



## RESEARCH REPORTS

### Excavations of a Mesolithic Site at Cass-Ny-Hawin, Isle of Man

A second season of excavations was carried out at the Mesolithic site of Cass-Ny-Hawin on the Isle of Man during July and early August of 1983. Phosphate and "magnetic susceptibility" testing had shown that the center of activity in the area was confined to an area near a presumed hut hollow. The purpose of the 1983 season was to: (1) investigate this small hollow and establish if this was indeed a dwelling, (2) examine the area under a "right-of-way" which also ran across the hollow in the hope of discovering other pits or postholes belonging to the Mesolithic settlement, and (3) investigate other areas where in situ material might have survived.

The excavation of the hollow revealed that it had filled in a very short period with approximately 30 cm of charcoal-stained soil containing numerous microliths and large quantities of waste flint. However, the basal levels contained relatively and it was only in the upper level that quantities of burnt stone and other materials were found - perhaps implying a more casual use of the hollow before abandonment. The hollow, which was cut into a very soft, unconsolidated gravel, was partially destroyed during the winter of 1981/82 and may originally have been up to 4.5 m in diameter.

One-half of a definite hearth was still preserved in the hut area (Fig. 1). The base was slightly reddened through use and the fill contained numerous burnt stone fragments. A high Magnetic Susceptibility reading from the red layer confirmed that the color was consistent with the presence of fire. From what survived of the hearth, it would appear to have been approximately 80 cm in diameter by 20 cm in depth. Around the inner edge of the hollow, two post holes plus one probable and one possible post hole were found (Fig. 1). The better examples were 10 cm deep by 15 cm across. One hole still contained choking stones. Due to the unconsolidated nature of the deposits into which there were cut, it is reasonable to suppose that holes contained very small posts. They may have been used to form a windbreak or an enclosed hut, but without greater depth, they could only have supported very slight structures, unlike those substantial post holes found at Mt. Sandel in the north of Ireland.

Excavations under the right-of-way had originally been expected to reveal postholes around the outside of the hollow. Instead, a small concentration of microliths and blades were found to the north of the

hollow while a series of pits was uncovered to the south. The largest pit, which was over 1 m across, produced more than 70 microliths as well as charcoal. Excavations to the southwest of the hollow revealed an area which was exceptionally rich in flint. No charcoal or features were recovered. The area may be a dump or disturbed zone. The 2 x 2 m trench in this area produced more than 200 microliths.

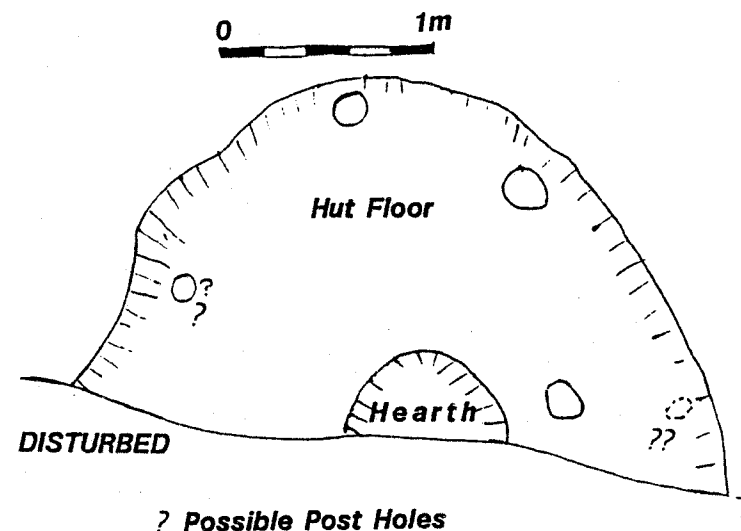


Figure 1. Structural remains at the site of Cass-Ny-Hawin.

In addition to charcoal, large numbers of burnt hazelnut shells were found. In two instances very definite concentrations were recovered from the hollow. The only bone fragments found were in a suspiciously late pit. Large soil samples were taken for flotation in the hopes of recovering carbonized seeds and samples for further susceptibility and trace element analysis were also collected.

