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“ΤΟ ΠΥΡΡΑΙΩΝ ΟΡΟΣ ΤΟ ΠΙΤΥΩΔΕΣ”: AN ARCHAEOLOGICAL AND EPIGRAPHICAL
APPROACH TO A TOPOGRAPHICAL PROBLEM

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Introduction

If one is always wary of how mono-dimensional studies can be which are based solely upon one body of evidence, whether that evidence be textual, epigraphical or archaeological, how much more effective is the study of a specific problem when the results of more than one source are combined? The present paper is intended as an exercise in making a more three-dimensional approach to a specific problem (in this case, one relating to topography and settlement patterns) by comparing and contrasting archaeological and epigraphical data in order to try and avoid the potential difficulties which the use of either source in isolation might create.

The particular problem to be examined is the precise definition, settlement and exploitation of the extensive upland forested area of southeast Lesbos known in antiquity as τὸ Πυρραίων ὄρος τὸ πιτυῶδες "The pine-covered Pyrrhaean Mountain" (Thphr. *HP.* 3.9.5). The forest still exists today (pl. I. 1), but there has been prolonged debate as to whether its size has grown or shrunk since antiquity, and this question is of significance since it affects greatly questions such as the patterns of ancient settlement and land-use in southeastern Lesbos and whether the present-day forest is, in fact, masking a lot of archaeological evidence. In other words, is the archaeological record a sound base on which to build up hypotheses of which areas in this part of the island were being settled and exploited in antiquity, or are there other sources independent of the archaeology which tell a different story and suggest that the archaeological database is incomplete?

Sources for the Extent of the Pyrrhaean Forest

Today both the massif of the Olympos range and the infertile plateau to the north which lie between the gulfs of Gera and Pyrrha are covered by a forest of pine trees (*Pinus nigra*) approximately 10 km wide (fig. 1).² The area in question stretches from the south end of the uplands near Plomari, beyond Mount

¹ Thanks are due to Panagiotis Doukellis, Hector Williams, John Barron, Lin Foxhall and Graham Shipley who all offered comments on earlier drafts of this paper. Dr. Machiel Kiel kindly discussed details of his research into Lesbos during the Tourkokratia and communicated to me the views of Dr. Dimitris N. Karidis and Dr. Dr. Hedda Reindl-Kiel on the same period of history. However, the responsibility for all the opinions expressed here of course remains with the author. The research was carried out during a British Academy Major State Studentship and a British Academy Postdoctoral Fellowship (generously funded by Swan Hellenic/P&O). Funding for a visit to Lesbos was kindly provided by the Dover Fund of the Hellenic Society. Abbreviations of the names and works of ancient authors correspond to those listed in the introduction to *LSJ*.

The following abbreviations have been employed throughout:

Admiralty	Naval Intelligence Division, <i>Greece: Regional Geography</i> (London 1945) III.
Axiotis I/II	M. Axiotis, <i>Περπατώντας τη Λέσβο</i> (Mytilene 1992) 2 vols.
Charitonidis	S. Charitonidis, <i>Αἱ ἐπιγραφαὶ τῆς Λέσβου - Συμπλήρωμα</i> (Athens 1968).
Déléage	A. Déléage, <i>La Capitation du Bas-Empire</i> (Paris 1945).
Erleben	E. Erleben, "Zur Katasterinschrift Mytilene IG XII 2, 77", <i>Klio</i> 51 (1963) 311-23.
Jones	A.H.M. Jones, "Census Records of the Later Roman Empire", <i>JRS</i> 43 (1953) 49-64.
Koldewey	R. Koldewey, <i>Die antiken Baureste der Insel Lesbos</i> (Berlin 1890).
Kontis	G.D. Kontis, <i>Λέσβος καὶ ἡ μικρασιατικὴ τῆς περιοχῆ</i> (Athens 1978).
Mantzouranis, 1951	D.P. Mantzouranis, "Σωζομένα τοπωνύμια ἐκ τοῦ ἀρχαίου κτηματολογίου τῆς Λέσβου", <i>BZ</i> 44 (1951) 410-12.
Mantzouranis, 1976	D.P. Mantzouranis, <i>Τὸ ἐτήσιο γεωργικὸ εἰσόδημα τῆς Λέσβου στὴν ἀρχαιότητα</i> (Athens 1976).
Parker and Williams	R. J. Parker and H. Williams, "A fragment of a Diocletianic tax assessment from Mytilene", <i>EMC</i> 39 (1995) 267-73.

² Admiralty, 496; A. Philippson and E. Kirsten, *Die griechischen Landschaften*, (Frankfurt 1959) IV, 236.

