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From the Editor

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

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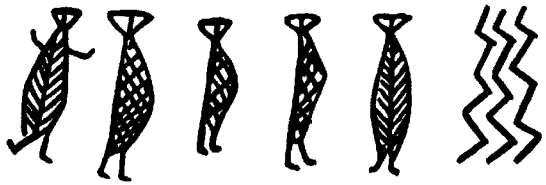

May 1995

Mesolithic Miscellany

Volume 16 Number 1

Editorial

With this issue *Mesolithic Miscellany* enters its sixteenth volume and I am taking over the position of editor. As Doug Price explained in his editorial column in the November 1994 issue, after 15 years in charge he feels the time has come to pass on the responsibility and the not inconsiderable work of producing an international archaeological newsletter on a regular basis. Doug conceived *Mesolithic Miscellany* around the time of the Second Mesolithic Symposium held in Potsdam in April 1978, and the first issue appeared in November 1980. Under his editorship, MM has achieved a regular circulation of around 200 worldwide, with individual subscribers in Africa, the Far East, North America, and throughout Europe. It is also taken by many Institutional and National Libraries in those same areas. I am sure that I speak on behalf of all those who subscribe to *Mesolithic Miscellany* in thanking Doug for his efforts over the years.

In addition to subscribers, MM also needs contributors. It is a particularly useful vehicle for informing Mesolithic specialists around the World of the interim results of current research, and I hope as many of you as possible will contribute, as often as you can. Guidelines for contributors can be found on page 27 of this issue.

Clive Bonsall

In this issue . . .

Direct Dating of Mesolithic Antler and Bone Artifacts from Great Britain: new results for bevelled tools and red deer antler mattocks

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Introduction

In this paper we present a further series of dates for antler and bone artifacts from Great Britain provided by the University of Oxford Radiocarbon Accelerator Laboratory (*Table 1*). The site locations are shown on *Figure 1*.

With the exception of the bevelled tool from An Corran (Skye) (*Figure 2*), and the antler mattocks from Longton (Lancashire) and Uskmouth (Gwent), the dates reported here are the outcome of the artifact dating programme being undertaken as part of an investigation of antler and bone technology in the British Late Palaeolithic and Mesolithic by Christopher Tolan-Smith and Clive Bonsall (Bonsall & Smith 1989, 1990, 1992; Smith & Bonsall 1990, 1991).

Red deer antler mattocks

Perforated mattock-heads made from lengths of red deer antler are known from over 50 findspots in Britain. Usually they were isolated finds, but a number of those from northern Britain were excavated from shell middens and thus have definite archaeological contexts. They can be divided into four types, according to the part of the antler from which they were made and the position of the shaft hole (Smith 1989): antler-base mattocks with the perforation in the same plane as the tines (Type A); laterally-perforated antler-base mattocks (Type B); antler-beam mattocks with the perforation made through the stump of the trez tine (Type C = 'T-shaped antler axes'); and laterally-perforated antler-beam mattocks (Type D).

Three of the four dated specimens listed in *Table 1* can be classified according to this system. The specimens from Longton and Uskmouth are antler beam mattocks of Type D, and increase to four the number of directly

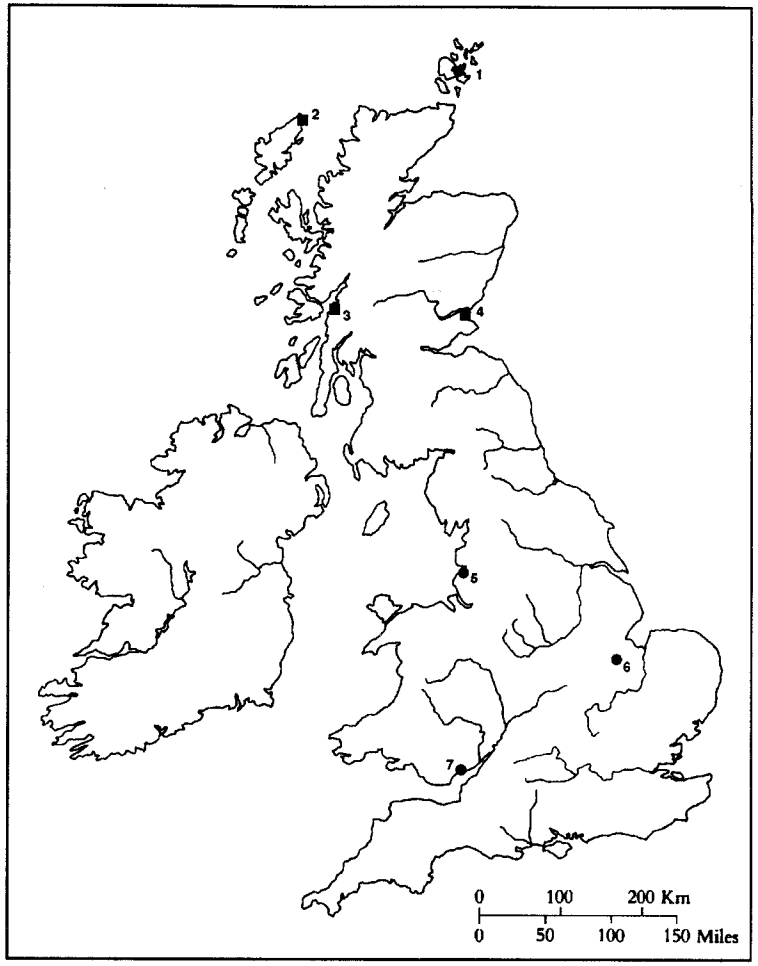

Figure 1 Findspots of antler mattocks (●) and bevelled tools (■) mentioned in the text: 1 – Crantit, Orkney; 2 – An Corran, Skye; 3 – Druimvargie Rockshelter, Oban; 4 – Morton, Fife; 5 – Longton, Lancashire; 6 – Alton Longville, Huntingdonshire; 7 – Uskmouth, Gwent.

Table 1 New radiocarbon dates for bevelled tools and antler mattocks from Great Britain. Unless indicated otherwise, the dates were done as part of the programme of direct age measurements on antler and bone artifacts initiated by Christopher Tolan-Smith and Clive Bonsall.

