NEW DISCOVERY OF AN ARCHAEOLOGICAL AND PALEONTOLOGICAL SITE IN WIND CAVE NATIONAL PARK, SOUTH DAKOTA

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For the first time, a stratified succession of sediments containing both archaeological and paleontological specimens has been discovered in the Black Hills. Mr. Richard W. Klukas, research biologist, brought the site along Beaver Creek in Custer County, South Dakota, to our attention, and, through the courtesy of the Park Service, excavations were permitted.

Initial surveys and partial excavations of the Beaver Creek site were undertaken during the summer of 1985 by the authors and Mr. Mark D. Fahrenbach, Museum of Geology. The locality is in a natural shelter formed by solution of the Mississippian Pahasapa Limestone. Sedimentation during the Holocene deposited the strata under study. Only three meters of section are exposed above the level of Beaver Creek, but the fossiliferous section appears to extend deeper and may contain Late Pleistocene material. Of the exposure, only 1.5 meters have been excavated (Figure 1). Most of the matrix is red siltstone and loosely consolidated sandstone with angular limestone fragments. In fact, part of the reason for preservation of the fossiliferous section is due to roof collapse of the shelter, with boulders of limestone forming a protective cap over most of the preserved section. In addition to the oxidized sediments, charcoal is scattered throughout the section and some is concentrated in discrete layers which may be radiometrically dated.

As illustrated on Figure 1, excavation has revealed eleven stratigraphic levels, all of which contain plant, mollusk, and vertebrate remains. Three samples from interbedded charcoal horizons were dated through the efforts of the Park Service (Martin, 1985, p. 113). The oldest date of 3870 ± 70 yr B.P. was obtained from unit 11, a date of 2220 ± 70 yr B.P. was derived from unit 7, and the most recent date of 1750 ± 60 yr B.P. was obtained from unit 4. At least one additional charcoal layer has been identified lower in the section.

Although excavations have just been initiated, rock flakes have been identified from all units except 1 and 3, and a quart-

Stratigraphic Section of Beaver Creek Locality
Wind Cave National Park, Custer County, South Dakota

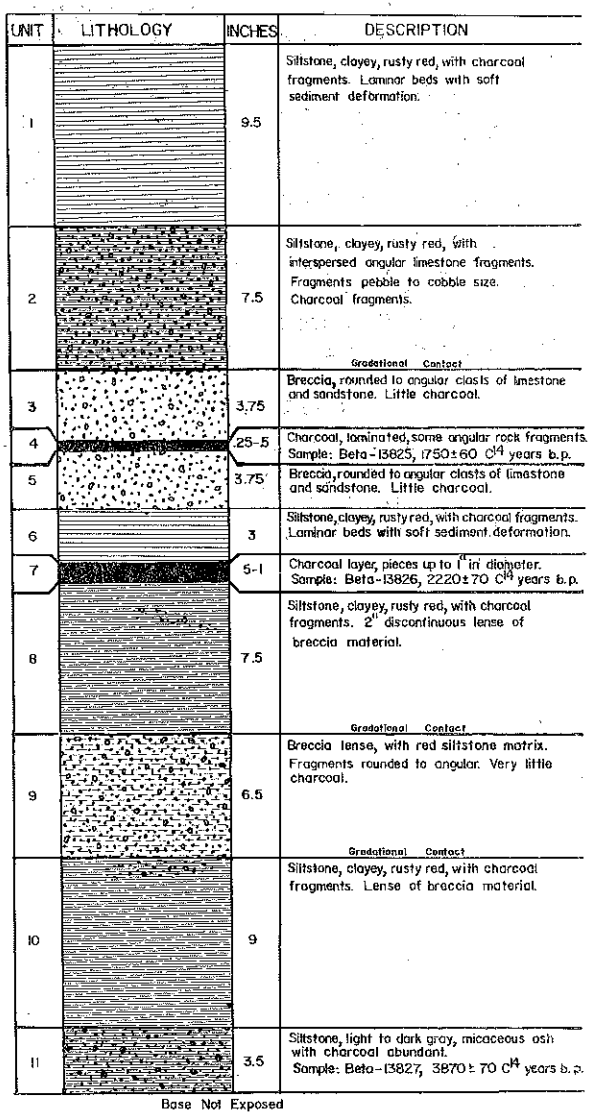

Figure 1.

zite knife was discovered at the base of unit 11. Thus far, no chronologically significant artifacts have been recovered.

Plant, gastropod, pelecypod, and vertebrate remains appear relatively common throughout the site. Presently, 695 kg of matrix have been removed and screened and washed from the upper eleven units. Fossil extraction and identification is now underway, so only a preliminary survey of the vertebrates is reported. The taxa include: Osteichthyes—Cyprinidae and Catostomidae; Amphibia—*Rana* and cf. *Bufo*; Reptilia—Serpentes; Aves; Mammalia—*Sorex, Myotis, Sylvilagus,* Sciuridae, Geomyidae, *Peromyscus, Neotoma,* cf. *Cleithrionomys, Microtus, Bison* and Cervidae.

More conclusive statements cannot be presented about the locality until it is more completely excavated and analyzed. The Beaver Creek locality appears to be the first stratified section of fossiliferous Holocene sediments in the Black Hills, and the section may extend deeper into Pleistocene deposits.

REFERENCE

Martin, J. E. 1985. Geological and paleontological road log from the Nebraska-South Dakota border to Rapid City, South Dakota. In **Fossiliferous Cenozoic Deposits of Western South Dakota and Northwestern Nebraska,** J. E. Martin (ed.) pp. 99-119. Mus. Geol., S.D. School of Mines, Dakoterra. 2(2):1-368.