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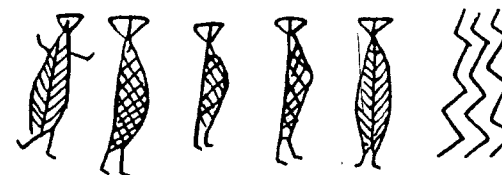
SUBSCRIPTION INFORMATION

Mesolithic Miscellany is issued twice a year, in May and November, as an informal communication among individuals interested in the Mesolithic of Europe. If you would like to subscribe and contribute to the newsletter, please send your name and address to the editor. The cost of a yearly subscription is US\$3 or £3. There are several possible methods of payment: (1) Payment directly to the editor in US\$, (2) European subscribers may send payment in sterling to Clive Bonsall, Department of Archaeology, 16-20 George Square, Edinburgh, or (3) individuals for whom currency exchange may be difficult should write directly to Clive Bonsall. He has arranged for the Institute of Archaeology at the University of Edinburgh to provide subscriptions in exchange for publications. Subscriptions for 1985 are due.

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**Location of Sites Mentioned
in the Text****Key**

- 1 Grotta della Cala
- 2 Abri Collombey-Vionnay
- 3 Ferriter's Cove
- 4 Medo Tojeiro
- 5 Samouqueira
- 6 Prejlerup
- 7 Skateholm
- 8 Swifterbant

**MESOLITHIC MISCELLANY**

Union Internationale des Sciences Pre- et Protohistoriques

Commission 12

Volume 5, Number 2

November 1984

ANNOUNCEMENTS**III Mesolithic Congress**

The III International Symposium on THE MESOLITHIC IN EUROPE will be held in Edinburgh, 31 March - 6 April 1985. Accommodations will be in Carlyle Hall at the University. Registration and room and board will be £135, due by 30 November 1984. Applications to attend the Symposium should be made to Clive Bonsall, Department of Archeology, University of Edinburgh, 16-20 George Square, Edinburgh EH8 9JZ, Great Britain.

To date, some 75 abstracts of papers have been submitted. Approximately 100 individuals, from at least 20 countries, have indicated they will attend. The symposium committee consists of Clive Bonsall, Organizing Secretary, Dennis Harding, Chairman, and Members: Lin Barnettson, Roger Mercer, Barbara Ottaway, Eddie Peltenburg, David Ridgeway, and Trevor Watkins. The preliminary program was mailed earlier this year and provisional outlines of the major sessions are reproduced below. The third and final announcement will be circulated shortly.

- 31 March Antecedents and Origins of the Mesolithic
 Fernandez-Tresguerres, Gonzalez-Echegaray, Barton, Tromnau, & Fischer.
Artifacts, Raw Materials, and Technology
 Blankholm, Gendel, Dumont, Juel Jensen, Sanger, Welinder.
- 1 April Artifacts, Raw Materials, and Technology
 Wickham-Jones, Perlès, Burov, Smith, Foxon, Venci, Kobusiewicz.

Human Communities and the Environment

Jochim, Burdukiewicz & Brodzikowski, Geddes et al., Clason, Simmons et al., Edwards.

2 April

Population and Social Structure

Constandse-Westermann, Snyder, Newell et al., Arts.

The Analysis of Settlements and Burial Areas

Oshibkina, Zagorskis, Gramsch, Schild, Skar & Coulson, Floor, Gob, Roche, Brinch Petersen, Larsson.

3 April

Excursion

4 April

Regional Studies: Greece and the Balkans

Jacobsen, Gatzoff, Radovanovic, Sre jovic.

Regional Studies: Italy and the Iberian Peninsula

Biagi et al., Barandiaran & Cava, Clark, Bahn.

Regional Studies: The British Isles

Woodman, Palmer, David, Young, Morrison & Bonsall.

5 April

Regional Studies: Central and Northern Europe

Valoch, Arora, Kozlowski, Thevenin, Vermeersch,
Matiskainen.

Settlement Patterns and Subsistence

Price, Nygaard, Bang-Andersen, Gonzalez-Morales,
Gautier, Morais Arnaud.

Problems of the Meso-Neolithic Transition

Bar-Yosef, Voytek & Tringham, Chapman, Boroneant, Lewthwaite, Lubell et al., Zvelebil, Saville, Helskog.

6 April

Settlement Patterns and Subsistence

Deith, Andersen, Mellars, v. Wijngaarden, Grigson,
Legger & Rowley-Conwy, Schadla-Hall.

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ICAZ Announces International Conference

The Fifth International Conference on Archaeozoology will be held in Bordeaux, France, between the 25th and 29th of August, 1986. This conference is sponsored by the International Council for Archaeozoology and is being organized by Pierre Ducos and his French colleagues with the support of various local and national French academic, research, cultural, and political bodies. There is no specific theme for the conference other than "taking stock of world archaeozoological research". For registration forms, please write to the organizer: Dr. Pierre Ducos, V^e Conference ICAZ, C.R.E.P., St. André de Cruzières, France.

Union Internationale des Sciences Pré- et Protohistoriques
XIth Congress - Southampton and London
1 - 7 September 1986

This meeting of archaeologists and others who are interested in the past is to be a truly international one. Most of the main subjects to be discussed should be of interest to people all over the world. The working sessions will take place at the University of Southampton and a significant event will be the opening of a major new exhibition at the British Museum. As its contribution to the congress, English Heritage will carry out a major excavation at the great hill-fort of Maiden Castle, Dorset. Contemporary hunter-gatherers from Australia, Africa and elsewhere will attend the Congress. The specific themes of the Congress will be based on pre-circulated papers so that the five days of meetings in Southampton will be entirely devoted to discussion. Major themes include:

Cultural Attitudes to Animals

Archaeology and the Very Remote Past

Archaeological "Objectivity" in Interpretation

Interactions between "Central" and "Peripheral" Cultures

Cross-Cultural Social and Economic Contexts of Technology

The Proceedings of the Congress will be published in a series of volumes by Allen and Unwin. Persons interested in registering for this Congress should contact Prof. Peter Ucko, Department of Archaeology, Southampton University, Southampton, Great Britain.

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Conference Report

The Culture and Environment of the Late Glacial Period in the Odra Basin against the Background of Central Europe

Rydzyňa, Poland

30 May - 1 June, 1984

Once again the Poles have done it - organized and sponsored an archaeological meeting with great success. Dr. Michal Kobusiewicz of the Poznan branch of the Academy and dr. Jan Burdukiweicz of Wroclaw University were responsible for the three days: two days of sessions, interrupted in the middle by a full-day excursion. The latter took us to, *i.e.*, the Kopanica

Valley with the Olbrachice sites and then to Pomorsko, which according to the reported evidence surely must be one of the most promising Late Glacial sites on the North European Plain. Furthermore, passing by Chwalim, a Preboreal site, we finally made it to the Hamburgian site of Liny, just before the rain started.

Scholars from Czechoslovakia, the DDR, the BDR, USA, France, Holland, Denmark, and of course Poland, included not only archaeologists, but also geologists and geomorphologists. All were housed and dined at the beautiful castle of Rydzyna, just to the south of Lezno, in the western part of Poland.

In the good old days, everything was simple, and so was the Late Glacial. In fact, the time and space framework of the Late Glacial cultures had become a sort of textbook classic. Clear and well-defined pollen zones and distinct cultures, easy to identify and to date by way of the former, were demonstrable by everyone. However, like all simple systems, it was too good to be true and had for some time been open to revision. Pollen zones do not have the same significance as previously and have been subjected to different interpretations. For example, if Bølling is not found at the type site of Bølling, can Bølling then be Bølling, or should it rather be Allerød as the palynologist H. Usinger recently has suggested?