Type	*Site*	*Lab. Ref.*	*Context*	*Material*	*14C Age BP*	*Reference*
Antler mattocks:	Alton Longville (Hunts)	OxA-4606	Unassociated find	Red deer antler	8005±80	
	Longton (Lancashire)	OxA-4800	Unassociated find	Red deer antler	6520±60	*Middleton & Edwards 1993; Middleton et al. 1995*
	Uskmouth (Gwent)	OxA-4574	Unassociated find	Red deer antler	6180±80	*Aldhouse-Green & Housley 1993*
	Crantit (Orkney)	OxA-4607	Bronze Age Cist	Red deer antler	3385±55	
Bevelled tools:	Druimvargie (Oban)	OxA-4608	Midden	Bone	8340±80	
		OxA-4609	Midden	Bone	7890±80	
	An Corran (Skye)	OxA-4994	Midden, C36	Bone	7590±90	*Saville & Miket 1994*
	Morton, site B (Fife)	OxA-4610	Midden, T65	Bone	5180±70	
		OxA-4611	Midden (lower), T59	Bone	5475±60	
		OxA-4612	Midden (upper), T59	Bone	5790±80	

Figure 2 Radiocarbon dated bevelled tool (Bone Tool 54) from An Corran, Staffin, Isle of Skye. This piece has been dated as 7590±90 BP. Drawn by Marion O'Neil. Copyright: Trustees of the National Museums of Scotland.

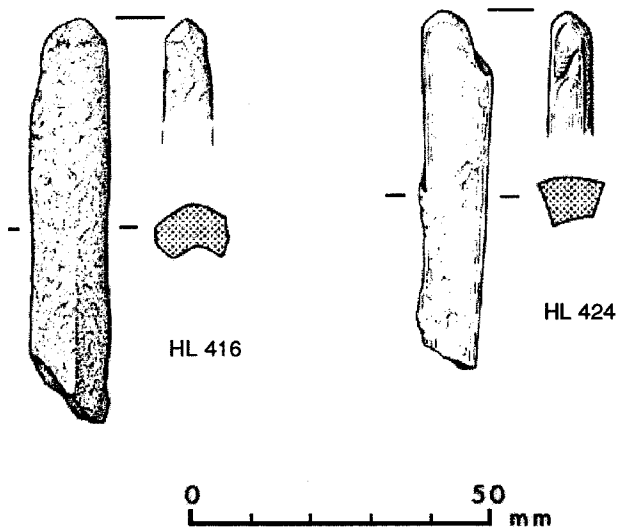

Figure 3 Radiocarbon dated bevelled tools from Druimvargie Rockshelter, Oban, in the collections of the National Museums of Scotland. HL416 has been dated as 8340±80 BP, and HL424 as 7890±80 BP. Drawn by Marion O'Neil. Copyright: Trustees of the National Museums of Scotland.

dated specimens of this type. These have dates which fall within the range *ca* 6560 to 5350 BP, suggesting that Type D mattocks are predominantly a Late Mesolithic type.

The Type B antler-base mattock from Alton Longville has been dated as 8005±80 BP, making it only the second specimen of this type that can be positively assigned to the Mesolithic. Another five directly dated specimens of this type have given ages between *ca* 3430 and 3000 BP, and thus relate to the Bronze Age (Bonsall & Smith 1990, 1992).

The specimen from Crantit is atypical. Although technically a mattock in terms of the definition proposed by Tolan-Smith (Smith 1989:272), it is an unusually small, slender example (only *ca* 10cm long and 3cm wide) and appears to have been made from an antler tine. However, it has a certain

historical significance; once mistakenly reported as excavated from the Mesolithic shell midden at Cnoc Sligeach on Oronsay, it is now known to have been recovered from a burial cist on Orkney (see MacKie, this volume). The date of 3385±55 BP confirms its Bronze Age context.

Bevelled tools

Bevelled tools made from fragments of bone or antler are highly characteristic of coastal Mesolithic shell midden sites in Scotland, and especially the so-called 'Obanian' sites on the west coast. Samples from three sites were selected for radiocarbon assay – An Corran and Druimvargie rockshelters on the west coast of Scotland, and Morton on the east coast (*Figure 1*: sites 2–4). Previous dates on bevelled tools had suggested a time-range for their use from *ca* 7810 to 4765 BP, coinciding with the later stages of the Mesolithic and the early part of the Neolithic. The new dates extend that time-range back to *ca* 8350 BP, and increase to ten the number of direct dates for this artifact type. Particular interest attaches to the dates from Druimvargie (Oban) and Morton Site B (Fife).

OxA-4608 and OxA-4609 date artifacts excavated from the midden in Druimvargie Rockshelter in 1898 (*Figure 3*). Together with a previous date on a bone barbed point (OxA-1948: 7810±90 BP – Bonsall & Smith 1989), they confirm this as the earliest known Obanian site, and suggest that the midden was deposited over approximately 550 RC yr, from *ca* 8350 to 7800 BP. Within Scotland, only the open-air Mesolithic (microlithic) site at Kinloch on Rhum (Wickham-Jones 1990) has produced earlier radiocarbon dates.

The three age determinations for Morton B are the first 'direct' dates on human artifacts from this site. The midden had an overall length of *ca* 30m and an average width of 3.5m (Coles 1971:fig. 29). The samples were chosen so as to maximize information on the length of time represented by the midden deposit. OxA-4611 and OxA-4612 date artifacts from the upper and lower parts of the midden in trench T59 (*Figure 4*), while OxA-4610 dates an example from T65 *ca* 10m away near the western end of the midden. The dates from T59 are not in depth order, but in the context of a midden deposit (which frequently exhibit complex stratification) and the method of excavation (in unit-levels or 'spits') this lack of consistency is not considered a reason to suspect either of the assays. Together, the new dates on bone artifacts suggest that the midden at Morton was deposited over a period of approximately 600 RC yr, from *ca* 5800 to 5200 BP.

