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From the Editor

Editorial responsibility for the newsletter is now shared between Madison and Edinburgh. I shall edit all the issues up until May 1992; thereafter Doug Price will edit the November issues, while I shall continue to edit the May issues. So please forward your manuscripts, notes and new publications to me for the November 1991 issue. The deadline for that issue is 30 October.

If you enjoy reading about the work of others, chances are they will enjoy reading about yours. Mesolithic Miscellany publishes research reports, book reviews, national synopses of recent excavations and research, statements for debate, conference summaries, important radiocarbon dates, announcements, and summaries or abstracts of recent publications to inform readers of current developments in the field. Recent Publications is a category that is particularly important and particularly difficult to keep up-to-date. Reprints or simple citations of your work would be most useful. Please prepare a brief abstract of the article or publication if one is not included in the text. We always need more reports, reviews and papers from you, the reader.

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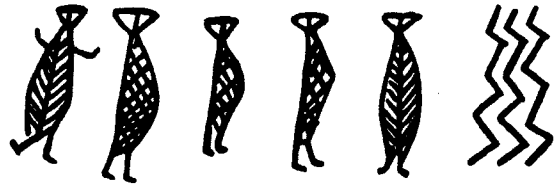

May 1991

Mesolithic Miscellany

Volume 12 Number 1

RESEARCH REPORTS

Is there a 'preceramic event' in Poland ?

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Recent research on the Mesolithic—Neolithic transition has involved excavations at several Late Mesolithic sites in the Polish Lowland (Domańska 1990*a*). Of these, the site of Dęby 29 in the voivodedom of Włocławek merits particular attention (Domańska 1987, 1990*a*). Here, bones of domesticated animals were uncovered in a fossil soil horizon along with classic 'Mesolithic' flint artifacts. Identification of the cultural affinity of this complex reveals its relationship to the Caucasian—Black Sea province of early farming communities (Domańska 1990*b*).

In two recent publications S.K. Kozłowski has presented his own interpretation of my discoveries at Dęby 29 (Kozłowski 1989, 1991). The first of these was published before the publication of my own critical analysis of dating evidence from the site (Kozłowski 1989). In this work Kozłowski presented his view on the dating of the finds at Dęby.

In this issue . . .

Taking into account only one of the ^{14}C determinations for this site (6090±70 BP) which was considered valid in view of the presence of an alleged Danubian point in the assemblage, he interpreted the finds from the fossil soil horizon as contemporaneous with the first Danubian communities (Linear Band Pottery Culture) and the presence of bones of domesticated animals as resulting from cooperation between the Mesolithic and Neolithic groups.

In his second work, Kozłowski argues for the existence in the fossil soil horizon of two settlement stages: Mesolithic and Early Neolithic. In his view, the Mesolithic is represented by artifacts of the Janisławice Culture for which he takes the ^{14}C dates within the range 7300–7200 BP, and he includes within this phase the microliths — trapezes, triangles and Janisławice points. The Early Neolithic occupation, which he assigns to the Linear Band Pottery Culture (LBPC) and dates to *c.* 6800–6100 BP, is considered to be represented by some of the blades, the sickle inserts (the artifacts with gloss) and the bones of domesticated animals (Kozłowski 1991).

Here it should be emphasized that not a single fragment of LBPC pottery has been found in any of the levels of the Dęby 29 site nor in its immediate vicinity. The homogeneity of the finds from the fossil soil horizon is also indicated by the horizontal distribution of the flint artifacts and bones which together form an elliptical concentration, 40 by 7 metres (*Figs 1 & 2*). Analysis of the vertical distribution of Dęby-type inserts and microburins (*Fig. 3*) which, according to Kozłowski, represent different cultural traditions (inserts of Dęby type = Neolithic; microburins = Mesolithic) shows that they have an identical distribution within the fossil soil. The horizontal distribution of the two types is also similar (*Figs 4 & 5*). An analysis of the width of some of the blades found in the fossil soil (*c.* 600 specimens) has shown that the whole collection (*Fig. 6*) is typical of the Janisławice Culture. According to Lech (1983) most blades from Danubian sites over the entire geographical range of the culture have average measurements of length 40–60 mm, breadth 15–20 mm and thickness 5–7 mm. There are no such blades at Dęby 29. Those blades of breadth greater than 10 mm, which are not very numerous, have been marked on the map (*Fig. 1*) of the spatial distribution of all flint artifacts from the fossil soil horizon; it can be seen that their distribution is identical to that of the other artifacts of the Janisławice Culture.

Thus among the flint artifacts there is no evidence that two settlement phases are represented in the fossil soil horizon Dęby 29, as Kozłowski has suggested. All artifacts made from so-called chocolate flint from this stratum are characteristic of the Janisławice Culture, and there are no artifacts of this material which could be connected with the LBPC tradition.

Why then should Kozłowski wish to find LBPC flint artifacts in the Janisławice Culture assemblage at Dęby? Well, twenty years ago, he put forward a hypothesis that the LBPC communities used chocolate flint which they acquired through exchange or trade with Janisławice hunting groups (S.K. Kozłowski 1971; J.K. Kozłowski & S.K. Kozłowski

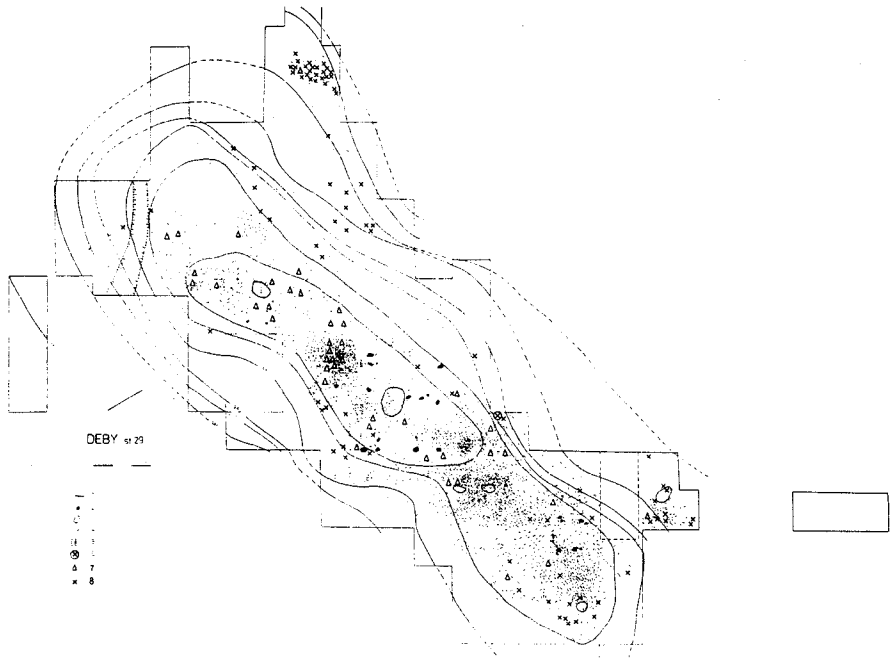

Fig. 1 Dęby 29. Distribution map of flint artifacts, hearths and huts (1 – outlines of fossil soil at different depths; 2 – postholes; 3 – hearths; 4 – flint artifacts; 5 – ^{14}C samples; 6 – alleged Danubian point; 7 – blades with width greater than 13mm; 8 – pieces of erratic flint)

1977). Beyond the fact that it could be shown that the two communities used similar raw materials, this hypothesis has not so far been supported by any empirical data. So, the discovery of Dęby 29 provided Kozłowski with the chance to obtain direct confirmation of this hypothesis. The more so since at this site were represented the two elements that were so important to his thesis, namely chocolate flint and its presumed equivalent obtained from the farmers — meat of domesticated animals. This, it seems, is the reason for Kozłowski's special interest in the results of research at the site (Kozłowski 1989, 1991).