Likewise, the classic cultures: Hamburg, Bromme, Ahrensburg, and the arched-backed points (ABP), or Federmesser, now appear to be very promiscuous. At Olbrachice (Poland), Hamburgian sites with ABP-elements occur together with pure Federmesser ones (Burdukiewicz, this conference). The same mixture of Hamburgian and Federmesser can also be found in the Ahrensburg tunnel valley itself. Even in Denmark, where the first Hamburgian sites have recently come to light, Federmesser and Hamburgian elements occur together at the site of Jels I.

In Holland, from the site of Oldeholtvolde (what a charming name!), D. Stapert (this conference) described a Hamburgian assemblage with normal Hamburgian points as well as Havelte ones - not forgetting some ABP elements. These lithic types were found within a single concentration just 7 m in diameter, bound together by a number of refits. Finally, this concentration was dated by ^{14}C to the Allerød.

In order to finish with the Hamburgian and its possible mates, it must not be forgotten that J. Allain at Cepoy in the Paris Basin already for some time has been finding a mixture of Hamburgian elements with Late Magdalenian ones. By the way, N. Arts presented the meeting with the first Late Magdalenian site in Limburg, the southernmost province in the Netherlands.

Finally, it was very instructive to overhear the discussion when, on the last evening of the meeting, a recent surface collection from the

neighborhood of Sezczin, northwestern Poland, was being debated as to whether it was of Hamburgian origin or not. As far as I remember, end-of-blade scrapers were present together with zinken-types and burins, although no typical notched and shouldered points have been found so far. On one side, there were those who saw it as genuine Hamburgian, while the opposing view considered it to be Late Mesolithic, i.e., of Ertebølle character. However, as a compromise, we all agreed as to its nature as a "hot spot".

Just to indicate a few more examples, the same mixture can be seen between Bromme and Federmesser, between Ahrensburgian and Federmesser, and between Federmesser and Preboreal/Boreal Mesolithic.

Chronology: A number of chronologies have been proposed for the material in question, beginning with Schwantes, through Rust, Schwabedissen, Taute, and Tromnau; but now all of these schemes appear to be open to question. This is not the place for a long monologue on chronological matters but one reflection may be permitted. What for so long has seemed to be the foundation for this period - the chronology based on pollen zones - may in reality be more of a hindrance. Indeed, chronological phenomena seem to cross the borders of pollen zones, and the changes observed in the lithic assemblages tend to appear within the zones instead of after the zones. Furthermore, and as paradoxical as it may seem, the very end of one of the Late Glacial cultures - the Masovian at the central Polish site of Calowanie - apparently continues right into the Early Preboreal, at the beginning of the Holocene. However, these questions are perhaps more a case for discussion at the forthcoming meeting in Edinburgh.

Space: A further complicating factor must also be considered and that is the uneven distribution of the various Late Glacial cultures over the North European Plain. With Hamburgian sites in Holland, southern Denmark, Schleswig-Holstein, and western Poland, why are there no such sites in the DDR? Furthermore, if Bromme and Ahrensburgian are respectively an early and late variant of the same cultural phenomenon, why are there then no true Ahrensburgian sites in Denmark, or in northeastern Holland for that matter?

In his summary of the meeting, Romuald Schild demonstrated elegantly that many basic questions are still not resolved, and therefore that there was absolutely no danger that we would soon be out of business!

To my mind, the question of site integrity is paramount. Many of the most recent hybrids described above can, of course, be refuted on the grounds of artificial mixture of different habitations, instead of "cultural mixing". Or to paraphrase an old saying: "for the pure everything is mixed and for the mixed everything is pure". But after all, the mixers might be right! Furthermore, what is finally the interpretation of the various point types, the type fossils

of the Late Glacial on the North European Plain: Hamburgian Kerbspitzen, tanged points of Havelte, Bromme, Ahrensburg, and Masovien (Swiderian) types, not forgetting the Federmesser points? It is chronological, regional, social, functional, or all of these things at the same time, or even something quite different? Metaphysically speaking, they may have been put there in order to confuse the archaeologists.

Although not openly expressed during the sessions, certain site names kept re-appearing in the discussions - just as there was one archaeologist who constantly was quoted and referenced. This, of course, was the late **Alfred Rust** and his investigations in the Ahrensburger Tunnelait. For those who knew him intimately, as well as those who had barely met him, he was the great archaeologist - the discoverer of the Late Glacial on the North European Plain in all its aspects, as well as a gifted excavator and the author of several outstanding monographs.

And so, in a way, we all paid homage to him by taking part in this meeting and the discussions of his material. If one of us at our wake is as well spoken of by so many archaeologists from so many countries, then perhaps there is a case for an optimistic archaeology.

Erik Brinchowski Petersen
Institute of Prehistoric Archaeology
University of Copenhagen

2 June 1984, on the train somewhere on the Plain -
between Warsaw and Berlin, heading for Copenhagen.

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RESEARCH REPORTS

**The Mesolithic-Neolithic Transition
as seen from Southern Portugal:
Preliminary Report on the 1984 Field Season**

What effect does a major change in the economy of a society have upon the health and demography of the people who compose it? Specifically, what happened when "Mesolithic" hunter-gatherers changed to "Neolithic" farmers and herders? And, why did they change in the first place? These are the sorts of questions we began to investigate in Portugal during June, July, and August of this year. Our research is funded by the Social Sciences and Humanities Research Council of Canada (Research Grant 410-84-0300) and is undertaken in collaboration with the Archaeological Survey of Portugal and the Setubal Museum. Our team consists of David Lubell (University of Manitoba), Christopher Meiklejohn (University of Winnipeg), and Mary Jackes (University of Alberta) as co-principal investigators for archaeology and paleoenvironments (CL) and human osteology (CM, MJ). Carlos Tavares da Silva (Setubal Museum) heads the Portugese team and is responsible for archaeology in collaboration with Carlos Penalva (Archaeological Survey, Evora) and Joquina Soares (Setubal Museum). Peter Sheppard (University of Waterloo) is responsible for the study of lithic technology and collaborates with Lubell and Soares on the overall lithic analysis. Achilles Gautier (University of Gent) is supervising the archaeozoological portion of the study. Rudolph de Ceunynck (University of Gent) is responsible for palynology. Christopher Devereux (London) is undertaking geomorphological studies. Michael Kelly and Thomas Shay (University of Manitoba) are analyzing paleobotanical samples collected by Kelly this past summer. Gerd Weih (Victoria, British Columbia) collaborates with Jackes on osteological analyses. Henry Schwarcz (McMaster University) is doing isotopic analyses of shell and both human and non-human bone. Student field assistants this year were Richard Lello (Alberta, archaeology) and Catherine Schentag (Winnipeg, osteology). Additional work is being undertaken by Esther Palmer (osteology) and Catherine Hoohey (geoarchaeology), both from the University of Alberta.

Physical Anthropology

As the list of team members indicates, our research this year had two complementary aspects. To begin with, we wished to study the human skeletal collections from the Muge sites (Moita do Sebastião, Cabeço da

Arruda, Cabeço da Amoreira) (a) to resolve problems of inventory and provenience (see Newell et al. 1979), (b) to establish as accurately as possible the paleodemography of these populations, and (c) to investigate the patterns of paleopathology. We were fortunate to obtain permission from the Geological Survey of Portugal to move the Moita collections from Lisbon to our field headquarters so that they could be studied during the same period as the excavations. Meiklejohn was responsible for the study of crania, while post-cranial remains were analyzed by Jackes and Weih. Weih designed and operated a drill to remove 9 mm diameter cores (for osteon counts) from all left femora (also X-rayed for cortical thickness measurements). These are now being investigated in Edmonton, Canada, by Jackes and Palmer to establish a more accurate demographic profile for the population.

Jackes and Weih did a complete inventory of the collections from Cabeço da Arruda housed at the Geological Survey in Lisbon, in preparation for a detailed study next year. Jackes and Lubell inventoried the Muge skeletal materials housed at the Institute of Anthropology, University of Porto.

Archaeological and Paleoecological Aspects

The second major aspect of the work this past summer was the archaeological and paleoecological study of two prehistoric sites on the Atlantic coast, south of the modern town of Sines.