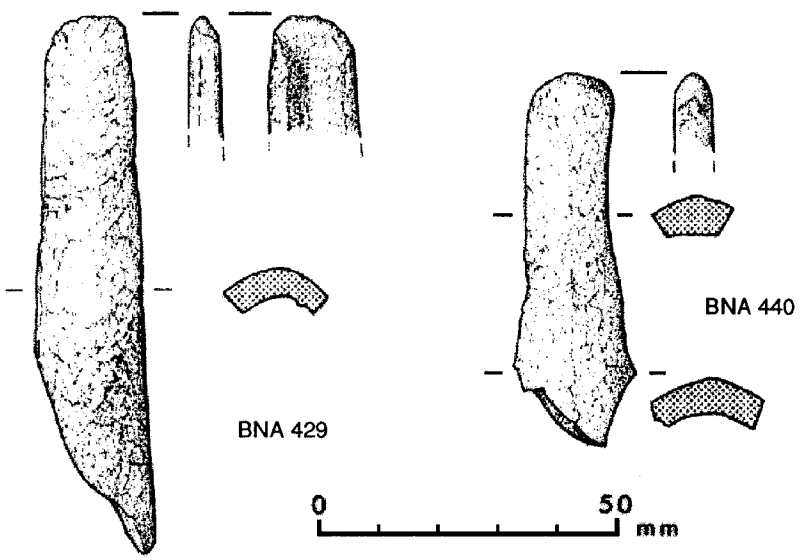

Figure 4 Radiocarbon dated bevelled tools from Morton Site B, Fife, in the collections of the National Museums of Scotland. BNA 429 has been dated as 5790±80 BP, and BNA 440 as 5475±60 BP. Drawn by Marion O'Neil. Copyright: Trustees of the National Museums of Scotland.

The new dates are significantly younger than previous determinations on bulk samples of charcoal fragments from the midden which – with the exception of a date of 12,200±240 BP (NZ-1194) which is usually accepted as unreliable – range from *ca* 6380 to 6115 BP (Coles 1971:table XI). Assuming both sets of age measurements to be valid, several possible explanations can be proposed to account for the difference in the ages of the charcoal and bone samples: (1) the charcoal samples contained 'old' timber or were contaminated by coal; (2) charcoal from an earlier occupation(s) was 'accidentally' incorporated into midden; or (3) the midden was deposited over a much longer period (*ca* 6400–5200 BP) than is represented by the artifacts selected for dating.

A discussion of the chronology of Mesolithic occupation at Morton is beyond the scope of this paper, and will be considered in a later publication. The main conclusion to be drawn at this stage is that the results from Morton Site B and Druimvargie Rockshelter confirm previous findings (Bonsall 1994) that many Mesolithic shell middens around the coasts of Scotland resulted from repeated use of the same sites over hundreds of years. When further radiocarbon dates are available for the midden at An Corran (Skye), this site too may prove to have been used over a very long period of time.

Acknowledgements

We should like to thank the museum curators who gave permission for the implements in their care to be sampled: Euan MacKie (Hunterian Museum, Glasgow), Adrian Zealand (Dundee Museum & Art Gallery), Miranda Armour-Chelou and Juliet Clutton-Brock (British Museum Natural History), and Alison Sheridan (National Museums of Scotland). We are also indebted to Rupert Housley and the staff of the Oxford University Radiocarbon Accelerator Unit for dating the samples.

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An 'Obanian' Antler Mattock Re-attributed

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The distinctive Mesolithic tradition of Argyllshire, later known as the Obanian, was first recognized by Joseph Anderson (1898) after his study of material found in MacArthur's Cave and in the Druimvargie Rockshelter in Oban and of that discovered by Grieve and Galloway in Caisteal nan Gillean on Oronsay in 1884. Similar material was found later by A.H. Bishop in Cnoc Sligeach, also on Oronsay in 1910–13 (Bishop 1914). The finds from the latter site were among the large private collection Bishop presented to the Hunterian Museum of the University of Glasgow in 1951. The term Obanian was first used to define this west Scottish Mesolithic tradition by Movius (1942:180–192) and again by Lacaille (1954:196–245). J.G.D. Clark (1956) offered further thoughts on the subject, especially on the methods of antler-working employed, as did The Royal Commission (R.C.A.H.M.S. 1975:5–6, fig. 2) and Morrison (1980), and the two Oronsay sites mentioned were extensively re-excavated, and two new ones explored for the first time, in the 1970s and published in detail by Mellars (1987).

The Obanian assemblages are characterized by the absence of microliths (except perhaps at the unpublished Risga site), by the presence of barbed bone and antler points and on some of them by perforated antler mattocks (Morrison 1980:pls. X–XI). One almost complete mattock (Clark 1956, fig. 1) and several fragments were recovered in Bishop's excavations into a Mesolithic midden on the small island of Risga in Loch Sunart, Argyllshire (Clark 1956, 94). This collection is also in the Hunterian Museum but as yet unpublished in detail. When Bishop's Cnoc Sligeach collection was being catalogued in the Hunterian Museum in the early 1950s (accession nos B.1951.1827–1859) it did not include the small, complete perforated mattock which is the subject of this Note (*Figure 1*); neither did this implement feature in Bishop's own account of the work nor in the first general accounts of the Obanian (Movius 1942; Lacaille 1954). A few years later J.G.D. Clark visited the Hunterian Museum to study the material and the small mattock was then

pointed out to him as being from Cnoc Sligeach (Clark 1956:93, fig. 3). Thereafter the implement has featured prominently in discussions of the site and of the Obanian culture (Morrison 1980:157, pl. XI).

However, the mattock had actually been in the museum since 1914 when it arrived with the many archaeological specimens presented to the Hunterian in that year by A.H. Bishop; no place of origin was recorded for it when the collection was finally catalogued about twenty five years later (accession no. B.1914.516).

Figure 1 Red deer antler mattock from Crantit Farm, Kirkwall, Orkney – approx. 1:1. Reproduced from Cursiter 1910: fig. 2.