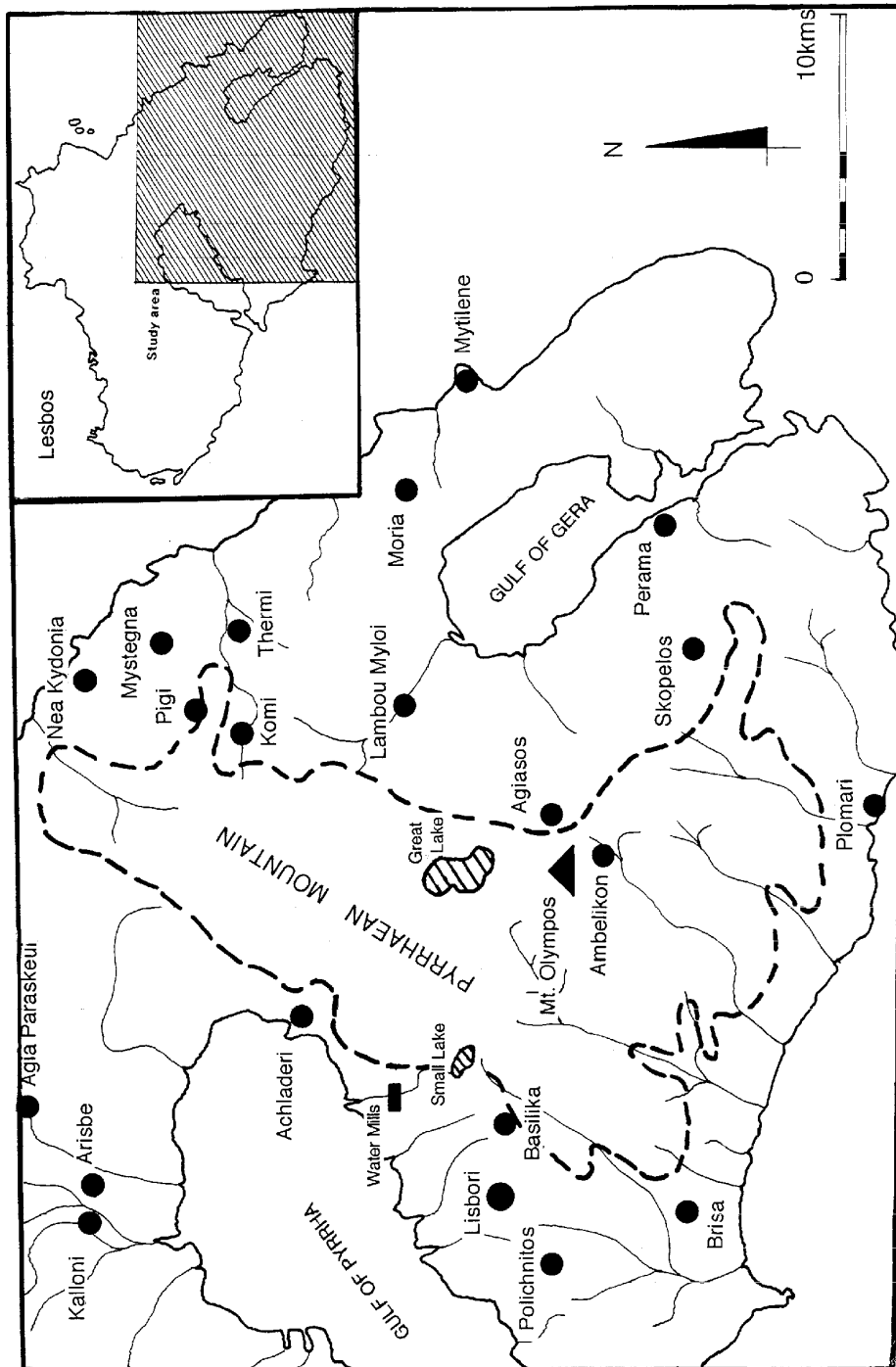


Fig. 1: Map of eastern Lesbos indicating the 'Pyrrhaean Mountain', the extent of the modern pine forest (dotted line shows forest outline) and present day towns/villages.

ed the "nemus Pyr-rhaeum". But was the forest of similar size 2,000 years ago to that which it is today, and was it an area extensively cultivated and settled?

³ There have been eleven serious fires in the last twenty years, *Τα Νέα* (18/5/92), 40.

⁴ The only traces of ancient settlement activity in the entire forested upland area are near its southern edge (see fig. 3f), immediately west from the modern village of Ambelikon, where settlement activity of Roman date has been reported, see Axiotis II, 606, 610. All other remains in the area are of Byzantine and Turkish date.

Olympos, across the "Pyrrhaean Mountain", and all the way to the northeast edge of the plateau near the east coast of the island at Mystegna and Nea Kydonia. The forest is of varying density, ranging from some areas thickly covered with pines to other regions which are merely sparsely sprinkled with trees, the latter largely the result of recent fires.³ The main feature of the whole area, however, is its near total abandonment today and a similar, almost complete, absence of signs of ancient habitation and cultivation.⁴

Literary sources also testify to the existence of the forest in antiquity. Theophrastos (cited above) spoke of "τὸ Πυρραίων ὄρος τὸ πτυῶδες" whilst Pliny the Elder (*HN*. 16.19.46; possibly merely quoting Theophrastos) mention-

There are two completely opposing views on this subject. One is represented by Mantzouranis who believed that the forest is now larger than it once was. This thesis suggested that the forest must have been smaller in antiquity because the desire for cultivatable land would have been greater, therefore more of the area now occupied by forest would once have been cleared and worked (Mantzouranis, 1976, 8).

The opposite point of view is stated by Choutzaïou, Kontis, and the Admiralty's report on Lesbos: all three believed that deforestation has resulted in the extent of pine trees being smaller than it once was.⁵ Kontis stated that the deforestation has resulted especially from the replacement of pine trees with olives during the increase in olive cultivation in more recent times.⁶

But which of these two views does the evidence currently available support? An examination will be made first of the patterns of settlement apparent from the archaeological evidence for this region of the island, distributions which will then be compared with epigraphical evidence from the late Roman period.

