. Nikolaos	Ἅγιος Νικόλαος
128	Alevron		Alévrou	Ἀλευρου
129	Anavreti		Anavryti	Ἀναβρυτή
130	Anustazova	Anastasoua	Anastasova	Νέδουσα

131	Arna	Arua	Arna	Ἄρνα
132	Bastan	Basta	Basta	(Μπάστα) πλατό
133	Bisbardi	Bisbardi	Bisbardi	(Μπισμπάρδιου) Ἀσπροπουλιὰ
134	Calamata	Calamata Terra	Kalamata	Καλαμάτα
135	Castagnia	Castagna	Kastania	(Καστανιά) Καστόρειον
136	Chazziochono		Katsikova	Κατσίκοβον
137	Chichalo-cori			
138	Chornousta	? Cumusa		? (Κουμουστά) Πενταυλοί
139	Chrizzafa	Crisafà		Χρύσαφα
140	Chuzuna	?? Curzaussi	Kourtchaouchi	
141	Chuzzava	Cuzzaua-Caruli	Koutsava Karveli	Καρβέλιον
142	Doracchi	Durachi	Dirakhi	Δυρράχιον
143	Eulogiani			
144	Gaiduro-Chori	Gaidurocori	Gaïdourokhori	Ἀριοχώριον
145	Gliandina, Apano)	? Clidognia	? Kydonia	? (Κυδωνιά) Κυδωνέα
146	Gliandina, Chato)			
147	Lapon			

148	Londari detto Christianopoli	Leondari Fortezza	Leondari	Λεουτάριου
149	Longamicho	Longanigo	Longamicho	Λογκανίκος
150	Malcina	Malina		(Μαλιτσίνα) Μέλισσα
151	Manezzi			
152	Michrimani	Cuzzucumani	Mikromani	Μικρομάνη
153	Panagia	? Banagia-Loxa	? Panaïti	Φαναΐτη
154	Prasinigo		Barsinikos	?Περγαυτικος
155	Prizza	Brizza		(Πρίτσα) Παλαιόβρυση
156	Scala	Scala	Skála	Σκάλα
157	Stenna		Sitenna	
158	Vlachozzotira	Villachiotti	Vlakhioti	Βλαχιώτης
159	Vriea	? Frizzala	? Fourtsala	
160	Zizzona		Sitsova	Σουστικύνοι
161	Zotira	Sotira	Sotira	Σωτήρα

1. Villagi da Calamata fin al Capo di Mayna et ritorno di Colochitia fin a Passava nel spradetto territorio ... (.... villages from Calamata as far as the Cape of Mayna, returning through Colochitia as far as Passava).

2. Villagi 38 chi sono vicini al Braccio di Mayna nelle montagne, sudditi al Turco, da Passava et Bardugna castelli, fin a Londari detto Christianopoli (38 villages which are in the vicinity of Braccio di Mayna, in the mountains, under Turkish rule, from Passava and Bardugna castles as far as Londari, called Christianopoli).

3. H = Haghios, a transliteration of ἅγιος ("saint")

   M = monastery

   P = pyrgos, a transliteration of πύργος ("tower").

APPENDIX V: SETTLEMENTS AND FORTRESSES LOCATED IN THE STUDY REGION AND MENTIONED IN MEDIEVAL DOCUMENTS - THE SOURCES FOR TABLE 14.1.

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