

Further notes on humanly worked bones from the Norwich Crag Formation of Easton Bavents

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SUMMARY

Two artifacts of fossilised bone originating in the Norwich Crag Formation are discussed. According to the author the workmanship of the artifacts cannot be dated.

SAMENVATTING

Twee artefacten, afkomstig uit de Norwich Crag Formatie, worden besproken. Volgens de auteur is datering van de bewerking niet mogelijk.

The question whether tool making hominids existed in the British Isles during the Pliocene and Early Pleistocene is one which has occupied the minds of geologists, archaeologists and anthropologists for many years. Periodically evidence is offered that artifacts have been found in the Craggs of East Anglia. Much of the evidence has related to flaked flints from stone beds at the base of the Red Crag and the Norwich Crag Formations. In addition there was the carved face on a Red Crag shell shown to the British Association in 1881 of very doubtful authenticity and the perforated sharks' teeth described by T. McKenny Hughes. The only record of human skeletal remains from the Craggs is that of a human lower jaw excavated by workers in a phosphate pit at Foxhall, near Ipswich, but most of the contemporary workers did not accept it as a Red Crag fossil and the specimen has since been lost. More recently Mr. H.D. Collings of Southwold has reported flint flakes from a stone heap in the old pit at Cove Bottom and from the Norwich Crag at Easton Bavents Cliff. In addition a number of bone fragments from the latter exposure have been described as humanly worked (COLLINGS, 1974). Some of the latter are discussed by the author.

The Geological Section at Easton Bavents

The Norwich Crag Formation is intermittently exposed in the cliffs between Southwold and Covehithe (Fig. 1). It is overlain by glacial beds and outwash gravels of pre-Anglian age. The Crag itself consists of three members. The upper is a series of thin bedded sands with occasional pebble seams and obscure borings, which has been interpreted as a shallow water marine deposit. The middle member is a dark loamy clay, occasionally with marine shells, known as the Easton Bavents Clay. The lowest member consists of shelly sands, the shells being often most common in distinct layers where pebbles also tend to occur. It is in the upper part of these shell beds that the artifacts were reported. Much of the lower member ("Norwich Crag") is concealed by the beach deposits and scree.

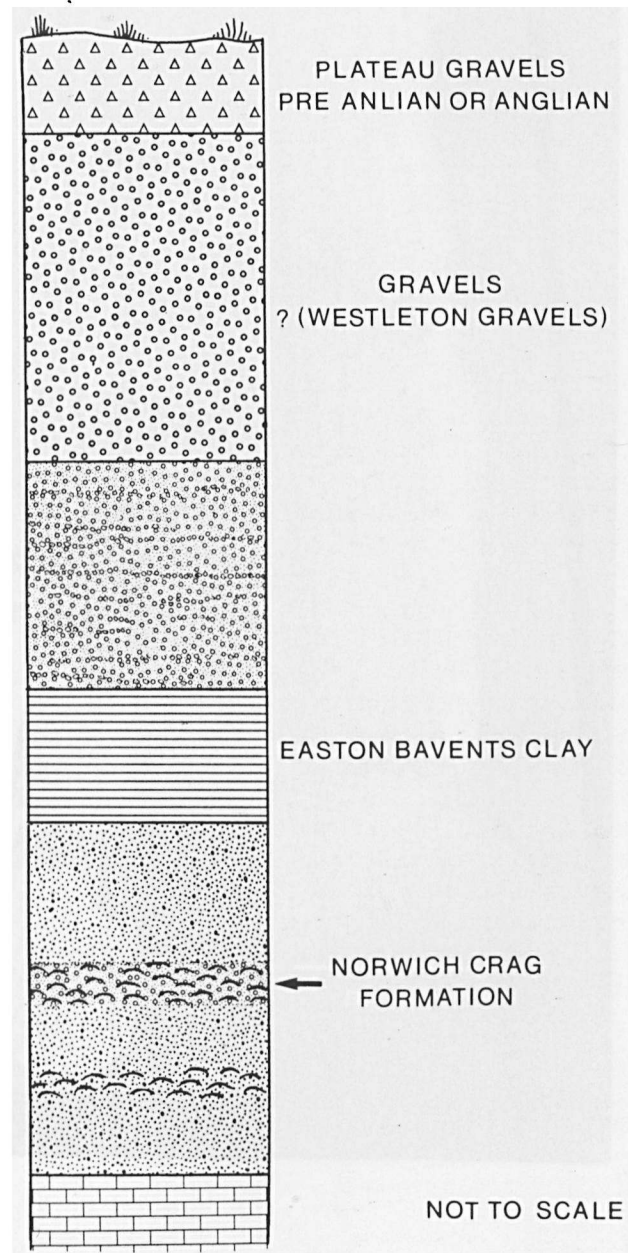


Fig. 1 Generalised geological section of the Cliffs between Easton Bavents and Covehithe. Arrow shows level of the Upper Shell Bed.

