

EARLY NEOLITHIC SITES IN THESSALY

In the last chapter we have seen that the mode of subsistence of the people of Sesklo was agricultural, involving domestic crops as well as livestock. The presence of objects and implements manufactured from raw materials which can only be found at places which are more than a day's journey from the site, points to contacts with other regions. In this chapter we will investigate whether there were settlements similar to Sesklo and, if so, how far away they were. We will see that they do indeed exist, but only in certain geographic regions and not everywhere in the surrounding countryside. This compels us to give a geographical description of Thessaly. Furthermore we propose to investigate the similarities and differences between the settlements. Overall, we will see that Sesklo is part of a more general pattern.

VI. 1. *Geography (fig. 2)*

In order to achieve the above aim we will first give some information on the geography of Thessaly. It is largely based on the excellent account of A. Philipsson (1950/59 Vol. I, pt. 1).

Thessaly consists of a large 'lowland area' which is almost completely surrounded by mountains and sea. Two large basins – the plains of Karditsa and Larisa- and three smaller basins – the plains of Xerias, Volos and Almyros - together form the lowland area of Thessaly. The plains are separated from each other by low ridges of hills.

– In the West, Thessaly is separated from Epiros and Aetolia by the steep and barren Pindos. It can be crossed only by the difficult Zygos pass;

– in the Southwest and South, it is separated from the Spercheios basin, Boeotia and Locris by Tymphristos and Othrys. The Western part of the latter is quite low and may fairly easily be crossed;

– in the Northeast and East, are Ossa, Mavrovouni, the Volos plateau, Mount Pilion and the Magnisia peninsula, ending in Trikkeri. The peninsula encloses the Pagasitic Gulf, also known as the Bay of Volos, which is in fact the continuation of the Volos basin. In between Trikkeri and the mainland is the narrow strait of Trikkeri, leading from the Pagasitic Gulf into the Aegean;

– in the North, Thessaly is separated from Macedonia by Kato-Olympos, Olympos and the Chasia mountains. The only roads leading into Macedonia go by the Vale of Tembe, separating Ossa and Kato Olympos, and by the valley of the river Xerias, in between Olympos and the Chasia mountains.

It will be clear that Thessaly is a well enclosed region. Easy access overland is only to be found in the North, through the vale of Tembe and the valley of the river Xerias, and in the South, across the western part of Othrys and along the coast. By sea, the best route is from places situated on the Pagasitic Gulf.

During the Plio-Quaternary, the basins of Karditsa, Larisa and Volos were submerged (Aubouin 1959, p. 276). In the two former, lakes were formed whereas the latter was submerged in the sea. Most of the lakes became land again after a more recent uplifting of the land and lowering of the sea-level. The larger part of the Volos basin remained submerged and is known as the Pagasitic Gulf. The only fragment surviving of the Quaternary Lake of Larisa was Lake Viviis. The extent of the Lake during the Neolithic period is unknown, but Schneider (1968 p. 45) supposes that at some time during the Postglacial the watertable was some 20 m higher – therefore it must have been larger in extent. In fact Grundmann (1937 p. 56) had concluded this already, arguing that the distribution of Neolithic settlements indicated the former shore line (fig. 2).

Looking at Thessaly from Sesklo, we see that to

the North and North-east the land first goes down to the small pass connecting the plains of Volos and Larisa and then rises steeply to the foothills of Marrovouni and Pilion. To the East it descends towards the small plain of Volos. To the Southeast and South it ascends first rather steeply to the Chalcodonio foothills and then descends into coastal plain of Almyros. Towards the Westsouthwest it ascends into the Chalcodonio for a distance of some twenty km and then finally gives way to the plain of Karditsa. To the West it descends into the plain of Larisa.

To the North and Northeast, areas are suitable for hunting, but not especially for permanent human occupation. Here no settlement traces are discovered yet. The same applies to the area directly Southwest of Sesklo. The areas most suitable for settlement in the vicinity would be the plains of Volos, of Almyros and of Larisa. In the first, no traces of Early Neolithic settlements have been recovered, although the possibility that they are either buried by later settlements or covered by recent alluvium cannot be excluded.

VI. 2. *The plain of Almyros*

The plain of Almyros offers favourable conditions for an Early Neolithic economy. One would expect that it had been inhabited during Early Neolithic I, but proof of this is still lacking.

The only Early Neolithic settlement investigated in this plain is *Pyrasos*. (fig. 18 no 27). The site is situated on the coast, in modern Nea Anchialos, at a distance of 9 km from Sesklo. It lies in a flat alluvial plain, which may have been slightly damp during winter, since several small streams debouch into the sea along this shore. The soil in the region is at present very fertile and well suited to different agricultural purposes. During the Early Neolithic, climate and vegetation will not have differed much from what we described in general terms for the region of Sesklo.

The mound itself is composed largely of building debris, which is over 9 m thick. Trial excavation revealed that it had been occupied from Early Neolithic to Classical times (Theocharis 1959, pp. 31-69). The lowest level of the Early Neolithic

stratum included some twelve sherds with early painted motifs. It can best be compared to Early Neolithic II from Sesklo. Older phases have not as yet been discovered.

The architectural remains discovered in the lowest level consisted of some postholes and a hearth, but otherwise provided no information. The finds other than pottery do not differ from those discovered at Sesklo.

The faunal remains were quite interesting for they included not only bones of domesticated animals, but also many vertebrae of large fish, shells and remains of crustaceans – indicating that marine activities played some role in the subsistence pattern. As yet this is the only Early Neolithic site in Thessaly situated directly on the shore.

As for raw materials available in the vicinity, these included clay, wood and probably reed and stone. The extinct volcano of Mikro Thive, which supplies the volcanic rock used to manufacture grinding slabs, is at a distance of four km from Pyrasos, across an area of flat land.

