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THE SCOTTSBLUFF BISON QUARRY AND ITS ARTIFACTS

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The association of artifacts with extinct bison bones in a quarry near Grand Island, Hall County Nebraska,[1] and from one in Custer County, Nebraska, have already been reported.[2] In the meantime, continued search has been rewarded, and a large bed of fossil bison with associated flint implements found. The discovery, if not of actual consequence, at least adds something to the accumulating evidence that Pleistocene man in America may have been a reality.

The field season of 1932 began the first of May, and by the twenty-first of the month, prospective quarry sites had been examined as far west as Scottsbluff, Nebraska, by the junior writer, Mr. C. Bertrand Schultz, class of '31, Mrs. Schultz, class of '34, and Mr. Loren Eiseley, class of '32.

On May 22nd, while at Bridgeport, Mr. S. R. Sweet, whose avocation is collecting and studying the fossil vertebrates of his region, and who has aided the museum parties in many ways on all occasions, volunteered the information that Mr. Ray C. Swanson of Scottsbluff, while exploring for Indian relics, had located several bone beds of importance. On May 30th, one of these beds, located near Signal Butte, was visited by a field party, accompanied by Mr. and Mrs. Swanson, and found to contain extinct bison. The deposit, varying in thickness from two to four feet, and having a length of thirty feet, was a solid mass of skulls, jaws, and bones. The sandy and silty materials above the bone bed varies from sixteen to thirty feet. All of the privileges of the extensive ranch, on which the deposit occurred, was accorded to the field party by Mr. E. A. Simpson. The quarry is situated within a few hundred yards of the base of Signal Butte, sixteen miles west and three miles south of Scottsbluff on the north bank of

[1] Meserve, F. G., and Barbour, Erwin H., Association of an Arrow-point with Bison occidentalis in Nebraska, Nebraska State Museum, Vol. I, Bulletin 27, February 1932, pp. 239-242. 2 figures.
Barbour, Erwin H., and Schultz, C. Bertrand, The Mounted Skeleton of Bison occidentalis, and Associated Dart-points, The Nebraska State Museum, Vol. I, Bulletin 32, October 1932, pp. 263 to 270. 3 Text figures.

[2] Schultz, C. Bertrand, Association of Artifacts and Extinct Mammals in Nebraska, Nebraska State Museum, Vol. I. Bulletin 33, pp. 171 to 183. 1 figure.

Spring Creek, about 50 feet east of the juncture of Kiowa Creek.

In trenching its course, Spring Creek has cut and exposed a cross section of an old river channel, in the coarse gravels of which the bison bones occur. This fossil river is incised in a floor of Brule Clay, (Oligocene), and its gravels vary in size from ordinary sand and pebbles up to chunks of Tertiary sandstones and clays weighing fifty pounds. The coarseness of the material indicates a stream having a considerable volume of water with a strong current. Later, due to some cause, climatic or otherwise, the transporting power was reduced, and a lighter load was carried, as indicated by the overlying sand and silt. Still later the river ceased to flow. A covering of from twelve to twenty-seven feet of wind-blown material now rests upon the remains of the old river bed. The invertebrate fossils found in the old river channel differ essentially from those found in the fine wind-blown sand above. This fact strongly indicates that there must have been a considerable duration of time, and possibly a climatic change separating the lower and upper horizons of the deposit. The numerous invertebrate fossils found in connection with the bison quarry were passed upon by Dr. F. C. Baker of the University of Illinois, and Dr. Junius Henderson of the University of Colorado. Dr. Baker considers the entire fauna undoubted Pleistocene, and that three of the species from the lower horizons are not represented in recent times. Both Dr. Baker and Dr. Henderson think that this fauna has not changed much since Late Pleistocene (Pre-Wisconsin) because most of the forms are living today.

The geology of the region was carefully studied by the members of the field party during the collecting seasons of 1931 and 1932. Mr. Eugene Vanderpool and C. Bertrand Schultz, made a plane table survey and prepared a topographic ma

Fig. 169.—Eight artifacts from the Scottsbluff Bison quarry, letter in the order found, and numbered on the day found, express numerically. Natural size.

a. Dart-point No. 1-4-8-32. The first artifact found in the Scot bluff quarry. Found on the 4th of August, 1932.
b. A rough flint knife No. 1-10-8-32.
c. Half of a dart-point No. 1-12-8-32.
d. A well-wrought dart point No. 1-30-8-32. This, and the rest the artifacts, were found far back and deep in the quarry.
e. Dart-point with tip broken off. No. 1-4-9-32.
f. A knife of pale fawn colored chalcedony. No. 2-4-9-32.
g. A rough flint knife or scraper. No. 1-5-9-32.
h. A "snub-nosed" scraper of flint. No. 1-8-9-32.


a
b
c
d
f
e
g
h

of the territory adjacent to the bison quarry. The information thus obtained is of value in determining the course of the ancient river in relation to the present drainage, as well as throwing additional light on the age of the deposit.

After opening the quarry, conditions made it necessary to suspend operations temporarily. In the latter part of July, Loren Eiseley was called to field work in Arizona, and on July 29th, the Director sent to the Scottsbluff camp a supplemental party consisting of Eugene Vanderpool, Frank Crabill, Bob Long, and Gordon Graham.

THE ARTIFACTS

Work was resumed in earnest, and on August 4th, the first artifact was found practically surrounded by bones. It was located well toward the bottom of the bone bed, and about ten inches above the floor of Brule Clay. It is of fine workmanship, and seems to be what is termed a Pre-Folsom dart-point. On learning of the discovery of this artifact, the quarry was visited on August 6th by the senior writer and Dr. Earl Bell, Professor of Anthropology in the University of Nebraska and also Science Service Minute Man for Nebraska. The dart-point was studied and photographed in situ.

During August and early September seven more artifacts were found among the bison bones. This made a total of eight, four of which were beautifully chipped dart-points, the others knives and scrapers. The eight are considered to be of a Pre-Folsom culture. All concerned think it impossible that these artifacts could have been buried intrusively.

Among the professional guests attracted to the quarry were: Dr. E. B. Renaud, Professor of Anthropology, Denver University; Director J. D. Figgins of the Colorado Museum of Natural History; Dr. W. D. Strong, Ethnologist, Smithsonian Institute; Mr. Eric Schlaikier, in charge of museum field party from Harvard University; Mr. Childs Frick, Honorary Curator of The American Museum of Natural History; Mr. Charles Falkenback, and Mr. John C. Blick, field men for the American Museum of Natural History; Dr. Nels A. Bengtson, Professor of Geography, and Dr. A. L. Lugn, Professor of Petrology , The University of Nebraska.

The University of Nebraska,
Lincoln, October, 1932.