The archaeological record

The archaeological patterns of settlement in Lesbos (especially in the south and east parts of the island) indicate a strong bias in the selection of coastal locations for settlement focused around the two large gulfs (of Gera and Pyrrha) right from the earliest traces of human activity in the area dating to the later Neolithic and Early Bronze Age (see fig. 2a-d). Moreover, since the majority of these earliest settlements are located upon the present-day shoreline, it indicates that the extensive alluvial plains visible today on the shores of the Gulfs of Pyrrha and Gera had been formed before the earliest human occupation of these areas. Indeed, the number of inundated remains on the shores of both gulfs, caused both by tectonic movements and by the gradual rise in sea-level around the island since antiquity, means that these lowland areas of fertile alluvial deposits in southeast Lesbos could have been even more extensive in antiquity than they are today.⁷ This initial coastal pattern of settlement derived from archaeology, a pattern not due simply to a lack of exploration in the upland areas,⁸ continues along much the same lines throughout the Iron Age until the Roman period (fig. 3a-f), and there are few archaeological indicators to suggest that the upland forested area of the "Pyrrhaean Mountain" was extensively exploited or settled before the Turkish and early modern period (see nn. 4 and 8).

⁵ G. M. Choutzaïou, "Συμβολή στὴ μελέτη τοῦ κλίματος τῆς νήσου Λέσβου", *Mytilini* I (1981), 107; Kontis, 37, 46, 259-60; Admiralty, 496.

⁶ Kontis, 37. The spread of olive-tree monoculture in the island began to be especially marked from the start of the 17th century and also may have been the reason behind the abandonment of many small villages in Lesbos with localised synoikismos into larger "komopoleis" nearby. D. M. Karidis and M. Kiel pers. comm. (1995).

⁷ For the local rise in sea-level and inundated remains see Koldewey, 47; W. Lamb, "Antissa", *BSA* 31 (1930-31) 167-70; G. Daux, "Chronique des fouilles et découvertes archéologiques en Grèce en 1959", *BCH* 85 (1961) 835; M. S. F. Hood, "Archaeology in Greece, 1960-61", *AR* 7 (1961) 22-23; A. H. S. Megaw, "Archaeology in Greece, 1962-63", *AR* 9 (1963) 29; M. Paraskeuaidis, "Νέες ἀρχαιολογικὲς ἐνδείξεις γιὰ τὴ Λέσβο", *Lesbiaka* 5 (1966) 208; id., "Ἐπίμετρον· βιβλιογραφικὰ ἀρχαιολογίας τῆς περιοχῆς Ἀγίας Παρασκευῆς Λέσβου in K. Makistos, Ἡ Σελλάδα τῆς Ἀγίας Παρασκευῆς Λέσβου (Athens 1970), 259; Kontis, 360; G. Basiakos, "Ἐρευνα γιὰ ἐργαστήρια ἀμφορέων", *ArchDelt* 41 (1986) Chronika 208-10; Axiotis II, 566-67.

⁸ There has been thorough examination within the area of the modern forest by Kiepert and Koldewey in the 19th century (Koldewey, 76-78, 80-81 and pl. 30) and even more detailed research by Axiotis within the last decade, all of whom found very little apart from material of Medieval and early modern date, see note 4. The air photograph coverage of the area (taken in November-December 1943) also gives a similar picture of little human activity. Sortie 64150 (flying west - east), photographs 3184-3201 show the abandoned upland area between Polichnitos and Skopelos; photographs 4192-9 (also west - east) extend the coverage to the south in a parallel, overlapping band. Sortie 64156 (flying east north-east - west-southwest), photographs 4208-14 show the abandoned area of the north-east edge of the Pyrrhaean Mountain; photographs 4177-84 (part of a long southwest - northeast sweep across central Lesbos from the west coast at Sigri to Aspropotamos near Mandamados) show a section of the Pyrrhaean Mountain and the forest without any traces of buildings and/or agricultural activity east of Agia Paraskeui; photographs 3206-14 run in a parallel direction to the former run, further south, again showing the abandoned forest area east of Agia Paraskeui. Air Photo Library, Keele University, unpublished.