VI. 3. *The plain of Larisa*

The plain of Larisa, to the Northeast of Sesklo, is an area which is very suitable for farming. It is an alluvial plain and it consists largely of flat land. Towards the surrounding foothills it is slightly undulating. It is partly covered by Holocene deposits. There are not many rivers crossing it – the only large ones being the Pinios and its tributary, the Xerias. Otherwise the plain is watered by rain-fed streams coming from the Chalcodonio. The Pinios used to be connected to Lake Viviai by the Asmaki stream. Streambeds are all rather shallow (Anastassiades 1949) and melting snow and heavy rains have often caused floods.

The climate of the plain is slightly different from the east coast and Sesklo. Summers are hotter and winters colder. The yearly average is 16.1°C, with an August average of 27.3°C and an average for the coldest month of 5.4°C. In summer rainfall is extremely low, whereas the temperature may rise to maxima of over 40°C. The climate was probably slightly different during the Early Neolithic, but is

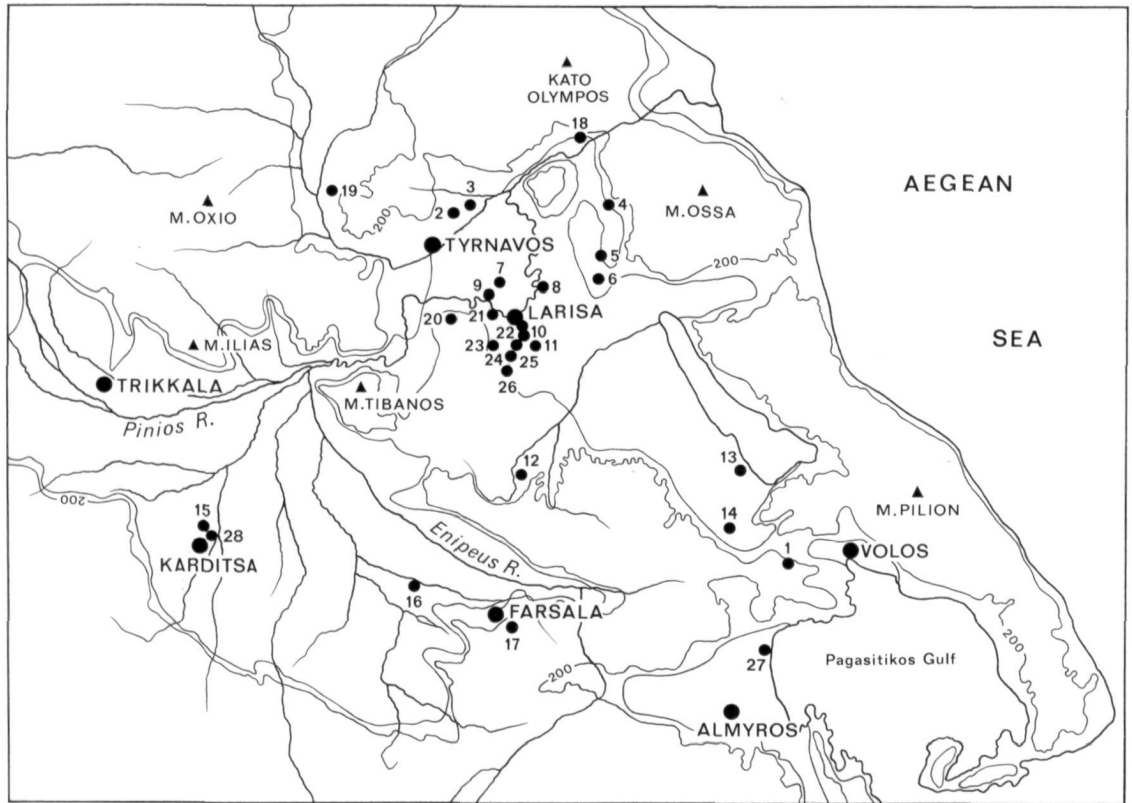


Fig. 18 Map of Thessaly – distribution of the Early Neolithic I settlements.

1 Sesklo. 2 Agia Anna. 3 Magoula Agios Athanasios. 4 Bournarbasi. 5 Nessonis I. 6 Gendiki. 7 Otzaki. 8 Soufli-Magoula. 9 Argissa. 10 Magoula Motel. 11 Magoula SE of Motel. 12 Koutouki Magoula. 13 Karamourlar. 14 Gioulberi. 15 Koskina Magoula. 16 Magoula Demerli. 17 Achilleion. 18 Magoula Tepe Gonni I. 19 Magoula Domenikon. 20 Magoula Mantras. 21 Magoula K.E.P.M. 22 Magoula Averof. 23 Magoula Vrastira. 24 Magoula Pigadoula. 25 Magoula "Boukoum". 26 Magoula Beï. 27 Pyrasos. 28 Prodomos.

likely to have been in the same relationship to that of Sesklo as it is at present.

As to the vegetation, we refer to the general remarks on the vegetation of Early Neolithic Sesklo made in chapter V. We think they will largely be valid for the Larisa plain, too.

Survey has indicated that the plain was well settled during the Neolithic (French, forthcoming), but unfortunately most mounds have been investigated only rather haphazardly. As a result we possess but limited information on occupation during the Early Neolithic. Going from Sesklo northwestwards

through the plain, we will discuss the Early Neolithic sites one by one.

VI. 3. 1. *Magoula Gioulberi* (fig. 18 no 14)

A mound some 8 km northwest of Sesklo, some 2 km from the banks of Early Neolithic Lake Vivia. The site is the nearest to Sesklo of all those discussed here. It has not been excavated, but Early Neolithic pottery has been discovered during survey work (Theocharis 1965b, p. 319). The surveyor did not

state whether the pottery belonged to Early Neolithic I, II or III.

VI. 3. 2. *Karamourlar (fig. 18 no 13)*

Karamourlar is situated on slightly rising ground, apparently not a magoula, at a distance of 12 km northwest of Sesklo. (Theocharis 1973 p. 349). If we accept Grundmann's estimate of the extent of Lake Viviis, this site should have been well inside the lake – and in that case one might think of a small islet. Another possibility is that the extent of Lake Viviis fluctuated, in accordance with the humidity of a given period. Unfortunately the site itself can provide us with little information. Upon excavation it became clear that the entire area had been disturbed by previous agricultural activities. Although the finds were extremely rich and despite the fact that they included many interesting objects, they were of little practical value, since the stratigraphy was completely disturbed. The pottery finds included material which closely resembles the pottery from the lowest pottery-bearing levels at Sesklo – therefore it would be reasonable to suppose that the site was already occupied during Early Neolithic I.