The first site, Medo Tojeiro, has been the subject of a brief note by Zbyszewski and Penalva (1979). The site is located just south of the small village of Almogrove and consists of two areas that are not necessarily closely related in time. One of these is a small (ca. 12 x 6 m) remnant of shell midden, sitting on and covered by dunes which cap earlier deposits. The midden itself is some 30 m above modern sea level and overlooks the sea from a precipitous cliff. We excavated an area of about 11 m² using a combination of artificial (5 cm) and natural levels within one meter squares. The maximum thickness of the midden deposit was about 75 cm.

Artifacts were rare, consisting of a few potsherds, several geometric microliths, one polished celt, one chopper, some bladelet fragments, and a few quartzite (or greywacke) flakes. These materials, according to Tavares da Silva, are consistent with an assignment to the Older Neolithic which, he says, is in accord with the preliminary radiocarbon date of 6140 bp obtained by the BM(NH) on a sample collected in 1983 during our preliminary inspection of the site. Additional samples, collected this year, will be analyzed shortly.

No bone was recovered during our excavations. Charcoal was abundant, often in large pieces which will be easy to identify. Fire-cracked rock was

very common, forming up to 95% by weight of our 1 liter bulk soil samples. At least 20 species of marine invertebrates were recovered. Of these, four were probably major sources of food - *Mytilus* [53-90% of identified shells], *Patella* [7-33%], *Trochocoloea* [0-3%], *Thais* [1-10%]. Three others (*Cardium*, *Blycimeris*, *Ostrea*) were present but not common. Barnacles (two species) and sea urchins both appear to have been collected. Other, much smaller, shellfish (7 species) may have been brought in attached to sea weed. There were 5 species of terrestrial gastropods (possibly intrusive). These smaller species may be useful indicators for paleoenvironmental analyses.

The second area of interest at Medo Tojeiro is a large blowout in the dune some 30 m inland from the midden. This was the main focus of the earlier publication on the site. This area was the focus of excavations this year under the supervision of Tavares da Silva and Soares. It was here, on a deflated surface, that Penalva had collected several hundred microlithic stone tools belonging to an industry known variously as "Languedocian", "Miriensian" or "Portuguese Asturian" (see discussion in Clark, 1983). In addition to the stone tools, there were several concentrations of broken stone which Penalva originally thought might represent knapping stations. Upon excavation, these were revealed to be hearths. One contained both charcoal and microlithic artifacts, while another included a greywacke flake among the fire-cracked pieces. There is not, however, any indisputable connection between these hearths and the microlithic industry found on a nearby deflated surface. Inspection of the surface of the blowout revealed a mixture of cultural materials ranging in age from modern, through Medieval to at least the Bronze Age (a mint condition Palmela point was found on the back slope of the blowout near the hearths). Peter Sheppard will supervise thermoluminescence analyses of some of the rocks (but not for a date). We hope to get a radiocarbon date on charcoal from one of the hearths. However, all our observations suggest that it will be very difficult to associate these concentrations with the microlithic industry. This is unfortunate, as the date of this material is of considerable interest, given its rather "primitive" aspect and apparent closeness in age to "Neolithic" materials in Portugal. We hope that geomorphological (Devereux) and palynological (de Ceunynck) analyses may help resolve the question.

The second site investigated was Samouqueira, just north of the modern village of Porto Covo. The site is briefly described by Tavares da Silva and Soares (1981) who note the possibility of occupations dating to both the Mesolithic and the Neolithic based on their examination of surface finds.

Samouqueira is a very large site, covering an area of 120 x 140 m or more.

Our work there this year consisted only of four 1 m² test pits and an excavation of 7 x 2 m in 1 m squares, using 5 cm artificial levels within thicker natural strata; all these in the part of the site thought to contain deposits dating to the Mesolithic. Because the site lies in what is now a plowed field, there has been some disturbance. The ground slopes up from the edge of the sea (a 10 m cliff) to an old beach (about 200 m inland) and this entire area has been plowed. Thus, there has been a good deal of downslope soil movement and this is reflected in the depth of overburden which reached over 2 m at a distance of 40 m from the cliff edge. There were scattered cultural materials throughout this depth until apparently *in situ* deposits were reached.

In the main test excavation, running from almost the western edge (sea side) of the site inland for 7 m, with a width of 2 m, we recovered a rich assemblage of lithic artifacts (both microlithic on flint and macrolithic on greywacke and/or quartzite). No ceramics were observed. Marine shell (mostly *Mytilus* and *Patella* with some *Cardium*) was common, and there were bones of *Cervus elaphus*, *Sus scrofa*, *Lepus capensis*, *Vulpes vulpes*, as well as a number of birds, fish (*Sparus auratus*), and possibly dog (? *Canis lupus* f. *familiaris*).

Two partial human skeletons (Samouqueira 1 & 2) were excavated from the cultural levels. S1 was either a lightly built male or a large female (using our data from the Moita population as a reference). The right humerus had probably been fractured and had healed poorly, with medial and anterior deflection of the distal end. There is evidence of osteomyelitis. S2 was a male between 173 and 175 cm stature (on the basis of Trotter and Gleser estimates), with strong muscle markings. Pronounced arthritic changes are evident at the right wrist. Both skeletons had been disturbed, probably by plowing and subsequently perhaps by downslope erosion. S1 may or may not have been buried in full articulation. S2 certainly was, probably as a flexed burial (after rigor mortis had relaxed) with the head to the west and the face to the north.

We plan to extend the excavations at Samouqueira in 1985 (during July) and to continue analysis of human skeletal collections, concentrating on the material from Cabeço da Arruda housed both in Lisboa and in Porto (August and September).

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[illegible]NATIONAL RESEARCH SYNOPSIS

Mesolithic Research in Ireland over the Last Five Years

- (1) Excavations at Bay Farm, Carnlough, Co. Antrim, 1978-80.

Joint Ulster Museum/Queens University research program in Glencloy. Excavation of extensive later Mesolithic chipping floor. This had been mostly destroyed by mud flows but an area of 10 x 6 m was still preserved intact. There were few traces of stake holes, hearths, etc., and no trace of adjacent settlement.

Date Range: 3800-3400 b.c. Final report in preparation.

Excavator: P.C. Woodman

(2) Excavations at Moyknock, Co. Meath, 1980-

Excavation of an Early Christian crannog (artificial lake dwelling) revealed extensive prehistoric occupation underneath, with a Later Mesolithic lakeshore occupation at the base. To date, only limited excavations have taken place. Industry is Later Mesolithic with some faunal remains present, including pig and (?) cattle.

Date Range: 3200 b.c. (may be Mesolithic survival)

Excavator: J. Bradley

(3) Flint identification program.

Due to the need to identify whether flint on Bann Valley sites was coming from Antrim coastal sites such as Bay Farm, a program of characterization has been undertaken using electron spin resonance. This procedure showed that Bann Valley artifacts had characteristics more in common with those in East Antrim coast flint (Griffiths and Woodman, **Proc. of the Fourth International Flint Conference**, in press.)

(4) Stone axe program.

Thin sections of stone axes from Bann Valley showed that the axes were probably made from rocks originating in the Paleozoic Peneplain to the south of Lough Neagh. These axes would have to be imported by man. (Johnston and Woodman, *J. Irish Archaeology* 2, forthcoming).

Mesolithic Research in Southwest Ireland

The Department of Archaeology, University College Cork, has been involved in three programs of research in southern Ireland:

(1) Support for the Ballylough Project in Co. Waterford (reported in **Mesolithic Miscellany** 5,1):

(2) Co. Cork Field Walking Program. This project was carried on throughout the 1983/84 winter and was made possible financially through a grant from the Royal Irish Academy. The purpose of the project was to establish if there was any Mesolithic settlement in S.W. Ireland. Two areas were carefully examined: (a) the East Cork coast where one late Mesolithic site was discovered as well as several stray, later Mesolithic, Bann Flakes. With

substantial changes in relative sea level and extensive coastal erosion, it is hardly surprising that few traces of pre-Neolithic settlement are found. (b) The Blackwater Valley where one certain early Mesolithic site was discovered on a cliff at the confluence of the Awbey and the Blackwater. This site has produced a number of microliths. In Ireland, microliths are presumed not to post-date 6000 b.c. Several other probable early Mesolithic sites were found but no later Mesolithic materials were encountered.