Fig. 1 Schematische geologische doorsnede van de 'Cliffs' tussen Easton Bavents en Covehithe. (pijl = niveau van Upper Shell Bed)

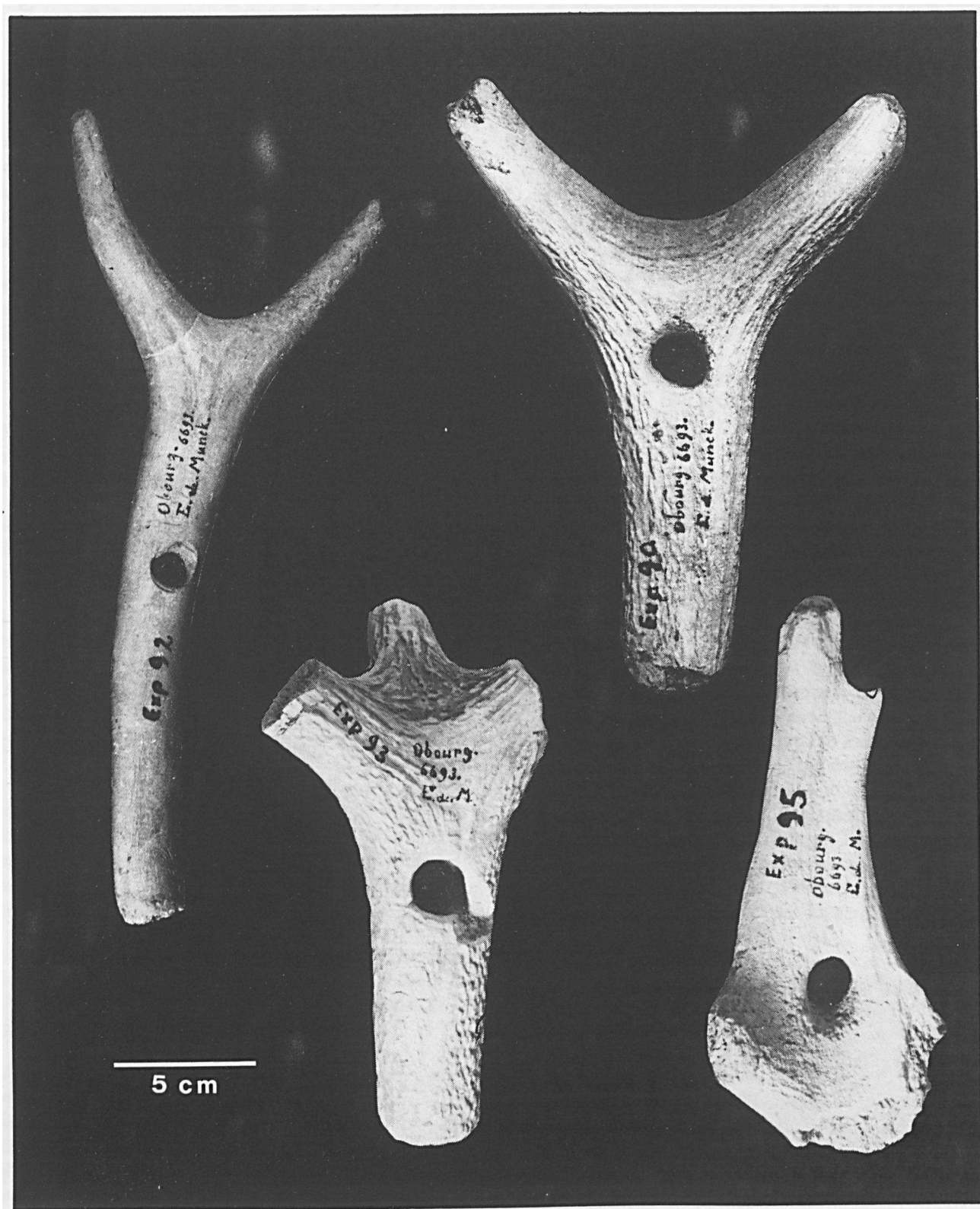


Plate 1. Four antler Hoe Tods from the Neolithic of Obours, Belgium. Photographs by courtesy of the Insitute Royal des Sciences Naturelles de Belgique, Brussels

Plaat 1 Vier gewei artefacten van het Neolithicum van Obours, België. Foto's ter beschikking gesteld door Institute Royal des Sciences Naturelles de Belgique, Brussel.

