Andreas Darlas

3 The earliest occupation of Europe: the Balkans

The small number of Lower Palaeolithic sites in the Balkans, one of the most probable pathways for hominids entering Europe, is possibly the result of the limited amount of research in this area. Isolated finds and excavated sites as Yarimburgaz (Turkey), Petralona (Greece) and Gajtan (Albania) all point to human occupation from the beginning of the Middle Pleistocene onwards.

1. Introduction

A few years ago the Balkans, and above all their southern part, represented a blank on the maps of Lower Palaeolithic Europe. Yet this region is considered to be situated on the most probable pathway that hominids took at the time of their 'conquest' of the European continent. The absence of knowledge of prehistoric man in the Balkans is actually due to the lack of prehistoric research within this area. Information on the Palaeolithic of the Balkan countries started to become available only in recent years. Data concerning the Lower Palaeolithic are very scarce and sites known from this period are not numerous (cf. Fig. 1). The only excavated sites which date to the earlier parts of the Middle Pleistocene are the caves of Yarimburgaz (Turkey), Petralona (Greece), Gajtan (Albania) and Sandalja (Croatia; see K. Valoch, this volume).

2. Turkey

The only site in the European part of Turkey which has yielded Middle Pleistocene archaeological finds is the cave of Yarimburgaz, where archaeological research started recently. The cave of Yarimburgaz is situated 25 km to the west of Istanboul on the Marmara Sea. It has numerous halls, staggered at different levels, which contain important Quaternary deposits with numerous Middle Pleistocene occupation levels (Howell 1989). The associated fauna consists of: *Canis mosbachensis, Vulpes vulpes* ssp., *Cuon/Xenocyon* sp., *Ursus deningeri, Felis sylvestris, Felis leo, Felis gombaszoegensis, Felis (C) caracal, Equus mosbachensis, Praemegaceros* aff. *verticornis, Dama* sp., *Cervus elaphus* ssp., *Bos/Bison, Gazella* sp., *Capra* sp.

The industry comprises a number of pebble tools and a large variety of flake tools (denticulates, notches, side scrapers, composite tools). On the other hand, handaxes are absent, as well as products of the Levallois flaking technique.

3. Greece

The only Middle Pleistocene site excavated in Greece is Petralona cave. Apart from this site, evidence for Middle Pleistocene human occupation consists of isolated finds.

3.1. Petralona

Petralona cave is situated at Chalcidique (Northern Greece), approximately 35 km south-east of Thessalonique and near the village of Petralona. It is a vast cavern made up of a number of galleries more than 1500 m. in total length.

Inside the cave a remarkably well preserved anteneanderthalian skull was discovered in 1960. It was stuck, by a calcite flow, against the wall of a diverticule a few dozen cm above the surface. The skull is of a large size, while its cranial capacity is approximately 1200 cm^3. Unfortunately, the fact that the skull was not found within a stratigraphical context prevents a clear assignment to any of the levels established within the deposits in the cave. Thus the age estimates vary between 200 and 600 Kyr BP (Hennig *et al.* 1981; A. Poulianos 1982).

The quaternary deposits in some places in the cave are up to 15 m in depth (section B cf. Fig. 2) and 27 levels have been distinguished. An important stalagmitic floor seals the sediments, whilst a second one seems to be present in the middle of the deposits.

The different levels are very rich in faunal remains. The small vertebrates (all the levels combined) are represented by Pisces ind., *Bufo* sp. ind, *Pelobates fuscus, Varanus intermedius, Lacerta* sp. ind., *Lacerta* cf. *trilineata, Lacerta* aff. *viridis, Testudo graeca, Testudo* sp., *Ophidia* sp. ind., *Anser anser, Aythya ferina, Fulica atra, Buthierax pouliani, Falco tinnunculus, Alectoris graeca med., Alectoris* sp., *Perdix* cf. *jurcsaki*, Scolopacidae ind., *Larus* sp., *Columba oenas* ssp., *Columba livia* ssp., *Columba palumbus, Strix aluco, Glaucidium passerinum, Bubo* (?) sp. ind., *Corvus corax, Pyrrhocorax graculus vetus, Turdus* sp., *Lanius minor, Prunella collaria*, Passeriformes ind. I., Passeriformes ind. II., *Pachyura* cf. *etruscus* (= *Suncus*

