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RECOMMENDATIONS FOR PROCESSING HUMAN BONE FROM ARCHAEOLOGICAL SITES

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Summary

This document gives guidelines on the processing (washing, drying, marking and packing, and, for cremations, sieving to recover bone from pot or pit fills) required for human bones at the post-excavation stage prior to sending them to a specialist for examination.

Paper copies of this report are available from the Ancient Monuments Laboratory.

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Recommendations for Processing Human Bone From Archaeological Sites

Prior to sending them to the specialist for examination human bones should be clean, dry and appropriately marked. The following are general hints on how this may be done.

Cleaning: the bone should be cleaned in tepid water, soil being removed using gentle brushing with a soft toothbrush or similar. Particular care should be taken not to remove deposits of calculus from the teeth during washing. Washing should be done over a bowl, not a sink (so that bone fragments are not lost down the plug-hole!). The water in the bowl should be changed regularly and any small fragments of bone retrieved from the sludge at the bottom (perhaps by pouring the dirty water out through a sieve). The water should always be changed between contexts so that it is clear from which context any bone retrieved from the bottom of the bowl comes. It may be helpful to use a second bowl of clean water to rinse the bone.

Once washed the bones should be allowed to dry slowly at room temperature away from strong sunlight and artificial heat sources.

When dry the bone should be marked with waterproof ink, common-sense dictating the minimum size of fragment to be marked. No attempt should be made to glue broken fragments together, nor should the teeth be glued into their sockets.

The bones should be bagged in polythene bags. It is most important that the bones be quite dry before bagging: if bones are bagged when still damp mould will quickly form leading to rapid deterioration of the bone. For an articulated skeleton the bones of the hands and feet, if they were recovered separately, should be bagged in 4 separate small self-seal polythene bags - once mixed it is often difficult to distinguish left from right phalanges. The remainder of the skeleton should be inserted into larger polythene bags, preferably keeping the various anatomical parts of the skeleton (e.g. skull, arm-bones, leg-bones, vertebrae, ribs etc) separate. The bags should be labelled.

If fairly intact, the skull should be placed (not resting on the teeth) in a separate box from the remainder of the skeleton: English Heritage uses skull boxes 24x16x15cm. Any loose teeth should be placed in a small self-seal polythene bag in the skull box. The mandible, bagged separately, should also be placed in the skull box. Skull boxes can also be used to take an entire infant skeleton.

The post-cranial skeleton should go into a box (or boxes) large enough to take comfortably the large long-bones - English Heritage uses boxes about 50x22x15cm.

In fairly full boxes the cushioning effect of the polythene bags containing the bones should be sufficient to prevent damage in transit, but if it seems likely that the bones will rattle around sufficiently to damage them (as might occur in boxes containing relatively little bone or if the bone is particularly friable) then tissue paper (preferably acid free) should be used as packing material.

Boxes should not be over-filled and should preferably be of acid-free material. Labels should be on the boxes themselves, not just on the lids, and on the ends so that they are visible when the boxes are stacked or shelved. When a single skeleton or context is spread between more than one box labels on the boxes should indicate this by saying "Box 1 of 3" etc.

Supplementary notes on cremated human bone

Separating cremated bone from pot or pit fills: the fill containing the cremated bone should be gently wet sieved through 4mm and 2mm meshes. The bone (and any cremation slag - Henderson et al. 1987) in the material retained by the 4mm sieve should be picked out by hand; the best time to do this is when the residue is almost dry (when particles are no longer wet enough to stick together, but are damp enough for the colours to be more intense than when fully dry). Soil adhering to the bone fragments should be removed. It is not necessary to sort the material retained by the 2mm mesh. For fills from large pots it may be worth processing them in several spits so that distribution of bone within the fill can be studied.

The exact sizes of mesh used are not critical (as long as the same size meshes are used for all the cremations from a site), thus if, for example, only meshes of 4.5mm & 1.5mm are available they may be used. The purpose of this sieving is so that the sorted 4mm fraction can be studied by the specialist in detail and the fraction retained by the 2mm mesh can merely be scanned by the specialist for diagnostic fragments.

The bone fragments should be allowed to dry slowly at room temperature away from strong sunlight and artificial heat sources.

The fragment size in most cremations makes it impractical to label the fragments themselves.

Once thoroughly dry the bone should be placed in polythene bags. Since the fragments themselves are not labelled particular attention should be paid to ensuring that the bags are properly sealed - putting the fragments in a self-seal polythene bag and inserting this into another self-seal poly bag is a good way for ensuring this. The bags should be labelled on the outside and another label inserted inside.

Provided the bags are adequately sealed cremated bone from several contexts can be put into one box.

Reference

Henderson, J., Janaway, R. & Richards, J. (1987). A Curious Clinker. Journal of Archaeological Science 14: 353-365.