After these two, there is a remarkably long distance over which the presence of Early Neolithic mounds has not yet been attested. There are a good many magoulas in this area, but the pottery discovered in survey has not been subject to close analysis.

In the region of Larisa proper, at a distance of some 45-55 km northwest of Sesklo, is a cluster of magoulas which may have been occupied during Early Neolithic I. Many of them (fig. 18 no. 20-26) have been discovered very recently in a survey by Dr. C.J. Gallis and exact data on situation and size are unknown to the author. She has however identified some of the ceramic material as belonging to Early Neolithic I. These settlements are apparently all situated South of the River Pinios at a distance of up to 12 km from the bank of the river. The distance between the mounds is some 4-6 km.

We have a little more data on numbers 10 and 11

of the map. No 10 is *Magoula Motel*, also known as *Magoula Vrasterò* or *Karagats*. It is to be found 3 km south of Larisa, directly behind the Larisa motel. It lies on the borderline between an Upper Tertiary terrace and the valley of the River Pinios. Grundmann surveyed it (1932 pp. 102-123) and discovered a rich collection of Early and Middle Neolithic ceramic material, including some Early Neolithic I fragments.

No 11 is situated some 2 km Southeast of *Magoula Motel*. It is a very low mound, which was probably occupied for only a short period. Survey revealed that the pottery had Early Neolithic I and II characteristics.

VI. 3. 3. *Argissa (fig. 18 no 19)*

The site of *Argissa* is some 4.5 km west of Larisa. It is commonly known as *Gremnòs* or *Gremura Magoula*. The mound was visited by W. Leake (1835 p. 534) during the last century. It was cited by Tsountas (1908 p. 6 no 30) as being the ancient city of *Argoura* and Homeric *Argissa*. It may have been the *Akropolis* of the city of *Argoura*, which flowered from the Early Geometric to the Early Roman period. During the years 1956-1958 it has been excavated by a German team, directed by V. Miložčić. (1960 pp. 1-56). At a depth of 6-7 m below the old ground surface, fossilised bones and stone implements indicated the presence of Middle Palaeolithic occupation at the site. The occupation of the mound lasted from the Pre-Pottery Neolithic to the Early Roman period.

The site is situated on the southern edge of an extensive Upper Quaternary terrace. South of it stretches the wide valley of the River Pinios. The soil in the immediate vicinity consists of riverine clay, deposited by flooding of the river.

On the vegetation of Neolithic *Argissa* we have just a little additional information in the form of carbonised remains of hawthorn (Hopf 1962 p. 110). The fauna included aurochs, which according to Clason (1978 p. 104) can be found in an open forest with undergrowth, but according to Bökönyi (1973 p. 167) likes big plains with areas of forest.

Of the earliest settlement we have few architect-

tural remains. As at Sesklo the Pre-Pottery stratum contained pits which had been dug into the sterile soil. All have a northeast/southwest orientation. The fact that one pit cuts through three others led the excavator to conclude that they belong to two different phases at least. The pits were related to some postholes of unknown purpose. The excavator (Milojčić 1962 p. 24) surmised that at least one of the pits served for grain storage. In the lowest level of the pottery bearing Neolithic, traces of a rectangular building have been discovered. This had a North-South orientation and measured some 4 x 5 m. The walls had been constructed with posts. Remains of a simple hearth have been found in the northwest corner. In short they are of a conception which seems slightly different from the dwellings at Sesklo.

There are few indications of the size of the settlement, although the Early Neolithic stratum seems to stretch over some 80 m at least in the profile of the mound.

The ceramics of the lowest pottery bearing stratum show the following characteristics:

1. The vessel forms are simple. Restricted shapes are more common than unrestricted ones.
2. The rim generally shows no changes in thickness, though both thinned and thickened rim shapes occur. Lips are generally blunt; both inside tapered and flattened lips occur rarely.
3. Both (plano-)convex and ring-bases are present, apparently in equal proportions.
4. Vessel surfaces are in most cases only well smoothed. Burnishing is very rare.
5. The only decoration consists of pierced lugs and small oval lugs.
6. The wall is mostly between 6 and 9 mm thick – a medium thickness.
7. Coarse tempered ware is extremely rare.

These characteristics, which correspond to those of the middle of Early Neolithic I at Sesklo, are valid for the entire stratum. No shifts towards more elaborate vessel forms and a better surface finish are to be noted. On the other hand there is no clear development from the Pre-Pottery phase towards this Early Neolithic pottery – it appears suddenly. There are indeed a few sherds, resembling the very coarse ware of Sesklo, but they are entirely mixed with the

common medium gritty pottery. The apparent lack of any notable development during the period may be due to the fact that the stratigraphy is rather difficult. Because of the many disturbances, we have chosen for our sample only material from secure Early Neolithic sections. It seems quite possible that pottery, corresponding to that of the end of Early Neolithic I at Sesklo, is included with material of the next planum.

The finds other than pottery resemble the Sesklo assemblage and we will not discuss them here.

The subsistence pattern is largely the same as at Sesklo. Carbonised seeds included einkorn and emmer wheat, six-row barley, millet and lentils (Hopf 1962 p. 102). The bone sample consists for the largest part – some 80% – of caprovines; most are undetermined but those which could be attributed to either sheep or goat belong for the main part to sheep. Among the minimum number of individuals were 25 sheep and one goat. The remaining bones, some 10% are of pig, some 6% of cattle (including possibly the earliest domesticated cows) and a few fragments are of dog, red deer, roe deer, hare, fox and birds, one of them possibly grey goose (Boessneck 1962). Several shells of freshwater molluscs have been found, too. The bone sample indicates that wild animals were of little importance in the diet.

Building materials were clearly all found locally: they consisted of wood and reed for frame and wattle and of clay mixed with chopped plant remains for daub.

