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COMPARATIVE COLLECTIONS FOR ARCHAEOZOOLOGY

A modern comparative skeletal collection is an essential for archaeozoological work. Identifications on the basis of memory, or by comparison with other archaeological bones are always suspect. There are rare individuals who can work without a comparative collection but they are mostly people who over years of work in a Bone Institute have built up a store of detail in their own brains. Secure knowledge of the major large species (in Britain this usually means horse and donkey; cattle; sheep; goat; red, fallow and roe deer; and pig) will ensure that a bone from a rarer species or with pathological changes stands out as something different. Such bones can then be taken to a larger comparative collection for determination. Ideally then all bone work should be undertaken in a Bone Room containing a basic collection of the major large species and other material should either be sent to specialists or worked on at a larger comparative collection. Determination of wild species usually requires a run of modern comparative material of each species and the relevant literature. For example, recent work on the Lagomorpha, makes nonsense of most archaeological determinations of 'hare' (Mayhew, 1975) and it is unlikely that fallow and red deer are always correctly separated. Small mammal, bird and fish identifications are a specialist task. This means that there is little point in building such a collection unless there will be someone to work on it, the specialist literature to go with it, and an adequate run of specimens of each species. Although a tentative identification of, for example, 'hare', 'domestic fowl', 'cod' may be made on the basis of one comparative skeleton it is essential to check any such material and the correct scientific names before publication with someone who knows the group. No one person has the time or facilities to keep up with every group and one way out of this, and the terrible lack of good comparative collections, may be to have several regional collections of modern skeletons set up primarily for archaeozoological work. If the research workers were available it would be possible for each such collection to specialize to some extent to make it more cost effective. But there would be little point in having the specialized collection without the worker as it, and the literature that went with it, would need to be used and kept up-to-date.

At the moment we have a situation with too few comparative collections - we must ensure that the next stage does not turn out to be comparative collections abandoned because of job changes. Placing collections in a Research Institution is perhaps the best solution. Although a large Provincial Museum can probably offer adequate facilities it would be essential for such collections to be the tool of a research worker. This might occasionally involve moving the collection to the worker rather than the reverse. The sort of collections needed for archaeozoology are not the same as those normally made by museums. Museum collections, such as the majority of those in the National Museums, are primarily research collections used by comparative anatomists for taxonomic, anatomical and ecological research. As such they are too important for archaeozoologists to jiggle about with as research more immediately vital to our own survival could one day depend upon them and for such they must be kept in trust.

Modern skeletal collections for archaeozoology, like all skeleton collections, must be made from material which was identified accurately before preparation. This point cannot be overstressed, neither can the importance of secure labelling during preparation and the final marking of each bone of a skeleton to avoid skeleton mixing. In addition, archaeozoologists often need more information from their modern skeletons. It is useful to observe the following points when setting up such a collection.

1. Sex, age, weight and dimensions of the animal must be recorded and any other details of its life history and death that could be useful.
2. An archaeozoological collection can use material of both sexes, immatures at all stages, and animals in a wide range of conditions. Museum specimens tend to be healthy males.
3. Disarticulated bones with clean articular surfaces are essential. Easy viewing of anatomical features is sometimes aided, e.g. in small mammals and fish, by colouring the bones or not whitening them.
4. Storage must be based on easy access and the most-used bones can well be hooked on to the walls of the Bone Room as they are in many Bone Institutes abroad.

5. Completeness of the skeletons of the major species is essential as much time is often wasted by beginners over, for example, sesamoid bones, penis bones, and 1st sternabrae as they are rarely present in Museum and Teaching Collections.
6. Bones of the four limbs should be separately marked.

There are health risks in preparing skeletal material (Irvin, 1972)

but at the moment these are not as bad as they may be in the future as our European links grow stronger and we gradually lose our island isolation. This is an additional reason for building our comparative collections now, if the fact that lack severely hampers current work were not sufficient. We have fewer species that commonly occur in our digs so that whereas our continental cousins wrestle with bones of elk, bison, bear and more species of small mammal as an everyday task, we have different and more subtle problems, e.g. 'who introduced what?' or, 'are we correct in assuming we never had this?'. Much good modern material goes to waste and with a 'swopping scheme' could find its way to the people who need it most. For provincial museums not only are good taxidermists like gold dust but taxidermists who know anything about bones or are encouraged to prepare skeletons as a routine procedure have been extinct for many years. We can only hope that the new gallery at the Booth Museum, Brighton is the dawn of a new bony era.

Archaeological comparative collections are a more controversial issue. It is still necessary to convince some people in Britain that archaeozoologists need to remove bones from their archaeological contexts in order to array those of the same type. Three safeguards are essential - the detailed recording of the material at the level of the archaeological layer; the preservation in the original bags of material not needed for further study at this ^{time;} and the clear labelling of all bones removed for further study. Indian ink with a layer of resin to prevent erosion is of proven efficacy. Labelling must include site code and original archaeological context. It is sometimes argued that the material should then be resorted into its original bags. My answer to those who want this is "give us the trained staff and we will do it". The only solution at present is to rebag all analysed material (such as that used for ageing and measurement) in its studied groups, e.g. pig raddii for the whole site, the period, the phase or the layer complex, according to the site size.

Whether special items like whole skeletons, rarer species and pathological specimens should then be put into an archaeological comparative collection with easier access than the bulk of the material and what happens to worked bones and finished bone objects are questions which can only be answered after full discussions with the Excavator, any Museums involved, and the body responsible for Storage - naturally discussions are best carried out before the bones are analysed. These are matters of importance for the future of archaeozoological research in Britain and the decisions must be made now.

The Faunal Remains Project at the University of Southampton is financed by the Department of the Environment Ancient Monuments Laboratory and began building both a modern and an archaeological comparative collection for archaeozoological work in January 1975. Progress is slow as archaeological bone study goes on at the same time, and we have no technical help but about 250 modern skeletons of British mammals, birds and marine fish have so far been prepared. The decisions on what to collect were made in the light of current bone work proceeding in Wessex, especially that in Southampton and Winchester. Staff of the British Museum (National History) have advised us during the setting up of this collection. The growing modern collections are already in constant use by archaeozoologists and students from Wessex and further afield.

Anyone with comparative collection problems is most welcome to visit Southampton or to exchange views by letter. It is conceivable that temporary loans of modern skeletal material may be a part of the future rôle of such regional collections if they come into being, for as the number of bone analysts increases we must be prepared to maintain high standards by ensuring that no-one is having to guess.

References

- Irvin, A.D. et al. (1972) Possible health hazards associated with the collection and handling of post-mortem zoological material. Mammal Review 2 (2) 43-54
- Mayhew, D.F. (1975) The Quaternary history of some British Rodents and Lagomorphs, Ph.D. thesis, University of Cambridge.