



A Fossil Bison Skull from Prescott, Washington

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IN VIEW OF THE RARITY of bison remains in southeastern Washington the discovery of a skull near Prescott is of more than usual interest.

During the spring of 1950, it was reported to me that Mr. Howard Fox had discovered a bison skull while working on a road-building excavation. Unfortunately, time was not taken to investigate the site of the find and exact data concerning the locality of the skull are not available. The following spring Mr. Fox presented the skull to the Whitman College Museum where it could be studied and an analysis made.

The right horn had been broken off at the base and the entire skull was covered with the fine Palouse loess in which it had been imbedded; but the horn-cores themselves and the crest of the skull posterior to the orbits were almost complete. Although the entire snout and jaw regions were gone the occipital part of the skull, including the posterior two-thirds of the brain case, was in good condition. I was able to cement the left zygomatic bone on the process of the temporal bone and complete the arch. In spite of the loss of the anterior end it was also possible to restore the ventral side of the left orbit and to fit several pieces of the frontal bone into place so that the forehead was nearly whole as far forward as the anterior base of the horn-cores. Viewed from the front, the brain case looks small and round, but is smaller proportionately and actually a little larger than that of a modern cow. This is due in part to the great breadth of the forehead. The frontal sinuses extend into the bases of the horn-cores and their combined capacity must have been over twice that of the brain case.

The measurements of this specimen follow:

Spread of horn-cores, tip to tip.....	840 mm.
Core length on upper curve, tip to burr.....	277 "
Core length on lower curve.....	345 "

Transverse diameter of core at base.....	105	”
Vertical diameter of core at base	102	”
Circumference of core at base	312	”
Width of forehead between cores and orbits.....	337	”
Greatest diameter of brain case (approximate).....	120	”
Width of condyles.....	150	”
Greatest width between auditory openings.....	280	”
Greatest width of temporal bones	301	”
Occipital crest to bottom of foramen magnum.....	160	”
Occipital crest to top of foramen magnum.....	118	”

These figures show the bases of the horn-cores to be almost perfectly round—more nearly so than any other measurements I have seen. This, however, agrees with the statement by Skinner and Kaisen (1947) about the genus *Simobison*: “The cores are subcircular in basal cross section as a rule—” These data and other characters like the set of the horn-cores, almost at right angles with the axis of the skull, confirm the opinion of J. Arnold Shotwell, (Based on photographs and measurements) that this is a very good specimen of *Bison (Simobison) antiquus antiquus* Leidy “—which is rather common in Oregon.”

The rear view (Fig. 1) shows the prominent ridges on the horn-cores and the contours of the occipital region. The proportionately small brain case and large sinuses are seen in Fig. 2; while Fig. 3 shows the angle of the horn-cores with the skull. The zygomatic arch and lower portion of the left orbit can be seen in all three figures. The horns must have rested on the cheeks of the living animal, for the horn-cores come within four millimeters of the temporal bone.

The town of Prescott where this skull was found is located on the Touchet River at an altitude of 1038 feet. The stream has carved a steep-sided valley fully 1500 feet deep through the Palouse loess of the surrounding hills. Since this deposit has been assigned to late Pleistocene, 10,000 to 20,000 years ago, we may set a similar date for this relic.

The skull has been varnished, catalogued with the number 9659, and placed on exhibition in the Whitman College Museum where it makes a valuable addition to the fossil collection.

Five other finds of prehistoric bison remains in southeastern Washington are known. One of these; “Right horn-core, broken off at butt, with part of left horn-core. U.S.N.M.:V.P. 8523. Wallula, Walla Walla County; collected

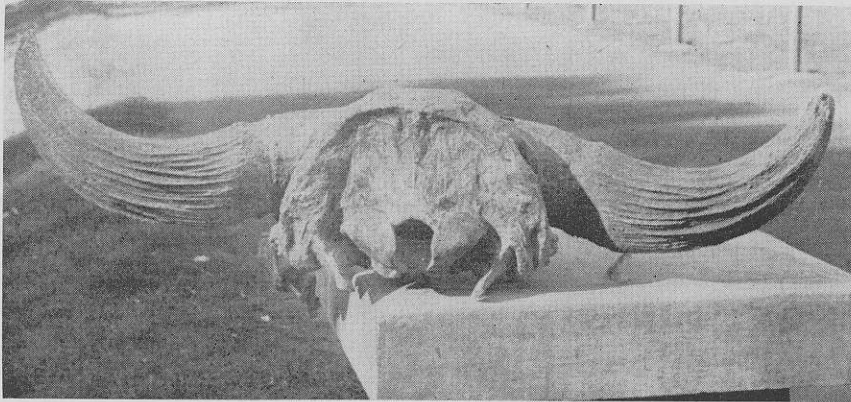


FIG. 1 Rear view of Bison Skull.