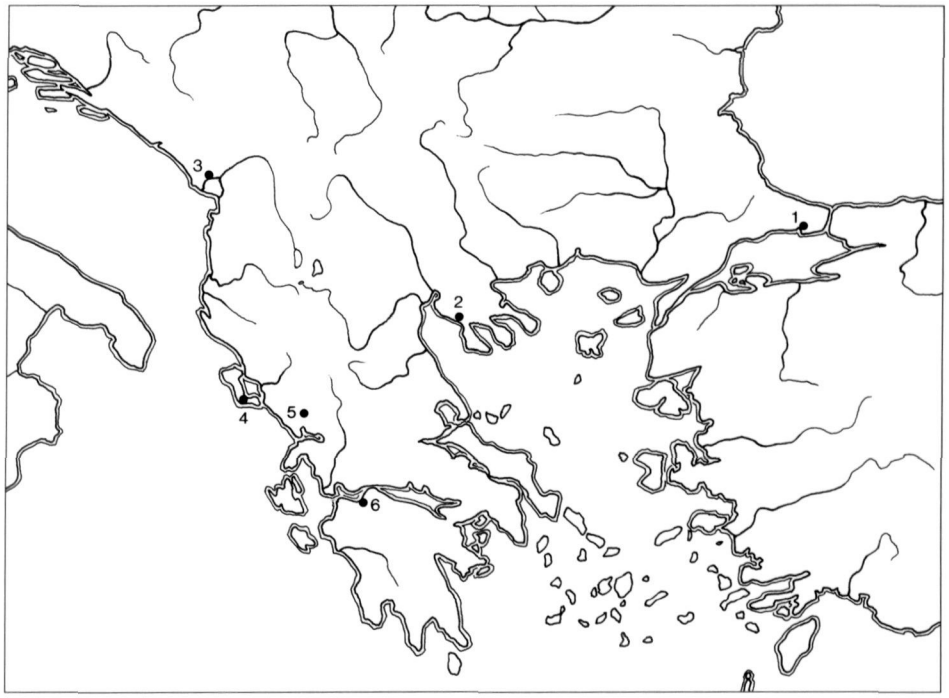

Fig. 1. Sites mentioned in the text. 1: Yarimburgaz, 2: Petralona, 3: Gajtan, 4: Korissia, 5: Kokkinopilos, 6: Vrahneïka.

etruscus), *Sorex minutus, Sorex* sp., *Talpa minuta, Erinaceus europaeus praeglacialis, Rhinolophus* sp. ind. I., *Rhinolophus* sp. ind. II., *Rhinolophus ferrumeguinum topalensis, Myotis myotis, Myotis blythi oxygn., Myotis* sp. ind. I., *Myotis* sp. ind. II., *Eptesicus* sp. ind., *Pipistrellus* (?) sp. ind., *Nyctalus* cf. *noctula, Lepus* sp., *Oryctolagus* sp., *Urocitellus primigenius dafnae, Parasmithus brevidens, Dryominus eliomyoides arisi, Spalax chalkidikae, Allocricetus bursae simplex, Microtus praeguentheri, Apodemus* sp., *Apodemus* (*Kastormys*) *mystacinus, Mys* (*Budamys*) *sinanthropus, Hystrix* sp. (Kretzoi and N. Poulianos 1981). Subsequently N. Poulianos (1990) added *Lagurus* (*Eolagurus*) *argyropuloi zazhighini, Lagurus transiens* and *Arvicola cantiana* (= *A. terrestris cantiana*) to this list.

The large vertebrates are represented by: *Canis lupus mosbachensis, Vulpes* cf. *praeglacialis, Cuon priscus, Ursus deningeri, Ursus thibetanus mediterraneus, Meles meles, Crocuta crocuta praespelaea, Crocuta crocuta petralonae, Hyaena perrieri, Hyaena brevirostris, Felis sylvestris hamadryas, Panthera leo fossilis, Panthera* cf. *gombaszoegensis, Panthera pardus, Homotherium* sp., *Equus* cf. *mosbachensis, Asinus hydruntinus* ssp., *Dicerorhinus hemitoechus, Sus scrofa, Praemegaceros verticornis, Dama* sp., *Cervus elaphus* ssp., *Bos primigenius, Capra ibex macedonica* (Kurtén and A. Poulianos 1977; Kurtén and A. Poulianos 1981; Kretzoi and N. Poulianos 1981; Kurtén 1983).