In my opinion explanation of the phenomenon of Dęby may only be made through additional biological analyses. At the present stage of research, for instance, it is possible

to question the results of some of the ^{14}C analyses and consequently to regard the assemblage as contemporaneous with the LBPC — but this is not confirmed by the flint

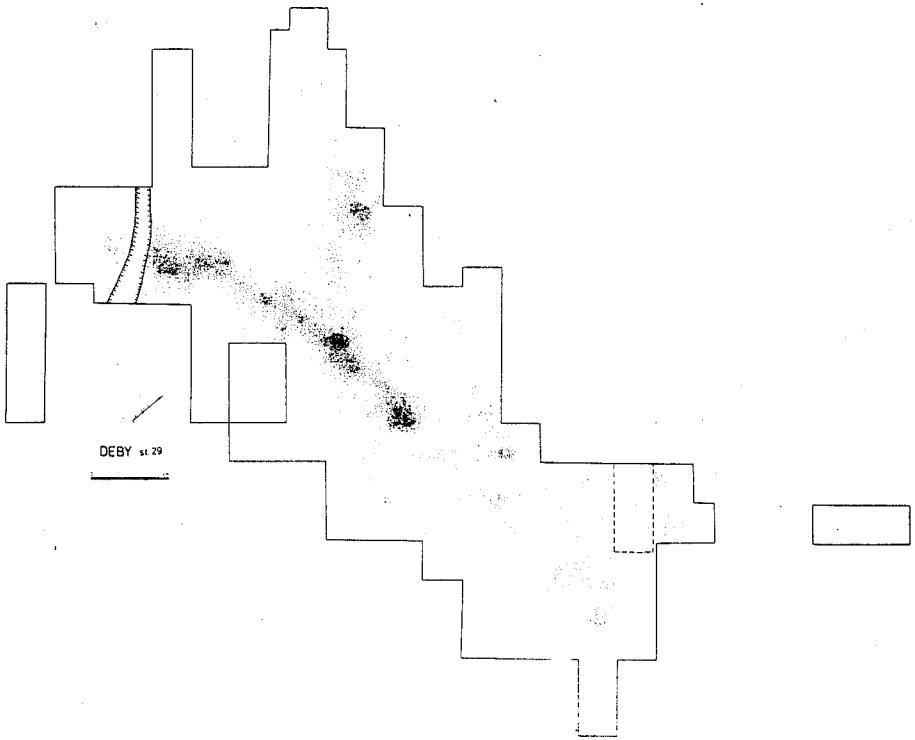

Fig. 2 Dęby 29. Distribution map of bones

material, as Kozłowski would wish it to be. Alternatively, it would be possible to reject the results of the faunal analysis and include the assemblage within the 'typical' Mesolithic. In my recent interpretation of the findings at Dęby (Domańska 1990*a*), always having in mind the various possible interpretations, I asked myself whether it was possible to accept the implications of the biological analyses — *i.e.* the *association* of flint artifacts typical of the Mesolithic Janisławice Culture and the bones of domesticated animals and the dating of the whole assemblage to the end of the 8th millennium BP (most of the ^{14}C dates for the site fall into this time range). My answer is — yes!

This hypothesis is justified by the conception of the idea of 'Protoneolithization' as a process preceding by several hundreds years the Neolithization proper of the Polish

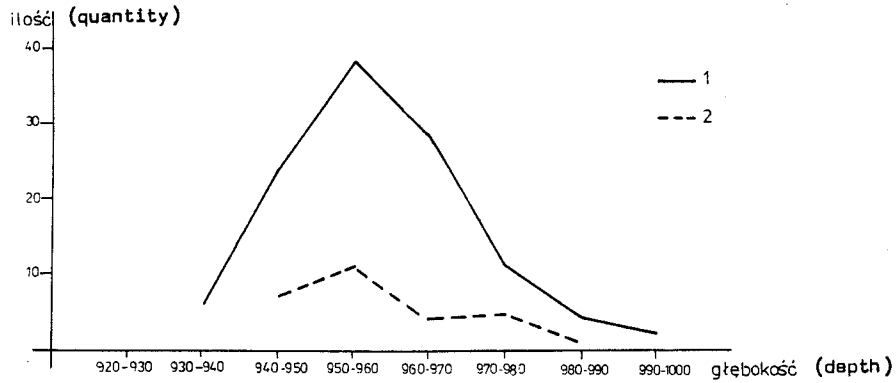

Fig. 3 Dęby 29. Histogram of vertical dispersion of the microburins (1) and the Deby inserts (2)

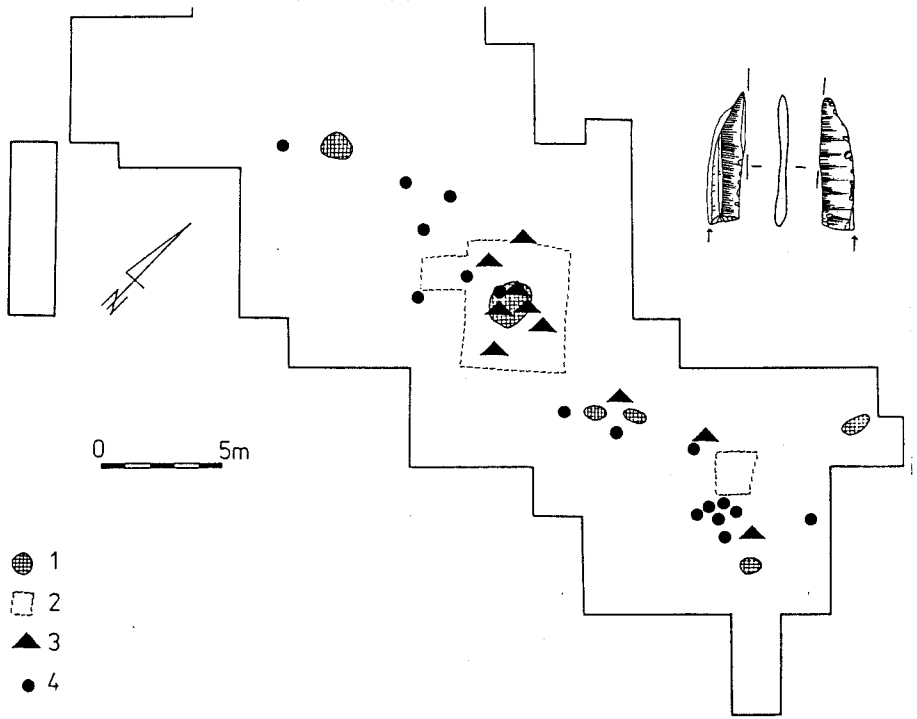

Fig. 4 Dęby 29. Distribution map of the Deby inserts (1 – hearths; 2 – huts; 3 – inserts; 4 – waste from their production)