Among that 1914 donation – although unrecognized as such when systematic cataloguing did begin – were many important objects from the Orkney Islands which had been collected by James W. Cursiter and several of which the latter had already described in the *Proceedings of the Society of Antiquaries of Scotland*. Cursiter's character, and his collecting activities, were described by Sir John Flett (1950:171). His collection, like Bishop's, had been exhibited in the Prehistoric Gallery in the Glasgow Exhibition of 1911 and many of the items are described in the exhibition catalogue (Anon. 1911:808ff). Bishop's album of photographs of most of the archaeological specimens exhibited is also in the Hunterian Museum. Thanks to a brief comment by Shetelig (1940:172), first noticed in 1993, we now know that the

Cursiter collection shown in Glasgow in 1911 was bought by A.H. Bishop immediately afterwards and was among the material he gave to the Hunterian in 1914, though evidently not identified clearly as such (the author has never seen a systematic list by Bishop of either of his two donations). Cursiter gave more of his collection to Glasgow University in 1922 but this too unfortunately became mixed with the 1914 Bishop donation when it came to be catalogued many years later. This important early collection from Orkney and Shetland is now being reconstructed. That there was once a catalogue by Cursiter of his whole collection is shown by the characteristic inked numbers on paper labels stuck to a large number of the specimens (but not to the mattock). No trace of these lists have been found.

Though it has a 'B.1914' number the perforated 'Obanian' mattock allegedly from Cnoc Sligeach does not appear either in the 1911 exhibition catalogue or in the album of photographs. It is not clear how it came to be assumed in the 1950s that it was part of Bishop's Oronsay collection but is is obvious now, thanks to the research on the James Cursiter collection which has recently been undertaken, that it is part of this and was discovered in a cist on Crantit farm near Kirkwall, Orkney, in 1909. This was described and illustrated in a note which has been overlooked by everyone concerned up until now (Cursiter 1910).

The Crantit cist was a two-storeyed one, the shallow, smaller, empty upper compartment with drystone sides evidently serving as a weight-relieving protection for the massive slab roofing the larger burial cist proper down below (NGR HY438097; Cursiter 1910: fig. 1). The latter contained a pile of burnt bones at one end with, partly overlapping this, the crouched skeleton of an individual estimated to be about 15 years old. The only artifact found was the perforated antler mattock under discussion, associated with the skeleton (Cursiter 1910: fig. 2). One can reasonably assume that this is a burial cist of the Early Bronze Age. The mattock has been made from part of an antler tine, in contrast to most of the genuine Mesolithic mattocks. Since the rediscovery of the Orkney origin of this mattock it has been included in the programme of dating Late Palaeolithic and Mesolithic antler and bone artifacts organized by Christopher Tolan-Smith (University of Newcastle on Tyne) and Clive Bonsall (University of Edinburgh) (Bonsall & Smith 1990, 1992). A ^{14}C has now been received, of 3385±55 BP (OxA-4607), or 1435 BC, confirming its date in the earlier Bronze Age.

Acknowledgements

The groundwork of sorting out the Cursiter collections in the Hunterian Museum was undertaken by Eleanor Clark in 1993 and I am very grateful to her. I thank Clive Bonsall and Christopher Tolan-Smith for including the Orkney mattock in their dating programme, and also Alex Morrison for reading and commenting on this Note.

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Excavation of a Mesolithic dwelling in a Submerged Wetland. A Very Preliminary Report of an Underwater Excavation

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In 1993 Langelands Museum excavated what is interpreted as a Mesolithic dwelling from the early Ertebølle Culture (*Figure 1*). The structure was located on the shore of the island of Ærø, 4.5 metres deep. It measured 5 x 3 metres and appeared as an oval, lenticular, sandy layer deposited in a 15–20cm deep shallow pit into the underlying gyttja and peat layers. The structure was excavated in quarter square metres and 5cm layers. A plan was drawn for each layer and all objects registered on the plans have been levelled. Realistically all particles larger than 2mm were caught in the discharge nets from the injectors. Apart from fragments of branches all visible organic objects (remains of fruits, nuts, seeds, particles of charcoal, bones, etc.) were collected and registered for each square unit and layer. Hazelnut shells, fish bones and charcoal particles have been weighed to 0.1g and lithic waste and burnt flint by the gram, for each unit.

A number of stakes were preserved around the pit, some of them burnt at the top. Approximately along the western half of the centreline was found remains of a structure consisting of a bundle of withes, apparently slightly twisted and kept in place by three stakes. To the north of this structure the pit contained a layer of very decomposed bark. On it was found two hearth zones, represented by concentrations of fish bones, burnt hazelnut shells and charcoal. The western one had four stones indicating a circle *ca* 0.5m in diameter. Immediately to the north of each of these hearth zones was

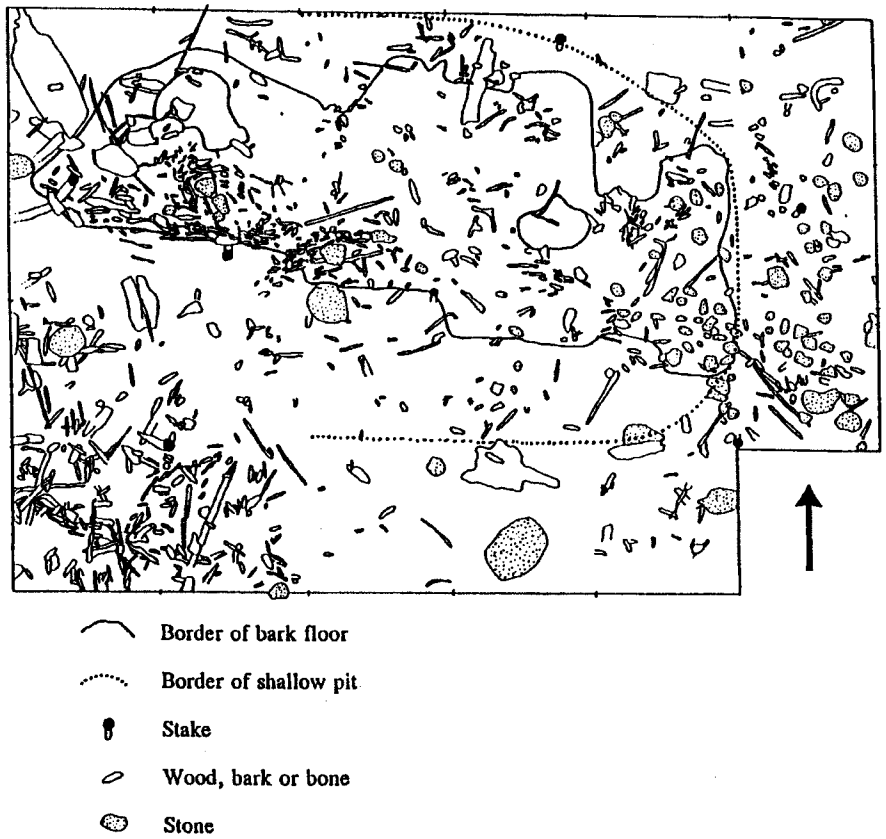

Figure 1 Excavation plan of the proposed dwelling area, with the waste layer in the SW–corner.

