LATE PLEISTOCENE (WISCONSINAN) CARIBOU FROM SOUTHEASTERN WISCONSIN

Robert M. West
Milwaukee Public Museum

ABSTRACT

Two specimens of caribou (*Rangifer tarandus*) antlers extend the late Pleistocene range of that species to southeastern Wisconsin.

* * * * * *

Specimens of caribou, *Rangifer tarandus*, have been reported from the late Pleistocene of Michigan (Dorr and Eschman, 1970), Illinois (Bader and Techter, 1959), Iowa (Frankforter, 1971), and Minnesota (Hay, 1923a), as well as numerous other localities in the eastern United States (Guilday, Hamilton and Parmalee, 1975). The only reported Wisconsin occurrences are from fire clays near Menomonie in Dunn County, presumed by Hay (1923b) to be of late Illinoian Age. Antler specimens from two previously unrecorded localities now confirm the expected presence of this species in the late Pleistocene of southeastern Wisconsin. Both specimens are in the vertebrate paleontology collection of the Department of Geology, Milwaukee Public Museum.

The best diagnostic material, MPM VP 858 (Fig. 1), is composed of three unconnected fragments of at least two right antlers. They are slender in comparison with antlers of the modern barren ground caribou, the more gracile of the living North American subspecies. The beams are oval in cross-section. Both brow and bez tines are well developed, and the brow tine is noticeably palmate. All three fragments are intensively water-worn, and the broken surfaces are also abraded, suggesting considerable pre-burial transportation.

Figure 1. MPM VP 858, fragmentary right antlers. The longest fragment is 79 cm in length.

The second eastern Wisconsin caribou (MPM VP 902) is a fragmentary left antler of a much larger animal than those represented by MPM VP 858. The brow tine is missing, lost prior to burial; the broken surface is large, suggesting that it was well developed. The antler, which has an oval cross-section, is comparable in size with the larger barren ground caribou specimens in the collection of the Department of Vertebrate Zoology at the Milwaukee Public Museum.

The specimens comprising MPM VP 858 were found in June, 1943, in a peat deposit near Wauwatosa in the Menomonee River valley a few miles west of Milwaukee. When the specimens were recently found in the collection precise locality data were not with them. Probably the area of the occurrence was the NW¼ of T7N, R21E, Milwaukee County, Wisconsin. By the time the writer examined the specimens all adhering matrix had been removed. However, surficial sediments in the probable area of occurrence were late Wisconsinan in age (Hough, 1958), and compatible in age with other, much better documented, *Rangifer tarandus* finds. The isolated specimen, MPM VP 902, was eroded from a bluff along the shore of Lake Michigan east of Oostburg (approximately sec. 4, T13E, R23E, Sheboygan County, Wisconsin) during the summer of 1963. The precise circumstances of this discovery are also unclear; the bluff is composed of lacustrine sediments equated to the late Wisconsinan late Glenwood Stage of Lake Chicago, and to till of the upper Wedron Formation (12,500-13,000 years BP: late Woodfordian) (Evanson *et al*, 1976), and to the peat from which MPM VP 858 was collected.

Four living subspecies of North American caribou presently are recognized (Banfield, 1974). The most southerly is the woodland caribou *(R. t. caribou)*, which now ranges south to the north side of Lake Superior, and which occurred with some frequency in northern Minnesota, Wisconsin and Michigan in historic times (Cory, 1912; Burt, 1946; Bergerud, 1974). There is no historic record of its occurrence south of about 45° north. Three barren ground subspecies *(R. t. groenlandirus, R. t. pearyi,* and *R. t. granti* range far to the north into the Arctic tundra, and are physically smaller than *R. t. caribou.*

Subspecific distinctions based only on antlers are difficult (Bubenik, 1975). Barren ground caribou antlers tend to be smaller, less palmate, and more oval to round in cross-section than those of woodland caribou, but there is extensive overlap. Clearly, the MPM specimens belong to *R. tarandus.* On the basis of the rounded cross-section of the beams, they are tentatively assigned to *R. t. groenlandicus,* despite the relatively large size of MPM VP 902.

ACKNOWLEDGMENTS

Mr. Walter Bubbert of Wauwatosa, Wisconsin, recovered and donated MPM VP 858, and Ms. Julie Te Ronde of Oostburg, Wisconsin, recovered and donated MPM VP 902. The illustration was prepared by the Photography Department, Milwaukee Public Museum. Dr. Holmes A. Semken, University of Iowa, offered comments which greatly improved the manuscript.

LITERATURE CITED

Bader, R. S., and D. Techter. 1959. A list and bibliography of the fossil mammals of Illinois. Natural History Miscellanea, Chicago Academy of Sciences, 172:8 p.

Banfield, A.W.F. 1974. *The mammals of Canada.* Univ. Toronto Press. Toronto. 438 p.

Bergerud, A. T. 1974. Decline of caribou in North America following settlement. J. Wildl. Manage. 38:757-770.

Bubenik, A.B. 1975. Taxonomic value of antlers in genus *Rangifer.* Biol. Papers Univ. Alaska, Spec. Rep. 1:41-63.

Burt, W. H. 1946. *The mammals of Michigan.* Univ. Mich. Press, Ann Arbor. 288 p.

Cory, C. B. 1912. The mammals of Illinois and Wisconsin. Field Mus. Nat. Hist., Zool. Ser., 9:1-502.

Dorr, J. A., and D. F. Eschman. 1970. *Geology of Michigan.* Univ. Mich. Press, Ann Arbor. 476 p.

Evenson, E. B., W. R. Farrand, D. F. Eschman, D. M. Mickelson, and L. J. Maher. 1976. Greatlakean substage: a replacement for Valderan Substage in the Lake Michigan Basin. Quat. Res. 6:411-424.

Frankforter, W. D. 1971. The Turin local fauna, evidence for the medial Pleistocene age of the original "Aftonian" vertebrate fauna in western Iowa. Proc. Neb. Acad. Sci. and Affil. Soc., 81st Ann. Meeting: 48-49.

Guilday. J. E., H. W. Hamilton and P. W. Parmalee. 1975. Caribour (*Rangifer tarandus* L.) from the Pleistocene of Tennessee. J. Tenn. Acad. Sci. 50 (3):109-112.

Hay, O. P. 1923a. Description of remains of *Bison occidentalis* from central Minnesota. Proc. U. S. Nat. Mus., 63:1-8.

Hay, O. P. 1923b. The Pleistocene of North America and its vertebrate animals from the states east of the Mississippi River and from the Canadian provinces east of longitude 95°. Carnegie Inst. Wash. Publ. 322:499 p.

Hough, J. L. 1958. *Geology of the Great Lakes.* Univ. Ill. Press, Urbana. 313 p.