(3) Excavations at Ferriters Cove, Co. Kerry. This is a series of sites on a wave-cut platform at the western end of the Dingle Peninsula. The sites consist of hearths, small heaps of shells, pits, and occasional stake holes. The sites have been dated to the end of the Mesolithic, 3600-3200 b.c. (Woodman, Duggan and McCarthy, *J. Kerry Archaeol. Soc.*).

The fauna consists of deer, pig, fish and a range of shells. The artifacts are made primarily from rhyolite and volcanic ash. Some of the raw material had been brought to the site from nearby rock outcrops. As there is one stray Neolithic artifact from the immediate vicinity of the excavation, it is possible that these sites may lie at the interface between the Mesolithic and the Neolithic in this area.

In sum, work over the last year has shown that the distribution of Mesolithic sites reported in Woodman (1978) reflects activity on the part of research workers rather than Mesolithic hunter-gatherers.

Peter C. Woodman
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Reference

Woodman, P.C. 1978. *The Mesolithic in Ireland*. British Archeological Reports, British Series 58.

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DISCUSSION**The Age of Red Deer or of Bowmen?**

In *Mesolithic Miscellany* 5 (May, 1984), T.D. Price reviewed Grahame Clark's *Mesolithic Prelude*, noting the absence of a definition of Mesolithic. Price tries to fill that gap by defining the Mesolithic as "that period of time when Postglacial hunter-gatherers occupy the Continent prior to the introduction of agriculture".

Thomsen, in the re-organization of the National Museum in Copenhagen in 1836, distinguished the three ages: Stone Age, Bronze Age, and Iron Age. In 1847, Boucher de Perthes demonstrated the contemporaneity of man with extinct animals through the association with worked flint tools. In 1865, John Lubbock created the concepts of Paleolithic and Neolithic and, in 1869, G. de Mortillet divided the Paleolithic into Acheulean, Mousterian, Aurignacian, Solutrean, and Magdalenian. As early as the beginnings of the field of prehistory, the Paleolithic has been classified according to the activities of man and, more particularly, the tools he made, the proof of his other activities.

Price's hybrid definition would in part take us back to the short-lived paleontological classification of the periods of prehistory proposed by Lartet and Christy - to the Great Bear, Mammoth, and Reindeer Ages. That obsolete conception is repeated, but not revised, by Paul Mellars (*Mesolithic Miscellany* 2, 1981) for the only expressed reason that he was unable to go back from the tools that were used to the hunting technique which determined them (see below). From this perspective, man is a passive witness to geological developments, he is conditioned thoroughly by nature, which is beyond him. Cultural evolution is narrowly likened to an external, environmental/material determinism. Mellars adds this ridiculous conception: a limit fluctuating with time, as long as two millennia (while intercultural currents prove that these populations used to share technological improvements quickly).

For more than one hundred years, our predecessors and colleagues have admitted that G. de Mortillet's point of view was correct; for him and for us, prehistory is above all the continuation of human initiatives; inventions respond in the face of the constant pressure of the environment. There does not seem to be any serious reason why we should refute that line of argument, the fruitfulness of which has been proven by experience. One cannot consider as sufficient reason the inability of some people to understand the meaning of the changes that occurred around the 10th and 9th millennium, that is, before the end of the last glaciation.

Let us note casually the circular line of argument which, from an incorrect definition of the Mesolithic as Postglacial, leads one to say that climatic change (and not the continuous pressure of the environment) was the cause of the transformation. And, consequently, this perspective would place the obviously microlithic armatures of the Ahrensburgian or Valorguian in the Paleolithic - quite contrary to common sense - but would not put Azilian or Tjongerian armatures in the Mesolithic even though they were made for hunting stag during a period of temperate climate.

The article by Mellars (*Mesolithic Miscellany* 2, 1981) is a splendid illustration of that circular line of argument. Should I recall the Ahrensburgian microliths which weigh less than 1 g and are observed fixed to arrows which were found in peat? These microliths are dated to Dryas III which was a very cold period; they were found in Germany and the Netherlands, both areas which cannot be considered as southern.

Price (*Mesolithic Miscellany* 5, 1984) restates the well-known pseudo-arguments: there are a few microliths in the Magdalenian and, moreover, a lot of backed bladelets; the Upper Paleolithic is associated with temperate fauna in Spain (which should have convinced him that fauna is not a valid reference), along with (dubious) assertions regarding the permanent occupation of dwelling sites (the same was argued for the southwestern French Magdalenian). These arguments are just nonsense.

There is a well-known fact: the tool kits of the Upper Paleolithic can be studied with the de Sonneville-Bordes/Perrot typology while epipaleolithic assemblages cannot. It was necessary to develop special lists of type definitions, the validity/usefulness of which are not in question at this point.

Indeed, microlithic armatures (with the exception of backed bladelets) are present in very few Paleolithic sites and then only in very low numbers (e.g., not more than 5% of the entire assemblage at Gare de Couze). They are nothing more than first attempts, without any immediate continuation and without the general, permanent character that is the case in the Epipaleolithic. Of course no change occurred in a single day and it will be useful to discuss the limits.

The backed bladelets have quite a different character; they are not pointed, while other microlithic armatures are. This major morphological difference permits easy recognition of backed bladelets (for whatever use they might have). Let us also add that the geometrical or non-geometrical character of the armatures is totally unimportant - Tardenois points, scalene bladelets, mistletoe leaves, Istres points, for example, show that clearly.

Ethnographic interpretation, which has puzzled our predecessors for a century, is quite simple and well established: the abundant and widely spread

microlithic armatures are proof of the abundant and widely spread use of the bow and arrow as the way of hunting and the very basis of life, causing repercussions throughout the social organization and giving it its special character. The bow is one of the major inventions in human history (after fire, clothing, and the stages of working stone).

The Mesolithic, regarded here as the bowman's period, is mainly Epipaleolithic. The upper limit, of course, corresponds to the introduction of the production of food and not to climate change (the same as before with the introduction of the bow and arrow). In Europe, this process appears to be intrusive, more especially so with the introduction of plants and animals from outside this area.

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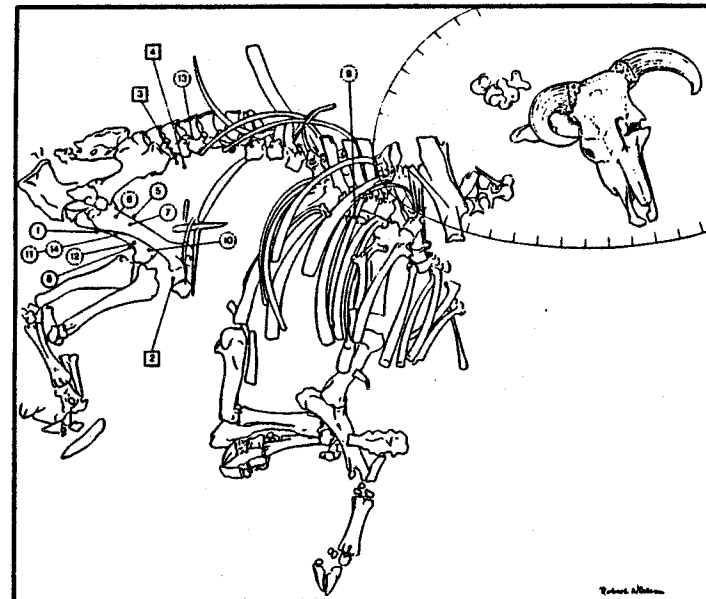
Rozoy, J.-G. 1978. *Les Derniers Chasseurs. L'Épipaléolithique en France et en Belgique*. Available from the author, 500 FF. (see in particular Chap. 2, historique des recherches; Chap. 21, pp. 949-969, les armatures; 1008-1020, l'arc et la flèche).



