
A NEW PLEISTOCENE BIGHORN SHEEP FROM ARIZONA

BY CLAUDE W. HIBBARD AND BARTON A. WRIGHT

Reprinted from *JOURNAL OF MAMMALOGY*
Vol. 37, No. 1, February 1956, pp. 105-107
Printed in U.S.A.

A NEW PLEISTOCENE BIGHORN SHEEP FROM ARIZONA

BY CLAUDE W. HIBBARD AND BARTON A. WRIGHT

The junior author with the assistance of three other students in the summer of 1949 made a study of Catclaw Cave in Mohave County, Arizona. The cave is in the Black Canyon of the Colorado River, fifteen miles downstream from Hoover Dam and one mile upstream from United States Geodetic Survey Cable No. 17 (Fig. 1, Loc. F:2:1, Catclaw Cave). It lies two hundred yards east of the river on the south side of a small unnamed tributary, and is approximately 45 feet above the Colorado River. The cave is now covered by Lake Mohave which is formed by the Davis Dam. The excavation was done under the auspices of Dr. Emil W. Haury, Department of Anthropology, University of Arizona.

The formation of the cave was the result of an intermittent tributary of the Colorado River cutting through a dike of volcanic tuff breccia. This cutting had left vertical faces of breccia on opposite sides of the arroyo. The force of the stream was directed at the base of the southern cliff by the broad flank of the northern exposure. This erosion had resulted in a long shallow cave measuring 12.3 meters in width, 3.4 meters in height from the cave fill, and 12.4 meters in length. The floor of the cave lay at a greater elevation than the present arroyo and was composed of interbedded silt, sand, and gravel with consolidated rock-fall from the cave roof, lying between the irregular masses of the cave floor. Secondary erosion, resulting from groundwater entering along a fault plane had produced a chimney at the rear of the cave. Evidence of water flow through this chimney was traceable in the small channels cut into the cave deposits. At the extreme rear of the cave was a high bench composed of partially consolidated sand and gravel. The forward edge of this deposit had been cut away either by flooding or by human agencies.

The deposits within the cave showed definite changes throughout the depth of the fill excavated. Prior to excavation the cave floor was covered by a deposit of fine wind-blown silt (Level 1) extending from the bed of the arroyo to the consolidated bench at the rear of the cave and partially into the chimney at the rear of the cave. All archaeological material and animal remains from the cave were recovered in this loose stratum.

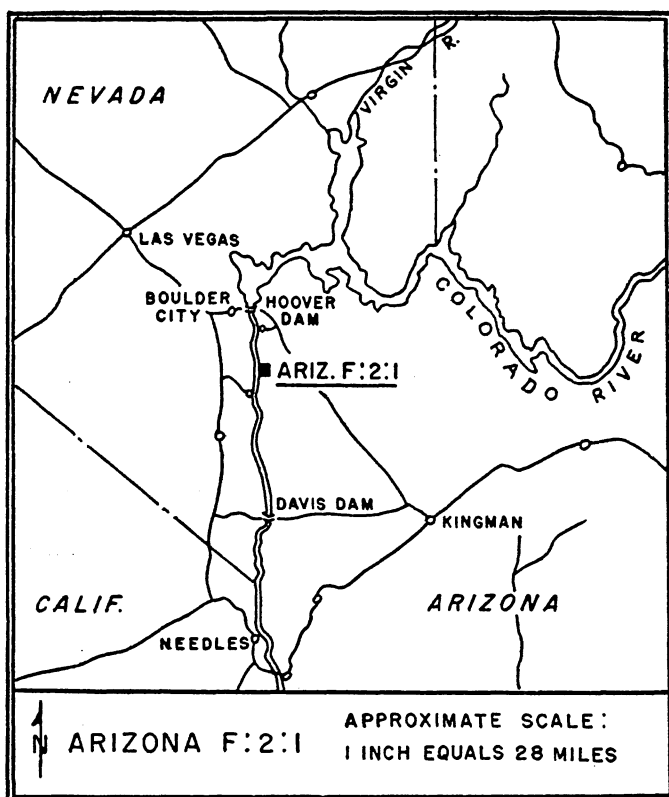


FIG. 1.—Map showing the location of Catclaw Cave. (Ariz. F:2:1).