Raw materials to manufacture utensils and objects were partly found locally and partly imported. The latter was certainly the case with obsidian, coming from Melos. Despite the fact that chert was present in the immediate vicinity – only a little way upstream – obsidian was the more commonly used material. We have little information on the provenience of other raw materials. The sandstone slabs which were used as grinding stones may have been found in the vicinity.

VI. 3. 4. *Otzaki Magoula* (fig. 18 no 7)

The site of Otzaki Magoula lies some 5 km North-

east of Argissa. It had already been mentioned by Tsountas (1908 p. 7) and by Grundmann (1932 pp. 102-123). In 1953 a trial trench was dug by the German Archaeological Institute under the direction of V. Miložčić (1954 pp. 1-28). As a result, a large scale excavation was carried out, revealing settlement debris from Early Neolithic II to the end of the Late Neolithic period. Pottery fragments discovered in survey indicated that the mound had already been occupied during Early Neolithic I.

The site lies on the extensive Upper Quaternary terrace. It rises to a height of 5 metres above an area of flat land. The soil in the vicinity consists of a silty clay, which is at present quite fertile.

About the vegetation we have no direct information. The faunal sample included aurochs (Boessneck 1962 p. 40).

The architectural remains of the Early Neolithic II settlement were of mudbrick dwellings. They did not have a stone foundation or a framework made of wooden posts; the walls rested directly on the ground surface. The excavator found indications that the houses had flat roofs, constructed in wattle and daub (Miložčić 1971 p. 17). A similar construction may also have been used during Early Neolithic I.

Since the finds which belong to Early Neolithic I are surface finds only, we will not discuss them here.

As far as the subsistence pattern is concerned we have to rely on the information given by the bone material from the Early Neolithic II and III strata. The sample, which is very small, shows the common pattern. Caprovines are most important, followed by cattle and pig. Contrary to the data from Argissa, goat seems to have been almost as common as sheep. Wild mammals are of little importance.

The provenience of building materials was again local. Raw materials used to manufacture utensils and other objects, other than ceramics, probably came largely from the same areas as those exploited at Argissa.

site bank of the River Pinios lies the site of Soufli Magoula. Tsountas had already mentioned that it yielded much pottery from the earlier Neolithic (1908 p. 6). In 1958 Theocharis made a trial excavation with two trenches (Theocharis 1958, p. 78-86). In this way he wanted to clarify the stratigraphy of the Neolithic occupation. He discovered a fairly thick stratum bearing no pottery at all, which lay over bedrock (fig. 19). Overlying this were strata from the earliest pottery bearing Neolithic to the Bronze Age. In 1974 the present ephoros of the Larisa region, C. Gallis, had to do a rescue excavation on an area of large blackish patches on the eastern flank of the mound (Gallis 1975 pp. 241-258). Those turned out to be cremation burials, eleven in all. Four of them were completely untouched and undisturbed. To judge by the pottery they belonged to Early Neolithic III. If so, they represent the oldest cemetery yet found in Greece.

The magoula, a low artificial mound consisting

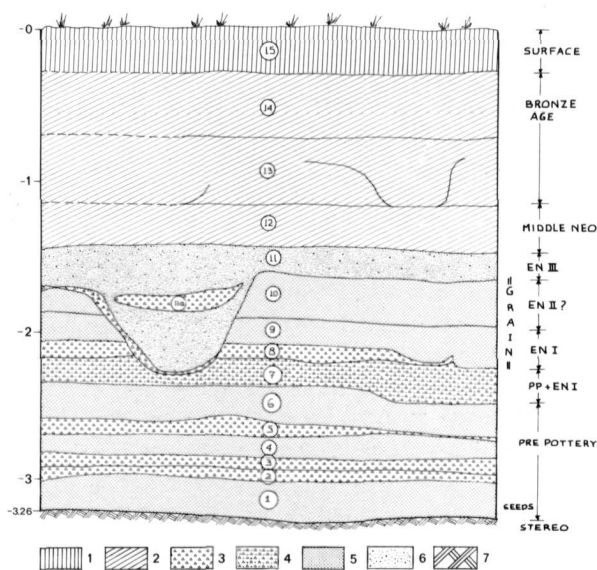


Fig. 19 Stratigraphical section of Soufli-Magoula, excavated in 1958.

1: surface humus. 2: building debris. 3: clay. 4: clay mixed with charcoal. 5: ashy. 6: ashy with charcoal. 7: sterile.

VI. 3. 5. *Soufli Magoula* (fig. 18 no 8)

Some 10 km Eastsoutheast of Otzaki, on the oppo-

largely of building debris, is at present situated directly on the bank of the River Pinios; it is highly probable that during the Neolithic it used to be at a greater distance from the river. The soil in the vicinity consists of a fertile riverine clay, deposited by flooding. At present the area is largely used for the cultivation of sugarbeet.

The vegetation was probably much the same as that described in general terms for Sesklo. We have one small additional piece of information in the form of a carbonised wild olive stone, which was discovered in the lowest non pottery bearing level.

No clear architectural features have been discovered, although the excavator speaks of beaten clay floors separating the different building phases of the Pre-Pottery Neolithic stratum.

The total of some 250 sherds from the lowest pottery bearing stratum (levels 7-10) is rather small, especially since they include about 95 tiny body fragments. This is probably due to the fact that a large part of the Early Neolithic I stratum had been disturbed by an Early Neolithic III pit. The sherds show the following characteristics:

1. The vessel forms are very simple. In the lowest level, restricted shapes are more common than unrestricted ones, but there seems to be a shift towards a preference for unrestricted forms in the higher levels.
2. The thickness of the rim usually remains unchanged. In the higher levels hole-mouthed jars and convex-walled open bowls may have an up-turned rim. Lips are often blunt. A tapered and a rolled form are represented by one example each.
3. As base-forms, both plano-convex and ring-bases are represented.
4. Thickness of wall varies generally between 5 and 10 mm. Heavier wares occur only rarely.
5. Surfaces are in most cases only smoothed. Bur-nishing is rare.
6. Coarse ware occurs in small amounts. Medium fine ware is rare.
7. Colours are never fully oxidised. They belong generally to the group of middle chromas. The percentage of colours of higher values increases from 0% in level 7 to 26% in level 10.
8. The percentage of non-oxidised cores apparently increases in the highest level (10), especially with

sherds having a surface colour of one of the higher values.