RECENT PUBLICATIONS

Aaris-Sørensen, Kim. (Editor). 1984. *Uroksen fra Prejlerup. Et arkeozoologisk fund*. Copenhagen, Zoological Museum.

A virtually complete aurochs skeleton was found in 1983 in a bog near the village of Prejlerup in northwest Zealand, Denmark. The aurochs was a large male, weighing perhaps 1000 kg. The animal was 18-20 years of age at the time of death which was likely in the winter. In addition to the well-preserved skeleton, 17 pieces of flint - including 15 microlithic points or fragments of points - and a 4 cm long pine arrowshaft with attached resin were recovered in the excavations by the Zoological Museum. The majority of the points were found in the rear of the animal. The microliths belong typologically to a later phase of the Maglemose culture and the site is radiocarbon dated to 8410± 90 b.p.



Aurochs at Prejlerup (numbers indicate locations of flint artifacts).

Andersen, K. 1983. *Stenalder bebyggelsen i den Vestsjællandske Åmose*. Copenhagen: Fredningsstyrelsen. 210 pp., 94 figs.

Andersen, Søren H. 1982. Harpunen fra Føns Vig. *Fynske Minder* 1982: 7-16. (German summary: Die Føns-Harpune.)

Andersen, Søren H. 1983. Stenalderfolk fra Tybrind Vig, Vestfyn. *Fynske Minder* 1983:7-28. (German summary: Steinzeitmenschen aus Tybrind Vig, Westfönnen.)

Andersen, Søren. 1983. Mønstrede åreblade fra Tybrind vig. *Kuml* 1982-83: 11-30. ("Patterned oar blades from Tybrind Vig." English summary.)

Andersen, Søren H., and Erik Johansen. 1983. Nye undersøgelser ved Ertebølle køkkenmøddingen. *Antikvariske studier* 6: 294-299. (New investigations at the Ertebølle kitchen midden.)

Bagniewski, Zbigniew. 1980. Studies on the southern portion of the Kashabian Lake District. *Ślaskie Sprawozdania Archeologiczne* 21: 12-22. (In Polish with German summary.)

In the course of surface investigations, 19 new Mesolithic sites were discovered and excavations were begun in two of them. At Zbrzyca 2, there was an assemblage of 1500 flint artifacts (cores, tools, and waste products) along with numerous animal bones. The site dates to the Komornica culture, mixed with elements of the Chojnice-Piński culture, from the second half of the Atlantic period. At Zbrzyca 5, a hearth was uncovered containing 79 flint artifacts, including tools, flakes and chips, along with several small sherds of Pit-Comb pottery, found in a secondary layer. The complex is datable to the later phases of the Komornica culture, with elements of the Chojnice-Piński culture, from the decline of the Atlantic Period. (*Polish Archaeological Abstracts*.)

Bagolini, Bernardo, and Paolo Biagi. 1981. The Mesolithic and Early Neolithic Settlement of northern Italy. *Prace Komisji Archeologicznej* 21: 9-26.

The article describes results of investigations at previously unknown sites in the regions of Liguria, the Po River and Venice. With the exception of one case (Grotta della Tertaruga), the sites of the earliest Mesolithic do not reveal any links with the Late Paleolithic settlement.

These sites are linked with the cultures of the Microlithic cycle (Triangle complex). The economy of these people was based on hunting, fishing and gathering. The economy of the late phase of the Mesolithic Age, does not show any essential differences in relation to the economy of the early phases of the Mesolithic. Generally speaking, the evolution of the Mesolithic age in northern Italy is similar to other European regions such as Provence or Switzerland. Also noticed are similar ways of producing tools, both in the Mesolithic and Neolithic Ages, even if later ones are of larger dimensions. The first Neolithic communities are known from caves on the Ligurian coast, with finds dating to around 4500 b.c. Mesolithic material elements continue into the Neolithic. (*Polish Archaeological Abstracts* 1983.)

Bahn, Paul G. 1982. L'économie paléolithique et mésolithique du Béarn. *Revue de Pau et du Béarn* 10: 127-140.

Bandi, H.-G. 1981. Mesolitische und Neolitische Stabharpunen der Schweiz. *Prace Komisji Archeologicznej* 21: 27-34.

This article concerns the problem of harpoons in Switzerland, where late hunting cultures and early farming cultures existed simultaneously. Harpoons were widely popular in both periods. The author concludes that it is impossible to prove that Neolithic populations adopted Mesolithic harpoons. However, indirect evidence of contact between Tardenois culture and Linear Band Keramik cultures is present. The author, therefore, thinks that contacts resulting from such borrowings came, in earlier periods, from beyond Switzerland. (*Polish Archaeological Abstracts* 1983.)

Collins, A.E.P. 1983. Excavations at Mount Sandel, Lower Site, Coleraine, County Londonderry. *Ulster Journal of Archaeology* 46:1-22.

Constandse-Westermann, T.S., & R.R. Newell, with collaboration from C. Meiklejohn. 1984. Human biological background of population dynamics in the Western European Mesolithic. *Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen, Series B*, 87(2):139-223.

Various approaches to the problem of quantifying population growth in the Western European Mesolithic are presented and evaluated. An archaeological approach through the study of site density and size gives the best results. The relatively slow population growth during

the period in question is due to a low fertility rather than to an exceptionally high mortality. The main agent which keeps fertility low is amenorrhea, caused by prolonged and intensive lactation. Secondary population depressant factors may include induced abortion and infanticide. The underlying factors are studied making use of analogous ethnographic hunter-fisher-gatherer populations.

Crotti, P., and G. Pignat. 1983. Abri mésolithique de Collombey-Vionnay: les premiers acquis. *Jahrbuch der Schweizerischen Gesellschaft für Ur- und Frühgeschichte* 66: 7-16.

Das mesolithische Abri Collombey-Vionnay VS wurde bereits vor einigen Jahren entdeckt, aber erst 1980 konnten erste Sondierungen stattfinden. Ausgedehnte Ausgrabungen sind für die Jahre 1982 bis 1984 vorgesehen.

Der Aufsatz legt die vorläufigen Resultate der ersten Sondierungen vor: Fauna. Bis jetzt konnten folgende Tierarten identifiziert werden: Hirsch, Reh, Wildschwein, Bär, Wildkätz, Dachs, Marder, und Biber. Reste von Fischen und Vögeln sind vorhanden müssen aber noch genauer bestimmt werden. Die Artenlist zeigt deutlich die Lage des Abri zwischen zwei verschiedenen Biotopen: Wald und Moor/Fluss.

Geräte aus Knochen: Trotz den sehr zahlreichen und gut erhaltenen Hirschknöchel, konnten keine bearbeiteten Stücke geborgen werden. Hingegen fand sich eine durchbohrte Muschel (*Columbella rustica*). Organische Reste: Als einzige Funde sind etliche verkohlte Haselnusschalen zu erwähnen.

Silexartefakte: Das Silexmaterial ist sehr heterogen und von verschiedener Qualität. Auch Bergkristall wurde zur Geräteherstellung verwendet. Der zahlenwässig geringe Anteil der Werkzeuge gegenüber den Abschlägen, die bei der Herstellung von Werkzeugen entstehen, ist erstaunlich. Der Grund dazu ist möglicherweise in der geringen Qualität des zur Verfügung stehenden Materials zu suchen. Unter den Gerätetypen dominieren die geometrischen Mikrolithen, während die üblichen Werkzeuge wie Kratzer, Stichel usw. nur schwach vertreten sind. Unter den Mikrolithen, die meist kleiner als 2 cm sind, fand sich bis jetzt keine einziger Mikrostichel. Mikrospitzen hingegen, wie sie in Ogens VD und Baulmes VD gefunden wurden, sind häufig (sogenannte "pointes d'Ogens"). Das Gerätespektrum umfasst ebenfalls Klingen, Segmente und Dreiecke. Der gesamte Aspekt der Gerätetypen erlaubt eine Annäherung der Funde an die sogenannte "Fazies von Ogens". Diese als saunterrois angesprochene Fazies entwickelt sich zeitlich zu Beginn des Boreals, ungefähr 6500 b.c.