observed a hole in the bark layer. Possibly the bark has been destroyed here because of activities related to the two hearths. Along the northern edge and along its eastern end are two very significant rectangular concentrations of charcoal, probably originating from ashes cleared out from the two hearths. Under and around the stones of the western hearth, embedded in the culture layer, was observed approximately 10cm long pieces of 2–4cm thick branches

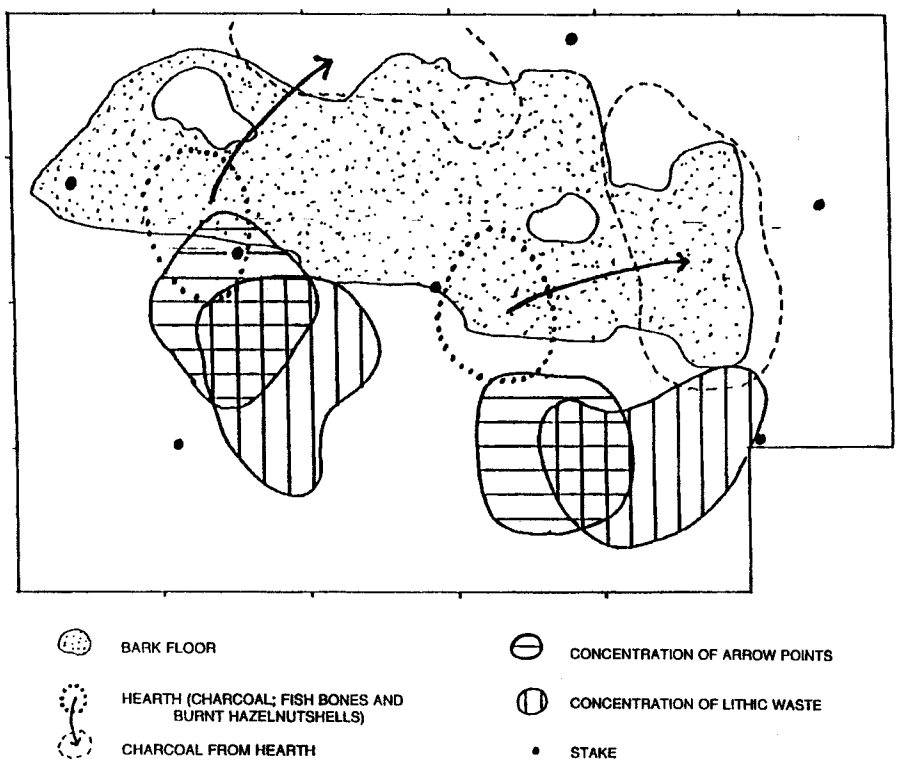

Figure 2 Plan of the organization of different types of waste inside the excavated structure.

lying parallel E–W in rows oriented N–S. It seems unlikely that these should be the remains of decomposed wickerwork, since the pieces of branches were clearly broken at the ends and since the pieces from the different sections lying approximately E–W of each other did not originate from the same branch.

To the south of the centreline no bark layer was found. This part of the pit contained two significant concentrations of arrow-points south of the two hearths. A little way to the ESE of these were two very significant concentrations of lithic waste, both close to the southern edge of the pit.

To the east of the pit was observed a concentration of burnt stones. In a number of cases 'hearths' consisting of stones have been observed outside (and often to the east of) dwellings from Kongemose and Ertebølle. This concentration of stones is interpreted as such a structure.

A waste layer seems to extend from the western end of the oval structure and out into the water, which then was no more than a few metres away. In this waste layer was a boat grave – dated to *ca* 4790 cal BC (K-5640) and apparently representing the burial of a 25-year-old male – excavated in 1990 and 1991 (Grøn & Skaarup 1993; Skaarup 1995).

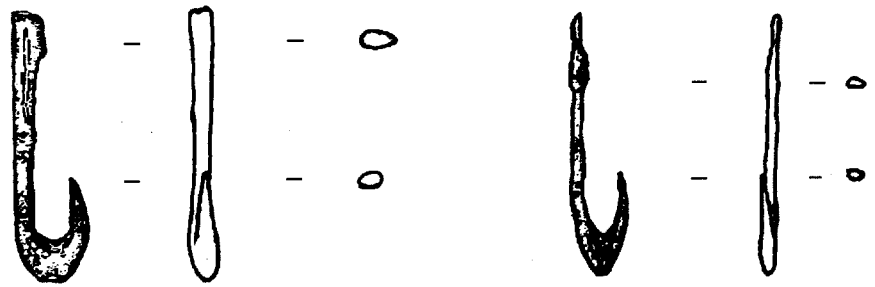

Figure 3 The two fishing hooks found during the excavation.

The result of the excavation is thus that two fairly identical activity zones can be distinguished in a pit surrounded by stakes which may represent the superstructure of a dwelling (*Figure 2*; see Grøn 1990; Grøn, in press). A precondition for this interpretation is that the stakes are contemporaneous. The Dendrochronological Laboratory of the National Museum of Denmark will attempt to prove or disprove such contemporaneity by relative dendrochronology. The dating of the boat grave fits the typological character of the more than 100 arrow-points from the site – very early Ertebølle with a mixture of symmetric transverse arrow-points and oblique, nearly rhombic ones. An attempt will also be made to test the chronological relationship between the burial and the pit–structure, also by relative dendrochronology

of stakes which seem to have held the dugout canoe of the burial in place. There are signs that the possible dwelling burned down. The possibility should be considered that the burning was related to the widespread custom observed among hunter-gatherers, that the dwelling of a person who dies is immediately burnt down and left by the others.