Part of a right lower jaw of a bighorn sheep was found in a packrat nest on the consolidated bench in the rear of the cave. The wind-blown silt had sifted in around the nest. The lower jaw is partially mineralized and the preservation is different from that of the other bones found. The jaw and teeth were covered with a thin layer of calcium carbonate. It appears to have weathered out of an older stratum or to have been removed from such. The anterior part of the jaw shows a fresh break. The jaw was found to represent an undescribed form of the genus *Ovis*.

***Ovis catclawensis* sp. nov.**

Holotype.—No. 31413 University of Michigan Museum of Paleontology, part of a right lower jaw of an adult, with alveoli of P_2 , and P_3-M_3 present. Collected in the summer of 1949 by Barton A. Wright and party. Field catalogue number is 237.

Horizon and type locality.—Late Pleistocene; Catclaw Cave, Mohave County, Arizona.

Diagnosis.—A sheep the size of *Ovis ammon* Linnaeus of Asia. It differs from the known North American Recent and fossil species of *Ovis* by its larger size and wider lower premolars and molars.

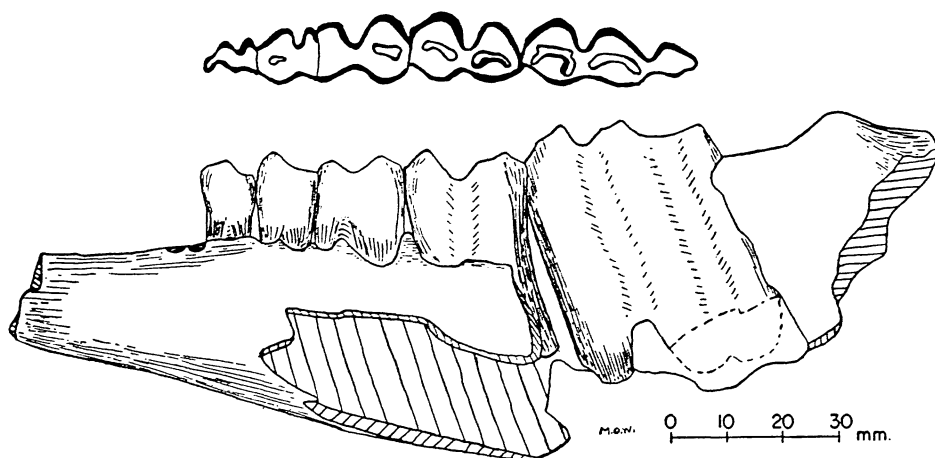


FIG. 2.—Lingual and occlusal views, right jaw with P_2 - M_3 , of *Ovis catclawensis* Hibbard and Wright; holotype UMMP No. 31413.

Description of holotype.—The ascending ramus and the anterior part of the lower jaw are missing (Fig. 2). The alveolar length of P_2 - M_3 is 101 mm. P_2 had two well-developed roots. The greatest transverse width, in millimeters, of P_3 is 8.5; P_4 is 9.8; M_1 is 11.0; M_2 is 12.5; M_3 is 12.8.

The anterointernal style of M_3 is like that of *Ovis canadensis* though it is not as well developed as on M_1 in *O. ammon*. The base of the anterior lobe of M_3 is free from the median lobe. The anterior lobe is more widely separated at the base from the median lobe than in Recent specimens of *Ovis canadensis* examined. In this character M_3 is similar to the larger M_3 of *Euucatherium*.

Cowan (Amer. Midl. Nat., 24: 505-580, 1940) in a study of mountain sheep found the longest premolar-molar series in *Ovis c. auduboni*, and that *O. c. mexicanus* had a rather heavier tooth row than *O. c. canadensis*. We have been unable to locate a lower dentition of *Ovis* from North America that has a premolar-molar series as long as, or teeth as wide as, the teeth of the fossil specimen.

Acknowledgments.—This study was aided by the loan of specimens under the care of Harold E. Anthony, American Museum of Natural History; Seth B. Benson, University of California; W. H. Burt, University of Michigan; and David H. Johnson, United States National Museum. The authorities of Arizona State Museum; of Region 3, National Park Service; and of the Museum of Man, San Diego, California, kindly gave their permission to deposit the specimen with the Museum of Paleontology, University of Michigan. The line drawings were made by Michael O. Woodburne. The illustrations of this paper were made possible by the financial support accorded to Hibbard by the Board of Governors of the Horace H. Rackham School of Graduate Studies of the University of Michigan.

Museum of Paleontology, University of Michigan, and Amerind Foundation, Dragoon, Arizona. Received April 28, 1955.