The faunal assemblage (the carnivores in particular) is interpreted as characteristic of the first half of the Middle Pleistocene. More precisely *H. perrieri, H. brevirostris* and *P. gombaszoegensis* indicate the early Middle Pleistocene as the minimum age, whereas *M. meles* and *P. pardus* give the same period as the maximum age (Kurtén 1983). Thus this fauna is characteristic of the first part of the Middle Pleistocene and allows attribution of an age of 500 to 750 Kyr BP to the Petralona deposits. The fauna has not been specified for each level yet, but the various authors indicate that there are no significant changes within the total sequence. However, three faunal sequences were distinguished on the base of the hyena material (Kurtén and A. Poulianos 1981; Kurtén 1983): the Crenian (levels 18 to 11) characterised by an association of *Hyaena perrieri* and *Crocuta crocuta praespelaea*, the Petralonian (levels 9 to 2) characterised by the replacement of *Hyaena perrieri* by *Hyaena brevirostris* and the continuation of *Crocuta crocuta praespelaea*, whereas the Thermaecian (upper stalagmitic floor) is characterised by the presence of only *Crocuta crocuta petralonae*.

Various dates have been put forward for the deposits, ranging from 200 to 1,000 Kyr BP, but the most coherent of these concern only the upper stalagmitic floor (Ikeya 1980; Wintle and Jacobs 1982; Shen and Yokoyama 1986). Dating of this stalagmitic floor by the uranium disequilibrium method resulted in an age of more than 350 Kyr BP – the limit of this method (Shen and Yokoyama 1986).