The very rich flint industry found here has yet to be studied in detail but it would appear to have more in common with material from Port St. Mary than with the more usual Glen Wyllin-type industry. Radiocarbon dating may eventually reveal whether the bewildering array of microlithic forms is a product of chronological or functional variation. In one area, there are some indications of stratigraphic change in the types of microliths found with more Glen Wyllin types

higher in the sequence. Although much of the material is patinated, some samples have been kept unwashed in case microwear or other studies are possible.

#### Summary

The excavations have shown that the hollow is artificial and some form of dwelling, although it may have been used only on a very short-term basis. The hollow had a hearth and may have been roofed. As some suggestion has been made that most of the Mesolithic "hollows" in Europe may have been accidental, natural phenomenon, Cass-Ny-hawin is an important exception. It is clearly dangerous to assume that all hollows of this size are the product of tree falls. This site also begins to make sense of the earlier reports of Mesolithic structures on the Isle of Man.

The radiocarbon dates for the site should offer a major step in building a chronology for the Manx Mesolithic. A preliminary estimate for the C-14 sample from the 1982 season is approximately 5500 B.C. Hopefully, the materials from Cass-Ny-Hawin will provide the basis for a detailed study of the function of many of the Mesolithic forms.

#### Acknowledgements

I would like to thank the landowners, Ronaldsway Airport and the Highways Board for allowing the excavation to take place. We are also indebted to the British Academy for their generous financial contribution to the running of the excavation. I would also like to thank the Director and Trustees of the Manx Museum not only for permission to excavate on the Isle of Man but also for their more than generous assistance, both financial and material. Without their support the excavation would have been so much more difficult.

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### The Skateholm Project Hunters - Fishers - Farmers

The summer of 1983 saw the fourth season of excavation of Mesolithic grave-field and settlement sites near Skateholm in southern Scania, Sweden (Fig. 1). This summary, while dealing largely with the archaeological aspects of the investigations, also documents the scope of the interdisciplinary research taking place in conjunction with the Skateholm Project. Ove and Evg Persson, Lund, are dealing with the human remains, while Lief Jonsson, Gothenburg, is examining the fish and fowl bone. Verner Alexandersen, Copenhagen, is conducting an odontological study of the human teeth. The quaternary biological research is being conducted by the team of Hans Göransson, Hannelore Håkansson and Geoffrey Lemdahl, Lund. Charcoal finds are being analyzed by Thomas Bartolin and the C-14 determinations conducted by Sören Håkansson, Lund. Analysis of microwear on flint artifacts is being undertaken by Helle Juel Jensen, Århus. Birgit Arrhenius, Stockholm, and T. Douglas Price, Madison, are conducting various trace element studies.

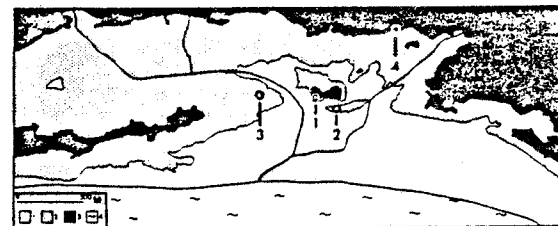


Fig. 1. The location of sites in the Skateholm area. Number (1-3) indicate Skateholm I-III, (4) Ö. Vemmenhög. The shaded area marks the contour between 5 and 3 m above sea level, the approximate shoreline during the later Mesolithic.

#### The Cemetery at Skateholm I

Trial excavations of discolored areas, revealed following the removal of topsoil late in 1982, had already demonstrated that several additional graves were present at this site. The first feature examined in 1983 proved to contain two overlying interments. The older of these - Grave 40 - held an adult in a cramped hocker position. Teeth of wild boar, among others, were found close to the chest. The second grave - Grave 41 - had been cut through the foot of grave 40. A man and a child

had been placed in grave 41, both in the hocker position (Fig. 2). The child lay in the man's arms. Two bear canines and four pieces of perforated amber were found on the child's chest. A bone point and a flint knife lay by its feet. Red ochre covered the child.