Cyrek, Marie, and Krzysztof Cyrek. 1980. La Sepulture Mésolithique de Janislawice. *Inventaria Archaeologica Polonie* 44.

The authors describe the contents of the oldest and only skeletal grave in Poland from the Janislawice Culture of the Boreal or Atlantic period. The skeleton was placed in a sitting position. Grave goods consisted of numerous flint, bone, and horn items (weapons, tools, and a necklace made of red deer teeth). (*Polish Archaeological Abstracts* 1983.)

ghardt, Kurt, and Friedrich B. Naber'. 1983. Die mesolithische Doppelbestattung bei Altessing, Gem. Essing, Ldkr. Kelheim/Ndb. *Bayerische Vorgeschichtsblätter* 48: 1-30.

Jønsson, Bente, and Lisbeth Pedersen. 1983. Sønderholm. En østsjaellandske boplads fra Ertebøllekulturen - kendt, glemt og genfundet. *Antikvariske Studier* 6: 173 - 185. (Sønderholm - An Ertebølle settlement site by Køge Bugt. English summary.)

The Sønderholm settlement site lies at the edge of the Karlslunde bog (East Zealand). In the latter part of the Atlantic period, the bog was a fjord. The excavation was carried out layer by layer according to a grid system of 0.5 m x 0.5 m units in order to avoid the time-consuming job of plotting in finds. The implements found at Sønderholm reveal that the site was inhabited throughout most of the Ertebølle culture, but the amount of implements from the late Ertebølle bears witness to intensive settlement in this phase. Stone paving found amid the culture layers may perhaps be interpreted as the foundations of a settlement site after a change in sea level. Among the finds were small bone points with unilateral barbs, assumed to be segments of composite fishhooks. A paddle of hazel wood, dated by pollen analysis to the period of the elm decline and by ¹⁴C to 3180 b.c., was found in marine deposits close to the site.

Martini, Fabio. 1981. L'Epigravettiano di Grotta della Cala a Marina di Camerota (Salerno). II. L'industria litica e la cronologia assoluta dell'Epigravettian finale. *Revista di Scienze Preistoriche* 36:57-125.

The Epigravettian of the Grotta della Cala at Marina di Camerota (Salerno). II. The lithic industry and the absolute chronology of the final Epigravettian. The author reports on the analysis of lithic

Industries from layers I-L, H, G, and F, associated with the Late Epigravettian. The artifacts can be divided into two subphases. The first, which is found in Layer I-L, is characterized by the prevalence of burins over scrapers, the development of the short scrapers, the presence of the geometrics wider than backed and truncated pieces. Typologically the industry is small with a predominance of flat tools and implements on flakes. The statistical analysis has indicated some connections with the underlying layer M (Evolved Epigravettian) a transition to the final phase on the basis of which Layer I-L may be considered a fluctuation with regressive characteristics inside the Final Epigravettian.

In the second subphase, represented by layers H and G, very homogeneous between themselves, there is to be seen a predominance of scrapers over burins, a further development of the short scrapers with some subcircular shapes, a diminution of the geometrics which become inferior to the truncated pieces in width. The industries are of small dimensions on flat flakes.

The two absolute dates from layer H (around 12,000 years b.p.) and layer F (about 10,000 years ago) fall in the expected position within the Final Gravettian. Finally, comparisons on a structural level, with other industries and the same cultural complex, are expounded.

Newell, R.R. 1984. Settlement systems in the Dutch Mesolithic: setting the record straight. *Helinium* 24: 44-52.

Noe-Nygaard, N. 1983. A new find of Brown Bear (*Ursus arctos*) from Star Carr and other finds in Late Glacial and Post Glacial Britain and Denmark. *Journal of Archaeological Science* 10: 317-326.

Price, T. Douglas. 1983. Swifterbant, Oost Flevoland, Netherlands: Excavations at the River Dune Sites, S21-S24, 1976. Final Reports on Swifterbant III. *Palaeohistoria* 23: 75-104.

Continuing investigations near the town of Swifterbant, on the reclaimed land of Oost Flevoland, in the Netherlands, have resulted in the recovery of the remains of human occupation dating from both the Mesolithic and the Neolithic periods. The somewhat higher elevations of the river dunes appear to have been favored locales for habitation. During the Boreal period of the early Postglacial, this area would have been a fairly typical coversand environment in a riverine regime. The landscape would have been dominated by a relatively stable Boreal forest. As conditions became moister and sea level rose after 5500 b.c.

in the Atlantic period, the area was transformed into a bog and creek system in a freshwater tidal delta environment. A marsh forest would have been present with abundant alder, oak and pine. Lime trees would have been common on the river dunes. Finally the area would have been inundated by rising water levels sometime after 3000 b.c. Although much of the occupation horizon on the river dune has been truncated by erosion, some of the materials collected from the site appear to document a Ceramic Mesolithic occupation, ¹⁴C dated to 4300 b.c. at site S23. Ceramic Mesolithic sites are recorded elsewhere along the northern coast of Europe. In northern Germany and southern Scandinavia, pottery is found with the Ertebølle-Ellebek cultures of the Mesolithic. Ceramics in the Danish Ertebølle, similar in size and shape to the Swifterbant materials, appear after 3900 b.c. An earlier utilization of the dune is indicated as well. Radiocarbon dates of roughly 5800 b.c. and 4800 b.c., along with certain lithic artifacts, provide evidence for earlier occupations, corresponding to the Boreal and Late Mesolithic periods.

Rowley-Conwy, Peter. 1984. Postglacial foraging and early farming economies in Japan and Korea: a west European perspective. *World Archaeology* 16: 28-42.

The article discusses the western-language sources available for the economies of the Jomon and Yayoi cultures. Little detailed evidence is available but the Jomon hunter-gatherers were apparently sedentary and exploited various combinations of marine and terrestrial resources. Good evidence for agriculture is available only in the Final Jomon Period (1000-300 B.C.). The uneven dispersal of rice cultivation after this period suggests that areas densely settled by foragers may not have been receptive to the spread of agriculture. This implies that agriculture spreads due to a series of particular, local causes, and not just as a result of a long period of general intensification and population growth among hunter-gatherers.

Sampson, C. Garth. 1984. Late Pleistocene and Holocene microlithic industries from the Lunsemfwa basin, Zambia. *The South African Archaeological Bulletin* 34(139): 24-36.

Thévenin, Andre. 1983. Les galets gravés et peints de l'abri de Rochedane (Doubs) et le problème de l'art azilien. *Gallia Préhistoire* 26: 139-188.

Andersen, Knud. 1982. Bjergby Enge, en tidlig Maglemoseplads. *Aarbøger* 1980: 5-13. (Bjergby Enge, an Early Maglemose site. English summary).

The site of Bjergby Enge was found in 1952 when the cultural layer was exposed by peat harrowing. On request, the two local people who had found the site gathered all the flint. The site is situated on the western edge of the bog area, approximately 12 km west of Holbaek on the island of Zealand. According to the finders, the site seems to have covered an area of 7x7 m, but the thickness of the cultural layer is unknown.

Practically all the organic materials are decomposed. Only a hazel shell, a fragment of a tubular bone, and a 2 cm fragment of rig, scraped smooth on the outside and slightly burned, remained - and this latter item provided the only evidence for a fireplace on the site. So the find consists mainly of flint. The type of flint is rather poor, the cores are small and the blades and flakes are somewhat irregular. However, the site clearly belongs to the Maglemose group (average width of the blades is 11.6 mm) but it cannot compare with later Maglemose sites.

