

AN UNUSUAL BONE IMPLEMENT

BY ELIOT CURWEN, F.S.A.

IN 1910 Mr. Reader wrote a paper¹ on a series of thirteen bone objects of a type to which attention had not previously been drawn, and which have not, as far as I know, been reported upon since. A recent gift to the Museum of the Sussex Archaeological Society, consisting of a perfect specimen and three fragments, offers an opportunity to draw attention to the type once more and to solicit opinions as to the purpose for which these objects were used.

The bones are the metatarsals and metacarpals of the ox or horse, and their constant features are a longitudinal scoop-scar on one or more surfaces, and a back from which all protuberances have been removed so as to render it a more or less flat surface. In addition the majority of the examples show one or more perforations bored in an antero-posterior direction through one or both ends.

These notes deal with the four examples presented to the Society's Museum by Mr. C. Maitland from the collection of local antiquities collected by the late Major Maitland of Friston Place, together with a specimen that has long been in the Society's Museum without label or record, and another from the Pitt Rivers Museum, Oxford, which Mr. T. K. Penniman, the Director, kindly allows me to describe and figure.

1. The Pitt Rivers Museum example (Fig. 1) was found by a dog, buried at an old mill near Banbury, Oxon., 1908. It is a large metatarsal bone of a full-grown ox, from which both ends have been hacked off. The anterior aspect of the bone has been cut longitudinally for $4\frac{1}{2}$ in. with wide, sweeping cuts which have removed half the thickness of the bone and opened up the medullary canal for 3 in.; its surface presents eleven concave tool scars, no two of which are in the same plane. Each scar surface is perfectly smooth as if cut by a knife, and shows no signs of scraping or rasping; the cut edges are sharp and not worn down. The posterior surface of the bone has been flattened by chipping and

¹ *Proc. Soc. Antiquaries*, 2nd Ser. xxiii (1909-11), 51.

appears glazed, the glaze being as apparent in the small concavities as on the small convexities. A slice of bone



FIG. 1

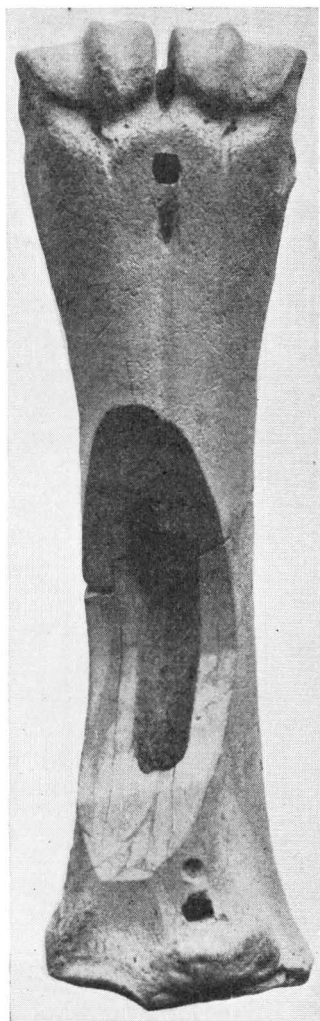


FIG. 2

$\frac{1}{4}$ in. thick and 1 in. long has been sawn off from this surface at the distal end of the bone, and the cancellous tissue thus revealed shows the same glaze in patches. At the proximal end a longitudinal slice of bone has been sawn off as shown

in the figure. In addition the expanded ends of the bone have been shaved down so as to reduce their width to approximately that of the rest of the bone. Both ends show large circular antero-posterior perforations, a single one countersunk at the distal, and two, one of which is countersunk, at the proximal end. There is no sign of denaturing of the bone, which is as dense as ivory.

Examples 2-5 are from the late Major Maitland's collection at Friston Place, Sussex, and it is greatly to be regretted that no note of their provenance has come down to us.