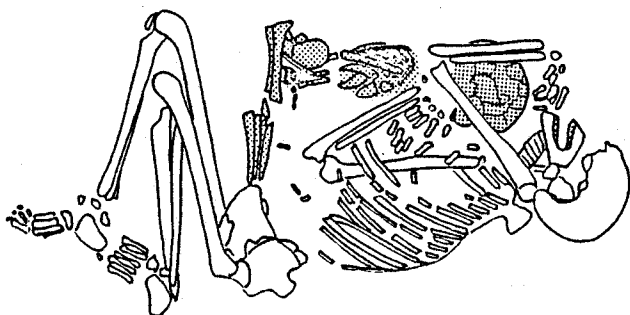


Fig. 2. Grave 41 at Skateholm I. Burial of a man and a child.

Grave 42 contained a three-year old child. Only the teeth were preserved. Grave 43 held a woman. Several stones lay around her head. Red ochre was only observed beneath the hip area. Her teeth must have caused much trouble in life due to the severe inflammation of the upper jaw. Certain teeth were so heavily abraded that the pulp was infected.

A feature in the northern section of the site also contained two overlying graves. Of the older interment - Grave 46 - only the head and feet remained. A decoration consisting of three rows of red deer teeth, in their correct dental order, were found directly behind the cranium. Four pieces of amber, one with extant perforation, were found adjacent to the teeth. That this combination of tooth and amber had been present on other parts of the body is indicated by 11 other pieces of amber in the disturbed section of the grave. The younger grave - Grave 47 - had been cut directly through the earlier interment. Moreover, this grave lay considerably deeper. Grave 47 held the skeleton of a young adult male, supine, with a child of no more than one year by his right side. Three

pecked stone axes, an oval stone and a large flint flake were found between the man's thighs. Two tooth beads lay adjacent to his left hand.

Grave 53 held an adult male in a supine position, but with crossed arms and legs. Perforated teeth of red deer and wild boar were found on both hands. Some from the latter lay by the elbow and thigh. A row of some 15 teeth, primarily from elk, were found in the region of the hips.

#### The Settlement Area at Skateholm II

A site with cemetery and settlement area was registered already last year on another island in the ancient bay, ca 150 m to the southeast of Skateholm I (Fig. 1). An investigation in the spring of 1983 revealed that it was occupied during a late part of the Kongemose and an early part of the Ertebølle period. Three C-14 dates vary between  $6810 \pm 70$  and  $6380 \pm 70$  BP.

Three species not recorded previously were identified in the abundant bone material - European tortoise, mackerel and wels. This brings the total from both sites to 76 species of mammals, fowl and fish. No molluscs have been observed to date. The salt content of the Baltic during the period of occupation was apparently too low.

Altogether 7 new graves were investigated at Skateholm II in 1983. The total from the site is now 11. The majority were found by investigating likely spots as indicated by geo-radar, a technique which registers sub-terra inconsistencies, such as graves.

Graves V, VI and VII formed a row in the western portion of the site. All held adults in supine positions. In grave VI, female, a petrified sea-urchin was found in the hip area. Grave VIII, an adult placed in a sitting position, also contained a dog, laid over the legs of the inhumation. This animal appeared to have had its neck broken. Some 60 perforated red deer teeth encircled the hip area of the deceased. Grave IX contained an adult in the supine position. The bones of about 100 three-spined sticklebacks, as well as pike and perch, were found in the chest area. A bone point lay by the feet. A transverse arrowhead, found in the chest cavity, may have caused a fatal injury. Grave X contained two men placed close together, but in opposite directions. One was supine and the other was sitting. A flint knife lay on the former's hip and a pecked stone axe was found between his thighs. A perforated tooth lay by the feet and parts of a boar tusk above the hip. The second individual also had a knife on the hip. Several tooth beads were found around the neck, on the chest, hips and thighs. A thin bone tool lay above

the head. A dog was found in the fill above the seated man, on its back and with legs uppermost, as though thrown down during the filling of the grave.

Grave XI held a man in his twenties. Flint flakes adjacent to the head are interpreted as grave goods. A veritable network of red deer antlers lay over the shins, seven in all. Six were shed antlers, but two beams were still attached to parts of the cranium.

The geo-radar registered features other than graves as well. One of these, adjacent to grave X, had the shape of a grave. While no skeleton was present, three antlers were found. This may, with reservation, be interpreted as a cenotaph. A larger construction, filled with occupation-layer like materials, may possibly be the equivalent of the hut construction documented at Skateholm I, which was reconstructed at an experimental center in Scania's Djurpark (animal preserve) during the summer of 1983.