Lowland which coincided with the appearance of communities with a fully developed farming economy — the LBPC. This concept derives not only from the studies at Dęby 29, but is supported by findings at many other sites throughout Europe (Telegin 1982; Voytek & Tringham 1985; Lewthwaite 1986; Roussot-Larroque 1989). In the flint inventories this process is reflected by a change in the technique of blade production (the so-called Montbani style). Unusually regular blades were obtained from the single-platform cores by means of the pressure technique and fragments of these were used as inserts for various types of composite tools. Microscopic analyses of the blades from Dęby (Willis 1990) show that they were most often used as elements of tools for cutting plants. As far as the economy is concerned, this phase is characterized by intensification of the use of local resources of the forests of the temperate zone and in some areas by 'protoagricultural' exploitation of certain plant species and the beginnings of animal husbandry. It should be emphasized, however, that all these economic innovations appeared within the context of the hunter-gatherer economy and did not play as important

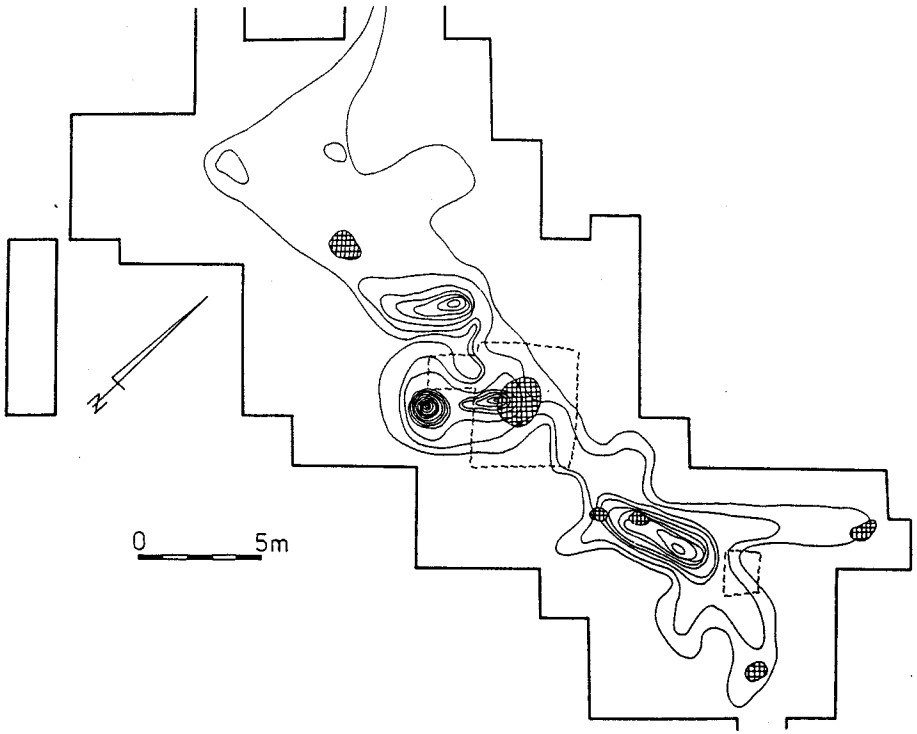

Fig. 5 Dęby 29. Distribution map of microburins

a role as among communities with a fully developed agricultural economy (cf. Zvelebil 1986). These changes are found, for example, in such early Atlantic cultures as the Kukrek and Grebeniki cultures of the Northern Pontius or the Castelnovian and Montbani cultures of the Mediterranean zone.

The study of Protoneolithization in the European Lowland is still at an early stage, but it seems to be expressed most clearly in the finds from Dęby 29. Obviously, this observation requires still better documentation. However, given the changes recorded

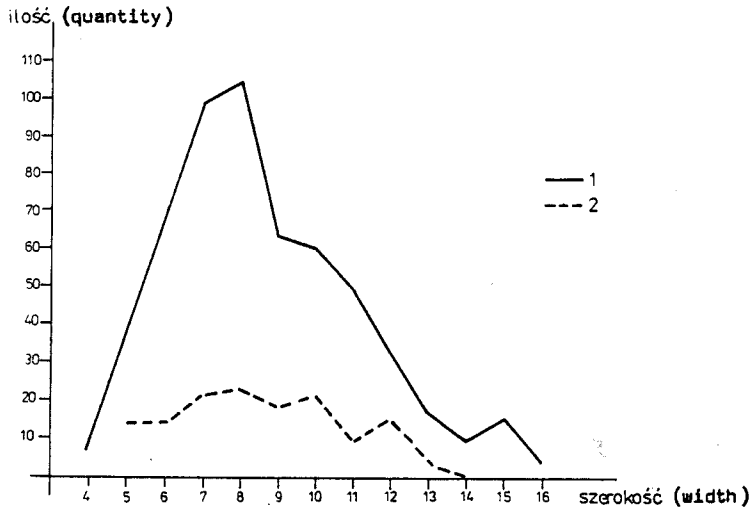

Fig. 6 Dęby 29. Histogram of blade width
(1 – blades without cortex; 2 – blades with cortex)

among the early Atlantic communities of Southern Europe it does not seem unrealistic now also to include some 'lowland' groups. The Janisławice Culture which occupied the southern part of the Lowland on the dividing line between Eastern and Central Europe and which throughout its period of development maintained intensive contacts with the Black Sea steppe zone (Telegin 1982; Zaliznyak 1984; Domańska 1990*b*) was in a position to adopt these cultural traits at an early stage.

This hypothesis is not offered as a 'final solution'; it requires still more and better documentation. However, it should be viewed as a contribution to scientific debate and not categorized as an 'archaeological scandal' as it has been by S.K. Kozłowski (1991).

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ANNOUNCEMENT

In **Mesolithic Miscellany**, vol. 7(2), 1986 a conference entitled:

<< The Big Puzzle — International Symposium on Refitting Stone Artifacts >>

was announced. This symposium took place at the Castle of Monrepos near Koblenz (Germany) from 6th–9th September 1987. More than 50 participants had the opportunity to listen to a series of interesting contributions with very different chronological and geographical perspectives, but all dealing with the refitting of stone artifacts.

Now, just three years later, the publication with its 39 articles in *c.* 700 pages represents the most comprehensive compilation presently available on the subject of refitting stone artifacts:

Cziesla, E., S. Eickhoff, N. Arts & D. Winter (eds). 1990. **The Big Puzzle — International Symposium on Refitting Stone Artefacts**. Studies in Modern Archaeology vol. 1, Bonn. ISBN: 3–926216–94–8.