On the whole these characteristics indicate ceramics which are comparable with the pottery from Early Neolithic I Sesklo. According to our observations, some of the developments which occur at Sesklo may be noted at Soufli, too.

The finds other than pottery resemble the material from Sesklo. Due to the limited size of the excavation, they are very few in number and will not be discussed here.

The subsistence pattern was probably much the same as at Sesklo. Carbonised seeds include einkorn, emmer, two-row hulled barley, pea and lentil (J. Renfrew, 1966. p. 21 ff.). The bone sample has not been analysed.

Raw materials used to manufacture implements were partly local like the clay used for pottery manufacture, partly from a few km upstream, like the chert, and partly from a long distance away like the Melian obsidian.

VI. 3. 6. *Gendiki* (fig. 18 no 6)

Some 10 km East of Soufli is the site of Gendiki, also known as Chasambali. In 1962 a trial excavation, consisting of one small trench, was carried out by D.R. Theocharis, on behalf of the Greek archaeological service. As a result we possess a stratigraphy (fig. 20), giving us some idea of the periods present at this mound, but not of their extent or importance. Directly above the sterile soil is a stratum which did not contain any pottery. Overlying it is a stratum of yellow river sand. The following strata cover the whole of the Early Neolithic, Late Neolithic and Early Bronze Age (Theocharis 1962b pp. 73-76).

The magoula is situated on the border between the plain of Larisa and the Chasambaliotiki hills, which form the foot of mount Ossa. It lies on the Southwest side of the once marshy area of former Lake Nessonis. The magoula consists of building debris over a small natural rise. The soil in the vicinity consists of fertile clay.

In the lowest strata were no architectural remains, but the Early Neolithic II stratum contained parts of

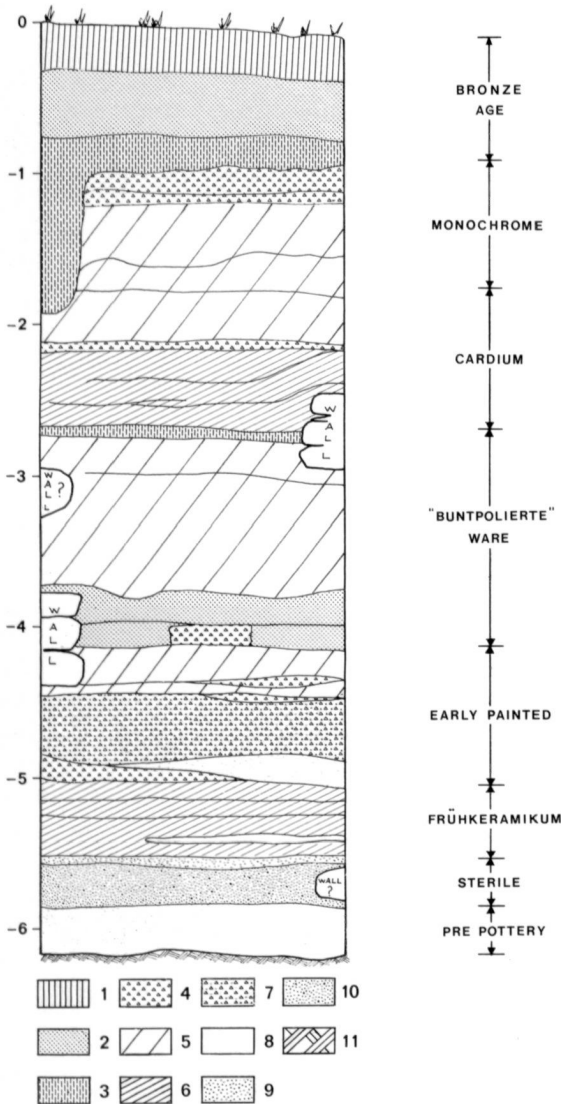


Fig. 20 Stratigraphical section of Gendiki.
 1: surface humus. 2: ashy. 3: burnt building debris. 4: clay. 5: ashy building debris. 6: building debris. 7: dark soil with clay. 8: ashy with charcoal. 9: sand. 10: sand with ashes. 11: sterile.

a stone foundation wall and a beaten clay floor covered with ashes.

The sample of 150 sherds from the lowest pottery

bearing stratum which we have investigated showed the following characteristics:

1. Vessel forms are very simple. Restricted shapes appear to be more common than unrestricted ones.
2. Rims do not generally show any changes in thickness. Hole-mouthed jars have in several cases a slightly up-turned rim. Lips are generally blunt.
3. Both plano-convex and ring-bases occur. It cannot be stated which is the more common type.
4. Vessel surfaces are generally well smoothed only. Burnishing appears to be rare.
5. Walls are generally between 6 and 9 mm thick. Both thin and heavy wares are rare.
6. Pierced lugs are the only decoration.
7. Coarse tempered ware occurs, but is rare.
8. Colours often belong to the group of middle chromas. The core is often completely oxidised.

These characteristics show that the ceramic ware of this stratum may be compared with the Early Neolithic I ware from Sesklo. There were no vessel fragments in our sample which seemed to belong to the final part of the period, apart from the hole-mouthed jars with upturned lips. There was not a single fragment of the very coarse clumsy ware; this could be accidental, but might also have been caused by the fact that Early Neolithic I began slightly later at Gendiki than at other sites.

The finds other than pottery included, apart from chert, obsidian and bone implements and a stone earstud, as well as fragments of two shallow, open stone bowls. These had been made in a light coloured greenstone, possibly serpentine.

Concerning the subsistence pattern we possess only a little data, but they indicate that from the Pre-Pottery Neolithic stratum onwards, agriculture played an important role. A sample of carbonised seeds from the deepest stratum consisted for the largest part of emmer, but also included einkorn, two-row hulled barley, lentils, vetch and peas (J. Renfrew 1966).