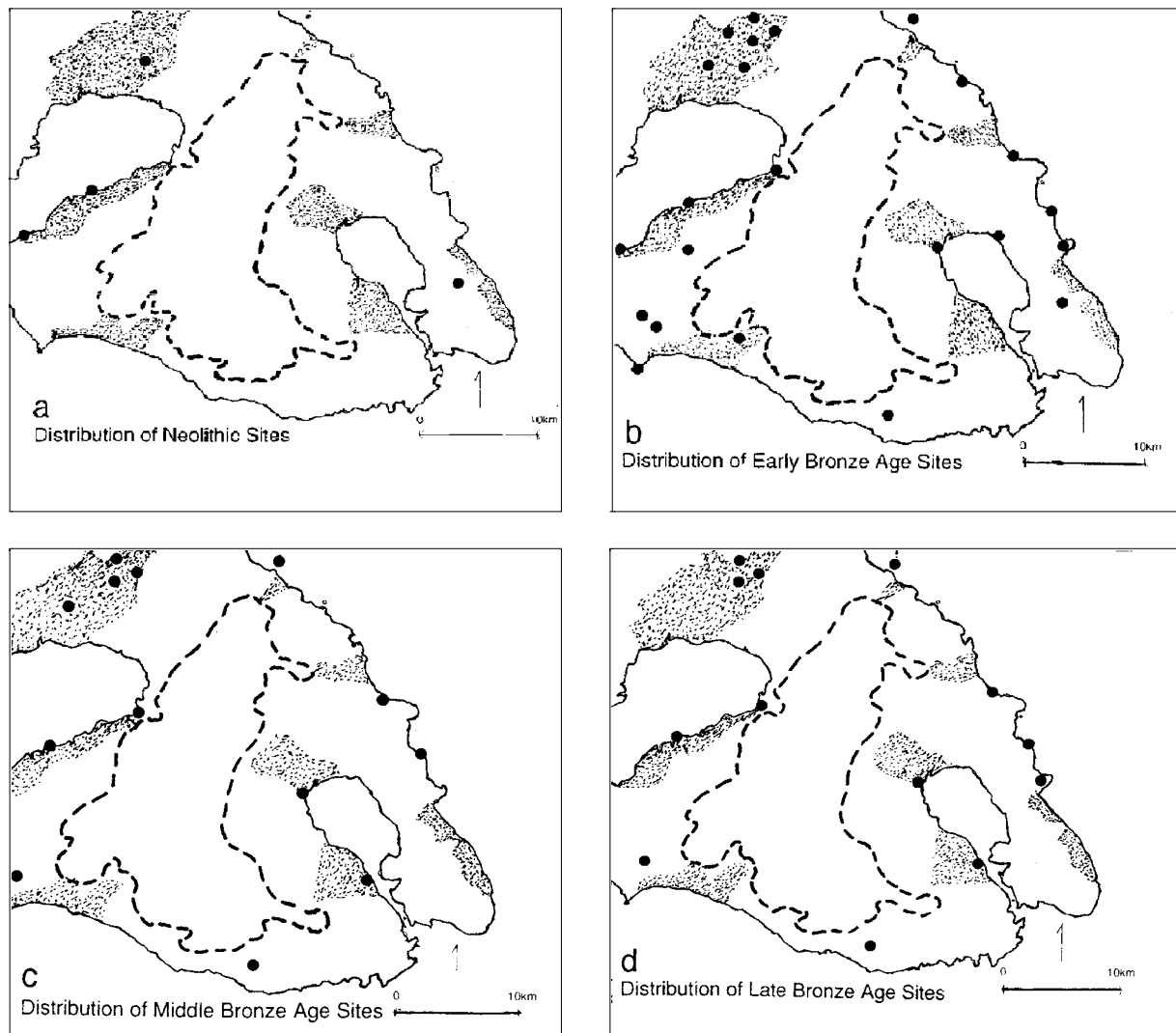


Fig. 2 a-d: Archaeologically-attested Neolithic and Bronze Age sites in Lesbos. (Data from N. Spencer, *A gazetteer of archaeological sites in Lesbos*, BAR International Series 623, Oxford 1995). Outline of the modern forest shown with dotted line, stippled area indicates coastal plains.

At first sight this might be thought surprising. First, because study of both ancient and modern farming practices in Greece has indicated a desire to possess scattered plots of land in order to reduce the risk of localised crop failure and provide variable conditions for different crops,⁹ production strategies for which the nearby upland areas would have been eminently suitable. Similar upland areas around the plain of Eresos in the west of the island were heavily exploited in later antiquity as the extensive remains of abandoned terracing indicate.¹⁰ And second, because the natural resources on the "Pyrrhaean Mountain" itself would have made the uplands a potentially attractive region for habitation and agricultural exploitation. Not only would parts of the forested upland plateaux in this area have pos-

⁹ P. Garnsey, *Famine and food supply in the Greco-Roman world: responses to risks and crises* (Cambridge 1988), 48-53; J. M. Wagstaff, *The development of rural settlements: a study of the Helos plain in southern Greece* (Avebury 1982), 88-89; A. M. Snodgrass, *An archaeology of Greece: the present state and future scope of a discipline* (Berkeley 1987), 74 and 75 fig. 14 (citing the evidence of Forbes in Methana); J. C. Wright *et al.*, "The Nemea valley archaeological project: a preliminary report", *Hesperia* 59 (1990) 600; A. Sarpaki, "The Palaeoethnobotanical approach: the Mediterranean Triad, or is it a Quartet?" in B. Wells (ed.), *Agriculture in ancient Greece. Proceedings of the seventh international symposium at the Swedish Institute in Athens, 16-17 May, 1990* (Stockholm 1992), 61-62.

¹⁰ G. P. Schaus and N. Spencer, "Notes on the topography of Eresos", *AJA* 98 (1994) 424-30.