#### A Third Site - Skateholm III

Credible reports, received more than a year ago, suggested that additional graves, possibly Mesolithic, had existed at a third site in the western part of the former bay, ca 300 m west of Skateholm I (Fig. 1). These graves were probably destroyed during gravel quarrying activities 50 years ago. A study of the archives revealed that one grave had been documented antiquaristically. The burial, an adult female, lay in the supine position. A radiocarbon date of the bone gave a determination of  $5850 \pm 90$  BP, i.e. late Mesolithic in age. This strongly indicates that the totally destroyed graves were from the same period. This means that three sites featuring a combination of cemetery and settlement area existed within a distance of 500 m of one another. Studies of sea level changes combined with the C-14 dates suggest that the Skateholm II site is the oldest, followed by Skateholm I, with Skateholm III the youngest.

#### Hunters, Fishers, Farmers

Limited survey of the terrain in the Skateholm area had already produced other sites. A more intensive reconnaissance in the spring of 1983 covered what once were the shores of the ancient bay and resulted in a significant increase in the number of known sites. Altogether 13 Stone Age site have been identified. One of these, located in the northeastern part of the bay, was the object of excavations. This

produced a considerable amount of material consisting of flints, bone and ceramics and is datable to the Early Neolithic period. The abundant bone material will, after analysis, hopefully provide information concerning the site's function, either as a seasonal camp or a more permanent settlement. Preliminary indications tend to support the latter case, based on the predominance of the remains of domestic animals.

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#### CONFERENCE REPORT

THE POST GLACIAL COLONIZATION OF IRELAND  
HELD OCTOBER 15, 1983  
UNIVERSITY COLLEGE, CORK, IRELAND

Discussions at the conference showed the clear division between those primarily concerned with the historical processes and those working from a modern ecological perspective. The former school felt that there was not clear evidence for a post glacial land bridge. The ecology school felt that, in certain instances, interdependence of species could be used to imply a faunal range which was not sufficiently impoverished to be explained by the absence of a landbridge. Papers revealed that a Late-Glacial land bridge was more probable and that any land bridge would have to be at the northern end of the Irish Sea. It would also be a very short-lived phenomenon and of different character to the area of dry land between England and Europe. It is hope to publish a short account of the Conference in the near future.

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## RECENT PUBLICATIONS

Bruen Olsen, Aise. 1981. Bruk av diabas i vestnorsk steinalder (The use of diabase in the West Norwegian Stone Age). Magister Art. thesis, Bergen: Universitet.

A study of the production and distribution of diabase axes from the recently discovered quarries at Stakaneset (Sogn of Fjordane). Petrological analyses are used to identify rough-outs and distributed axes. The rock was worked by the use of fire. Extensive fieldwork has revealed that more than 100 factory sites occur within 20 km of the outcrop. Shoreline datings and a large number of C-14 dates strongly indicate continuous activity in a period from 8500 to 4000 BP. The distribution of the axes covers Jaeren in the S. Helgeland in the north, and Gudbrandsdalen across the central mountain plateau in the east. The Stakaneset quarries were worked by hunter-fishers. Production stopped and the distribution network collapsed when farming economies expanded into Norway.

Andersen, Knud. 1982. Bjergby Enge, en tidlig Mølleplads (Bjergby Enge (Zealand), an early Mølle site). *Årbøger 1980*: 5-12.

Publication of a small, probably uncontaminated settlement belonging to the rarely found pre-Klosterlund phase of the Mølle period.

Larsson, Lars, Christopher Meiklejohn and R.R. Newell. 1982. "Human skeletal material from the Mesolithic site of Ageröd I:HC, Scania, southern Sweden." *Fornvännen* 76 (4): 161-168. In English.

At the site of Ageröd I:HC, dated to the Late Mølle culture, five human bones have been found. Their position in relation to stratigraphy and other remains is presented. The bones, which all probably come from a late adolescent or adult, are described and compared to other human bones from Mesolithic settlements in Scandinavia.

Grøn, Ole. 1983. "Social behavior and settlement structure. Preliminary results of a distribution analysis on sites of the Mølle culture." *Journal of Danish Archaeology* 2: 32-42.