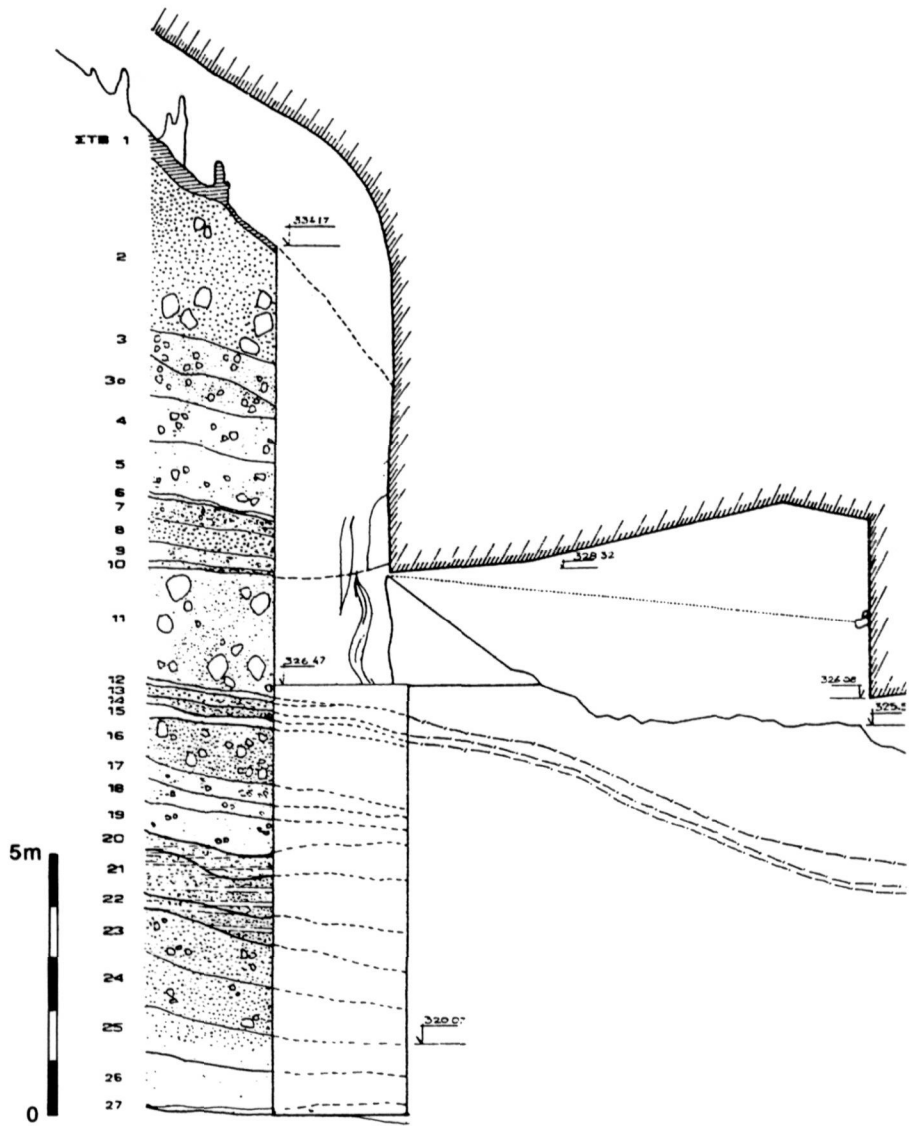

Fig. 2. Petralona: Section B stratigraphy (after A. Poulianos 1982).

As palynological and sedimentological analyses did not result in good indications on the climatic and environmental conditions during the formation of the deposits, only the faunal remains are helpful here. N. Poulianos (1990) has distinguished numerous climatic phases and has drawn up a biostratigraphic table of the deposits (Table I). The herbivores recovered in the different levels were mostly hunted by man, although some do appear to have been brought in by carnivores. The Petralona hominids mainly hunted horse (47.1% of the herbivores), cervids (21.8%) and mountain goat (21.4%) (Kretzoi and N. Poulianos 1981).

The lithic material is abundant throughout nearly all the levels (A. Poulianos 1982). Nevertheless, as a result of a lack of detailed studies, only some scarce data and some drawings and pictures of a few artefacts are available (Fig. 3.1 and 3.2).

The industry looks rather 'archaic' and is almost always made out of quartz; occasionally unmodified bauxite fragments were used as implements. Two flint pieces were

found on the surface of the deposits as well as a few within the deposits which closed the entrance to the cave. Pebble tools are rare and handaxes absent. The base of this industry is formed by small tools, made by using debris, and more rarely flakes. Side scrapers (most often formed by using a thick retouch), notches and denticulates are also frequent, while other tool types are rare.

3.2. Korrissia

A chopper (Fig. 3.3) was discovered *in situ* in a cutting close to the Korrissia lagoon in the south-west of the island of Corfu (North West Greece) (Kourtessi-Philippakis 1990). The artefact comes from a clay bed situated between two marine limestone horizons which rest in strong unconformity on a middle Pliocene sandy deposit. The clay bed has a normal magnetic polarity and has been attributed to the first part of the Middle Pleistocene (Jamet 1982). The chopper could, therefore, be contemporary with the Petralona industry.

3.3. Kokkinopilos

The open air site of Kokkinopilos lies in Epirus (North West Greece) (Bailey *et al.* 1992). A formation of Middle Pleistocene red silts, more than 40 m thick, yielded a Micoquian handaxe (Fig. 4.1), found in situ 16 m below the top of the red silts. The handaxe is, according to the researchers who found it, 250,000 to 300,000 years old (Runnels and Van Andel 1993). In any case this handaxe, with well retouched boards, would fit very well into a Middle, or indeed even Upper, Acheulean industry.

3.4. Other sites

A few isolated tools collected in river terraces have been attributed to the Middle Pleistocene, e.g. finds from the middle terrace of Aliakmon (Northern Greece) and the upper terrace of Piros (Achaïa, western Greece) (Darlas 1994).

A recent discovery near the village of Vrahneïka (region of Achaïa) of two flaked pieces associated with a marine beach has been attributed to the OIS 9 transgression. A limestone slab rests unconformably on Pliocene sands at 136 m of altitude and is covered in turn by an offshore bar with coarse grained sands. The two retouched flakes were found within this offshore bar.

4. Albania

In Albania, prehistoric research started only very recently and the research is mainly limited to the region of Shkoder, in the northern part of the country. In the other regions Palaeolithic discoveries are practically non-existent. Lower Palaeolithic material is found in the cave of Gajtan and the open air site of Baran, located only 800 m from the cave of Gajtan (Fistani 1993a and b).

