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BEAR JAW TOOLS FROM PETUN SITES

ABSTRACT

A number of purposefully modified bear jaws are reported and described.

INTRODUCTION

The writer has recovered eight bear-jaws all having similar modification and wear-pattern characteristics, six of which are illustrated and described in detail in this paper. The exact purpose of the modification is unknown, but it would seem reasonable that it was to convert the jaw into a tool. A study of the wear-polish allows some suggestions to be made concerning the possible use of these tools.

THE SITES

Four of the specimens were recovered by Mr. J. Allan Blair and the writer from a single midden on the north edge of site BdHb-2 (Borden, 1952; Garrad, 1967) overlooking Nottawasaga Bay near Craigleith. Two more were surface finds by the writer from the adjacent contemporary site BdHb-1, and two others were found by the writer on the surface of site BbHa-10, some seventeen miles inland and south-east of the other two sites. The two sites at Craigleith, in the Township of Collingwood, County of Grey, are believed by the writer to have been occupied by the Petun (Tionnontate) until their dispersal in 1650 A.D. The site seventeen miles away near Creemore, (Township of Nottawasaga, County of Simcoe), also in the area of the Petuns and an historic site, must have been abandoned earlier, possibly in 1641 A.D., since it is south of Etharita (Jones, 1909: 224).

A search of all local collections yielded no other similar specimens, and Mr. Blair cannot recall having seen any others during his more than half-a-century's active fieldwork in the area (Blair, pers. com.). The writer made a search through publica-

tions pertaining to Huron and Neutral sites but did not find these tools mentioned.

THE SPECIMENS

Data and photographs on six of the eight specimens are given below in tabular form for comparative purposes.

It will be seen that the typical tool is the right half of the mandible of the black bear (*Ursus americanus*,) separated at the symphysis, with a hole broken through the body of the ramus in the centre, known in the lateral aspect as the masseteric fossa. Around this hole, concentrated dorsally, is a high degree of wear-polish. The raised parts of the ramus, medially the coronoid process, laterally the coronoid crest, are similarly polished from use. A secondary degree of polish appears almost over all the specimen, as if from much handling.

That the typical tool is the right half of the mandible is stated because seven of the eight specimens are the right half, only one being the left.

EVIDENCE OF USE AS TOOLS

Examination of the mandibles included handling, holding and observations of the wear-polish, and gave rise to the following notes:-

- (i) Secondary wear-polish on all raised parts of the tool, on both sides, is consistent with much handling.
- (ii) The tool is naturally adapted to being held in a certain way. The ventral edge fits smoothly into the palm, and the mildly-serrated occlusal surfaces of the teeth provide a positive and comfortable grip in the crooks of the fingers. The ramus is thus presented as the working part of the tool, with the rough symphyseal face, canine tooth, condyloid and angular processes well out-of-the-way.
- (iii) The wear-polish within the hole is concentrated towards the top or dorsal ramus edge, consistent with some material passing through the hole rubbing this edge, as if the tool is being pulled towards the user against some resistance.
- (iv) The elongation and erratic shape developed by the holes show that the polishing effect is sufficiently abrasive to wear the bone away, the hole eventually breaking through the ramus dorsal edge rendering the tool useless. The specimen photographs accompanying this paper have been arranged to illustrate