Zvelebil, Marek. 1983. "Site Catchment analysis and hunter-gatherer resource use. Statistical application of the method to foraging societies in the Boreal Zone of Northern Europe. In *Ecological Models in Economic Prehistory*, edited by G. Bronitsky, pp. 74-114. Anthropological Research Papers, Arizona State University, Tempe, Arizona.

Evans, J.G., and I.F. Smith. 1983. "Excavations at Cherhill, North Wiltshire, 1967." *Proceedings of the Prehistoric Society* 49: 43-117.

A sequence of deposits ranging in date from Late-glacial to the present produced detailed evidence of environmental changes, reflecting both climatic fluctuations and the effects of human activities. A Later Mesolithic occupation horizon with a lithic industry and associated faunal remains, is dated to about 5280 b.c. It was sealed by a deposit of tufa. An irregular linear excavation, dated at about 2765 b.c., is interpreted as a quarry; the backfill contained earlier Neolithic pottery and settlement debris.

Skaarup, Jørgen. 1983. "Submarine Stone-Age settlement sites in the South Funen Archipelago." *Antikvariske studier* 6: 137-161. (Submarine steinalderboplads i Det sydfynske øhav. In Danish with English Summary.

Jennbert, Kristina. 1984. *The Fertile Gift. Tradition and Innovation in Southern Scandinavia Some 5300 years ago*. Lund: Acta Archaeologica Lundensia, Series in 4°, N° 16. (In Swedish with extensive English summary).

The major issues discussed in this book are the questions how and why farming and animal husbandry were introduced into southern Scandinavia. The Lössesborg site by the Öresund coast supplied most of the basic materials used in the

analysis. Similar sites in Scania and Blekinge, as well as finds of Limhamn-type axes, pointed-butted axes, polygonal axes, and dolmens complete the picture of the neolithization stage. A discussion of site materials from Denmark, Schleswig-Holstein, Lower Saxony, Mecklenburg, and Holland places the situation in southern Sweden in a wider perspective.

The archaeological source materials are connected with analyses of the natural environment. Anthropological studies facilitate an understanding of the social formation while helping to establish a background against which the neolithization process can be interpreted. Analyses of the various source materials show that there was a continuous transition from Ertebølle culture to the Early Neolithic Funnelbeaker culture, which indicates that the societies of the earlier Ertebølle went through a period of gradual change.

The produce from farming and animal husbandry is regarded as luxury goods, with no essential importance to the actual survival of the human population. The people concerned are assumed to have lived in a favorable ecological setting, where they were not compelled to familiarize themselves with a new method of production. Grain and cattle are supposed to have arrived as gifts being, tributes being paid, and matrimonial alliances being formed, involving neighboring groups and the "fully Neolithic" groups further to the south. As a metaphor, "the fertile gift" symbolizes the introduction of agrarian production which is, in its turn, associated with internal and external relationships.

Oshibkina, S.V. 1983. *The Mesolithic of the Sukhony and Eastern Onega Basins*. Moscow: Nauka. (In Russian).

Deith, Margaret R. 1983. "Molluscan calendars: the use of growth-line analysis to establish seasonality of shellfish collection at the Mesolithic site of Morton, Fife." *Journal of Archaeological Science* 10: 432-440.

The technique of growth-line analysis is used to examine

seasonal growth patterns in modern specimens of the edible cockle, *Cerastoderma edule* L. The modern control work provides a basis for the interpretation of seasonal collection in archaeological cockles, and is applied to shells from the Mesolithic site of Morton, Fife. The seasonal use of the site is shown to be clearly related to site function. The seasonal pattern which emerges indicates predominantly winter collection with a sufficiently large number of summer edges to constitute a second, valid season of collection.

Deith, Margaret R. 1983. "Seasonality of shell collecting, determined by oxygen isotope analysis of marine shells from Asturian sites in Cantabria". In *Animals and Archaeology: 2. Shell Middens, Fishes and Birds*, edited by C. Grigson and J. Clutton-Brock, pp.67-74.

Oxygen isotope and other data suggests that shellfish were not eaten in the summer months because other resources were available, which made shellfish-collecting less economical. It should be possible to test this by ecological approaches to potential seasonal resources, using the techniques of optimal foraging strategy.

