

An Aurochs Bone from Hoppenwood Bank, Northumberland

Peter Rowley-Conwy
Department of Archaeology
Durham University

A bone of aurochs (*Bos primigenius*) was recovered from Hoppenwood Bank in 2011. The bone is a left proximal radius, with part of the ulna attached. The bone is broken across the shaft, and the distal end is missing. The total length of the piece is c. 220 mm. Fig. 1 shows anterior and posterior views. The proximal end of the radius is fully fused. This does not necessarily mean that the aurochs was a mature adult. Proximal radius is an early fusing bone in modern cattle, Silver (1969) stating that it fuses when the animal is 12-18 months of age. Aurochs are likely to have been similar, so it is possible that the Hoppenwood Bank animal was not yet fully adult. The proximal end of the ulna is missing (fig. 2 top), so no fusion information is available for this bone.



Figure 1. The aurochs bone from Hoppenwood Bank. Top: anterior view. Bottom: posterior view. Photos: Jeff Veitch

No cut marks were visible anywhere on the bone. The break across the shaft is jagged and stepped (fig. 2 bottom), which suggests that it occurred some considerable time after death, when the bone had partially dried out. It is not a “spiral fracture” of the kind which forms when bone is broken while fresh, and there is no impact point. The crushing damage to the anterior shaft (fig. 1 top)

also occurred some time after death, possibly at the same time as the shaft was broken. There is therefore no sign of any human involvement with the animal, either during or after its death.



Figure 2. Top: the proximal end showing the broken ulna. Bottom: the broken mid-shaft end. Photos: Jeff Veitch.

The following measurements could be taken:

Greatest proximal breadth, BP:	114.2
Greatest breadth of proximal articulation, BFp	100.7
Smallest diaphysis breadth, SD	66.6

Measurements are in millimetres, and follow the definitions of von den Driesch (1976).

Fig. 3 plots BP and BFp, comparing it with various other specimens. It is closely similar in size to two individuals from the well-known site of Star Carr in Yorkshire, and to a third from the adjacent site of Seamer Carr. All of these are Early Mesolithic. Also plotted in fig. 3 are animals of known sex from Denmark, which date from the Early and Middle Holocene (Degerbøl and Fredskild 1970). Some aurochs bones are clearly sexually dimorphic, i.e. the males and females form separate scatters. This does not happen with proximal radius, probably because there is considerable post-fusion growth in this early-fusing element. Males are for the most part larger than females, with the dimensions of the two sexes lying end to end, except for one large female which falls in the male distribution. The Hoppenwood Bank specimen is larger even than this large female, and falls clearly within the male scatter. It therefore comes from an aurochs bull.

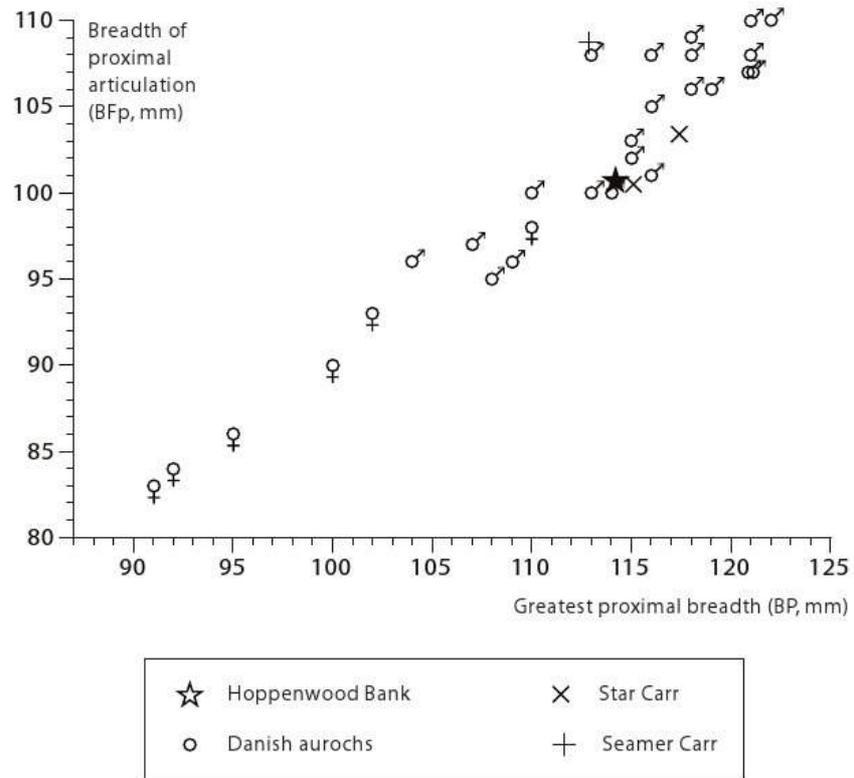


Figure 3. Measurements BP and BFp of the Hoppenwood Bank proximal radius, compared to those of Danish aurochs of known sex (from Degerbøl and Fredskild 1970), and to specimens from Star Carr (Legge and Rowley-Conwy 1988) and Seamer Carr (Uchiyama, Clutton-Brock and Rowley-Conwy in press).

Degerbøl, M. and Fredskild, B. 1970. *The Urus (Bos primigenius Bojanus) and Neolithic Domesticated Cattle (Bos taurus domesticus Linné) in Denmark*. Copenhagen: Det Kongelige Dansk Videnskabernes Selskab. (Biologiske Skrifter 17, 1).

Driesch, A.E. von den 1976. *A Guide to the Measurement of Animal Bones from Archaeological Sites*. Cambridge, Massachusetts: Peabody Museum of Archaeology and Ethnology. (Peabody Museum Bulletin 1).

Legge, A.J. and Rowley-Conwy, P.A. 1988. *Star Carr Revisited. A Re-Analysis of the Large Mammals*. London: University of London, Centre for Extra-Mural Studies.

Silver, I.A. 1969. The ageing of domestic animals. In *Science in Archaeology*, eds. D. Brothwell and E.S. Higgs, 283-302. London: Thames and Hudson.

Uchiyama, J., Clutton-Brock, J. and Rowley-Conwy, P. in press. Mammal remains from the excavations at Seamer Carr, Yorkshire, 1977-86. To appear in a volume edited by Paul Lane.