The good conditions of preservation inside the proposed dwelling area, resulted in the finding of a number of organic objects in the proposed dwelling which normally are only found in waste layers where they were deposited under anaerobic conditions: a couple of fish hooks (*Figure 3*), bone points, and a possible float from a fishing net. It seems reasonable to assume that the structure – if it is a dwelling – was transgressed only a short time after it was abandoned.

The scientific analysis of the material is in its initial stage. Sarah Mason, University of London, will analyze the plant macrofossils; Peter Rowley–Conwy, University of Durham, will analyze the bones of the mammals. Furthermore analysis has to be carried out of the numerous fish bones, of micro-wear traces on the lithic artifacts, and some geological consideration must be made on the location. A publication is planned for 1997.

References

Grøn, O. & Skaarup, J. 1993. A submerged Mesolithic site and a 'boat burial' from Ærø. *Journal of Danish Archaeology* 10:38–50.

Grøn, O. 1991. A method for reconstruction of social organization in prehistoric societies and examples of practical application. In *Social Space. Proceedings of an Interdisciplinary Conference on Human Spatial Behaviour in Dwellings and Settlements*, edited by O. Grøn, E. Engelstad & I. Lindblom, pp. 100–117. Odense University Press, Odense.

Grøn, O. In press. Neolithization in southern Scandinavia – a Mesolithic perspective. Some suggestions and working hypotheses or – skating on thin ice. In *The Origins of Farming in the Baltic Region*, edited by M. Zvelebil, L. Domanska & R. Dennel.

Skaarup, J. 1995. Stone Age Burials in Boats. In *The Ship as Symbol*, edited by O. Crumlin–Pedersen, pp. 51–58. National Museum of Denmark, Copenhagen.

Recent Publications

Andersen, S. H. 1994. New finds of Mesolithic logboats in Denmark. In *Crossroads in Ancient Shipbuilding* (Oxbow Monograph 40), edited by C. Westerdahl, pp. 1–10. Oxbow Books, Oxford.

Baird, D. & Finlayson, B. 1995. A Mesolithic and later flint scatter at Little Gight, Grampian Region. *Proceedings of the Society of Antiquaries of Scotland* 124(1994):95–101.

This paper describes fieldwork in 1990 at the Mesolithic and later flint scatter at Little Gight, Grampian, following the examination of a collection of artifacts. Little appears to survive of the site itself. The excavation was arranged and funded by Historic Scotland.

Cook, J. & Jacobi, R. 1994. A reindeer antler or 'Lyngby' axe from Northamptonshire and its context in the British Late Glacial. *Proceedings of the Prehistoric Society* 60:75–84.

A reindeer antler object found in Northamptonshire possesses the characteristic trais of a Lyngby axe. Such implements are themselves characteristic of the Lateglacial of northern Europe but hitherto unknown in Britain. A direct radiocarbon accelerator date of 10,320±150 BP confirms the typological dating and places it amongst a small number of finds which link Britain with the Ahrensburgian phase in Europe. The function of the axe cannot be determined, but consideration of its features throws some light on this problem.

Cziesla, E. 1994. Mittelsteinzeitliche Funde von der 'kleinen Kalmit' bei Ilbesheim (kr. südliche Weinstrasse). *Mitteilungen des Historischen Vereins der Pfalz* 92: 7–30.

Day, S.P. & Mellars, P.A. 1994. 'Absolute' dating of Mesolithic human activity at Star Carr, Yorkshire: new palaeoecological studies and identification of the 9600 BP radiocarbon 'plateau'. *Proceedings of the Prehistoric Society* 60:417–422.

The existence of a 'radiocarbon plateau' at 9600 BP causes problems for early Mesolithic archaeology and palaeoecology, since events separated by up to 400 calendar years are not distinguished by radiocarbon dating. A new sequence of closely-spaced radiocarbon accelerator dates from waterlogged deposits at the early Mesolithic site at Star Carr, Yorkshire, has enabled recognition of this plateau. It has been possible to 'wiggle-match' these Star Carr dates to the recently produced dendrochronological calibration curve for

the early post-glacial period, providing an 'absolute' chronology for formation of the deposits. Associated high resolution palaeoecological analyses indicate two local phases of human activity, the lengths of which can be estimated from the calibrated timescale. As far as we are aware, this is the first time that it has been possible to provide 'absolute' dates for human activity at an early Mesolithic site in Europe.

Hallgren, F., Bergstrom, Å. & Larsson, Å. 1995. *Pärlängsberget: en kustboplats från övergangen mellan senmesolithikum och tidigneolithikum* (Pärlängsberget: a coastal settlement from the Late Mesolithic–Early Neolithic transition) (Arkeologikonsult AB Technical Report no. 13). Arkeologikonsult AB, Upplands Väsby. (41 pages, 8 appendices, 34 figures, 1 table). ISSN 0284–9275.

During May and June 1994, Arkeologikonsult AB conducted excavations at part of a Stone Age settlement at Pärlängsberget in Överjarna parish, Stockholm county (registered ancient monument no. 143). The investigations were carried out in advance of planned road construction.

The investigations began with phosphate mapping over the whole area, at intervals of 5m. This was followed by the hand excavation of a number of 1m square test pits, equally spaced over the site, to establish a basic model of finds distribution. All material from these test pits was water-sieved with a 2mm mesh. The finds were registered and interpreted while the investigation proceeded. The interpretation of the finds distribution model led to the hand excavation of further areas. In total approximately 6% of the site was completely excavated in this way, an area which incorporated around 9% of the finds concentrations. After this had been completed, the entire site was exposed by machine. The stripped area was cleaned hand, and all features contacted were excavated by hand, recorded in plan and section, and surveyed using a total station EDM.