O'Shea, John, and Marek Zvelebil. 1984. "Oleneostrovski mogilnik: reconstructing the social and economic organization of prehistoric foragers in northern Russia." *Journal of Anthropological Archaeology* 3:1-40.

Oleneostrovski mogilnik (Red Deer Island cemetery) in Karelia, USSR, is the largest known Mesolithic-age cemetery in the Boreal Zone, containing the remains of at least 170 individual interments. An analysis of mortuary patterning, demographic structure and regional interaction was performed in order to elucidate the nature of Boreal zone forager society during the late Mesolithic. These analyses suggest that the society which produced Oleneostrovski

mogilnik was larger and more internally differentiated than previously believed, with a complex system of social differentiation that included hereditary social positions and economic ranking. It also participated in an extensive regional exchange network which moved exotic goods and raw materials over considerable distances. It is concluded that the climax of forager occupation in the Boreal zone occurred during late Mesolithic times, with a maximum density of population and maximum social complexity, and that more recent hunter-fisher-gatherer occupations represent only a pale reflection of this peak.

## BOOK REVIEW

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*Mesolithic Prelude. The Palæolithic-Neolithic Transition in Old World Prehistory.* (1980) Grahame Clark. Edinburgh at the University Press. 122 pp.

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There is little agreement regarding the meaning of Mesolithic. The term has been used. The term has been used with a variety of often mutually-exclusive connotations. There is general consensus that the Mesolithic is post-glacial and pre-farming but beyond this there is little unanimity. Several years ago Czarnik went so far as to propose that "the idea of Mesolithic...has very nearly outlived its usefulness" (1976:59).

Such a proposal is disputed however in a new book by the doyen of Mesolithic studies. *Mesolithic Prelude* presents the case that it was during the Mesolithic that "steps were taken crucial to the emergence...of the several distinctive and diverse civilizations" (p. vii).

The introduction to this volume provides a brief history of the term Mesolithic in Western European and Soviet archaeology. Emphasis is placed on the early belief in an hiatus between the Paleolithic and Neolithic. Discovery of microliths in association with Holocene fauna at Le Mas d'Azil and elsewhere led to the recognition of the Mesolithic. Since the acceptance of the concept, the Mesolithic has been regarded on the one hand as a degeneration of the late Paleolithic and, on the other hand, as a stage of quarantine awaiting the Neolithic Revolution of V. Gordon Childe. Indeed, Childe appears as a major antagonist in Clark's discussion of the changing significance of the Mesolithic.

The body of Clark's essay takes us through the Mesolithic Transformation of South-West Asia, Mesolithic Settlement in Europe, and the Neolithisation of Mediterranean and temperate Europe. The origins of agriculture in south-west Asia are traced as a process, not a revolution, in the Zagros and the Levant. In each area Clark points out that investigations have failed to reveal an hiatus between the Paleolithic and the Neolithic. The remains from Natufian sites, from Zawie Chemie, and other "Mesolithic" settlements demonstrate the presence of permanent architecture, storage facilities, and grain-processing technologies prior to the advent of the full Neolithic. Clark stresses the continuity between the last hunter-gatherers and the



first communities dependent on farming. "It was the Mesolithic communities who were responsible for laying the economic basis for the rise of the earliest cities and ultimately of the earliest states" (p. 36).

Mesolithic settlement in Europe is considered, with an understandable bias toward the north, in terms of ecology and technology, land animals, fishing and coastal resources, and vegetation. Rapid and efficient adaptation to the reforested landscape of Preboreal and Boreal Europe is the focus of the discussion of the tools and equipment used to clear the woodlands. The argument for the deliberate burning of forest cover to create clearings, to stimulate the growth of hazel and to foster forage conditions for deer is elaborated by Clark. Intensive exploitation of forest resources is seen as one hallmark of the Mesolithic.