The publication can be ordered from:

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The Woźna Wieś burial from Poland

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Sites 1 and 2 at Woźna Wieś on the shore of Lake Drestwo, voivodedom of Łomża, in north-east Poland (*fig. 1*) were excavated between 1973 and 1983. A monograph on the excavations is now in press (Kempisty & Sulgostowska 1991). The excavated area of Site 1 (436 m^2) revealed a palimpsest of several habitation phases with an inventory of 13,700 flint artifacts and 2,300 pieces of pottery.

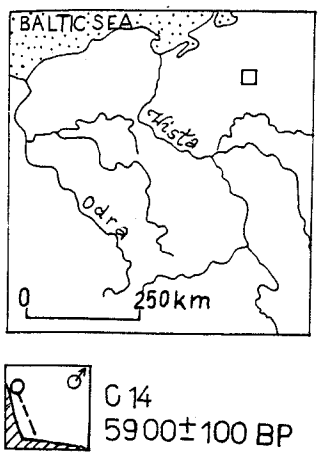

Fig. 1 Location of the Woźna Wieś site

The chronology of settlement has been estimated as extending from the (?)Allerød/ Younger Dryas to Subboreal periods. The final Palaeolithic settlement phases are represented by Bromme—Segebro, Ahrensburgian and Swiderian assemblages, the Mesolithic phases by Narvian and Vistulian Cycle (Komornica and Janisławice Cultures) assemblages, and the Neolithic phases by Neman and Rzucewo Culture assemblages.

The site is situated on an outwash field of the Last Glaciation and its sediments of sand and gravels are unfavourable for the preservation of organic materials. In the highest part of the site, however, a unique assemblage was discovered — the human burial,

preserved owing to the fact that the body was deposited in a pit and subsequently covered with sand and gravel.

A concentration of more than 100 fragments of unburnt bones, from several millimetres to several centimetres in diameter, was observed buried in the subsoil 35–95 cm below the surface. The horizontal distribution of the bones formed an oval *c.* 1 m in diameter. The sediment in the pit was a little darker than the surrounding dark yellow and orange sand and gravel (Munsell colour, 5YR7/6) but the outline of the oval was not clearly distinct from the rest of the sediment. Several pebbles of local stones up to 10 cm in diameter had been placed at the bottom of the pit.

The concentration of dark yellow-coloured bones contained both human and animal bones. The human skeleton was not complete; the upper parts — cranium and mandible — were well preserved, but only a few fragments of the postcranial skeleton (fragments of humerus, radius, ulna, femur, pelvis, thorax, vertebrae) were found. The poor preservation of the lower parts of the skeleton was probably due to groundwater activity. The vertical distribution of the human bones indicates the body had been placed in a seated position, but the position of the arms and legs cannot be reconstructed. The buried person was a man estimated as 30–35 years old.

Along with the human remains, fragments of horse bones (*Equus caballus*) were discovered. These comprised parts of the fore and hind limbs — the bits that were culinarily attractive owing to the presence of marrow and extensive musculature. Cut- and gnaw-marks and dark spots caused by fire could be observed on the surfaces of these bones. These marks prove that it was only the bones, and not the carcass, that were offered as a burial gift, and also that there had been dogs in the camp. The position of the horse bones in the upper part of the pit indicates that they were added when the pit had been partially filled in.

Since macroscopic traces of ochre were lacking in the pit, a spectrographic analysis was made of sediment from the surface of human and horse bones; this revealed traces of ochre on the human skeleton and their absence on the horse bones. Lumps of ochre occur in the local sediments, and their utilization by inhabitants was confirmed by finds of coloured grindstones (Sulgostowska 1990).

A radiocarbon date of 5900±100 BP (Gd–2431) was obtained from postcranial bones. These bones were also dated by the F/Cl and collagen methods giving results of 4130–4890 BP.

The burial shows both typical and specific features. The latter include: (i) the location of the burial in the centre of settlement — this is quite rare; a similar situation was discovered at Wieliszew XI near Warsaw (Więckowska 1985: 170); (ii) the seated position of the body — this is also infrequent, but is found in the Janisławice burial in central Poland (Chmielewska 1954); (iii) the absence of typical grave goods and the presence of

a symbolic gift in the form of the selected horse bones, which are rare in faunal assemblages of the time.

Attempts to relate the burial to a specific phase of Holocene settlement is difficult because of the absence of other comparable radiocarbon dates from the site and a shortage of radiocarbon determinations from the region as a whole. The burial can be connected with either: (a) the Mesolithic — preceramic phase of settlement (Vistulian Cycle assemblage); or (b) the Neolithic — ceramic phase (Neman Culture assemblage, which is dated in Lithuania from *c.* 5500 BP on the basis of lithostratigraphic data and typology.

The evidence cited above suggests that the burial belongs to the Mesolithic phase of settlement — Vistulian Cycle (Janisławice Culture). A radiocarbon date of 5700±120 BP has been obtained for a similar site with Mesolithic to Neolithic settlement phases at Sośnia, 25 km from Woźna Wieś (Kempisty & Więckowska 1985: fig. 3). These dates for the Vistulian Cycle are several hundred years younger than those from the sites of Tomaszow I and II in central Poland (Schild, Królik & Marczak 1985: 130) or the Janisławice burial (Sulgostowska 1990). This retardation can be explained by the specific character of the region with its different climate and remoteness from centres of productive economy. By virtue of these factors hunting-gathering human groups survived longer here than in more southerly regions of Poland where agriculture and husbandry had spread earlier.

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Mesolithic Sites at Sopotnice, Bohemia

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(English translation by H. Trávníčková)

So far the most conspicuous accumulation of Mesolithic sites in Bohemia includes more than 15 sites in an area of 3 km^2, situated in the cadastral territory of the community of Sopotnice, district of Ústí-nad-Orlicí in E Bohemia, some 40 km ESE of Hradec Králové (Vencl 1992). Geographically, it falls within the piedmont area of Orlické hory (the Orlice Mountains). Climatically it is at the edge of a moderately warm and very humid hill zone bordering a cold mountain zone. The geology consists of rocks of the Bohemian Cretaceous formation. The recent geomorphological history has been one of erosion so that there are virtually no Quaternary cover layers. Its attraction for Mesolithic settlement can be seen in the favourable micro-environment provided by the shallow valleys of small 4th- to 6th-order streams. Unlike the deep gorge-like valley of the Divoká-Orlice river, which is relatively shady and cold, the stream valleys offered sheltered sunny places.

The known Mesolithic sites in Sopotnice (*Table 1*) are no doubt an incomplete record of the former settlement pattern, as those areas with continuous grass and woodland cover, with a few exceptions, were not accessible to surface investigation between 1977 and 1989. Since a lot of field investigation has been done, it can be affirmed that the Mesolithic people preferred the smaller Rybná stream basin to the larger basin of the nearby Sopotnice stream. This may have been influenced by the Divoká-Orlice river meander protecting the entry to the Rybná stream basin from NW winds but opening the entry to the Sopotnice stream basin so that the Mesolithic peoples settled in sheltered places surrounding a nameless affluent (Sites C, J, G). The numerous springs in the area between the A and V sites in the Rybná stream basin were undoubtedly a reason for its popularity too.