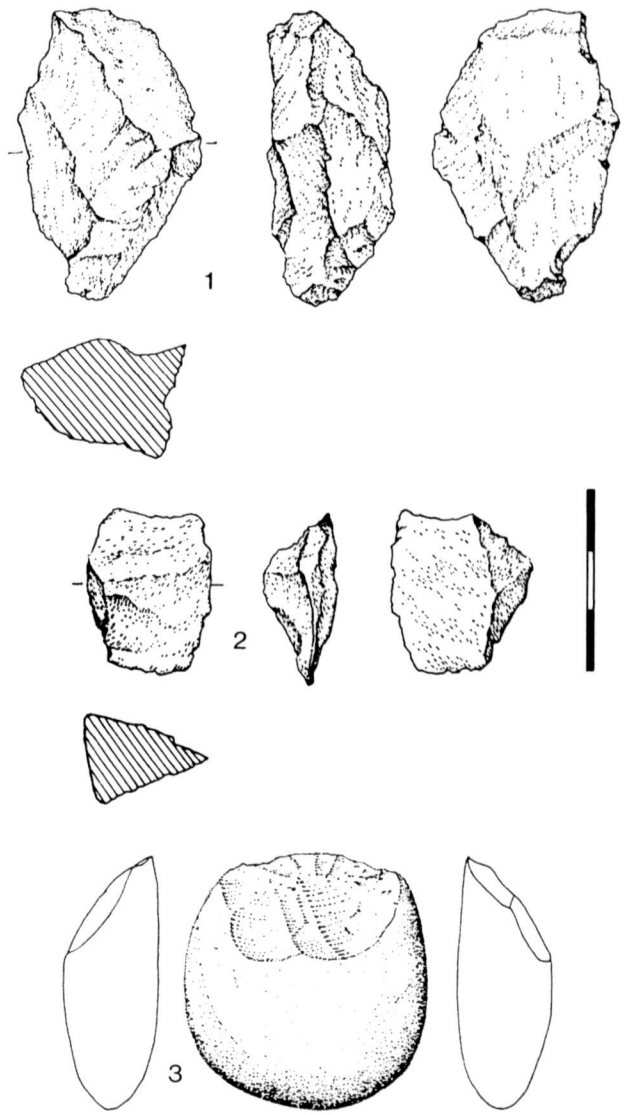

Fig. 3. 1 and 2: Petralona: quartz tools (after A. Poulianos 1978), 3: Korrissia: pebble tool (after Kourtessi-Philippakis 1990). Scale in cm.

Two fluvial terraces are exposed at the site of Baran. Only surface finds of stone artefacts, with no stratigraphic context, have been collected. A "pre-Mindel" age was attributed to the lithic material discovered on the upper terraces, because the assemblage contains archaic tools and rough handaxes, choppers, chopping-tools, and large flakes. Levallois flakes and discoïdal cores also present within the assemblage are interpreted as coming from a more evolved second industry, which represents an *in situ* evolution (*id*: 153).

Table 1: Summary of biostratigraphic and palaeoclimatic data of the Petralona Cave. The first appearance of a taxon in the Petralona Cave sediments is indicated by a dash; those taxa found only in one layer are indicated by a point; those which are observed at almost all layers are indicated by an asterisk; and, finally, those species which are found within certain layers, are indicated by a + (plus) (after N. Poulianos 1990).