The building materials, consisting of stones used in the foundations, mud mixed with chopped plant remains for daub, twigs, branches and reed for wattle, could be found in the vicinity. Raw materials used to manufacture implements could partly have been obtained in the direct vicinity or at short distance, like the greenstone. Chert came from an area

within a day's reach, but the obsidian was once again from Melos.

VI. 3. 7. *Nessonis* (fig. 18 no 5)

Some 5 km North of Gendiki are the four mounds of *Nessonis*. The mounds are situated in the plain of *Keserli*, on the northeast side of the former Lake *Nessonis*; they lie on an Upper Quaternary terrace. The surrounding area consists largely of flat land. To the East are low foothills, largely composed of schists. The soil in the vicinity consists of fertile clay, on which at present sugarbeet and cotton are cultivated.

In 1975 a trial excavation, consisting of two small

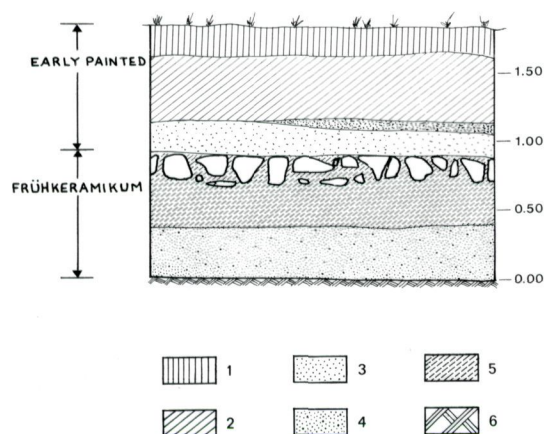


Fig. 21 Stratigraphical section of *Nessonis* I.

1: surface humus. 2: building debris. 3: ashy. 4: ashy with charcoal. 5: clay. 6: sterile.

trenches, was carried out at *Nessonis* I and II by D.R. Theocharis. It served merely to establish the stratigraphy of the mounds. In the trench at *Nessonis* I, the sterile soil was reached at a depth of 1.90 m. The finds indicated that the mound had been occupied during Early Neolithic I and II. The two strata were separated from each other by a kind of stone floor (fig. 21) (Theocharis 1958, p. 78-86).

Except for the stone floor no architectural remains have been discovered.

The sample of some 200 sherds from the deepest stratum showed the following characteristics:

1. Vessel forms are very simple. Restricted shapes appear to be more common than unrestricted ones.
2. Rims do not in general show changes in thickness. Hole-mouthed jars may have a slightly up-turned rim. Lips are mostly blunt, although varieties like inward tapered and flattened lip occur.
3. Both plano-convex and ring-bases are to be found.
4. The thickness of the wall ranges mostly between 6 and 9 mm. Both thin and heavy walled ware are rare.
5. The surface is in most cases smoothed only. Burnishing seems to be quite rare.
6. Pierced lugs are the only decoration.
7. Coarse tempered ware is rare.
8. The colours belong generally to the group of middle chromas: uncertain buffish or reddish.

These characteristics indicate that the pottery from stratum I of *Nessonis* I compares well to the pottery from Early Neolithic I *Sesklo*. We have not been able to discover the small changes characteristic of the end of Early Neolithic I and the transition to Early Neolithic II, but the sample was rather small.

The finds other than pottery included a few fragments of bone awls, a little chert and obsidian and some heavy stone implements.

We do not dispose of any data which could shed light on the subsistence pattern except for the bone awls, which were made of the bones of domesticated sheep/goat.

The raw materials were local in origin, but the chert and obsidian were certainly brought from further afield.

Some 7 km Northeast of *Nessonis* is the site of *Bournarbasi*. (fig. 18 no 4). It is situated near the northern entrance of the plain of *Keserli*, and therefore in an area of flat land. To the east rise the foothills of Mount *Ossa*, to the West flows the *Kalamitsa*, a tributary of the River *Pinios*. The site has only been surveyed, which revealed that the mound had an apparently continuous occupation

from the Early Neolithic to the Mycenaean period (Theocharis 1964 p. 262; Miložčić et alii 1976). The exact nature of this occupation is as yet unknown.

Some 25 km West of Bournarbasi, having crossed both the Pinios and Xerias, and 20 km North of Argissa we come to the site of *Agios Athanasios*. (fig. 18 no 3). At present it lies on the right bank of the River Mati, a tributary of the Xerias, on the Upper Quaternary terrace which borders the North and West side of the valley of the Pinios. In survey a large amount of pottery from the Early and Middle Neolithic was discovered (Theocharis 1964, p. 262). It included Early Neolithic I material.

Some 4 km Southwest of Agios Athanasios is *Agia Anna*. (fig. 18 no 2). The mound was surveyed by D.R. Theocharis in 1960 (Theocharis 1960, p. 186). A trial excavation was carried out in 1968 by G. Hourmouziades (Hourmouziades 1969b p. 169 ff). Due to bad weather he did not succeed in reaching virgin soil. The part which could be excavated revealed the presence of all Neolithic periods except for Early Neolithic I and II. Early Neolithic III had no architectural remains except for a stone wall. As far as pottery is concerned, this very thick stratum contained monochrome ware as well as black topped ware, cardium-incised ware and a few painted sherds.

In the northeastern corner of the plain of Larisa, near the Vale of Tembe is the site of *Tepe Gonni I* (fig. 18 no 18) – only recently surveyed by C.J. Gallis. We do not dispose of any geographical data on this site. The pottery seemed to include Early Neolithic I ware.

In the valley of the River Xerias, at the very westernmost foot of Kato Olympos, lies *Magoula Domenikon* (fig. 18 no 19) another site which has only recently been surveyed by C.J. Gallis. Here the pottery also included Early Neolithic I material.

Having considered all the Early Neolithic settlements hitherto investigated in the plain of Larisa, we must conclude that the circumstances of life were largely the same as at Sesklo. There appear to be

some differences in the way dwellings were built, which are largely due to the fact that construction methods are dependent on the locally available raw material. Stone foundations were only laid when large stones were available in plenty; otherwise either a framework of wooden posts was used or there were no foundation walls at all.