The find includes 198 blades and 130 blade-like flakes (B-blades). There are 15 cores, intact ones and fragments, 828 pieces of waste, and 62 tools. These are dominated by obliquely blunted points of which there were 44 intact or broken specimens, plus 8 microburins. There are 2 knives, one blade borer, one stout borer, 5 scrapers (one end of blade, one oblong, 2 round, and one carinate), plus 27 blades with partially retouched edges. Surprisingly, the find contained no burins. Furthermore, there is a symmetrical, flat-trimmed flake axe, a flake scraper, and an oblong scraper - all from a greyish flint that sets them apart from the rest of the material. In addition, one of the collectors has a flake axe, an oblong scraper and a flake from the edge of a specialized adze. However, these are made from a dark flint that cannot derive from this site.

A quite similar inventory was later found on the Baremose site in southern Zealand. This site contained approximately 70 obliquely blunted points. Like Bjergby Enge, the assemblage had poor cores and blades but did contain a few burins. The cultural remains included a finely barbed bone point and 5 more of the same kind were gathered on the bog surface - but there were no later types. The slightly younger site, Hasbjerg II, has a similar inventory but also includes 12 isocles triangles. Bjergby Enge contains no finely barbed bone points but large

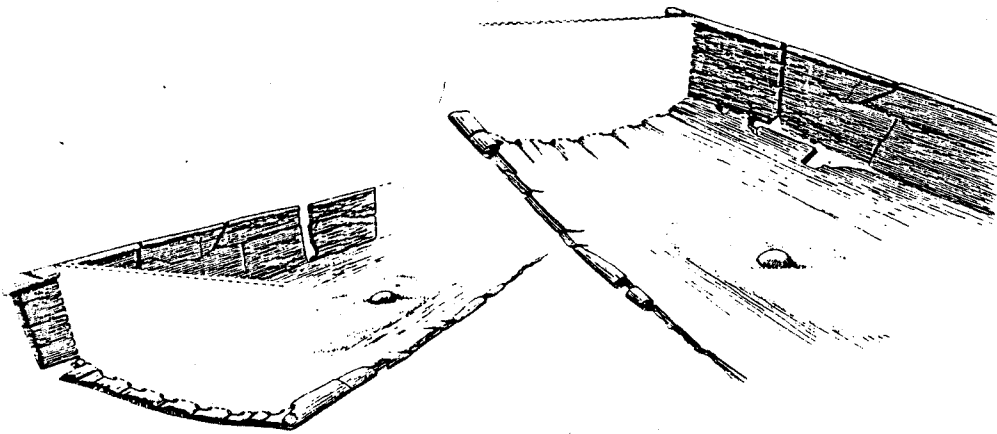
numbers have been found on a fishing site in the same bog area, and once again no later types were present. The finds were pollen-analytically dated to the Preboreal/Boreal boundary. The aurochs from Vig was killed with arrowheads identical to the type represented in these two finds. Star Carr and Klosterlund have many of these blade arrowheads combined with slightly younger types.

So Baremose and Bjergby Enge seem to represent a phase of the Maglemose culture which is older than Klosterlund, and possibly the oldest manifestation of the Maglemose culture in Denmark. The flake axes, which were found on both sites, create a problem which is insoluble at the moment. There are three possible interpretations: (1) the flake axes are an accidental admixture left by Ertebølle people who happened to settle on exactly the same site as the Preboreal hunters; (2) the find should be dated according to the blade arrowheads and thus the specially shaped flake axes are much older than is generally assumed; or, (3) the find should be dated according to the flake axes and consequently blade arrowheads of the old type appear as late as the final phases of the Ertebølle. A final determination of this question cannot be made on the present materials, but the author is of the opinion that the first interpretation is correct.

Andersen, Søren. 1983. En stenalderbåd fra Tybrind vig. *Antikvariske studier* 6: 162-172. (A Stone-age boat from Tybrind vig. English summary.)

During the excavation of the submerged Ertebølle site (4200 - 3200 B.C.) in Tybrind vig, the oldest and best preserved dugout canoe from a Danish Mesolithic settlement context was found. The dugout canoe lay in the prehistoric reef belt just outside the settlement with its bow on the prehistoric seashore. The Tybrind boat, C.14 dated to 3310 b.c., is an example of the Ertebølle culture's boat form. The most important characteristics are as follows: the raw material is the straight trunk of a lime (*Tilia* sp.) worked with an axe or adze (chopping marks being visible over the entire surface). The outline of the boat is a long, narrow, sharpened, ellipse with a pointed bow and straight, cut-off stern. In cross-section the boat is trough-shaped with a rather flat bottom. The length is c. 9.5 m, the beam c. 50-60 cm, and height of the sides c. 25 cm. The thickness of the sides is c. 1-2 cm, of the bottom, 3-5 cm. The length-beam ratio of c. 17:1 is very characteristic of this

kind of boat. The open stern of the boat has been closed by a removable bulkhead secured by pegs mortised into eight rectangular holes in the bottom and sides.



Two Views of the Stern of the Tybrind Boat

At the stern was an oval hearth on an underlayer of sandy clay. The fireplace is most probably connected with (eel)fishing - the calm, shallow, muddy-bottomed bay of prehistoric Tybrind must have been ideal for the use of "eel-flares" in the summer months. The gunwale is even and smoothly rounded with a clearly defined edge along the inside. There are no traces of any sort of washboard, nor is there anything to suggest that the boat had been braced. In the boat a big flat stone - weighting 30 kg - was found, probably used as ballast. A boat of this size must have been able to carry a considerable load. Final calculations are not yet available, but preliminary estimates indicate that the boat was large enough to transport an entire family - 6 to 8 persons - in connection with seasonal movements within the group territory. The size and craftsmanship of the Tybrind boat is impressive and a striking expression of the Ertebølle culture's technological ability and skill with wood. With a few simple tools it was possible to turn a lime tree into a boat about 10 m long which could hold a family.

The Tybrind boat was an essential means of transportation for the mesolithic population - both in connection with the many fishing activities and open-sea hunting, and also for communication along the coastlines from site to site.

What the boat looked like as it sailed in the bay of Tybrind at that time we shall never know exactly, nor for that matter why it was abandoned on the beach. But thanks to the remarkable state of preservation and to modern methods of underwater excavation, this find has yielded not only new and important information about the Ertebølle culture, but also about the evolution of man's oldest and most important means of transportation: the boat.

Bahn, Paul G. 1984. *Pyrenean Prehistory. A palaeoeconomic survey of the French sites.* La Haule, Jersey: La Haule Books, Ltd. 511 pp. 4to; 80 illus., 36 maps, 41 tables. £28.

The French Pyrenees occupy a key, gateway position between southern France and the Iberian Peninsula. In prehistoric studies this region has long been overshadowed by the Périgord - yet it is an archaeologically rich area and was the scene of work by some of the earliest and greatest pioneers in prehistory: Noulet, Lartet, Piette, and the first work by the abbé Breuil. It contains two type sites - Aurignac and the Mas d'Azil - and many of the finest examples of palaeolithic parietal and portable art. It is the region with the most evidence for the enigmatic activities of Magdalenian man in deep caves; and it is rich in megalithic monuments.

This book is the first synthesis of the prehistory of the French Pyrenees; it attempts to present an up-to-date account of the subject - from the Atlantic to the Mediterranean and from Tautavel to the Iron Age. Emphasis is not on the artifacts but on site locations and the development of subsistence patterns, in regard to environmental/climatic change and to topography. The volume argues that Upper Paleolithic man could have manipulated herds of animals, that Mesolithic man was by no means a miserable eater of snails, and that the distribution of megalithic monuments is directly related to the seasonal, altitudinal movements of pastoralists.

The volume includes all of the Mesolithic, from Piette's discovery of the Azilian to the problems of neolithization, and features important sites such as Mas d'Azil, La Tourasse, Poeymaü, and Guilaine's most

recent excavations in the eastern Pyrenees and Andora.