Thickness (cm)	Layers	Periods	Ages (ky)	Biostratigraphy	Environment
25	1	Thermaecian		(top stalagmite)	
			550	.*Cuon priscus*	Cooler
255	2	Petralonian		+*Crocuta c. praespelaea*	
				+*Dicerorhinus* cf. *hemitoechus*	?
100	3				
				+*Ursus thibetanus*	
75	4				
					Savanna
90	5				
30	6			**Ursus deningeri*	
				**Canis lupus mosbachensis*	
30	7				
45	8				Cooler
10	9				
10(20)	10	Thracian	610	.*Hyaena brevirostris*	Savanna
				(travertine stalagmite)	Sub-tropic
200	11			+*Crocuta c. praespelaea*	
		Crenian	650	+*Hyaena perrieri*	Savanna/Forest
7	12			**Archanthropus europeus*	
20	13			+*Lagurus transiens*	
15	14			-*Dicerorhinus* cf. *hemitoechus*	
22	15				
90	16			+*Ursus thibetanus*	
				-*Equus* cf. *mosbachensis*	
30	17			+*Hyaena perrieri*	Continental forest/
				.*Arvicola cantiana*	cold humid steppe
30	18				
				+*Lagurus transiens*	
60	19	Elaeochorian		-*Allocricetus bursae simplex*	
			700	-*Apodemus* sp.	Wet and warmer
30	20				
75	21				
30	22				
90	23				
				.*Talpa minuta*	
			730		
90	24				Cold humid steppe (±8°C)
60	25			±*Lagurus transiens*	
100	26	Chalkidikian			Very cold
				.*L. (Eolagurus) a. zazhighini*	steppe (4°C)
2	27		750		
	-28-	Aegean		(basal travertine)	
Total depth 1621					

However, the fact that these tools are surface finds, recovered outside a stratigraphical context, makes it impossible to confirm this age, whereas the presence of Levallois flakes and discoïdal cores seems to indicate a Middle Palaeolithic age. The pebble tools and the large and irregular flakes do not per se indicate a high age, as such pieces are frequent amongst industries discovered in fluvial terraces.