The expansion of the subsistence base in this period is dramatic and involves a variety of new resources, habitats, and technologies. As the ubiquitous reindeer are replaced by temperate species of animals following the close of the Pleistocene, red deer, aurochs, and wild pig become staples and are hunted with bow and arrow. Modifications in archery equipment are seen as indicative of the rapid evolution of this hunting technology. Fur-bearing animals such as marten and beaver are taken primarily for their pelts. Certain species of fowl appear for the first time in archaeological deposits. Inland fishing for pike and other fish involves the use of spears, hooks, leisters, nets and basket traps. Marine resources take on major significance in the Mesolithic as rapidly rising sea levels impinge on former land areas. Sea fisheries are established and cod and haddock remains appear in quantity in Mesolithic middens. The normal habitat of such species implies the use of sea-going boats to reach deep water. Marine mammals - particularly seals and whales - are also incorporated into the diet. A variety of shell fish constitute a large component of many middens. Plant foods may play a predominant role in the diet although direct evidence for intensive gathering activities is not yet available. The adaptation of economy and technology to the changing ecological conditions of the early Postglacial represents the significant achievement of the European Mesolithic for Grahame Clark.

For the final phase of the Mesolithic - post 6000 b.c. - Clark documents the spread of "cutting arrowheads" across the continent. These artifacts - the trapezoid, rhombic and transverse projectile points of the Blade and Trapeze

industries - move quickly across much of Europe in the sixth millennium b.c. Only along the Mediterranean and Atlantic coasts of Europe and North Africa is the distribution of these forms discontinuous. Clark suggests that this pattern indicates an introduction of the new forms by sea. Mechanisms for the rapid spread of ideas such as the cutting arrowheads, in conjunction with evidence for improved transportation (boats and snow skis) and the presence of exchange networks in raw materials, must have facilitated the introduction of farming into much of Europe.

Clark does not contest the fact that Europe is the recipient of agricultural practices from the Near East but he is at pains to stress the significant contributions made by the indigenous inhabitants of Europe to the transformation to food production. Neolithization in Europe is seen as the outcome of interaction between Mesolithic residents and the exotic influences of newcomers. A review of the introduction of the Neolithic into several regions - Greece, southeast and central Europe, the Alpine foreland, the Atlantic seaboard, and the Mediterranean basin - highlights the role of the native European in the adoption of agriculture.

Clark emphasizes the importance of fisheries in the spread of materials, information, and people in the coastal areas of Europe. The distribution of shell-impressed ceramics, for example, mimics the preceding irregular distribution of blade and trapeze industries. Clark argues that tuna fishermen may well have been responsible for the spread of both these assemblages. On the Atlantic seaboard, Clark notes certain parallels between Mesolithic and Neolithic adaptations. The Mesolithic practice of collective burial - seen in both Portugal and Brittany - is compared to the group interments of the megalithic chamber tombs of the Neolithic. After pointing out that pre-agricultural people are capable of erecting funerary monuments, Clark suggests that the distribution of cod fisheries on the Atlantic coast may be responsible for the discontinuous array of very similar tomb types in the coastal areas of Portugal, Brittany, northern Ireland and southern Scandinavia.

A few general reflections conclude the volume. For Grahame Clark, the appearance of *Homo sapiens sapiens* around 40,000 b.p. is one of the key turning points in human prehistory. The inherent capabilities of modern man provided for the discoveries that led to cultivation and beyond. But it is the Mesolithic and changes in subsistence wrought during that period that

provide for the complex societies that we know today. The course of history in Clark's perception is uninterrupted - the Stone Age is continuous. The "gaps" and "jumps" previously noted in the archaeological record are illusory and we must look to the Mesolithic to understand the transition to agriculture and more complex organization.

I have mixed reactions to this volume and to Clark's two major premises regarding the continuity of history and the importance of the Mesolithic. Perhaps most distressing is the lack of a formal definition of what it is that distinguishes the Mesolithic. Clark insists on a rigorous definition of the Paleolithic and the Neolithic that is congruent with the three original criteria of chronology, economy, and technology proposed by Lubbock in 1865, but does not outline these same characteristics for the Mesolithic. It is somewhat more difficult to investigate what is perhaps "the most important epoch in history" (Mathyushin 1976, cited in Clark) if we do not know the precise meaning of the term.