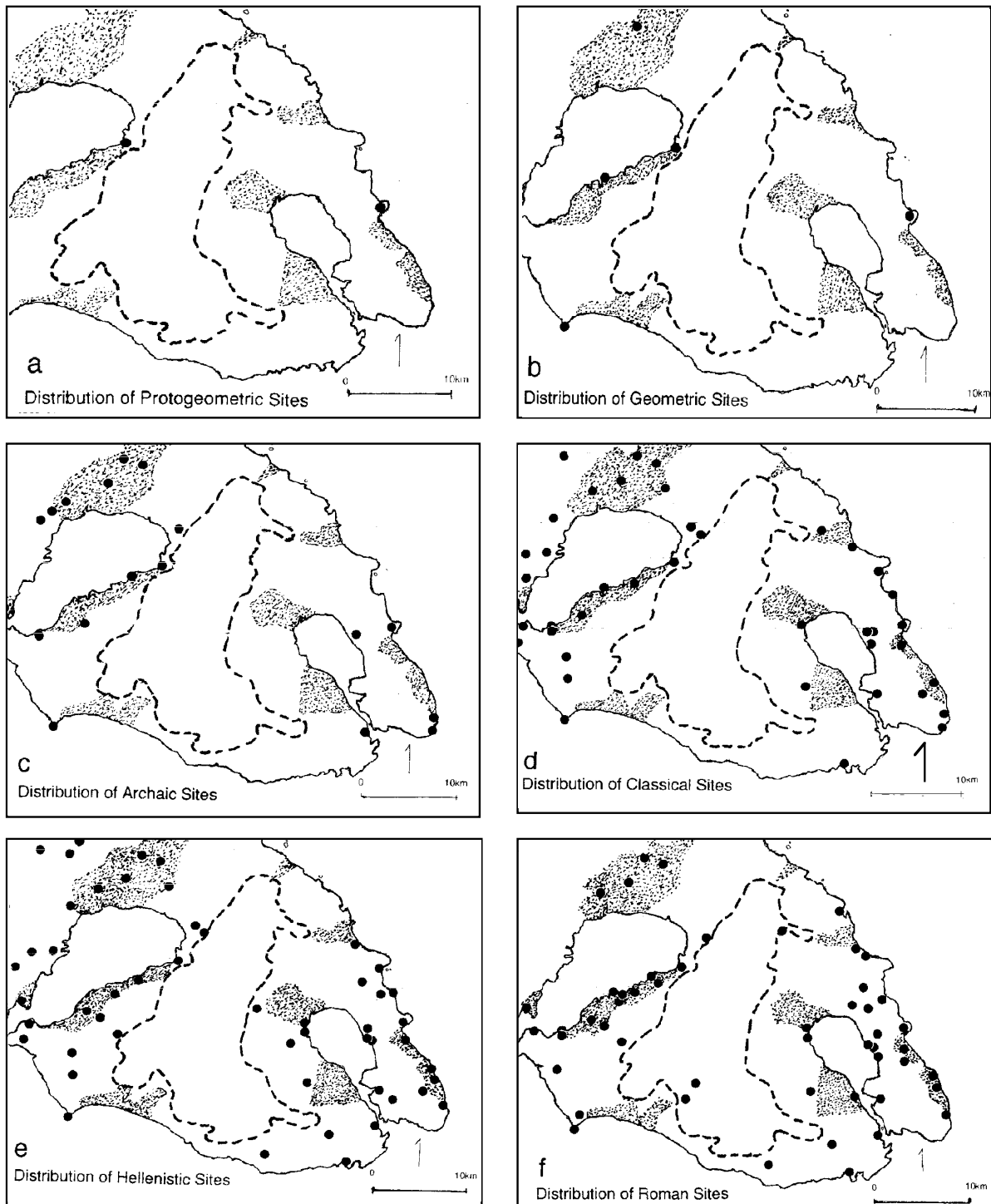


Fig. 3 a-f: Archaeologically-attested Iron Age and Roman sites in Lesbos. (Data from N. Spencer, *A gazetteer* (above, on Fig. 2a-d). Outline of the modern forest shown with dotted line, stippled area indicates coastal plains.

essed good soil coverage (aided by the protective canopy of the trees),¹¹ but also there would have been an ample supply of water in the area in antiquity with the two large (now drained) lakes below the northern and western slopes of Mount Olympos (fig. 1). It was the larger of these lakes which was

¹¹ The Admiralty report noted also that much of the Pyrrhaean Mountain plateau is gently sloping, another factor which would enhance the area's potential for agricultural exploitation; Admiralty, 496.