2. Metatarsal or metacarpal of an adult ox (Fig. 2). In this case the slicing or scooping on the anterior surface of the bone is nearer the proximal end; it is nearly 4 in. long and has opened up the medullary canal for 2 in. Unlike the Banbury specimen the scar surfaces on each side of the middle line are in one plane. As in all the examples, the scar surfaces are quite smooth as if made with a cutting instrument, and are not grooved or uneven as if ground or scraped out. The posterior surface has been flattened, and some of the more slightly convex surfaces show a brightness as if they had been smoothed by friction. Both ends of the bone are intact and present two small antero-posterior nail holes, circular at the proximal and square at the distal end. The bone, which is somewhat denatured, has been broken across in the middle.

3. A fragment (Fig. 3*a*); the anterior surface presents a flat scar for 2 in. at the proximal end, as if it had been chipped or scraped flat, and then commences the even concave surface of a scoop-cut that opens up the medullary canal; it is here that the bone is broken obliquely. The posterior surface is roughly chipped or rasped flat. There is a round antero-posterior perforation of medium size at the intact end, and some slight traces of gloss, especially in the scoop-cut surface.

4. Seven inches of the distal end of an adult bone (Fig. 3*b*). For 3 in. of its anterior surface this distal end has been thinned down and flattened, and on its posterior aspect projections of the articular end have been removed. The proximal end of the bone shows a slice-scar on its anterior aspect, just before it is broken off; as most of these bones are from 10 to 11 in. long, this would still allow room for a short scoop-cut. (In the York Museum is an example with

the scoop-cut quite close to the articular end of the bone.) There are two small circular antero-posterior perforations,

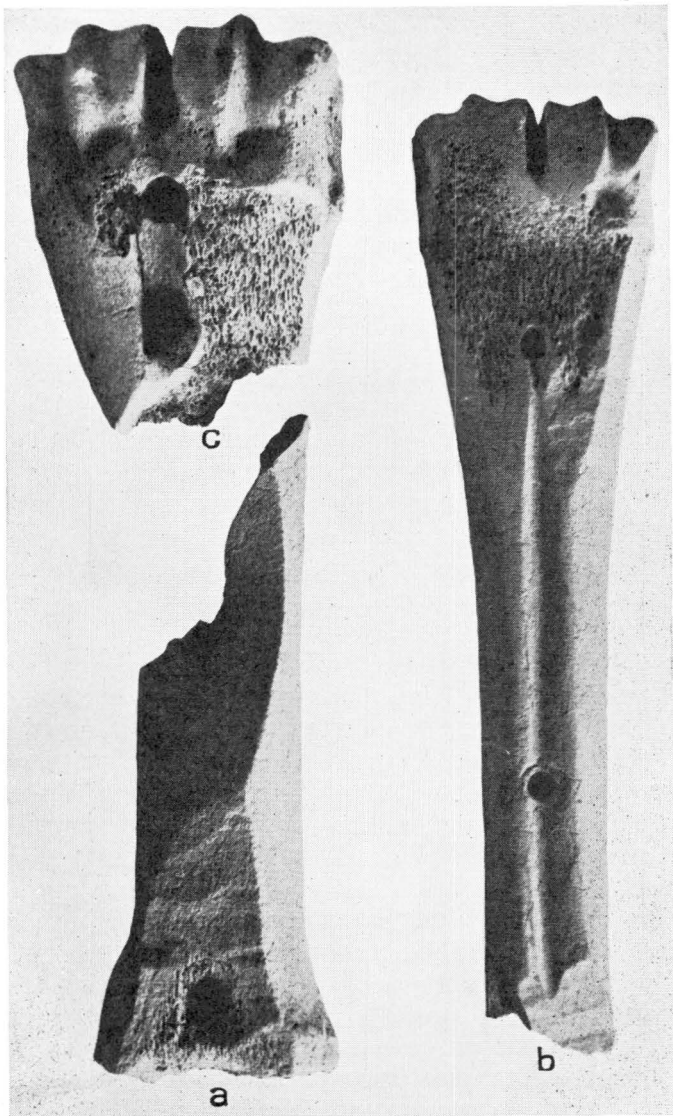


FIG. 3

one in the customary position near the articular end and the other near the middle of the shaft; this unusual position for

a hole suggests that its more normal position at the end of the bone was occupied by the scoop-cut.