Site locations

The Mesolithic bands settled in the Sopotnice area at sites lying between 348 and 427 m above sea level, the lowest point in the vicinity of the sites reaching 325 m and the highest 541 m above sea level (the only pre-Mesolithic site at Sopotnice, K, is situated at an elevation of 328 m above sea level). The relative heights of the Mesolithic sites above the nearest streams range between 2 and 40 metres; 6 of these sites are situated at relatively low levels (2–10 m); 3 sites are very high (35–40 m); while the remaining 7 sites lie at relative heights of between 14 and 24 metres. The Mesolithic bands at Sopotnice did not settle places lying close to water; 11 sites are 50–120 m from water, while 4 sites are as much as 170–330 m away, which is actually the maximum distance in a landscape

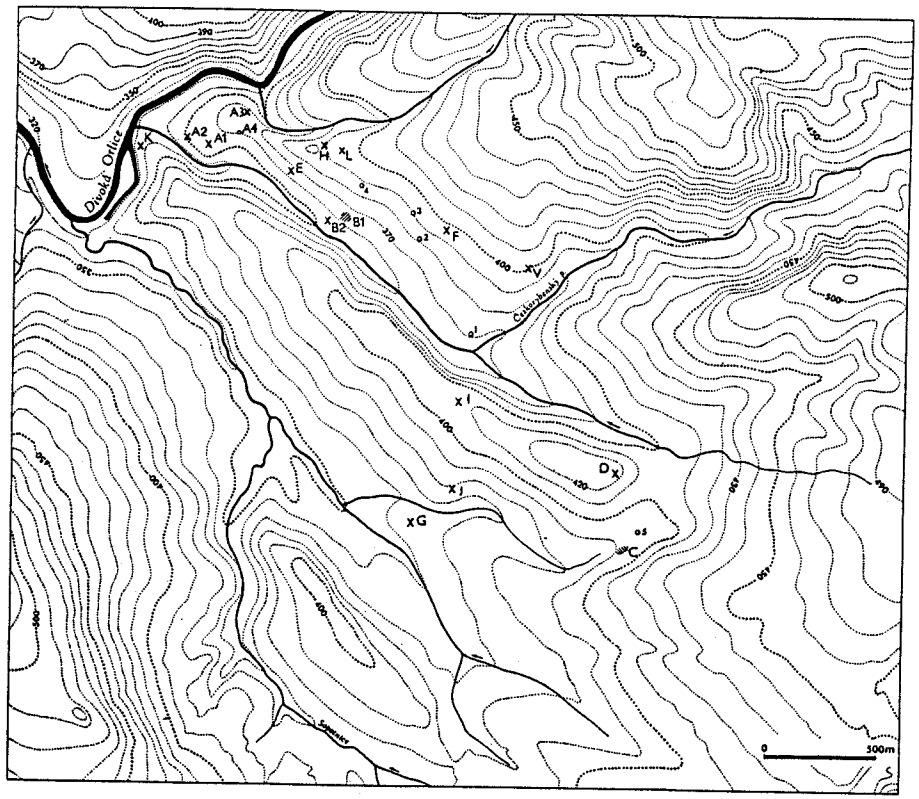

Fig. 1 Distribution of Mesolithic sites at Sopotnice, district of Ústí-nad-Orlicí, East Bohemia

Table 1: Locational characteristics of Mesolithic sites at Sopotnice

Site	Number of chipped stone artifacts	Elevation above sea level	Vertical distance to the nearest water	Location		Horizontal distance to		Orientation of area towards cardinal points	Topography		Approx. site size
				exposed	sheltered	the nearest brook	spring		general	local	
A1	245	355–6	20	x?		100		gently to W	saddle of a promontory	almost plain	15x20m
A2	61	348	14		x	50		W	slope of a promontory	gentle slope	dispersed
A3	32	367	15	x		75		NNW	edge of a promontory	gentle slope	15x20m
B1	589	359–66	6–13		x	100		SW	slope of valley	elevation	Φ 50m
B2	122	358	6		x	50		SW	foot of a slope	step	Φ 25m
B	223										
C	229	392	2		x	5–25		NW	spring basin	step	20x40?m
D	111	427	35	x		300		E	ridge top	gentle slope	Φ c. 50m
E	159	360	15	x		70		SW	steep slope	step	15x25m
F	56	396	38	x		330	80	SW	slope of valley	slope	Φ 20m
G	46	371	7	x		100		gently to W	ridge top	gentle slope	Φ 10m
H	144	390	15?	x		70		E	ridge top	saddle	10x5m
I	60	412	40	x		220		NW	ridge top	almost plain	Φ 20m
J	29	378	10	x?		100		S	slope of valley	step	Φ 20m
(K	9	328	2		x	50		gently to W	valley bottom	terrace	?)
L	26	393	18?	x?		120		SW	ridge top	gentle slope	Φ 20m
V	105	401	24	x?		170	20	S	slope of valley	step	Φ 5m

with such a dense water system (this distance was, however, occasionally shortened by the occurrence of small springs). Only Site C is situated near (*c.* 10 m) to the stream. Out of the group of 15 sites, 11 are situated in fairly exposed locations, and only 4 sites are situated in apparently sheltered places. Settlement locations in relation to topography are varied: 6 sites are situated on the gentle valley slope, 5 at the ridge top, 2 on the headland, one in the source basin, one near to the water level, and one in the shallow saddle. The site surface slopes down to the west in accordance with the overall regional inclination (5 sites to SW, 4 to W, 2 to NW); only two sites are situated in locations sloping to S and two sites to E.

The site area was probably secondarily enlarged by ploughing (cf. Yorston *et al.* 1990) as the smallest sites, V, G and H with a 5–10 m diameter, could have been ploughed only exceptionally. The size of the lithic collections is determined not only by the number of inhabitants of the site and the settlement duration, but also by the duration of the surface investigation. Sites discovered some 10–12 years ago have, of course, yielded more finds as a result of surveys repeated annually than sites investigated for only 3–4 years. The collection from Site B1 contains 589 pieces; 3 sites have yielded collections of 223–245 pieces, 5 sites collections of 105–159 pieces, and 8 sites only 26–61 pieces so far; isolated finds of artifacts within the cadastre are evidence that the Mesolithic people used the whole area of the micro-region.

The attempts to establish a correlation between the morphological and quantitative features of the stone industry and the environmental variables of the Mesolithic sites at Sopotnice have not brought positive results. The settlement pattern, which must have been seasonally differentiated, is still unclear as the organic remains are lacking. We may presume that the qualities of individual sites provided them with some minor advantages which, however, were not decisive for the choice of settlement location — obviously, the exposed sites would not have been settled in rough weather, nor would the sheltered sites by water sources have been settled when there were stinging insects, etc. More likely the micro-region was preferred as a whole.

