its worth I have two. Firstly, the symbol for a thermally fractured piece — a plain line — seems a little unclear and may easily be mistaken for a speck of dust or fluff, and would be even more so if reduced for publication. Secondly, large numbers of artifacts that have been dredged from rivers have 'trace' symbols placed on them. My proposed symbol for this is an irregular stipple (as per cortex) overlaid by an equally irregular stipple with a large pen size. This seems to be pictorially effective.

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FORTHCOMING CONFERENCES
The Prehistoric Society's Spring Conference in London (20th-21st March 1982) on THE ARCHAEOLOGY OF HUNTER-GATHERERS will include many papers of interest to IAS members. Further details may be obtained fromัว.ndy Lawton, Norfolk Archaeological Unit, Union House, Gressenhall, Dereham, Norfolk, NR20 4DR. (Telephone 0662-856-506).

BOOK REVIEW

This volume comprises six separate papers grouped in pairs under thematic headings, and linked by some editorial comment. The first theme is 'settlement perspectives', with T. Douglas Price on The spatial analysis of lithic artifact distribution and association on prehistoric occupation floors (pp.1-55), and Dave D. Davis on Lithic variability and its relation to early hominid subsistence strategies at Olduvai Gorge (pp.35-86).

Price's paper is a case study of the lithic distribution data provided by excavated Dashed mesolithic sites. Using nearest neighbour and segregation indices, Price analyses the spatial patterning of artefact classes within a site in order to identify potentially significant clusters which are then discussed in terms of tool-kits and activity areas. As with most British mesolithic sites where site definition is by lithic concentration alone, and where organic remains do not survive, the potential for such analyses appears very limited. Nevertheless, the subject matter and statistical methodology of this paper make it the most immediately interesting contribution for British lithicists, particularly if they wish to follow up Price's article in Kellner (ed) The early postglacial settlement of northern Europe, and do not have access to his PhD thesis (Michigan 1972).

Davis's paper on the analysis of the Oldowan occurrences at Olduvai is perhaps over-stretching the theme of settlement perspective. There are so many constraints operating on data of such antiquity that it is hard to accept that any variability present need be cultural (or biosocial) at all. Nevertheless, using Mary Leaky's Oldowan artefact typology, Davis analyses the lithic assemblages from eight occurrences, and suggests a potentially significant variability in the presence of choppers. However, the nature of Oldowan artefacts, given the anatomically uncertain nature of the makers, and the low numbers involved, this is not convincing. A correlation analysis of the Oldowan macrofaunal remains is used to suggest a seasonal pattern of exploitation by division into sites dominated by wetland species and those dominated by savanna species. This provides a useful model for further analysis of the Oldowan material, but even without considering the strictly geological questions raised, one is bound to query the methodology. The macrofaunal percentage values for each species given in Table II are not explained, but if these are simply equivalent of the numerical presence of the identifiable bones then they are unlikely to be valid for inter-species comparisons. Davis also examines the evidence for spatial patterning of the lithic and macrofaunal remains, using 'C-values' (an index of spatial aggregation). Distribution plots of 'C-values' for the major occurrences are given, as well as density contour maps. These would be easier to evaluate if the raw distribution data for both stone and bone remains were given alongside, and one is left with the impression that the complexity of the analysis is in inverse proportion to the visual nature of the excavated data. Davis is clearly aware of the problems which make all his suggestions and interpretations so tentative, but is forced to overstep them to carry the analysis to a conclusion.

The second theme is 'regional perspectives', with David B. Brose on A model of changing subsistence technology in the Late Woodland of northeastern Ohio (pp.81-115), and Robert H. Zeitlin and Ray C. Heimboth on Trace element analysis and the archaeological study of obsidian procurement in Precolombian Mesoamerica (pp.117-159). Brose summarises aspects of the development of the Whittlesley Culture through successive phases from A.D. 600-1650, with emphasis upon the respective lithic assemblages. In particular he contrasts the assemblages derived from summer villages and winter campsites, in terms of tool-types represented and the raw material exploited. The numerical data for this are presented in 'representative' percentage form only, and a 'family-tree' diagram model of Whittlesley Tradition lithic reduction strategy is given for 'representative' winter and summer site assemblages for each of five main chronological phases. Both supporting explanation and further data this reviewer found it impossible to evaluate the significance of Brose's 'production strategies', or the interpretations placed upon them. The suggested variability in the exploitation of quarried flint as opposed to glacially derived nodules is clearly of interest (though there is no explanation of how the flint type is distinguished), but it is difficult to see why a simple interpretation of the lower presence of quarried flint at winter campsites as a result of greater reliance upon raw material immediately to hand is not accepted by Brose. A more extensive treatment of Brose's ambitious subject is required.