A total of 61 features were found, of which the majority formed parts of five structures which were interpreted as huts. The hut remains consisted of a number of rounded rectangular cut features, 2.5 x 3m in size, surrounded by a wall slot in and around which were found postholes. Two of the huts contained hearths, both situated in similar positions at the end of a wall slot. A survey of other Mesolithic hut remains in Scandinavia revealed several parallel features with the Pärlängsberget structures, including sunken floor areas, hearths positioned in relation to the wall line, and a similar distribution of finds within the buildings. Earlier discussions of Mesolithic huts with sunken floors have suggested that these features are not structures at all, but may in fact be interpreted as cavities left by the roots of fallen trees; the Pärlängsberget site provided an opportunity to critically examine this

possibility. Several factors, e.g. the occurrence of hearths and postholes, the homogenous finds material, ^{14}C datings, together with a spatial relationship to the distributions of worked stone, fire-cracked stone and phosphate concentrations indicated that these features were indeed remains of huts.

The finds material consisted primarily of struck quartz and a smaller quantity of struck greenstone – a waste product from axe production, Among the objects found were five transverse arrowheads in quartz, a transverse arrowhead of Kristianstad flint, a flake-knife of quartz, a fragment of a polished greenstone axe, a fragmentary whetstone in red slate, and a combined quernstone and polisher for axe finishing. This latter was found as an edging stone in the hearth of Hut 3. The greater proportion of the struck quartz was found on a knapping floor which was preserved as an area between the huts free of other features. Particular types of struck flakes seem to have been removed from this knapping floor and used as various tools on other parts of the settlement. As the quartz was rarely retouched before use, microwear analysis is required to determine exactly which flakes were used or which purposes; this was not possible within the project budget.

Soil samples from the excavated features have been subjected to phosphate and organic-content analysis. This produced a pattern in which the different categories of features (postholes,wall slots, hearths, pits) grouped at different intervals. This further strengthens the interpretation of the features as huts.

Four charcoal samples from known species of trees, together with two hazelnut shells,were ^{14}C-dated by the Svedberg Laboratory at Uppsala University. The three samples taken inside the huts (from a hearth and two wall slots) were dated to the centuries around 5000 BP (ca 4000 cal BC). A hearth which overlay Hut 5, and the two hazelnut shells which were extracted during water-sieving of the test pit material, gave dates in the early Iron Age.

The topographical location of the site, the fact that stone was worked outside the buildings, and the small size of the huts may indicate that the site was a summer habitation – perhaps used temporarily by a part of a local band. The quernstone, together with the low phosphate values on the site, suggest a possible interpretation of Pärlängsberget as a specialized collection site for vegetable foodstuffs. The dating, which locates the settlement in the transitional period between the late Mesolithic and early Neolithic, together with the find of the quernstone, places Pärlängsberget within the debate on changing modes of living and economy in the mid-late Stone Age. We may postulate that the production of axes on the site should be seen in connection with swidden or garden cultivation. This would provide an insight into the agricultural economy which directly preceded the ideological transformations of the Neolithic, as manifested in and by the appearance of the Funnel Beaker culture.

Healy, F., M. Heaton & S.J. Lobb. 1992. Excavations of a Mesolithic site at Thatcham, Berkshire. *Proceedings of the Prehistoric Society* 58:41.

Excavations were undertaken in advance of construction work at Newbury Sewage Treatment Works on the outskirts of Thatcham in Berkshire, close to the sites of previous excavations undertaken by Wymer and by Peake and Crawford. Worked flint of Mesolithic date was recovered from a sandy layer overlying river gravel in two distinct concentrations suggesting two distinct episodes. Use wear analysis of the flint suggests that the sites were used as home bases at which a wide range of activities took place, with an emphasis on the processing of plant foods. A ^{14}C date of 9100±80 BP was obtained from a sample of hazelnut shells from within one of the concentrations. Analysis of the soil and sedimentary sequence as well as the pollen indicates constantly changing localized environments in the early Holocene in the Thatcham area, with sporadic occupation by Mesolithic communities on the drier areas at the edge of the floodplain.

Kobusiewicz, M. & Kabaciński, J. 1993. *Chwalim. SubBoreal Hunter-Gatherers of the Polish Plain*. Institute of Archaeology and Ethnology, Polish Academy of Sciences, Warsaw/Poznań. 130 pp., 41 figs. ISBN 83-85463-21-6.

The site of Chwalim, in western Poland, represents three settlement phases of the Stone Age: Late Palaeolithic, Early Mesolithic and, by far the most abundant, Paraneolithic. The cultural stratigraphy is preserved in organogenic layers adjacent to a sandy-gravelly terrace which was occupied repeatedly by human groups. The chronology has been established by radiocarbon analysis. In addition to detailed elaboration of archaeological materials, the book also contains analyses of geomorphology, archaeozoology, palynology, malacology, as well as micro-wear studies and macro-artifactual examination. The excavations at Chwalim demonstrate that in some areas of the west Polish Plain characterized by particularly favourable environmental conditions, some more-or-less isolated groups of hunter-gatherers, surrounded by early farmers, persisted for a surprisingly long time – up to the very beginning of the Bronze Age.

Lubell, D., M. Jackes, H. Schwarcz, M. Knyf & C. Meiklejohn. 1994. The Mesolithic–Neolithic transition in Portugal: isotopic and dental evidence of diet. *Journal of Archaeological Science* 21:201–216.

Paired radiocarbon (AMS) and stable isotope (δ13C and δ15N) analyses of human bone collagen from Mesolithic and Neolithic Portuguese skeletons suggest a marked change of diet just prior to 7000 BP at the Mesolithic–Neolithic transition. The Mesolithic diet was based on foods of both marine and terrestrial origins, while the Neolithic diet was more dependent on terrestrial food sources. A linear correlation trend between dl3C and d15N for the Mesolithic sample implies that the marine component of their diet was isotopically homogeneous, and consisted of either a well-defined mixture of several species, or a single species that was consistently exploited. Changes in the rate and type of dental attrition and differences in dental pathology confirm that a change of diet was established by 7000 BP, but suggest that the trend had been initiated soon after 8000 BP.