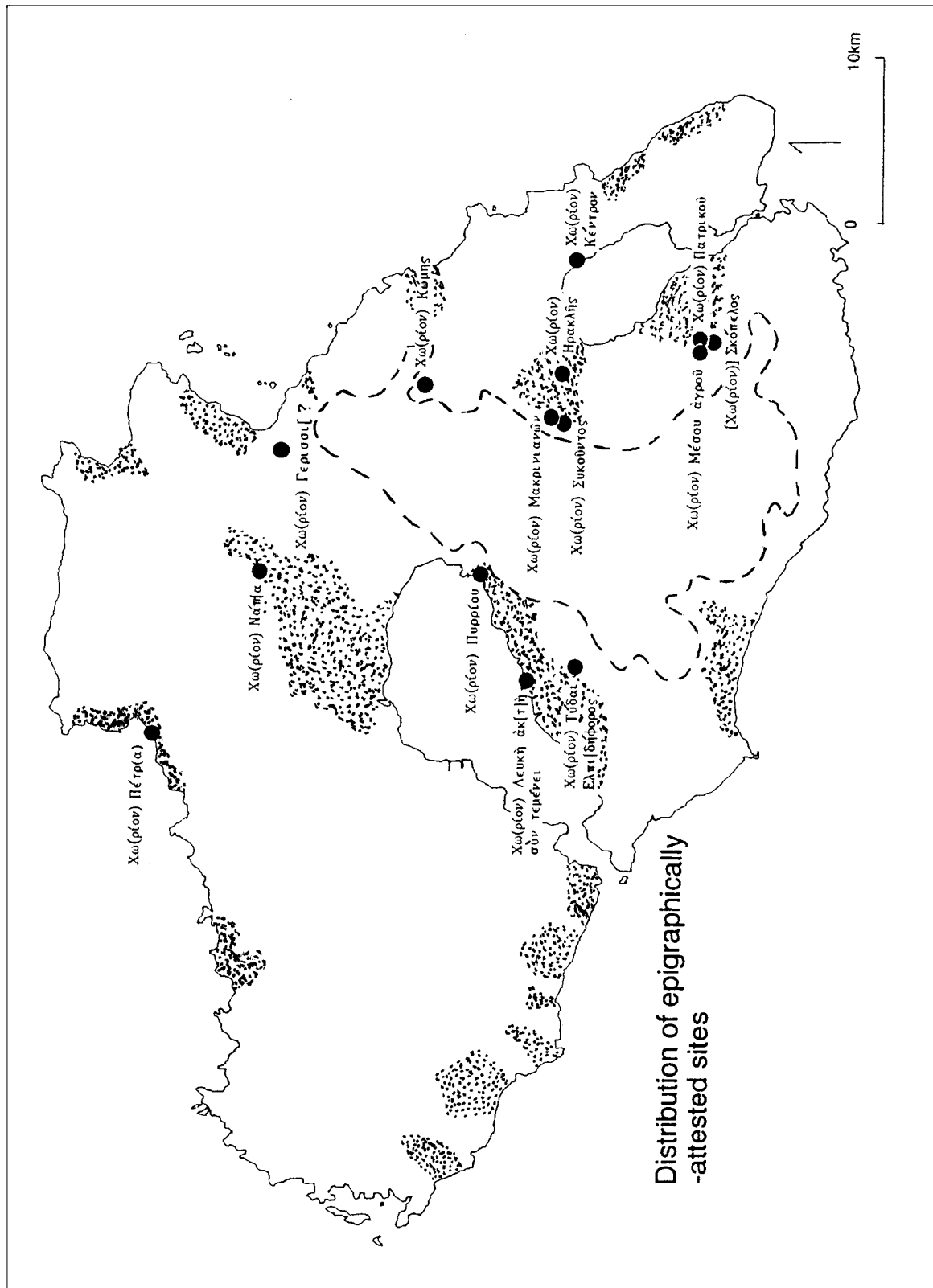


Fig. 4: Epigraphically-attested late-Roman sites in Lesbos. Outline of the modern forest shown with dotted line, stippled area indicates coastal plains

tapped to bring a supply all the way down to Mytilene in the Roman Imperial period via a long aqueduct (pl. I.2),¹² whilst one of the abundant streams fed by the smaller lake powered the nineteenth-century watermills of the Georgantinis family on the east shore of the Gulf of Pyrrha (fig. 1).¹³

But despite this potential of the "Pyrrhaean Mountain", it still remains the case that there is an almost complete archaeological blank over the whole area, and by examining the independent record of settlement and land-use provided by the late Roman epigraphy one can explore a source which may ascertain whether this "blank" is a real one or whether the modern forest is simply masking a lot of the former human activity in the upland areas.

The epigraphic record

The special value of the epigraphic record for the southeast of the island in the late Imperial period is that it offers a source completely independent of the archaeology to which one can turn as a control to the material data. The inscriptions¹⁴ relate to censuses carried out during the late third century or early fourth century AC by Diokletian as a basis for a new system of taxation (censuses which were carried out in many parts of the province of Asia).¹⁵ On these inscriptions are listed the locations of estates of landowners, many of which can be placed with confidence on the map of Lesbos (fig. 4).

The inscriptions list estates of landowners spread amongst the lands of different villages detailing the way in which each estate was divided up between land for sown crops, vines, olives and pasture. One of the Lesbos inscriptions (*IG XII.2.79*) has the added refinement of the land assessed being divided into two rates depending on its varying quality, a complication in the assessment which was abandoned.¹⁶ Where the names of the villages can be mapped they are found largely in the southeast of the island, a situation which has led to suggestions that the preserved records concern solely the lands of Mytilene (Mantzouranis, 1951, 412). A significant number of placenames are still unlocated, however, and given the pattern of fragmented agricultural landholding noted above there is no *a priori* reason to deny that certain other toponyms on the inscriptions which match places in the centre and north of the island are indeed referring to these known sites.¹⁷

There is no explicit statement elucidating to whom the estates belonged, but similar lists cataloguing rural estates (such as those from Thera and Astypalaia) are arranged under the names of individual landowners, "δεσποταί" or "δεσποτίαι", who possessed lands in many of the islands' villages.¹⁸ In an

¹² Koldewey, 65-68, pl. 29.1-7; I. S. Chatziioannou, "Τὸ Ῥωμαϊκὸ ὑδραγωγεῖο Μυτιλήνης", *Lesbiaka* 9 (1985) 153-62; R. Millar and H. Williams, "The Roman quarry at Moria, Mytilene", *EMC* 37 (1993) 220-23 and fig. 5. The aqueduct is probably of Hadrianic date at the earliest with some later repairs, H. Williams, pers. comm. (1994).

¹³ The water mills were built in 1850, and are still visible as ruins nearby (British "Aegean Islands" 1: 50 000 map, Grid Ref. 626630), see Axiotis II, 571.