Zeitlin and Heimboth's contribution provides an admirable summary of past work on the method and theory of obsidian sourcing, and one would only regret the omission of any reference to the important Japanese work in this field. The authors' main concern is with their trace element analysis programme using X-ray fluorescence. Some 30 Mesoamerican obsidian sources are characterised, and the analysis of 518 obsidian artefacts from Preclassic, Classic, and Postclassic archaeological sites on the Isthmus of Tehuantepec in southern Mexico...
The final theme is 'experimental perspectives', with Laurence H. Keeley on Microwear polish on flint and bone assemblages (pp.165-178), and Brian Hayden on Hauser in archaeology or inter-assemblage variability in lithics (a view from the antipodes) pp.179-198.

Keeley offers a concise and well-written introduction to his work on microwear analysis, which is now well-known in Britain. The present article has been superseded and amplified by Keeley's subsequent publications, particularly his book *Experimental determination of stone tool uses* (1980), and for this reason need not be described here. One might only comment that the wider application of the microwear polish analytical technique to various archaeological lithic tool-types is eagerly awaited, as is the typological chaos which will probably ensue. In particular Keeley's comments on later prehistoric tools with 'ochre gloss' raise hopes for the much needed characterisation of the implement type(s) involved.

Hayden is concerned with the understanding of variability amongst lithic assemblages from the viewpoint of the potential insight offered by ethnoarchaeological research into stone tool use. After a general review of the use of ethnoarchaeological analogy, which Hayden divides into three levels of significance, described as general analogy, analogy from principle, and the Direct Historical Approach, he turns to a summary of ethnoarchaeological observations of lithic use among the Australian Western Desert aborigines at three classes of procurement sites, involving food, water, and raw material. In terms of stone tool use in the Western Desert only two activities, butchering and woodworking, appear to be significant, and in neither case do these activities produce lithic assemblages which would be archaeologically visible as being activity-specific. This evidence is used to cast doubt on arguments which emphasise the importance of diverse activities in explaining inter-assemblage variability in palaeolithic contexts (especially the functional approach of Binford). There can be no doubt of the value of ethnoarchaeological work in Australia by Hayden, Golson and others for our understanding of Australian prehistory, and when this work is correlated with ethnoarchaeological data from other regions (ironically being achieved currently by Binford) it does provide a theoretical basis for understanding certain basic human responses to different environments. This approach to inter-assemblage situations which can be used to explain observed features and variability in the pre-agricultural archaeological record in Europe.

In the particular context of lithic, however, the Australian observations seem unlikely to offer many new insights into European prehistory because of the overwhelming differences in technology and habitat. Nevertheless, this closing article appropriately brings the volume full circle, since the cautions are especially relevant to the opening articles, reminding us once again of the limitations of lithic analysis.

It must be said that the overall production standards of this book are poor, and much of the blame must lie with the editor. The complete omission of the Table III referred to on p.49, and the Map I referred to on p.97 are unfortunate, particularly as the former relates to the editor's own article. The reference to Bradley 1975 in Eve's paper is not included in his bibliography, the Fig.2 on p.55 should be Fig.1, and the page numbering is inconsistent, leading to a completely unnumbered page of text between pp.86-87. The figures which accompany the editor's own article are very crude, and do a disservice to the other contributors. Other typographical errors will not be itemised.

The apparent hastiness of the production seems to match an equal lack of consideration given to its conception. The six very diverse papers which make up the volume are claimed by the editor in his introduction to provide a 'state-of-the-art overview'. They of course do no such thing, and their individual validity is undermined by the deceptive title, with its implication of coherence and comprehensiveness. Rather than further the interests of lithic studies, this volume is more likely to confirm critical suspicions about the esoteric and undisciplined nature of this branch of contemporary archaeology. Why was this book published? It would be unkind to suggest an overzealous desire to find an outlet for PhD work, but it is noticeable that five of the six papers do stem directly from very recent PhD theses. There is clearly a need for a responsible channel of publication for the growing amount of important research in lithics, but the answer surely does not lie in somewhat ill-conceived volumes like that considered here.

Alan Saville

RECENT PUBLICATIONS RELATIVELY TO LITHIC STUDIES

This list represents an arbitrary selection of titles to hand when this newsletter was being prepared. Please let us know if you think it useful, and if you think it should be expanded into a more comprehensive listing. If so, then offers of help in compilation would be appreciated.


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