Soundings at Sites V and A1 have shown that the Mesolithic industry can be found near the present surface, largely in a secondary context in the ploughsoil. The assemblages from Sopotnice recovered in surface surveys rarely contain heterogeneous cultural inclusions. Because of the mode of recovery of the assemblages microliths and other small pieces are under-represented. The absence of stratigraphical and chronological data allows classification of the assemblages only on a morphological basis, while the geographical proximity of the Sopotnice sites and the identical range of the raw material used for the stone industry suggests that they form a chronologically close complex, which may also have been connected functionally. Most of the microlith types from the 9 sites at Sopotnice are analogous to the numerous finds from Smolín (Valoch 1989) supposed to belong to the Central European variant of the Beuron—Coincy culture of the Boreal period.

The main raw material of the industry from Sopotnice is grey-bluish low quality chert from the East Bohemian Cretaceous formation, available locally, which accounts for 48–87% of all the raw material on individual sites. Second in importance is Baltic flint, representing 8–40%, the nearest sources of which are in the moraines and fluvio-glacial gravels of Silesia some 60 km NE of Sopotnice. Other raw materials combined account for only 4–22% of the total and are represented mainly by undetermined local raw materials, apart from a few pieces of quartzite from NW Bohemia the outcrops of which are 180 km away (Vencl 1990).

The agglomeration of Mesolithic sites at Sopotnice is an absolute exception within East Bohemia so far. In the whole of the Ústí-nad-Orlicí district, with an area of 1265 km^2, there are no more than 5 other Mesolithic sites; and within the NE quarter of Bohemia (some 13,000 km^2 in area) the Sopotnice sites represent almost a third of the known sites (Vencl 1978: 44). However, similar Mesolithic site concentrations containing up to 10 sites within the cadastre of one community can be found at other locations in Bohemia (*e.g.* Stvolínky, district of Česká Lípa; Hořín, district of Mělník), especially in the SW quadrant of the country (*e.g.* Střelské-Hoštice, district of Strakonice; Putim, district of Písek, etc. — Vencl *et al.*, in preparation). In the main, these are connected with intense local surface surveys or extraordinary find circumstances. For example, a temporary fall of the Lipno dam water level on the Upper Vltava river denuded its eroded shores revealing an alignment of Mesolithic sites in an otherwise inaccessible region of the Šumava piedmont area, with a continuous grass and woodland cover, at an elevation of 720 m above sea level — the highest Mesolithic settlement area in Bohemia (Vencl 1989).

So far, only a small part of the Mesolithic settlement of Bohemia has been investigated. All in all, this is the only period of Bohemian prehistory still lacking an accredited internal cultural and chronological framework. The inventory of some 150 sites reflects quite irregularly the original distribution of Mesolithic settlement, because it has been established by means of unsystematic local prospecting of varying intensity. As a result, the least intensively investigated SE quadrant has the smallest number of sites. Although the contemporary map of the Bohemian Mesolithic does not objectively reflect the ancient settlement pattern, it certainly cannot be considered a coincidence that the overwhelming majority of Mesolithic sites are scattered throughout the highlands over the whole of Bohemia, predominantly outside the most fertile loess regions on which the Neolithic settlement was concentrated (cf. Pavlů — Zápotocká 1979, figs. 1 & 2). The marked discordance of the areas of Mesolithic and Neolithic settlement in Bohemia thus represents another argument against the cultural continuity of the last food-gatherers and the earliest peasant farmers (cf. Vencl 1982, 1986, 1988).

The saddles and passes of the Bohemian border mountains lie between 500 and 800 m above sea level and contacts were certainly possible in all directions, given that there were Mesolithic settlements in mountainous areas of Europe over 1000 m, even occasionally over 2000 m above sea level (the Alps, Pyrenees, the Caucasus — *e.g.*

Vencl 1989: 496 with ref.). Although the Bohemian border mountains did not represent insurmountable barriers, only one region on the upper Ohře/Eger river (Klíma 1966) shows geographical continuity with the neighbouring country. The imports of stone raw materials prove nevertheless that there were contacts between the Bohemian Mesolithic population and those in areas to the N, NE and SW. Exceptionally, these inter-regional relations can be proved morphologically — for instance, the assemblage from Hřibojedy, district of Trutnov, is probably analogous with the Pieńki Culture in Poland (Vencl 1991). The supra-regional connections cannot be fully investigated because of inadequate information on the Mesolithic in surrounding regions. Thus in Upper Austria (Leitner 1989) and Bayernwald (Bavarian Woodland) (Spitzelberger 1972; Schier 1985) there is no evidence for Mesolithic settlement, and in Moravia (Valoch 1978) it is still scarce.

The uneven occurrence, or rather knowledge, of the Mesolithic in Central Europe is shown clearly in *Table 2*. The regions in the Danube river basin, *i.e.* Moravia, Slovakia and Austria (together with Hungary not included in *Table 2*, but excluding the Upper Danube region where the situation is different) show evidence of a substantially lower occurrence than those draining into the Baltic and the North Sea. The frequency of Mesolithic in individual Central European countries with relatively independent research traditions and priorities has to be assessed with regard to the differing local representation of the sites from individual phases of the Palaeolithic (cf. *Table 3*). While making this comparison, one should not forget that the neighbouring countries have been investigated to an unequal degree. In calculating the relative density of sites, the best studied regions are the (former) G.D.R. with one Palaeolithic/Mesolithic site per 78 km^2 and Poland with one site per 92 km^2; then come Moravia with one site per 121 km^2, Bohemia with one site per 200 km^2, Slovakia with one site per 426 km^2, and finally Austria with one site per 1524 km^2 (the extent of mountainous terrain is important only in the two last-named countries). Most sites in Moravia, Slovakia and, perhaps, Austria (where the situation cannot be considered reliable because of the very small number of sites) belong to the Upper Palaeolithic, unlike the G.D.R., Poland and, less conspicuously, Bohemia where Mesolithic sites are predominant. The settlement pattern density was formed both by the natural and cultural conditions. The settlement patterns established primarily by these conditions were afterwards deformed by secondary factors. Thus, the volume of Mesolithic settlement in Moravia and Slovakia was influenced primarily by a relatively earlier Neolithic diffusion, but was tertiarily (and hence temporarily) distorted by the lack of specialized investigations. On the other hand, the number of Upper Palaeolithic settlements in *e.g.* Southern Poland was limited primarily by natural conditions, and secondarily by later erosion and denudation processes. Very striking are the differences between neighbouring regions that are not dissimilar ecologically, *e.g.* between Bohemia and Moravia, and these differences still await a convincing explanation. The state and extent of our knowledge of the Central European Mesolithic patterns, of the proportions of ecological and cultural influences, of the secondary deformations, etc., can be enhanced in the future by detailed local investigation and analyses. This report on the settlement agglomeration at Sopotnice is one of them.