VI. 4. *The plain of Karditsa*

Moving from Sesklo eastward, over the Chalcodonio range, one comes to the plain of Karditsa. As is the case with the plain of Larisa this is an alluvial plain, consisting largely of flat land. It is quite probable that the Northern part of it is even covered by alluvium of late historical date (Vita Finzi 1969). This part of Thessaly is well watered by powerful rivers from the surrounding mountains, the steep Pindos range in the West and the Kassidiari in the South. They traverse the plain to unite in the mighty Pinios, which then flows Eastward to the plain of Larisa. Considerable flooding probably occurred in prehistory, as was the case in recent times too. On the one hand this improved soil texture and structure, but on the other hand destroyed crops and, in some cases, settlements.

The climate is different from the climate in the eastern plain. Temperatures do not show large differences – here too winters are cold and summers very hot – but the annual amount of rain is far larger (738 mm at Trikkala) and falls largely in the wintermonths (November - second half of February), with a second small peak in April. Being the result of topography, we may presume this difference in climate to have existed during the Neolithic period as well.

Concerning prehistoric vegetation we have no data, but we assume that, despite the different climatic circumstances, it will not overall have been greatly different from the general picture we have sketched for the vegetation at Sesklo.

On the whole our knowledge of possible Early Neolithic settlements in this area is a very scanty one. This may partly be due to the fact that settlements in the Northern part of this plain have been covered by recent alluvium and partly because it has been surveyed on a limited scale only.

VI. 4. 1. *Achilleion* (fig. 18 no 17)

Having crossed the Chalcodonio range we move a little South from the plain into the foothills of Kassidiari and at a distance of 40 km from Sesklo we come to the site of Achilleion. In 1961 a trial excavation with two small trenches was carried out by D.R. Theocharis (1962 pp. 71-73). In 1973/74 this was followed up by a larger scale excavation by the University of California, Los Angeles, in a joint venture with the Greek Archaeological service. The Director was M. Gimbutas, joined in 1973 by D.R. Theocharis and in 1974 by C.J. Gallis (Gimbutas 1974a). The trial excavation revealed a stratigraphy from the Pre-Pottery Neolithic till the end of the Middle Neolithic. In this large scale excavation the Pre-Pottery was missing.

The site is situated in an area of gently undulating hills; there is no flat land in the vicinity. The rock formation is largely composed of radiolarites and schists, but in the immediate vicinity serpentine comes to the surface, too. The soil consists of a red clay, which at present supports large wheat fields.

The only data we possess on the Neolithic vegetation consist of carbonised acorns. The faunal remains include red deer, roe deer, fallow deer, aurochs, wild swine, fox, hare, wild cat, badger and birds of unidentified species. This seems to indicate that the biotopes of all these animal species could be found in the vicinity of the settlement. We may therefore assume that there were woods as well as open spaces near the settlement.

The architectural remains of the Early Neolithic settlement are very scanty. They consist largely of ghost impressions of matting, of parts of stone foundation walls, of pisé debris, of carbonised fragments of wooden stakes and of some pits bordered with stones, probably fire pits or cooking pits.

The pottery of the lowest levels showed the following characteristics:

1. Vessel forms are simple: restricted shapes are more common than unrestricted ones.
2. Rims do not generally change in thickness. Percentages of thickened and thinned rims are equal. Lips are most often blunt.
3. Vessels generally have a low ring-base – straight

or slightly out-flaring. Plano-convex bases occur too.

4. Vessel surfaces are rarely burnished.
5. Pierced lugs are the most common decoration, but small lugs occur.

In the higher levels of the first stratum (Gimbutas 1974a, fig. 2) the following changes occur:

1. There is a slight temporary shift from restricted to unrestricted vessels. In the highest level the number of restricted shapes increases again.
2. The up- or out-turned rim becomes more common. Both ledge-rim and rolled lip are introduced.
3. The ring-base flares outwards both higher and wider, whereas the planoconvex base gradually disappears.
4. Vessel surfaces, and especially the exterior one, are in almost all cases burnished, albeit rather streakily.
5. Painted decoration is introduced, even though solid triangles are the only motif. Knobs replace pierced lugs more and more as applied decoration. In the highest level, rows of pellets are introduced.
6. Walls become thinner.
7. The amount of incompletely oxidised cores increases.

Compared with Sesklo we see that the pottery of the lowest levels has all Early Neolithic I characteristics. In the higher levels we note a gradual change to Early Neolithic II – not different from the development at Sesklo. This suggests the conclusion that the pottery which usually is said to represent the Achilleion phase of the Frühkeramik belongs in fact to transitional Early Neolithic I/II. Among the pottery from the lowest level is some of the very crude, clumsily made ware, again mixed with monochrome medium gritty pottery.

During the succeeding Early Neolithic III a difference in development may be noted. Whereas painted decoration has disappeared on the pottery from Sesklo, it continues to exist and even to gain in importance at Achilleion.

The finds other than pottery do not on the whole show a marked difference from those at Sesklo. They include obsidian, chert and bone implements, ground stone tools, a great number of figurines and also two fragments of plate-like greenstone vessels.

The subsistence pattern was clearly agricultural.

The sample of carbonised seeds which has been analysed (Renfrew 1966 pp. 21 ff.), included emmer wheat and oats. The bone sample consisted for much the largest part of domesticated animals – the highest percentage being of sheep/goat, followed by pig and cattle. There were also a few dog bones.

Building materials were probably all local. Of the other raw materials, obsidian was certainly imported; chert was partly imported – probably from the Pinios area near Larisa – but some of it is said to be local jasper (Elsker, pers.comm.). Greenstone could be a local product. The volcanic stone used to manufacture the grinding slabs probably came from the volcano of Mikro Thive.

Some 12 km Northwest of Achilleion is the site of *Magoula Demerli*. (fig. 18 no 16). It is situated in the plain, surrounded by an area of flat land. Survey indicated that this mound was occupied throughout the whole Early Neolithic period (Theocharis 1961 p. 179).