¹⁴ *IG XII.2.76-80*; Charitonidis, 13-17, no. 17; Parker and Williams.

¹⁵ For a detailed discussion of the inscriptions' precise dating, see Erxleben, 312-15; also Parker and Williams, 271 and n. 6. Two inscriptions from the Hellenistic period also record estates in Lesbos at certain toponyms (some of which can be located), but there is no evidence to suggest that actual "villages" (or other settlements) existed at these places in the same way as the late Roman inscriptions specifically state. For a discussion of some of these Hellenistic toponyms see Mantzouranis, 1951, 411.

¹⁶ Jones, 49 and n. 1. Erxleben, 314, concluded that this inscription must date from a different census to that recorded in inscriptions *IG XII.2.76-78* since he thought that different principles of classification within the same census were unlikely.

¹⁷ There are Roman villages of Pyrrha (Πυρραίου), Petra (Πέτρ[α]), Nape (Νάπ[α]) and Gerissi (Γερισσι[α], possibly ancient Aigeiros) mentioned on the inscriptions which could certainly be equated with the known sites bearing these names on the east coast of the Gulf of Kalloni, the northern coast, centre, and eastern coast of the island respectively; *pace* Déléage, 178; Erxleben, 319-20 was also unconvinced that all the placenames (many of which were unlocated) lay in Mytilene's territory.

¹⁸ *IG XII.3.180-82* (Astypalaia), 343-49 (Thera). Jones, 57, concluded from a number of inscriptions that the average agricultural unit was very small in the Aegean and that even wealthy landlords owned "a large number of scattered farms rather than a great estate" (*ibid.*), thereby agreeing with the archaeological and ethnographic conclusions regarding estate diversification referred to in n. 9 above. Inscriptions in Thera indicate that owners possessing estates in over 15 different villages, see *IG XII.3.344-45*.

inscription from Tralles southeast from modern Izmir¹⁹ the estates are listed nearly entirely by "field" ("ἀγρός") with the toponym following and are again probably those of individuals, although this is not made explicitly clear on the surviving portion of the inscription.

In Lesbos, the villages listed whose names can be read with confidence are as follows (an asterisk signifies a village the location of which is known, see fig. 4):

IG XII.2.76.

- Col. (b) Χω(ρίον) Μάγδια cὺν παρτ.
 Col. (c) Χω(ρίον) Τείχεα
 Col. (d) Χω(ρίον) Ὑποχόρια
 Χω(ρίον) Τείχεα
 Col. (e) Χω(ρίον) Ἀκτάων
 Col. (g) Χω(ρίον) Πύργου μερ. ζ
 * Χω(ρίον) Κυκοῦντος μερ. δ'
 Col. (h) * Χω(ρίον) Πυρρίου
 * Χω(ρίον) Πέτρ(α)
 Col. (i) Χω(ρίον) Τριοδότο[υ]
 Col. (k) * Χω[ρίον] Ἡρακλεους μερ. --
 Χω[ρίον] Σεμπρωνίου²⁰

IG XII.2.77.

- Col. (b) Χ[ω(ρίον)] Κενχρέω[ν]²¹
 Col. (d) * Χω(ρίον) Μακρινιανῶν²²
 Col. (e) * Χω(ρίον) Νάπ[α]²³

IG XII.2.78.

- Col. (b) * Χω(ρίον) Ἡρακλῆς
 * Χω(ρίον) Μέσου ἀγροῦ
 Col. (c) Χω(ρίον) Οὐτελλίου τοῦ αὐτοῦ
 μερ. δ'²⁴

IG XII.2.79.

- Col. (a) * Χω(ρίον) Τύδαι Ελπι[δήφορος]
 * Χω(ρίον) Λευκή ἀκ[τ]ῆ cὺν τεμένει
 Col. (b) Χω(ρίον) Μαρμαρίνη ληνός ὑπὸ Διονύσιον γεωργ.
 Χω(ρίον) Πυργίου ὑπὸ τὸν αὐτόν

Charitonidis, no. 17.

- Col. B * Χω(ρίον) Κώμης
 Χω(ρίον) Τενιάς

¹⁹ M. Fontrier, "Inscription de Tralles", *BCH* 4 (1880), 336-38.

²⁰ Déleage, 177-78, noted that this name, along with "Μακρινιανῶν" and "Ὀυτελλίου", also could have been the names of estates rather than village names.

²¹ Mantzouranis, 1951, 412, and Déleage, 177, placed Kenchreai near to Thermi on the evidence of *IG XII.2.103* which spoke of a fountain and aqueduct running from Kenchreai to the sanctuary of Artemis at Thermi. The length of the aqueduct is unclear, however, and says little about the spatial relationship of the villages at its beginning and end.

²² Even though the name "Μακρινιανῶν" listed on the inscription seems to be an estate name rather than that of a village (see n. 20), the related toponym survives on the northern coast of the Gulf of Gera.

²³ The reading of this village name was proposed by Déleage, 177, but other commentators have considered the remains of letters on the stone too incomplete for a secure reading.

²⁴ See n. 20.

- * Χω(ρίον) Κέντρον
 Χω(ρίον) Εὐγρενική
 Col. Γ * [Χω(ρίον)] Ἡρακλῆς
 * [Χω(ρίον)] Σκόπελος
 Col. Δ Χω(ρίον) Γορύτριον
 * Χω(ρίον) Πατρικοῦ

Parker and Williams.

line 1, (?*) Χω(ρίον) Γερισσι[.