Table 2: Frequency of Mesolithic sites in a part of Central Europe

Territory	*Bohemia*	*Moravia*	*Slovakia*	*Austria*	*G.D.R.*	*Poland*	*Total*
Area (km^2)	52,000	26,700	49,000	83,850	108,000	312,000	631,150
Number of sites	c. 150	10	15	22	1,200	3,000	4,397
Percentage	3.41%	0.23%	0.34%	0.50%	27.29%	68.23%	100.00%
Relative density of sites (area divided by number of sites	347	2670	3267	3811	90	104	144
Source	Vencl in press	Valoch 1978	Bárta 1981	Leitner 1989	Gramsch 1989	Kozłowski 1989	

Table 3: Comparison of frequency estimates of Palaeolithic and Mesolithic sites in a part of Central Europe (modified after Vencl 1990*a*)

Territory	*Bohemia*	*Moravia*	*Slovakia*	*Austria*	*G.D.R.*	*Poland*	*Total*
Approx. no. of all sites	260	220	115	55	1,370	3,390	5,410
% of Middle Palaeolithic sites	15	5	26	9	1	1	2
% of Upper Palaeolithic sites	15	86	57	46	6	2	9
% of Late Palaeolithic sites	12	4	4	5	6	9	8
% of Mesolithic sites	58	5	13	40	87	88	81

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Vencl, S. (1986) The role of hunting-gathering populations in the transition to farming: a Central European perspective. In M. Zvelebil (ed.), **Hunters in Transition**. Cambridge, University Press: 43–51.

Vencl, S. (1988) The problem of disappearance of hunter-gatherer societies in prehistory: archaeological evidence and testimonies of classical authors. **Listy filologické**, 111: 129–143.

Vencl, S. (1989) Mezolitické osídlení na Šumavě. **Archeologické rozhledy**, 41: 481–505, 593.

Vencl, S. (1990) K současnému stavu poznávání kamenných surovin mezolitu. **Archeologické rozhledy**, 42: 233–243.

Vencl, S. (1990*a*) K otázkám časoprostorových rozdílů v intenzitě paleolitických a mezolitických osídlení ve střední Evropě. **Památky archeologické**, 81: 448–447.

Vencl, S. (1991) Mezolitické tábořiště v Hřibojedech, okr. Trutnov. **Archeologické rozhledy**, 43: 3–21.

Vencl, S. (1992) Mezolitická osídlení v katastru obce Sopotnice, okr. Ústí-nad-Orlicí. **Památky archeologické**, 83: in press.

Yorston, R.M., Gaffney, V.L. & Reynolds, P.J. (1990) Simulation of artefact movement due to cultivation. **Journal of Archaeological Science**, 17: 67–83.

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CALLING ALL CONTRIBUTORS

Contributors please note:
The next issue of *Mesolithic Miscellany* will be in November. The closing date for all contributions will be 31 October 1991.

RECENT PUBLICATIONS

Bridault, Anne. 1990. Épipaléolithique et Mésolithique de l'Est de la France et du Bassin Parisien: Que dit la faune? **Recherche en Archéologie et Ethnologie** (Éditions du C.N.R.S.) 41: 213–222.

New studies of faunal remains from two sites in eastern France (Rochedane, Mannlefelsen) and two in the Paris Basin (Larchant, Acquigny) are presented in the context of a comparative regional analysis. This is envisaged under the diachronic aspect: while in the Epipalaeolithic the acquisition of large game is centred on one species, in the Mesolithic it becomes diversified; and under the synchronic aspect: in the Mesolithic the composition of the faunal spectra presents numerous inter- and intra-regional variants. It is evident that if the data on environment and subsistence organization are linked, they are not superimposed in a deterministic manner. The economic explanation thus permits an account to be made of changes and variations.

Bridault, Anne. 1991. Faune et fonction du site du Mannlefelsen I (Oberlarg, Haut Rhin, France). In **Mésolithique et Néolithisation en France et dans les Régions Limitrophes** (Actes du 113e Congrès National des Sociétés Savantes, Strasbourg, 5–9 Avril 1988), pp. 281–308.

The rockshelter of Le Mannlefelsen I is a small karstic cavity situated at an altitude of 650m in the undulating region of the Alsatian Sundgau. Excavations directed by M.A. Thévenin from 1971–1981 revealed an important Postglacial sequence. Analysis of the faunal remains from the Epipalaeolithic and Mesolithic levels reveals a homogeneity in the structure of the assemblages, in spite of some variations. There is an unbalanced distribution of the skeletal parts; the trunk and the upper limb bones are lacking. Two types of explanation are thus envisaged: (i) effects of natural agencies (differential physical—chemical preservation, or degradation linked to climatic factors); (ii) human transport (total processing *in situ* of the carcasses, which reduced certain skeletal parts to unidentifiable splinters, or intentional removal from the site of the parts richest in meat which, in the case of Le Mannlefelsen I, indicates a specialized pattern of occupation.

Connock, Kenneth. 1990. A shell midden at Cardingmill Bay, Oban. **Scottish Archaeological Review** 7: 74–76.

Cziesla, Erwin. 1990. Die Steinzeit in der Vorderpfalz — ein Überlick. **Pfälzer Heimat** 4: 145–152.

Cziesla, Erwin. 1990. **Siedlungsdynamik auf steinzeitlichen Fundplätzen. Methodische Aspekte zur Analyse latenter Strukturen** (= Studies in Modern Archaeology 2). Bonn, Holos.

Cziesla, Erwin. 1991. 20 Jahre Ausgrabungen in der Weidental-Höhle bei Wilgartswiesen. **Heimatkalender** 1991: 115–123.

Berit Valentin Eriksen. 1991. **Change and Continuity in Prehistoric Hunter-Gatherer Society. A Study of Cultural Adaptation in Late Glacial—Early Postglacial Southwestern Germany.** (*Archaeologica Venatoria* volume 12). Tübingen, Institut für Urgeschichte. *Ca.* 300 pages in Octavo major. English. Hard cover with thread-stitching.

Containing the following chapters:
Introduction (scope of the study and the conceptual framework applied); The Swabian Alb: A Presentation of the Physical Framework (general introduction to the topography, geology, hydrology, climate, flora and fauna of the Late Glacial and Early Postglacial of the study area); The Archaeological record (catalogue of the late upper palaeolithic and early mesolithic sites included in the study); Source Criticism (methodological evaluation of the archaeological record); The Chronological Framework (the archaeological complexes and their geochronological delimitation); Analysis of Settlement Patterns and Resource Exploitation (site location; site catchment; settlement dynamics; subsistence economy; seasonality; raw material economy; mobility and communication); Summary and Discussion; Deutsche Zusammenfassung; Résumé Français; Bibliography; Appendices.

This volume is due for publication in September 1991, and can be ordered from the publisher for a subscription price of 50 DM until 31 October 1991. Please contact: Archaeologica Venatoria e.V., Institut für Urgeschichte, Schloß. D–W 7400 Tübingen.

Finlayson, Bill. 1990. Lithic exploitation during the Mesolithic in Scotland. **Scottish Archaeological Review** 7: 41–57.

Green, Stanton and Zvelebil, Marek. 1990. The Mesolithic colonization and agricultural transition in south-east Ireland. **Proceedings of the Prehistoric Society** 56: 57–88.