The bone artifacts are reported as having been collected from the uppermost of the shell layers and this bed is described in more detail. There is a rich molluscan fauna with rarer examples of non-marine shells, fragments of estuarine clay, and brackish water shells. Fish bones are fairly common. Fragments of terrestrial mammal bones are not rare and probably represent existing fossils derived from valley gravels during the Crag marine transgression. Many are heavily mineralised, dark in colour on the outside but lighter inside, and more or less rounded and polished by scouring, although many have what were originally sharp fractures. In places the shell bed is more or less decalcified so that it gives the

appearance of a pebble bed (sometimes referred to as the Stone Bed). As is the case in the Crag generally most of the pebbles are of flint from the Chalk and of local derivation, but this bed also contains a variety of rock types including Carboniferous cherts, Jurassic cherts, Cretaceous fossils, sponge cherts, igneous erratics, rock crystal, etc. It should be noted that the term Stone Bed has no particular stratigraphical meaning.

The Worked Bone Artifacts

Some years ago the author was permitted to examine some bone fragments said to come from this bed. These were later illustrated and described as examples of hu-

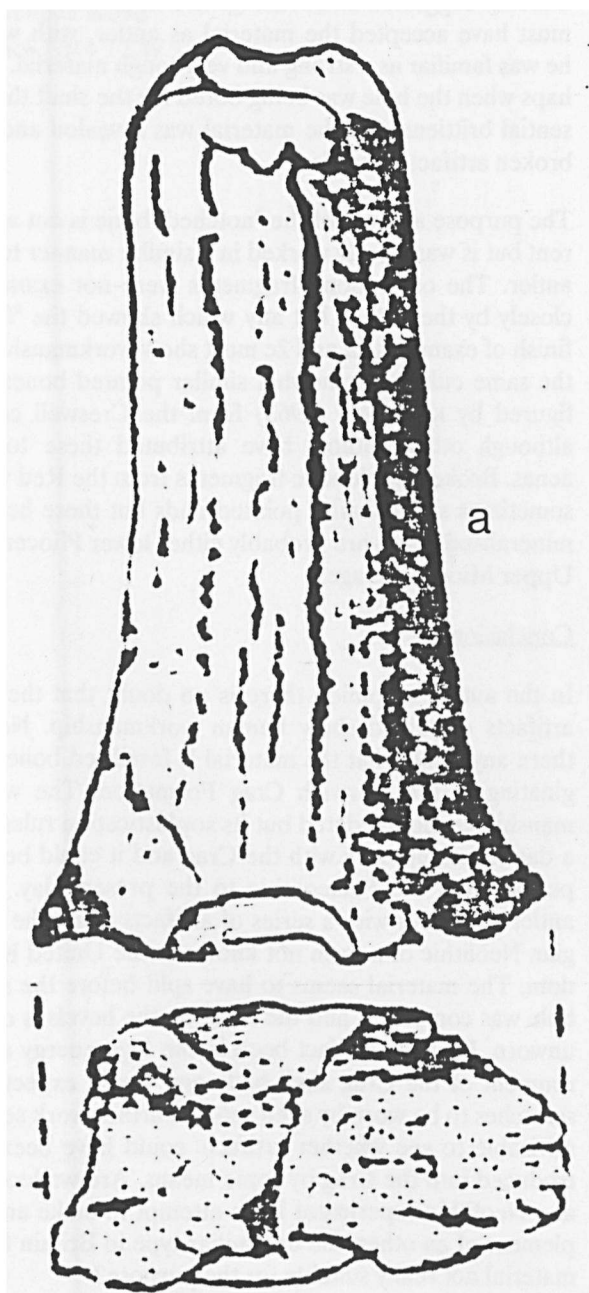


Plate 2. The antler artifact from Easton Bavents. 2a: Original drawing by Mr. D. Collings (Suffolk Nat. Soc., 1974) for comparison
 Plaat 2. Het gewei artefact van Easton Bavents. 2a: De originele tekening van Mr. D. Collings (Suffolk Nat. Soc., 1974) ter vergelijking.