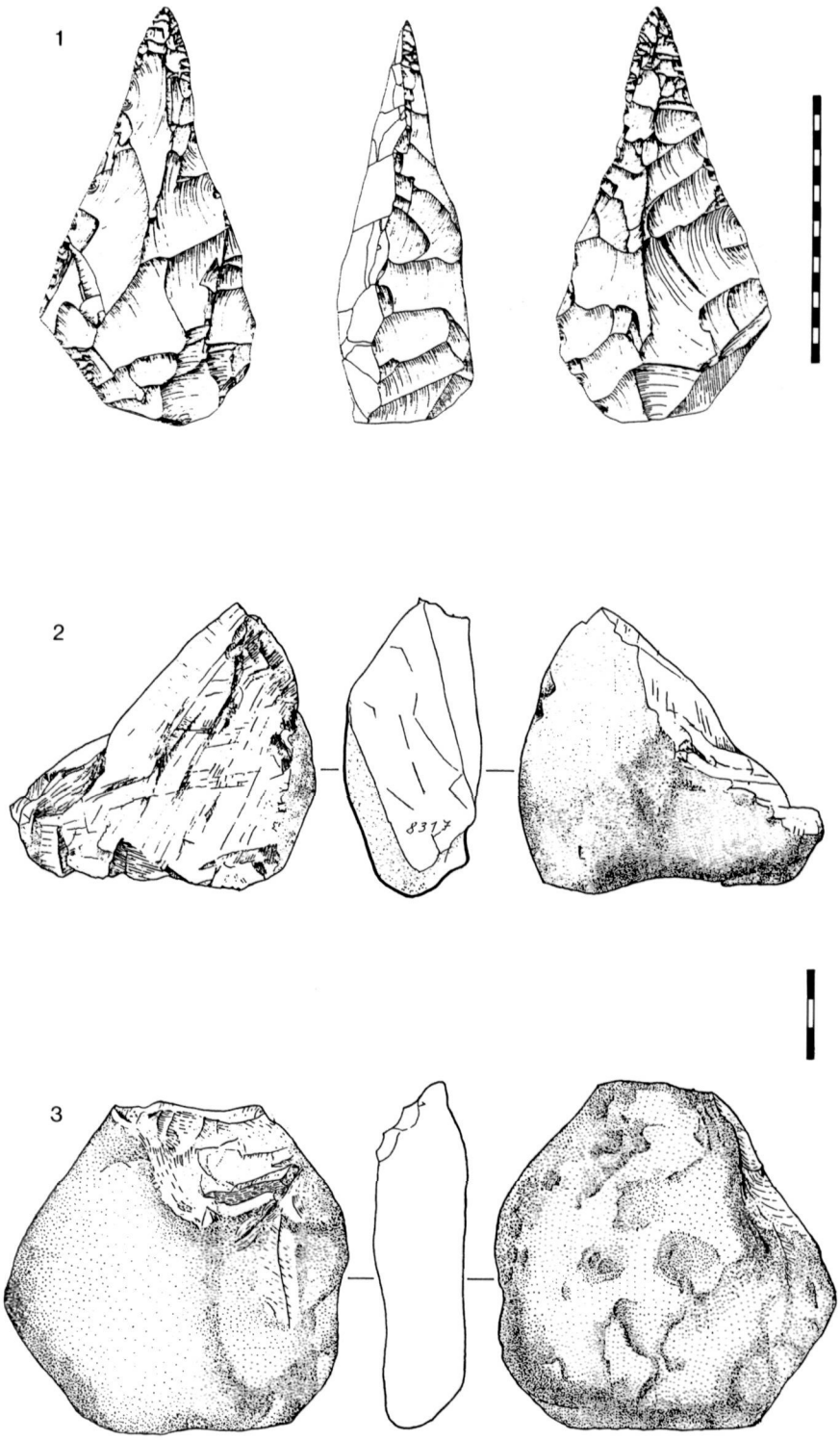

Fig. 4.1: Kokkinopilos: handaxe (after Runnels and Van Andel 1993), 2 and 3: Gajtan: pebble tools (after Fistani 1993b). Scale in cm.

4.1. GAJTAN

The cave of Gajtan is situated to the south-east of Shkoder between the villages of Renc and Gur i zi. The cave is part of a karstic network with a number of cavities which communicate by corridors. The cave has two porches. Excavations at the first one (Gajtan I) revealed important Quaternary deposits, which can be divided into 2 assemblages: the upper assemblage contains a Mousterian industry whereas the lower has yielded a Middle Pleistocene fauna and a Lower Palaeolithic lithic industry. Other bone remains of the same age as those of the lower assemblage were also found in a side chamber of the cave.

The fauna of the lower assemblage contains: *Testudo* sp., *Lepus* cf. *europaeus, Hystrix* cf. *vinogradovi, Canis lupus mosbachensis, Ursus* cf. *deningeri, Ursus thibetanus, Dicerorhinus* cf. *mercki, Sus scrofa, Cervus elaphus, Capreolus capreolus, Dama dama, Bison priscus* (?), *Macaca sylvana pliocena* (Fistani 1993a, Fistani 1993b, Fistani and Crégut-Bonnoure 1993).

This Middle Pleistocene fauna is indicative of temperate climatic conditions and a mainly forested environment. The assemblage has been dated to the Holsteinian Interglacial. A large number of the bone remains show traces that are attributed to human interference, such as defleshing, intentional fragmentation and fire.

The industry discovered in this assemblage consists for the most part of quartzite. It is characterised by the rarity of small tools, absence of the Levallois technique and a high proportion (40%) of choppers and chopping-tools (Fig. 4.2 and 4.3) as well as by the presence of a few atypical handaxes or proto-handaxes.

5. Conclusion

From the present state of Palaeolithic research in the Balkans it is only possible to say that there was human occupation from the first half of the Middle Pleistocene onwards, although the known sites are very limited and dispersed in time and space.

The only sites as yet discovered and excavated for this period are the caves of Yarimburgaz, Petralona and Gajtan. Most studies concerning these sites have been concentrated on the fauna and dating of the deposits. Apart from the faunal evidence, there is very little information about climatic and environmental conditions, and there is also practically no evidence concerning the habitat or activities of prehistoric hominids.

At other sites tools have been discovered in a stratigraphical context (Korrissia, Kokkinopilos, Vrahneïka) but too few to speak about Palaeolithic 'camp'sites. Finally there are a few small tool series, with doubtful dates, from surface sites.

In summary, two conclusions can be drawn:

1. Traces of human occupation dating from before the final phase of the Middle Pleistocene have been discovered in the southern Balkans in spite of the rarity of finds. Because of these finds this part of Europe is no longer a blank on the map of human occupation of this period.
2. The scarcity of sites is principally due to the rarity of research: traces of human occupation of Middle Pleistocene age have been discovered in nearly all regions where prehistoric research has been conducted. This leads us to infer that future research will in all probability lead to the discovery of other and eventually well-preserved sites. Such discoveries will enable us to present a more synthetic study of the first occupations of this peninsular, perhaps one of first regions of Europe to be occupied by hominids.

references

Bailey, G., V. Papaconstantinou, D. Sturdy 1992 Asprochaliko and Kokkinopilos: TL Dating and Reinterpretation of Middle Palaeolithic Sites in Epirus, North-West Greece, *Cambridge Archaeological Journal* 2(1), 136-144.