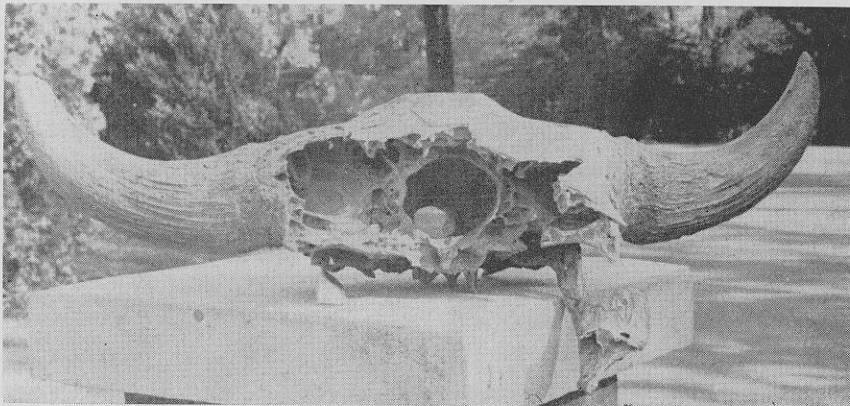


FIG. 2 Anterior view of skull, showing brain case, sinuses, and portion of left orbit.

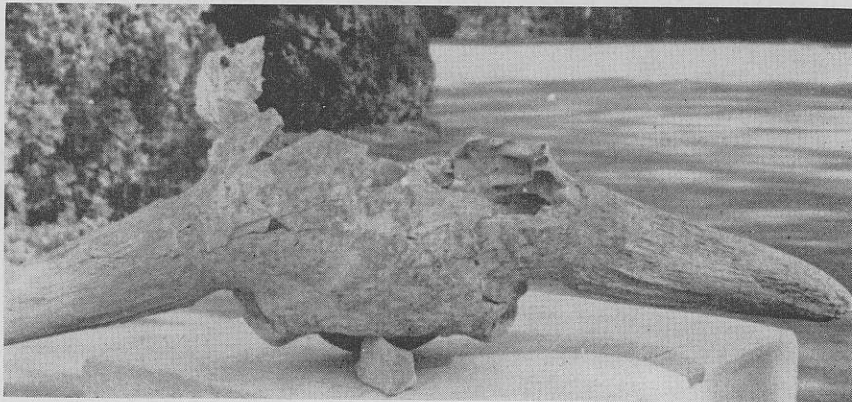


FIG. 3 Dorsal view of skull, showing angle of horn-cores with axis of skull.

—Photos by Newton M. Gray

by R. C. Fulkerson, 1916" (Skinner and Kaisen, 1947, p. 180) was referred to *Bison (Simobison) antiquus antiquus*.

The second is recorded by Brode (1928): "The Museum also contains a large vertebra of a bison which is identified as belonging to *Bison latifrons*. There is some question as to the locality from which this came. If it came from eastern Washington, as is probable, it is important in that it gives new information as to the range of this form." Hay (1927) says of this specimen: "In a collection of fossil remains of vertebrates sent for the writer's inspection by Professor H. L. (*sic*) Brode of Whitman College, Walla Walla, Washington, is a sixth cervical vertebra of a large bison. It has the catalogue number 2681. On account of its large size it is referred to *Bison latifrons*."

The third is the distal end of the left humerus of a bison, date and locality unknown. The specimen is 204 mm. long and 103 mm. wide and is catalogued as No. 9632.

The fourth find is part of a vertebra collected by the late Professor Benjamin H. Brown of Whitman College. The locality is not known but was probably in Walla Walla County where Professor Brown studied the local geology so carefully. It bears the catalogue number 7266.

The fifth consists of three bones among others collected May 5, 1929 by Ralph Glafke at White Bluffs, Washington and catalogued as 5732. A large lumbar vertebra with most of the processes broken measures 73mm. long and the centrum of a cervical vertebra 61 mm. Both of these are numbered 21, which evidently means that they were found together. Their bluish color and stony appearance indicate the same degree of fossilization. A third bone that looks more recent consists of an epiphysis marked "(?) Bison, distal of radius."

These relics do not indicate that bison were ever very plentiful in southeastern Washington, but it does appear that one, if not two, species lived here in late Pleistocene times, together with a large species of camel and the mommoth, *Elephas columbi*, whose remains have been found in many places.

Literature Cited

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- Skinner and Kaisen 1947. The Fossil Bison of Alaska and Preliminary Revision of the Genus. Bul. Am. Mus. Nat. History. vol. 89, art 3.