This paper presents the first systematic archaeological evidence from the early prehistory of south-east Ireland. The research is designed to investigate the colonization of the area during the Mesolithic period and the subsequent transition to agriculture. From a theoretical perspective, we offer a view of indigenous development. That is, we look for continuities between Mesolithic and Neolithic Ireland in terms of technology and settlement. The data we are gathering include surface and excavated materials. Lithic assemblages were systematically collected from ploughsoils surrounding the Waterford Harbour area between 1983 and 1987. These

materials are analyzed from the point of view of geography, raw material, reduction sequences, manufacturing technology, and chronological typology to yield an initial glimpse into the rich prehistory of the region and its pattern of settlement. Excavations during 1986, 1987 and 1989 have begun to fill in some detail including the region's first prehistoric barley, a Neolithic radiocarbon date, prehistoric pottery, a rhyolite quarry and several rich lithic assemblages.

Grygiel, Ryszard and Bogucki, Peter. 1990. Neolithic manufacture of antler axes at Brześć Kujawski, Poland. **Archeomaterials** 4(1): 69–76.

Antler axes, sometimes referred to as 'T-axes', appear on Neolithic sites across north-central Europe. They are normally found as finished products in burials or without provenience. Pits excavated in 1982 at Brześć Kujawski, Poland, yielded scrap and semi-finished antler axes that permitted the reconstruction of the manufacturing sequence of these artifacts. Their role in Neolithic economy and society is discussed.

Larsson, Lars. 1989. Ethnicity and traditions in Mesolithic mortuary practices of southern Scandinavia. In **Archaeological Approaches to Cultural Identity**, S.J. Shennan ed., pp.210–218.

Larsson, Lars. 1990. The Mesolithic of Southern Scandinavia. **Journal of World Prehistory** 4(3): 257–309.

The Mesolithic of Southern Scandinavia (Denmark and Southern Sweden) has been an attractive area for research for several reasons, including the good preservation conditions at many sites. Most of the work has been concentrated on the southwestern part of Southern Scandinavia, but results from more recent investigations mean that other areas can also be analyzed. New finds in the last few years have given us a greater understanding of the Late Palaeolithic settlement and its relation to the Mesolithic. For the Early Mesolithic (10,000–8000 BP) interest has focused primarily on the small inland bog sites in the southern part of the area, where the coast has since been submerged. Farther north, where the land has been uplifted, evidence of coastal settlement has been documented. The Late Mesolithic (8000–6000 BP) is known chiefly on the basis of its large coastal settlements. In this period there is also a larger and more varied collection of finds, which makes it possible to discern clear regional differences. There has also been considerable research on the transition from Mesolithic to Neolithic.

Mithen, Steven. 1990. New evidence for Mesolithic settlement on Colonsay. **Proceedings of the Society of Antiquaries of Scotland** 119 (1989): 33–41.

Describes the identification, through fieldwalking and test excavation, of two Mesolithic sites on the island of Colonsay, Inner Hebrides, Scotland.

Paz i Martinez, M.A. and Vila i Mitja, A. 1988. El Roc del Migdia (Vilanova de Sau, Osona): un jaciment mesolític atípic? **Tribuna d'Arqueologia** 1987/88: 133–143.

The latest paper on what is, apart from the enigmatic 'soil stains' of Cueva Morín, the oldest human burial known in the Iberian Peninsula: that of Roc del Migdia, in Catalonia, NE Spain. As at the abri Salauze, southern France, it can be classed as a megalithic burial, the body enclosed by conglomerate slabs and the back wall of the rockshelter (see drawing p. 557 in *The Mesolithic in Europe*, ed. C. Bonsall 1989): two slabs are large (95cm long, 57cm high, 20cm thick; 71cm long, 50cm high, 23cm thick), while the end slab is smaller (35cm x 52cm x 13cm). The supine skeletal remains belonged to a woman of about 51, *c.* 1.53m in height. She bore no trace of illness; there was a little dental pathology (abundant caries and some tooth loss). She is one of the oldest known specimens of the Protomediterranean gracile form, having been dated to 11,520 BP. Also inside the tomb were 44 land snail shells, 3 seashells, 2 bird bones, 81 mammal bones, 53 bits of quartz, 4 of limestone, 8 of flint, 3 boulders, and 2 fragments of ochre. In the site as a whole, quartz dominates the lithic industry (82%), followed by flint (61% of the rest), lidite (22%) and limestone (11%). The fauna is dominated by deer (48%), wild goat (29%), boar, etc. There are abundant land and sea shells, especially *Cepea nemoralis*. A few remains of charred pinenuts, hazelnuts, walnuts and acorns have survived. (abstract: *Paul Bahn*)

Peterson, Jane. 1990. From foraging to food production in south-east Ireland: some lithic evidence. **Proceedings of the Prehistoric Society** 56: 89–99.

Pollard, Antony. 1990. Down through the ages: a review of the Oban cave deposits. **Scottish Archaeological Review** 7: 58–74.

Rausing, Gad. 1990. Fanns ren i Skottland under vikingatid (On the question of reindeer in Scotland in Postglacial Times). **Kuml** 1988–89: 359–363.

Vencl, Slavomil. 1991. On the importance of spatio–temporal differences in the intensity of Palaeolithic and Mesolithic settlement in Central Europe. **Antiquity** 65: 308–317.

Vencl, Slavomil. 1991. Interprétation des blessures causées par les armes au Mésolithique. **L'Anthropologie** 95(1): 219–228.

At the interface between the Pleistocene and Holocene periods, the occurrence of cemeteries and, together with these, of series of wounds inflicted by weapons, announces the onset of changes of permanent importance. These are material correlates of causally linked transformations of socio-economic structures of food-gathering societies. Evidence for violent death of whole population groups offered by individual Mesolithic cemeteries of the Old World may most probably be explained as testimony of intense conflicts over food resources in which the competing local communities may have resorted even to annihilation of one another.

Whittle, Alasdair. 1990. Prolegomena to the study of the Mesolithic—Neolithic transition in Britain and Ireland. In **Rubané et Cardial**, D. Cahen and M. Otte eds, pp. 209–227.

The study of the Mesolithic—Neolithic transition in Britain and Ireland is itself in a state of transition. Theoretical and comparative studies have opened up many possibilities to consider, from agricultural colonization to indigenous adaptation. The available evidence is such that there is little agreement at present on the processes involved, or even on their chronology. An early transition may involve colonization, a late one some form of acculturation.

Whittle, Alasdair. 1990. A model for the Mesolithic—Neolithic transition in the upper Kennet valley, north Wiltshire. **Proceedings of the Prehistoric Society** 56: 101–110.

The general nature of explanations for the Mesolithic—Neolithic transition in Britain and the current support for the notion of indigenous change are noted. The need for a more regionalized view of the transition is argued with reference to the upper Kennet valley and surrounding chalk downland in north Wiltshire. Problems in the recovery and presentation of later Mesolithic settlement are discussed. A model of later Mesolithic exploitation of the area from camps or bases outside it leads to the view that, whatever the cultural identity of those involved, there was a genuine agricultural colonization of the valley, involving new adaptations and new skills. Such infill is unlikely to have belonged to the primary phase of the establishment of agricultural settlement, and other possible cases of secondary infill in southern England and western Europe are noted.

Woodman, Peter. 1990. A review of the Scottish Mesolithic: a plea for normality! **Proceedings of the Society of Antiquaries of Scotland** 119 (1989): 1–32.

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