Darlas, A. 1994 Le Paléolithique inférieur et moyen de la Grèce, *L'Anthropologie* 98(2-3), 305-328.

Fistani, A.B. 1993a Human Evolution in Albania for the Quaternary Period. In: Becky A. Sigmon (ed.), *Before the Wall Fell: The Science of Man in Socialist Europe*, 141-178, Toronto, Canadian Scholars' Press Inc.

1993b Découverte d'un humerus d'ursidé à l'oléocrâne perforé dans le site de Gajtan I (Shkodër) en Albanie du Nord, *L'Anthropologie* 97(2-3), 223-238.

Fistani, A.B. E. Crégut-Bonnoure 1993 Découverte d'*Ursus thibetanus (Mammalia, Carnivora, Ursidae)* dans le site pléistocène moyen de Gajtan (Shkoder, Albanie), *GEOBIOS* 26(2), 241-263.

Hennig, G.J. W. Herr, E. Weber, N.I. Xirotiris 1981 ESR-dating of the fossil hominid cranium from Petralona Cave, Grece, *Nature* 292, 533-536.

Howell, F.C. 1989 Yarimburgaz un nouveau site du Pléistocène moyen à occupation humaine dans l'Ouest de la Turquie (Résumé). In: E. Bonifay et B. Vandermeersch (ed), *Les Premiers Européens, Actes du 114e congrès national des sociétés savantes*, 233-234, Paris, Editions du CTHS.

Ikeya, M. 1980 ESR Dating of Carbonates at Petralona Cave, *Anthropos* 7, 143-151.

Jamet, M. 1982 *Étude neotectonique de Corfou et étude paléomagnetique de sédiments néogènes des îles de Corfou, Cephalonie et Zanthe*, Thèse de 3e cycle, Université de Paris-Sud.

Kourtessi-Philippakis, G. 1990 Les plus anciennes occupations humaines dans le territoire épirote et aux confins de l'Illyrie méridionale. In: P. Cabanes (ed): *L'Illyrie méridionale et l'Epire dans l'Antiquité-II, Actes du IIe Colloque international de Clermond-Ferrand (25-27 Octobre 1990)*, 10-16, Paris, de Boccard.

Kretzoi, M. N. Poulianos 1981 Remarks on the Middle and Lower Pleistocene Vertebrate Fauna in the Petralona Cave (with special reference to new Microfauna – up to 1981), *Anthropos* 8, 57-72.

Kurtén, B. 1983 Faunal sequence in Petralona Cave, *Anthropos* 10, 53-59.

Kurtén, B. A. Poulianos 1977 New stratigraphic and faunal material from Petralona Cave, with special reference to carnivora, *Anthropos* 4(1-2), 47-130.

1981 Fossil carnivora of Petralona Cave: Status of 1980, *Anthropos* 8, 9-56.

Poulianos, A. 1982 *The Cave of the Petralonian Archanthropinae: a guide to the science behind the excavations*, Athens, Library of the Anthropological Association of Greece.

1990 Petralona: the Key to the Eurasian Lower-Middle Pleistocene, *Anthropos* 12, 65-89.

Runnels, C., H.Tj. van Andel 1993 A Handaxe from Kokkinopilos, Epirus, and its Implications for the Paleolithic of Greece, *Journal of Field Archaeology* 20, 191-203.

Shen G. Y. Yokoyama 1986 T-230/U-234 Dating of Petralona Speleothems, *Anthropos* 11, 23-32.

Valoch, K. this volume The earliest occupation of Europe: Eastern Central and Southeastern Europe.

Wintle, A. J. Jacobs 1982 A Critical Review of the Dating Evidence for Petralona Cave, *Journal of Archaeology Science* 9, 39-47.

Andreas Darlas
Université d'Aix-Marseille II
Laboratoire d'Anthropologie
Boulevard Pierre Dramard
13916 Marseille Cedex 20
France