manly worked bones. The author has no opinion to express on the flint flakes which he did not examine but was convinced that some of the specimens figured (2a and 2c) showed signs of human workmanship. In particular that figured as 2a showed purposeful working, though at the time the type of artifact and its use was not clear. The edges of Fig. 2c showed notches, some polished but others displaying deliberate workmanship. The most interesting specimen was that figured as 2a. It consisted of a fragment of deer antler at the point where a tine meets the main beam. One end (uppermost in the figure) was flattened and had a bevelled edge all round, formed by some kind of filing action, which left a series of parallel scratches of uneven depth. At the opposite end there were two bevelled, curved, worked surfaces on the opposite edges of a fractured face. Complete these would have formed a hole right through the antler fragment. The comparatively sophisticated workmanship immediately suggested a culture of younger age than the Norwich Crag. Although artifacts are known from deposits of comparable age in Africa they are of crude design and workmanship.

By Upper Palaeolithic times antler working reached a high state of skill and the so called "baton de commandement" of the Continent shows borings in antler, very similar to that in the Easton Bavents specimen (OAKLEY, 1950, Fig. 25d). In Neolithic times the properties of antler were well known and the material used for a number of artifacts. Thus comparison with other British cultures suggests a rather late date for this type of workmanship. On the other hand there is little doubt that the age of the Norwich Crag is at least a million years earlier and the redating of the Easton Bavents Crag to a younger period is impossible. The shell beds were deposited under marine conditions, at no great distance from shore, so that the possibility of a working site in situ is not likely. There is no geological evidence for a land surface below the Easton Bavents Clay and there is no marked discontinuity at its base. The antler and bone fragments are visually similar to other bone fragments from the Norwich Crag and are likely to be older than the Norwich Crag marine transgression. However, the working of the antler must have been subsequent to its mineralisation. Closer examination shows that the worked parts are of a lighter colour where the outer darker layer has been removed. At this stage the evidence clearly pointed to human workmanship, after the bones had been "fossilised" and of a sophistication pointing to a much later date. At this point there seemed no further evidence as to the age of the artifacts other than a lingering doubt as to their provenance.

A Neolithic Age?

In September 1984 while studying Crag material in various museums in the Low Countries, the author visited the National Museum of Natural History in Brussels, and as well as the study work, looked at archaeological

material on display in the galleries. Among the very interesting displays was a small series of artifacts from the Industrie spiennienne of Obours, Belgium. This included what are almost certainly complete examples of the "antler artifact" of Easton Bavents (Plate 1). The Belgian artifacts were described as hoes and must have been shafted. Although not uncommon on the Continent the implement has not yet been described from the British Neolithic. If this interpretation is correct then the Suffolk specimen (Plate 2) could not have come from undisturbed Crag beds.

If the age is Neolithic then why did the maker use a mineralised specimen of antler? Perhaps the weight of the material suggested an advantage in a hoe. The workman must have accepted the material as antler, with which he was familiar as a strong and very tough material. Perhaps when the hole was being bored for the shaft the essential brittleness of the material was revealed and the broken artifact discarded.

The purpose and use of the "notched" bone is not apparent but it was clearly worked in a similar manner to the antler. The other bone fragments were not examined closely by the author but any which showed the "filed" finish of examples 2a and 2c must show workmanship of the same culture. Somewhat similar pointed bones are figured by KITCHING (1963) from the Creswell caves, although other authors have attributed these to hyaenas. Broken whalebone fragments from the Red Crag sometimes show similar pointed ends but these heavily mineralised bones are probably either lower Pliocene or Upper Miocene in age.

Conclusions

In the author's opinion there is no doubt that the two artifacts examined show human workmanship. Nor is there any doubt that the material is fossilised bone originating in the Norwich Crag Formation. The workmanship cannot be dated but its sophistication rules out a date contemporary with the Crag and it could be any period from the Palaeolithic to the present day. The antler compares with a series of artifacts from the Belgian Neolithic of a form not known in the United Kingdom. The material seems to have split before the shaft hole was completed and the filing on the bevels is quite unworn. Had the artifact been in the high energy environment of the Crag shell beds one would expect the scratches to be worn by sand scour. Further work seems advisable to see whether artifacts could have been introduced into the Crag by some means. Are we looking at a Neolithic experiment in an attempt to make an implement of an otherwise unfamiliar type in Britain from material not really suitable for the purpose?

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