Definition of the Mesolithic is a difficult task. Perhaps the major difficulty related to the time transgressive nature of the individual traits that have been considered distinctive of the period. Many features of the period are foreshadowed in earlier periods. Microlithic artifacts are recorded in the Upper Paleolithic. Temperate forest and marine fauna are recorded in the Upper Paleolithic of Spain (Strauss 1977:66). Permanent year-round habitation is almost certainly present in some areas during the Upper Paleolithic and perhaps during the Middle Paleolithic as well. Ceramic containers are restricted to the Neolithic but the technology for manufacturing fired clay artifacts is known from the Upper Paleolithic (Klima 1962). Is there a trait that is distinctively Mesolithic?

Archaeological remains have independent dimensions of time, space and form (Spaulding 1960) and these dimensions will not coincide when we consider large areas of space or spans of time. The term "Mesolithic" in Europe must simply be defined as that period of time when Postglacial hunter-gatherers occupy the continent prior to the introduction of agriculture. To attach more specific meaning to the term only reduces its utility.

A final comment regards the nature of cultural evolution. Clark has argued that history is continuous, that "jumps" in the archaeological record are

untenable. In my own view, the perception of cultural change is a relative matter. Certainly in the light of the entire span of the Paleolithic, some two million years at last count, the five thousand or so years in which the shift to agriculture occurs does mark a revolution - a jump. Nevertheless, when the process is viewed in and of itself, the agricultural transition is in fact a very gradual one. We as archaeologists have yet to come to grips with the rate of culture change. Until such information is available, it seems unwise to embroil ourselves in the evolution/revolution debate that is currently popular in the biological sciences.

Professor Clark has, as usual, provided much food for thought and the questions he raises will not find ready solution. Clearly the Mesolithic is of major importance in prehistory and a period deserving of more careful scrutiny than it has received previously. Clark's call for more investigations and his caution that we cannot understand later developments without knowledge of their genesis ring true. Hopefully the directions in which he points will pursued in the future as seek our past.

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## ANNOUNCEMENTS

### EXCAVATION OPPORTUNITY

Deux camps de fouilles préhistoriques seront dirigés en 1984 par le Docteur J.-G. Rozoy.

- (1) du 7 au 27 juillet, avec le Centre Ardennais de Recherche Archéologique (CARA):

ROC-LA-TOUR, commune de MONTHERME (Ardennes), 20 km à Charleville. Magdalénien supérieur de plein air, sur quartzite, avec gravures sur schiste. La fouille a pour objet l'étude d'une structure d'habitat.

- (2) du 5 au 19 août, avec l'Association pour la Recherche Archéologique en Tardenois, dirigée par R. Parent:

ALLEE TORTUE X, commune de FERE-EN-TARDENOIS (Aisne). Tardenoisien final, sur sable; étude et analyse d'une très riche concentration de silex, probablement double. Un foyer a été trouvé en place en 1981.

Pour les deux camps, s'inscrire auprès du Dr Rozoy (adresse ci-dessus). Age minimum 18 ans. La participation à la totalité d'un camp est préférable (en tous cas, faire au moins le début ou la fin du camp).

Apporter son matériel de couchage personnel et sa tente. Possibilité de logement en dur.

La vaccination anti-tétanique (ou un rappel) est recommandée.

Les fouilleurs ne sont pas rémunérés mais nourris (repas bons et copieux).

Un notice indiquant le chemin d'accès au lieu de fouille et de camp sera adressée ultérieurement aux fouilleurs inscrits.

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### Subscription Information

*Mesolithic Miscellany* is issued twice a year, in May and November, as an informal communication for 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 £2. There are several possible methods of payment:

- (1) 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.
- (3) Individuals for whom currency exchange is a problem should write directly to Clive Bonsall at the address above. He has arranged for the Institute of Archaeology at the University of Edinburgh to provide subscriptions in exchange for publications.

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### INFORMATION FOR AUTHORS

Contributions to the newsletter are always welcome with regard to any topics that are relevant to the European Mesolithic. Major categories of the newsletter include recent publications with abstracts or tables of contents, short research reports, book reviews, recent radiocarbon determinations, requests for information, letters to the editor, changes of address, synopses of research on a regional basis, summaries of meetings and conferences, and the like.

Deadlines for the newsletter are 1 May and 1 November for the May and November issues respectively. Material requiring translation should be submitted in advance to the editor. Line drawings can be reproduced in the newsletter and should be submitted in A4 page size. Because the newsletter is being reduced for printing, please make drawings as legible as possible.