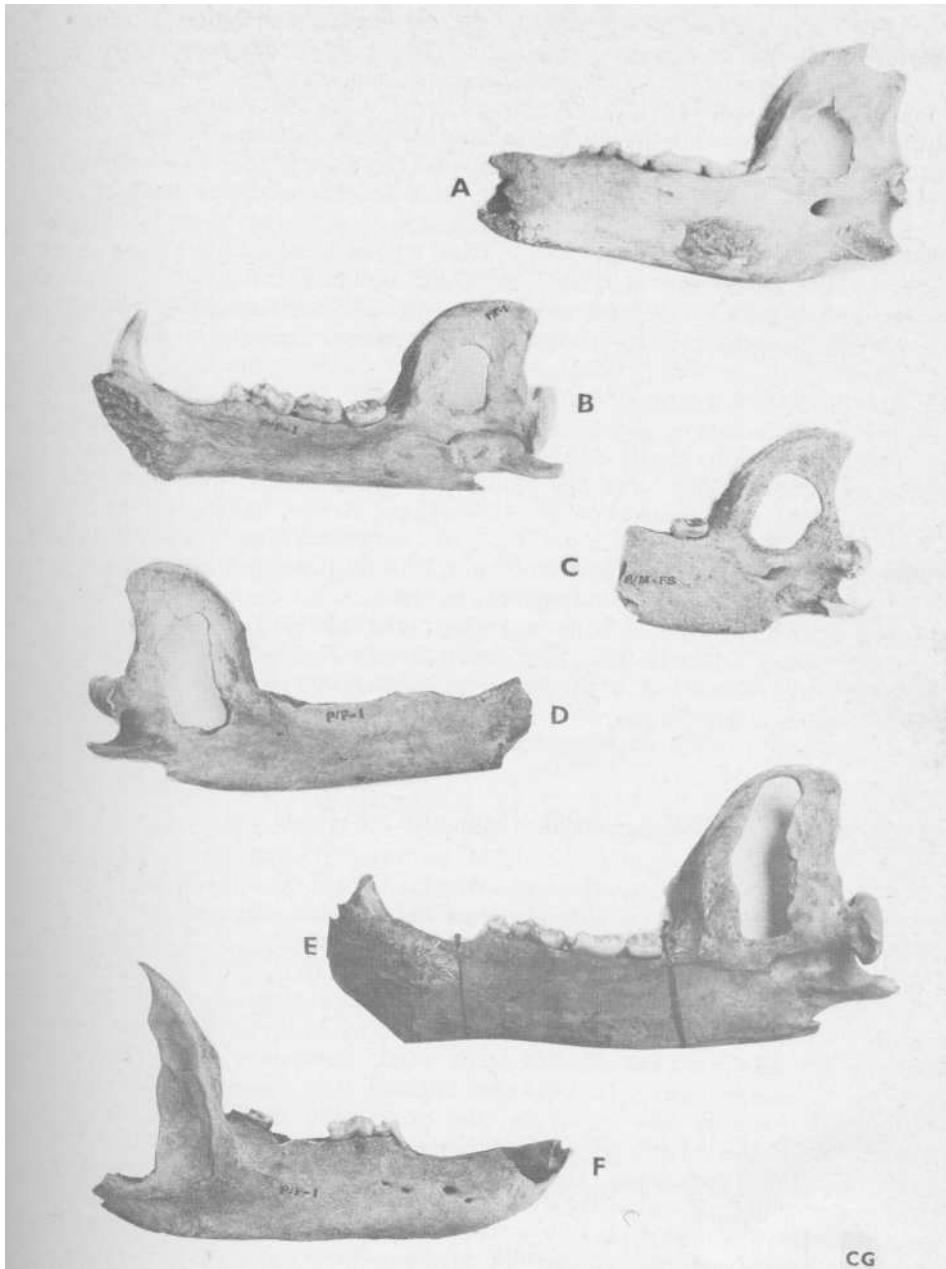


FIGURE 1

Medial aspects of specimens A, B, C, D, and E.
Lateral aspect of specimen F.E photographed in Collingwood Museum.

the apparent sequence. The specimen "A" shows the least wear both around the hole and of the ramus, showing little use. The hole progressively becomes larger and finally breaks through, illustrated by specimen "F".

- (v) Although the wear-polish around the hole is concentrated towards the top end as seen in the photographs, some degree of polish exists all round the hole in the more-used specimens. This suggests that the material passing through the hole may have been bulky, or that there was a circular movement such as twisting, or that the tension of the material under the working movement was eased during the return movement such as in pulling or stropping.
- (vi) The dorsal concentration of wear-polish both in the hole and on the raised surfaces of the ramus is consistent with the material rubbing the ramus while, passing through the hole, indicating that the tool was held and pulled flatly, and along the same line as the material was held.
- (vii) The writer personally found that the right-half mandible fitted his right hand slightly more easily than the left, and that the single left specimen similarly lent itself to best being held in the left hand. The presence of only one left-half compared with seven right-halves may therefore indicate a predominance of right-handed users of the tools.

DISCARDED SUGGESTIONS

Since the exact use of these tools is not known to the writer, opinions of more experienced colleagues were sought. The following are the more frequent suggestions:-

CORN SHELLER. This arises from the knowledge that deer mandibles were thus used (Waugh, 1916: 169). A consideration of the deer mandible reveals its suitability for such a purpose, the teeth cusps being sharp and pointed, the teeth being centred in the jaw with enough room at the anterior and posterior ends to hold the jaw and apply the teeth as the working part. The black bear jaw however has none of these advantages, the teeth are not suitable, nor the shape of the mandible convenient to hold for such an application. The wear patterns seen on the specimens demonstrate that the ramus, not the teeth, is the working part] of the tool.

RITUAL OBJECT OF THE HURON BEAR TRIBE. This suggestion stems from two of the three sites mentioned (BdHb-1 and BdHb-2) being situated geographically nearest to the Huron Bear tribe, and of the same period as the flight of the Huron Bear from Ossossane to the Petun. It is probable that these two sites, from which

six of the eight specimens came, housed remnants of the Bear tribe during their stay with the Petun from March 19th to May 1st 1649 (Jones, 1909: 382). However, the remaining known distribution conflicts with this proposal. The third site (BbHa-10) which produced two samples, is spatially and tempo-rally removed from this event and was at the time already abandoned, being south of Etharita, as stated earlier. Further, known Bear tribe sites at Ossossane and elsewhere have not yielded any specimens (Ridley, pers. cm.).

TOOL WITH SPECIALISED MARINE APPLICATION. This proposal stems from the proximity of Nottawasaga Bay to two of the three sites, but would seem confounded by the third site being seventeen miles inland and remote from any navigable water.

PROVISIONAL CONCLUSIONS

Considering the above data, the writer concludes that the tool was held in the hand, in a firm grasp, ramus extended out-wards, and was used to pull on, align, and perhaps twist, lengths of some material under tension, fastened at least by one end. The material must be strong, flexible, fairly soft, and in need of such treatment. A variety of aboriginal industries readily suggest themselves using materials such as rawhide, in the preparation of which this tool may have played a part.

Completely unexplained is the erratic distribution of these tools, and their general absence from sites where similar activities were undoubtedly carried out.

The writer seeks the reader's opinion as to the use of these tools. Access to the specimens may be arranged with the writer. Specimen "E" is part of the writer's display in the Collingwood Museum, Collingwood, Ontario, where it is erroneously identified as a corn sheller. The photographs illustrating this paper are by the writer. Two specimens are not illustrated or described in detail as both rami are broken off.

ACKNOWLEDGEMENTS

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