The book contains a complete list of absolute dates for the region, a bibliography of over 1300 references, over 80 illustrations, 41 climatic and dietary tables, and 36 maps.

Cahen, Daniel, et Paul Haesaerts (editors). 1984. **Peuples Chasseurs de la Belgique Préhistorique dans leur Cadre Naturel**. Bruxelles: L'Institut royal des Sciences naturelles de Belgique. 280 pp., 115 figs., 13 tableaux, index, bibliographie, résumés. 470 francs belges.

Réalisé par des chercheurs appartenant aux diverses universités et institutions scientifiques du pays, cet ouvrage renoue avec une tradition de recherche archéologique, paléontologique et géologique très féconde et dans laquelle la Belgique joua, au dix-neuvième siècle, un rôle de pionnier. Il constitue la première synthèse des découvertes anciennes et des recherches les plus récentes qui soit exclusivement consacrée aux peuples chasseurs de la Belgique préhistorique et à l'évolution de leur milieu naturel.

De l'aube de Quaternaire jusqu'à l'époque actuelle et des premiers occupants de l'Europe de Nord-Ouest jusqu'à l'arrivée des agriculteurs néolithiques, il y a 6.500 ans environ, l'évolution du paysage, des flores et des faunes est décrite parallèlement à la succession des cultures préhistoriques, retraçant ainsi une histoire couvrant plus d'un demi-million d'années et qui déborde largement le cadre national.

La diversité des thèmes abordés, des introductions méthodologiques, une illustration abondante et originale, un index des sites archéologiques, une bibliographie exhaustive et des résumés français, néerlandais, anglais et allemands font ce livre un ouvrage de référence indispensable pour le spécialiste. C'est aussi, pour un public beaucoup plus large, une bonne initiation à l'archéologie préhistorique.

A chronological chart from this volume appears on the following page.

Constandse-Westermann, T.S., C. Meiklejohn, & R.R. Newell. 1982. A reconsideration of the Mesolithic skeleton from Rastel (Commune de Peillon, Alpes-Maritimes, France). **Bulletin, Musée d'Anthropologie Préhistorique de Monaco** 26: 75-89.

STADES TECHNOL	INDUSTRIES		SITES (* grottes)	CHRONO- STRATI - GRAPHIE	AGE ESTIME BP ±10 ³	DATE B.P.	
NEOLI- THIQUE	RUBANE		Daron Place St-Lambert	ATLANTIQUE	70 - 5	6190 6370	
MESOLITHIQUE	RECENT - RMS		Station Leduc	ATLANTIQUE	70 - 5	6900	
	BEURONIEN - B/C		Coléoptère* (15)	ATLANTIQUE	70 - 5	7000	
	ANCIEN - BEURONIEN A		Ourlaine Sougne	PREBOREAL	10 - 87	9200	
	ANCIEN - EPIARHENSBOURGIEN		Neerharren-De Kip	PREBOREAL	10 - 87	9170	
	ARHENSBOURGIEN		Remouchamps *	DRYAS 3	11 - 10	10330	
PALEOLITHIQUE SUPERIEUR	recent	TJONGERIEN		Meer II	ALLEROD ?	12 - 11	8950
		CRESWELLIEN		Bos de la Sautte* Presle*	DRYAS 2 DRYAS 2 ?	± 12	
		MAGDALENIEN		Coléoptère* (16-8)	DRYAS 2	± 12	12 400
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	ancien	AURIGNACIEN					
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		- groupe 2		Hermitage	TURSAC	25 - 24	23 370
		- groupe 3		Trou du Renard* Halleux*	TURSAC ?	25 - 24	24 530 25 440
		Maisières-Canal	MAISIÈRES	20	27 985		
- groupe 2		Marche-les-Dames*	ARCY	31	23 460		
- groupe 1		Spy*	> ARCY	> 31			
INDUSTRIE A POINTES FOLIACEES		Spy* Goyet*	> ARCY	> 31			

The Late Pleistocene/Early Holocene in Belgium (Cahen & Haesaerts, 1984).

Gendel, Peter A. 1984. **Mesolithic Social Territories in Northwestern Europe**. British Archaeological Reports, International Series, 218. 263 pp., 29 tables, 61 figs. £12.00, postfree.

Larsson, Lars. 1984. The Skateholm Project. A Late Mesolithic settlement and cemetery complex at a Southern Swedish Bay. **Meddelanden från Lunds universitets historiska museum 1983-84**. New series, 5: 5-38.

A trial excavation of a site at Skateholm, South Scania, was initiated in the spring of 1980. The investigation was prompted as a result of flint artifacts from the Late Mesolithic period having been observed at surface level. It was established already during the first days of investigation that the site contained a combination of settlement area and cemetery, both of Late Mesolithic age. Investigations have now been conducted during four seasons of excavation at the first-discovered site, designated Skateholm I, and partly at a lately discovered, nearby site, Skateholm II. Altogether 53 graves have been recovered at Skateholm I, as well as some 60 other features together with some 100 m² of occupation layer. Eleven graves have been examined at Skateholm II along with a minor section of the occupation floor. Quaternary geological studies of sea level changes during Late Atlantic time show that the sites were then located on small islands in an ancient bay, the extent of which varied considerably in the course of transgressions due to the flatness of the terrain. The well-preserved bone material in the occupation layer testifies to the multiplicity of species which the various environments adjacent to the bay contained. It also shows that a few species dominate in large numbers. Moreover, it is interesting to note that a considerable part of the material consists of fish bone. The sites were strategically located where different environments for several species of fish were easily accessible.

The burials display considerable variation in terms of position of the body, with the supine, hocker, and sitting positions all represented. Indications exist, however, that the choice of position - and similarly the choice of grave goods and their amount - was dependent upon criteria of sex and/or age. Because of a chronological difference between Skateholm I and II, it is possible to analyze burial customs in terms of a time perspective. The investigations suggest that the combination of interrelated settlement area/grave field was not

particularly unusual occurrence in Late Mesolithic society and this assumption is supported by the discovery of another Late Mesolithic site, Skateholm III, with strong indications for the same conditions.

Larsson, Lars. 1984. Gräberfelder und Siedlungen des Spätmesolithikums bei Skateholm, südschonen, Schweden. **Archäologisches Korrespondenzblatt** 14: 123-130.

Persson, Ove, and Evy Persson. 1984. **Anthropological Report on the Mesolithic Graves from Skateholm Southern Sweden. I. Excavation Seasons 1980-82**. University of Lund, Institute of Archaeology, Report Series 21.

The basis of the research concerns two Late Mesolithic gravefields, designated Skateholm I and II, from Scania, southern Sweden. ¹⁴C datings indicate the time interval 4340±90 b.c. to 3890±125 b.c. for settlement/burial at Skateholm I, while dates from the occupation layer at Skateholm II are somewhat older.

Thirty-seven graves have been thoroughly investigated to date. Of these, 29 contain the remains of *Homo*, two of which were children and one was an almost fully developed fetus or newborn. The remainder of the individuals were adult or sub-adult.

The average life-span of those individuals whose age could be satisfactorily determined was c. 44 years for males and c. 34 years for females. These are remarkably high for prehistoric material. Further, it may be noted that two individuals are deemed to have reached ≥60 years of age. The average height for males was 168 cm and 155 cm for females.

Similar to the more or less contemporaneous Vedbæk population, the majority of the examined skeletons from Skateholm display connections with the Cro-magnon type, in the form of both the cranium and pelvis. Individuals are, however, present in the Skateholm material (including two in a double grave) who features do not deviate in any demonstrable way from recent or sub-recent Northwest European types. Several discrete traits have been observed, a few of which are quite rare. This suggests that the Skateholm population has been genetically isolated to a certain extent.

Welinder, Stig. 1983. Ecosystems change at the Neolithic transition. **Norwegian Archaeological Review** 16: 99-104.