5. This fragment (Fig. 3c) consists of 3 in. of the distal end of a bone of large size. It is included in this series because the finder evidently so included it, because presumably it was found with the others, and because, although it is a mere stump and shows no cut scar, it exhibits some of the other characteristics of the type. As in the other cases, the posterior projections of the articular surface have been removed so as to make the back a flat surface. There is one large round perforation near the joint, and an inch from it, and also in the middle line, what appears to be the head of an iron nail, which, however, does not perforate the bone.

6. In this example from the Lewes Museum there are two deep scoop-cuts, one on the antero-lateral angle of the bone and the other on the postero-lateral angle of the same side. It is at the intersection of these two cuts that the bone is broken. The scar surfaces are quite even and smooth, and one of them almost polished; their edges are not abraded or worn. The whole articular end has been hacked away, and the cancellous bone scooped out so as to open up the medullary canal. The circular antero-posterior perforation is unusually large.

This curious type of bone implement has a wide distribution. Mr. Reader refers to examples from York, East Anglia, the City of London, and Mortlake; to this list must be added Banbury in Oxfordshire and Friston in Sussex. A further example from the mud of Boveney Lock is mentioned in a letter from the late Prof. E. Ray Lankester to Mr. Quintin Waddington. Of the eighteen examples known only seven are whole, or nearly whole, the remainder being portions only and generally broken transversely across the cuts. They are all alike in showing deep longitudinal scoop-cuts with smooth surfaces and sharp, clean-cut edges, in having their backs trimmed down to a flat surface, and in possessing one or more antero-posterior perforations. Of the perfect specimens the two from York are perforated at one end only; those from Suffolk, Banbury, and Sussex in two places; the Banbury example has two perforations at one end, as shown, and so also has a fragment from Mortlake; of the other broken portions five show perforations and two do not.

These perforations would appear to be essential to the use of the tool, whatever that may have been; they were drilled, and are not the result of driving a nail; their edges are clean and sharp or else countersunk; only in one example we have seen was the hole squared.

In two cases the character of the bone is spoken of as being 'as dense as ivory', and in both the concave surface of the scoop-cut is described as very highly polished. The bone of the Friston examples has denatured to some extent, probably owing to the character of the soil in which they have lain, but in them the concave surfaces carry a marked degree of polish also.

The wide distribution of this bone object, and the similarity of the various examples, indicates that it had a definite and specific function, or else was a by-product in the manufacture of some definite article or articles. For what purpose the bones were made may never be clear until further examples are discovered in close association with known objects. In the meantime various suggestions have been made, but none carries conviction. Mr. Reader suggested that the concavity may have held some material that was being manipulated, and that the perforations were made to nail the bone down to the bench—hence the flattening of the back. Since two were found in connexion with old mills it has been held that they acted as chocks or brakes at the side of the millstones, but the absolute smoothness of the concave surfaces, the complete absence of striae, and the lack of symmetry of the cuts, negative this suggestion. One correspondent reports that he had seen a cobbler finish the blade of his trimming knife on such a bone after using the stone, though he preferred a cow's rib for the purpose; this purpose, however, would not account for the Colchester specimen, the scoop-scar of which is only about $1\frac{1}{4}$ in. long and $\frac{3}{4}$ in. in depth, with very steep sides. Other suggestions are that they were musical instruments of the bull-roarer type; that they came from a factory for the manufacture of bone objects of some kind, such as buttons, or are the tools of some extinct craft. None of these suggestions is satisfying, and it will be best to withhold judgement till further evidence is forthcoming. None of the bones has been found in unequivocal associations, but the condition of the bones themselves does not suggest any great age.