The first conclusion to be drawn when one examines the locations of the estates for the different landowners (fig. 4) is that there is no great divergence from the coastal (especially coastal-plain orientated) pattern of settlement and landuse suggested by the archaeological evidence (figs. 2-3). None of the villages where the estates lie are within the area occupied by the modern forest, seeming at first sight to confirm that the upland area of the "Pyrrhaean Mountain" was a part of the island just as bereft of human activity as it is today. But was this really true? Before settling for this conclusion there is one aspect of the inscriptions which should be considered in more detail, namely what they tell us about the type of activities on each estate.

Of the thirteen villages named in the Roman inscriptions for which the locations are known (the village of Herakles appears three times), ten estates preserve figures detailing the amounts of land employed for the different crops and farming activities (in iugera):

Village Name	Vines	Sown Land	Olives	Pasture
Κῦκος	5.5	60	2.4	0
Πύρρα	5	0	3.8	10
Πέτρα	2.5	50	4.6	100
Ἡρακλῆς (1)	8.75	0	3.6	0
Μακριάνα	10.5	?	1.4	8
Μέσαγρος	9.1	46.5	0.75	0
Ἡρακλῆς (2)	5.25	0	1.6	0
Τύδαι	>4	245	20.1	0
Λευκὴ ἀκτὴ σὺν τεμένει	3	>125	16.7	50
Σκόπελος	>600 ²⁵	0	?	0

Noteworthy points to emerge from this table include the relatively small amount of land devoted to olives in antiquity compared to their near-complete monopoly on areas of cultivatable land in central and eastern Lesbos today.²⁶ In the late Roman period the six inscriptions indicate that only 5-6% of their land was devoted to olive cultivation, whereas today it has been calculated that it accounts for over 60% of the overall cultivated area (Kontis, 35-37). Furthermore, there is a substantial contrast to be drawn in the ratio of land area devoted to olives and sown crops in the different periods: in antiquity the balance on these estates (in iugera) was 1: 8.9 (olives: sown crops), but in recent years measures 1: 0.6 (olives: sown crops), no doubt highlighting the much greater need in antiquity to be self-sufficient in cereals.

However, the one category on these inscriptions especially interesting for its bearing upon the problems concerning the use of upland areas of southeast Lesbos is that of "Pasture" which indicates that some estates set aside large tracts of land for this purpose. These parts of the estates in Lesbos are

²⁵ The figure for the amount of land occupied with vine cultivation on the estate at Skopelos (Charitonidis, 17Γ) is X[. . .] iugera, therefore indicating a figure in excess of 600.

²⁶ Admiralty, 511-12; Philippson and Kirsten (supra n. 2), 240; Mantzouranis, 1976, 9 n. 3; Kontis, 36-37. Today the olive contributes approximately 70% of the island's total produce (Admiralty, *ibid.*).

generally more extensive than those given over to such practices elsewhere in the Aegean (Déléage, 178) and Jones suggested (quite plausibly) that such land would be that which was of low agricultural value (Jones, 52). It is clear that in Lesbos the areas assigned to pasture could be of significant extent (100 iugera in the estate at Petra, 50 iugera on the east shore of the Gulf of Pyrrha, the "Λευκὴ ἄκτῆ cὺν τεμένει" estate), and that estates on each side of the "Pyrrhaean Mountain" at Pyrrha and Makriana, both prescribed land for this practise.²⁷ Most importantly, not only would it be likely that the areas given over to pasturage of animals in the summer months included upland areas (such as the Pyrrhaean Mountain),²⁸ but also that this type of land use is one which would leave little trace in the archaeological record.

It seems clear, therefore, that even though the pattern of settlement in southeast Lesbos indicated from the late Roman inscriptions agrees substantially with that created from the archaeological data in terms of the definition of the forest and the location of villages and estates, the data from the inscriptions have suggested that there may well have been use made of the upland areas (such as temporary occupation for shepherding purposes) which is simply not traceable today. This lesson in the interpretation of settlement patterns is a salutary one given that more often than not there is no such epigraphical evidence to help illuminate practises otherwise archaeologically-invisible. The inscriptions help, therefore, by indicating clearly what often has to be assumed, namely that the resources of areas which attracted little permanent settlement may still have been significantly tapped in less permanent or detectable fashions throughout all periods of human occupation, from the Bronze Age until the present day.

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²⁷ If one were to calculate the total area of pasturage for all estates (including in those villages for which the location is unknown), the overall area devoted to this practice would be very extensive indeed. Jones, 52, noted that in *IG* XII.2.76 alone, there was a combined total of over 925 iugera of pasturage.

²⁸ See C. Chang, "Sheep for the ancestors: ethnoarchaeology and the study of ancient pastoralism" in N. Kardulias (ed.), *Beyond the site: regional studies in the Aegean area* (Lanham 1994), 357-58 where the arguments of Skydsgaard and Hodkinson on such pastoral transhumance in antiquity are summarised; see also H. Forbes, "The identification of pastoralist sites within the context of estate based agriculture in ancient Greece: beyond the 'Transhumance versus Agro-pastoralism' debate", *BSA* 90 (1995) 325-38.



1)



2)

1) The modern pine forest behind the village of Agiasos (foreground), looking southeast,
2) The Roman aqueduct at Moria