Mason, S.L.R., Hather, J.G. & Hillman, G.C. 1994. Preliminary investigation of the plant macro-remains from Dolní Věstonice II, and its implications for the role of plant foods in Palaeolithic and Mesolithic Europe. *Antiquity* 68:48–57.

Analysis of plant food remains from one small hearth sample at Dolní Věstonice in the Czech Republic, hints at the untapped potential that exists for recovering information on plant foods from European Palaeolithic and Mesolithic sites, provided suitable sampling, recovery and identification techniques are applied.

Schofield, A.J. 1994. Lithic artefacts from test-pit excavations on Lundy: evidence for Mesolithic and Bronze Age occupation. *Proceedings of the Prehistoric Society* 60:423–431.

Lundy is a small offshore island set in the approaches to the Bristol Channel. Prior to the late 1980s several excavations and artifact collections demonstrated the presence of prehistoric and historic communities on the island. Yet, despite this, little was understood of the intensity of occupation and the archaeological context within which the excavated sites occurred. Two surveys, one by the National Trust and one directed by the author, have been running concurently since 1988 with the aim of placing the well-documented sites or places in their spatial and behavioural contexts. This paper describes one element of the author's landscape survey project – the prehistoric occupation.

Searight, S. 1994. Lussa Bay, Isle of Jura, Argyll: a note on additional tools. *Proceedings of the Society of Antiquaries of Scotland* 123 (1993):1–8.

More than 2000 additional tools have been recovered from the shore of Lussa Bay since 1969. Blades, flakes, cores and scrapers are the most common forms. The assemblage is compared to the previous finds from the immediate area; of particular interest are the relatively large broad trapeze–triangle microliths noted elsewhere on Jura, and thought to belong to a comparatively early phase within the Mesolithic sequence of the island.

Smith, C. 1992. The population of Late Upper Palaeolithic and Mesolithic Britain. *Proceedings of the Prehistoric Society* 58:37–40.

Tomaszerski, A. J. & R. Willis. 1993. Tool-kits and burial rites: the case of the Janisławice Mesolithic grave. *Proceedings of the Prehistoric Society* 59:105–112.

Zvelebil, M. 1994. Plant use in the Mesolithic and its role in the transition to farming. *Proceedings of the Prehistoric Society* 60:35–74.

The purpose of this paper is to review the current evidence for plant use in Mesolithic Europe and to summarize its implications. In order to do so, four sources of data are examined: macrobotanical remains, palynological data, artifactual evidence, and the human biological record.

A preliminary survey of palaeobotanical evidence for plant use in the Mesolithic indicates that the evidence is far more extensive than expected hitherto and that accumulations of plant food, especially of nuts, point to their regular and extensive use. In those areas such as Britain, where a large number of fine-resolution palynological studies have been carried out, the incidence of clearance and burning phases seems to be too high to be explained by acts of nature alone. A good case can be made for deliberate forest clearance and the maintenance of a more open landscape by Late Mesolithic groups as part of a promotional strategy to increase the productivity of nut and fruit trees and shrubs, wetland plants, and possibly native grasses.

Artifactual evidence points to a widespread distribution of soil-working tools (hoes and antler mattocks), especially in temperate Europe, and to a greater than expected presence of reaping and grinding equipment, lending conditional support for the existence of a specialized plant processing tool kit for digging, reaping, and plant processing.

Palaeopathological evidence indicates the existence of a dietary pattern in the west Mediterranean making extensive use of starchy and carbohydrate foods which resulted in a high caries rate among the Mesolithic population of that area.

In discussing the significance of these four lines of evidence, it is argued that, by the Late Mesolithic, the patterns of plant use support the notion of wild plant food husbandry instead of the incidental and opportunistic use of plants for food which has implicitly been accepted as a norm for the Mesolithic in Europe. Three geographical areas can be identified with their specific pattern of plant use: temperate Europe, Mediterranean Europe, and the south-eastern Balkans/Pontic Steppe. The patterns of plant use suggested in this paper emphasize the additive nature of the adoption of the agro-pastoral Neolithic farming practices in Europe.

Notes to Contributors

Manuscripts

Contributions for *Mesolithic Miscellany* should be supplied in hard copy (manuscript) *and also*, if possible, on 3½" computer diskette. Please note:

1. The manuscript should be typed or printed on good quality A4 paper. The minimum size of characters should be 12pt; if using a typewriter, daisywheel or dot matrix printer, then adopt a 10 cpi pitch.
2. The diskette can be in any of the following formats: **MSDOS 720K or 1.44Mb; Apple Macintosh 720K or 1.44Mb; Acorn 640K, 800K or 1.6Mb; Atari 720K.** The DTP software used for producing *Mesolithic Miscellany* can interpret most common word processor file types, including: **ASCII, Rich Text Format (RTF), Word 5/5.5, Word for Windows, Claris Works, Word Perfect (v. 4.2, 5.1), Wordstar, Impression.**
3. Short contributions can be sent by e-mail in plain ASCII or DOS text format, to: **CBonsall@ed.ac.uk**

References

References should be listed alphabetically at the end of the paper, and should follow modern scientific convention, *e.g.*:

Clark, J.G.D. 1936. *The Mesolithic Settlement of Northern Europe*. Cambridge University Press, Cambridge.

Price, T.D., Whallon, R. & Chappell, S. 1974. Mesolithic sites near Havelte, province of Drenthe (Netherlands). *Palaeohistoria* 16:7–61.

Woodman, P.C. 1978. The chronology and economy of the Irish Mesolithic: some working hypotheses. In *The Early Postglacial Settlement of Northern Europe*, edited by P. Mellars, pp. 333–369. Duckworth, London.

Illustrations

Particular care should be paid to illustrations. Wherever possible these will be scanned into the newsletter. They should therefore be submitted as black-on-white camera-ready copy. Original artwork is preferred, but good quality photographic or electrostatic reproductions are acceptable. Illustrations should not exceed A4 size (297mm x 210mm) and should be prepared to allow for reduction to A5 (210mm x 149mm). Each illustration should be presented on a separate sheet, and a separate list of *captions* should be provided. Exceptionally, photographs may be accepted for publication. Plans and drawings should have a *scale* marked on the illustration, not incorporated in the caption.