VI. 4. 2. *Prodromos* (fig. 18 no 28)

Some 25 km Westnorthwest of Magoula Demerli is the village of Prodromos. Between 1970 and 1972, rescue excavations were carried out by G. Hourmouziades at three magoulas, Prodromos 1 and 2 at a distance of some 1.5 km North of the village, and Prodromos 3 inside the village. The former two are both low mounds which were occupied during the Early Neolithic until the transition to the Middle Neolithic. Prodromos 3 is a tall mound on a natural rise. Here Late Neolithic, Bronze Age and historical levels overlie a thick Early Neolithic deposit. (Hourmouziades 1971, 1972).

The sites lie near the southern edge of a large area of recent floodland and marsh in the northern part of the plain.

Concerning the vegetation we have some sparse data in the form of carbonised acorns and stones of Cornelian cherry (Halstead and Jones 1980). The faunal remains included red deer, roe deer, perhaps wild swine and aurochs, fragments of tortoise shell, one vertebra of a small fish, shells of a freshwater bivalve and one bird bone. We may assume that

biotopes suitable to these animal species could be found in the vicinity of the settlement, which means that there were woods, something like a pond or a lake, and possibly open spaces.

The architectural remains of the Early Neolithic included a wooden roof which had been preserved by waterlogging.

The pottery from the lowest levels mostly has a well oxidised surface colour. It is often red slipped and has a burnished surface. In several cases it has painted decoration. On the whole it compares well with the Early Neolithic II material from Sesklo. Ceramic vessels or fragments of pottery which could be related to Early Neolithic I are not represented among the material.

The finds other than pottery are largely the same as at other sites in Thessaly.

The subsistence pattern at all three sites was agricultural – as evidenced by carbonised seeds, grinding stones, flint sickle blades and a large collection of animal bones. The samples of carbonised plant remains included both emmer and einkorn wheat, barley, peas, lentils and *Lathyrus sativus*. The bone sample consists for the largest part of sheep/goat (some 62%). As was the case at Argissa the bones which could be attributed to sheep predominate heavily over those belonging to goat. The next group – and possibly the biggest supplier of meat – is cattle (some 23%) followed by pig (some 13%). Only a few dog bones have been discovered.

Building materials were all local. Of the materials used to manufacture implements we know but little. The flint probably had the same provenience as at other sites, some 25 to 30 km downstream on the Pinios. Greenstone possibly came from the Kassidiari – 30 km to the East across the plain. The obsidian was Melian.

It is quite remarkable that Prodromos 1 and 2 are so close together, while Prodromos 3 is quite nearby too. It has been suggested that low rises like these mounds would be advantageous for agriculture if flooding was a problem. In that case it would have been practised in the dry area on top of the mound, between the dwellings, and a settlement might have been divided between two or more low mounds in close proximity (Hourmouziades pers. comm; Halstead and Jones 1980 p. 95).

Some 5 km. Northwest of Prodomos is the site of *Koskina Magoula*. (fig. 18 no 15). As is the case with Prodomos, it lies near the southern edge of a large area of recent floodland and marsh. It is a mound built over a low rise and largely composed of building debris. During 1967 an irrigation canal was dug into the eastern side of the mound. The pottery and other material recovered from this trench revealed the presence of the entire Early Neolithic period, including Early Neolithic I, and the Middle and Late Neolithic and Early Bronze Age. (Hourmouziades 1969a pp. 93-95; 1969b p. 169). The finds other than pottery included disc spindlewhorls – made out of early painted sherds – and a ceramic ear-stud.

In the western part of the low foothills of the Chalcodonio, between the plains of Larisa and Karditsa, lies *Koutouki Magoula* (fig. 18 no 12). It is situated on the border of an Upper Tertiary plateau and an alluvial valley. Survey has revealed that the mound was occupied during the Early Neolithic period. (Theocharis 1967, p. 98).

In this chapter we have investigated the position of Sesklo in a larger geographic context – Thessaly. Our knowledge, at present, of the distribution pattern of Early Neolithic settlements is somewhat haphazard. It seems too early to reach any conclusion on their original distribution and on which areas were most favoured for settlement. However, we have noticed that the settlements are all built on the boundary between two different topographic zones. Within this framework we may discern three groups:

1. settlements on the boundary between plain and low foothills – e.g. Sesklo and Achilleion;
2. settlements on the boundary of a river valley and a plateau – e.g. Argissa, Soufli, Prodomos;
3. settlements on the shore of a lake or of the sea – e.g. Magoula Karamoular, Pyrasos.

This quite certainly has much to do with the presence of alternative foodresources. The accessibility of raw materials may have played a role too.

Taking into consideration all the scarce data collected, we have to conclude that at all the sites investigated in Thessaly the subsistence pattern was largely the same. It was in all cases agricultural. At most of the sites where it was possible to attribute the bones of sheep/goat to one of these two species, sheep predominated over goat. This is at first sight contrary to expectations: in a wooded environment, goat should predominate over sheep. An interesting theory has been put forward by Halstead (1981, p. 324), who suggests that the main grazing resource in use was a combination of stubble in summer and autumn and fallow fields in winter and spring. We have too little data on plant remains to say anything about local differences in, for example, the ratio of cereals and pulses grown.

At all sites pottery shares the same characteristics for Early Neolithic I and initial Early Neolithic II. Afterwards local changes gradually occur; these tend to be concentrated regionally, e.g. incised decoration in the region of Larisa.

At all sites local materials were used for building purposes. As a result there are differences in architecture, although the basic house plan seems to have been the same at nearly all sites. In areas where no suitable stone was available, people either built posthouses or they erected their dwellings in mud-brick directly over the clay floor. Concerning construction of the roof we possess little information, but it seems possible that this may have been flat or gabled, depending on local conditions.

Comparing all the data on the raw materials in use, it seems that obsidian, chert, volcanic stone and greenstone, at least, had the same provenience at all sites. This suggests that there was some exchange in Early Neolithic Thessaly; at least it is fairly certain that there was mutual contact between settlements.