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Dirk Van Vuren
University of California, Davis

Frank C. Deitz
U.S. Bureau of Land management, Elko, Nevada

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EVIDENCE OF *BISON BISON* IN THE GREAT BASIN

Dirk Van Vuren¹ and Frank C. Deitz²

Key words: *Bison bison*, *bison*, *Great Basin*, *biogeography*, *archaeology*.

The former occurrence of modern bison (*Bison bison*) in the Great Basin is poorly understood yet is of considerable importance in understanding the biogeography (Berger 1986:248) and archaeology (Butler 1978) of the area. Bison occurred at the northern edge of the Great Basin, around Malheur Lake (Bailey 1936, Van Vuren and Bray 1985) and at the eastern edge, near Great Salt Lake (Durrant 1952). Reports of bison skulls from the central part of the Great Basin, however, are lacking except for the partial skull of a male recovered in Lander County, Nevada, in 1955 (Hall 1961). This report is problematic because the locality is ca. 400 km distant from either Malheur Lake or Great Salt Lake (Fig. 1). Does this specimen represent a lone individual that wandered a great distance, or was it a member of a viable population of bison living in northern Nevada? The former existence of a population of bison in northern Nevada, particularly in the Humboldt River Valley, has long been suspected (Steward 1938:38, Hall 1946:644) but never substantiated. Herein we report the discovery of two more bison skulls from the Great Basin, both from near the Humboldt River in northeastern Nevada.

In 1990 the partial skull of a male bison, consisting of horn cores and the cranium posterior to the orbits, was found in an ephemeral wash 35 km NE of Wells, Elko County (41°21'40"N, 114°42'8"W). No other bones or cultural materials were found in association with the skull.

In 1992 Bureau of Land Management (BLM) wildlife biologists discovered the complete skull of a female bison embedded at a depth of 6 m in a cut bank of Susie Creek, a perennial stream 10 km NNE of Carlin, Elko County (40°48'28"N, 116°2'48"W). At the time

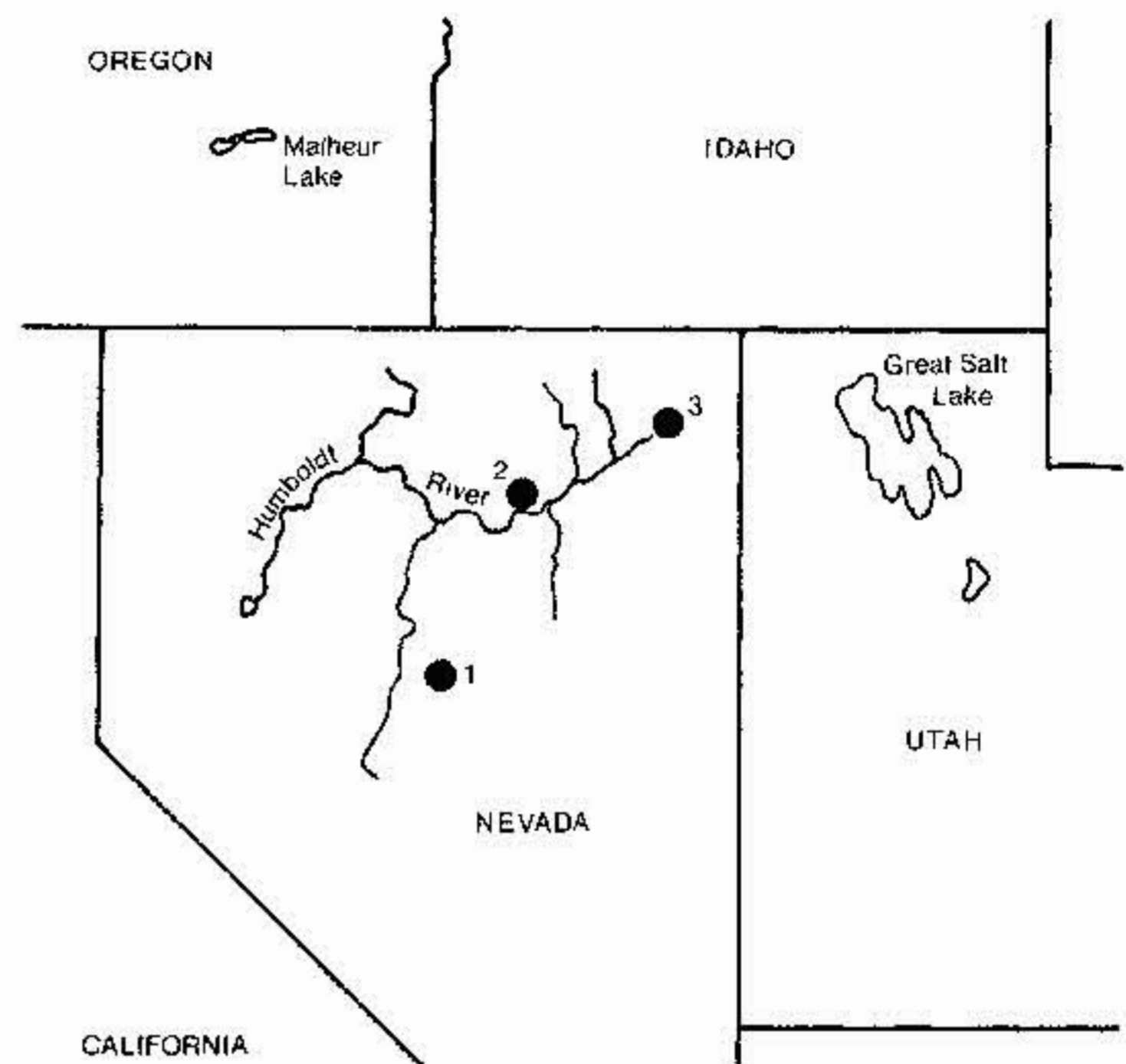


Fig. 1. Localities of bison skulls reported from Nevada: (1) a male (Hall 1961), (2) a female (this report), and (3) a male (this report).

of discovery, a fragment of the skull was dislodged; a chert (cryptocrystalline silicate) scraper fell simultaneously with the fragment, suggesting that the skull and scraper were associated.

The site (26EK5465) was investigated by BLM archaeologists, and the skull was excavated with no finding of additional bison remains. Other artifacts found within 15 cm of the skull were two chert flakes and a possible battered cobble. One of the flakes is of the same chert as the scraper, further supporting an archaeological association between skull and stone tools. The general area has numerous archaeological and faunal remains, both surface and subsurface, and few have received more than cursory attention. One charcoal sample situated 62 cm directly above the skull was submitted for radiocarbon dating using

¹Department of Wildlife and Fisheries Biology, University of California, Davis, California 95616.

²U.S. Bureau of Land Management, Box 831, Elko, Nevada 89803.

the accelerator mass spectrometry technique (Beta Analytic, Inc., Miami, Florida). Adjusted age was 950 ± 60 yr BP (Beta-555844/ETH-10033).

Standard measures (Skinner and Kaisen 1947:145) of each skull did not differ significantly ($P > .05$, modified t test, Sokal and Rohlf 1981:229–231) from measures of *Bison bison* given by McDonald (1981:96). Standard measures of the skulls are available, upon request, from the senior author. Both skulls are currently curated at the U.S. Bureau of Land Management, Elko District Office, Elko, Nevada. The Susie Creek specimen will be permanently housed at the Nevada State Museum, Carson City.

All three specimens of bison reported from Nevada were recovered in or near the basin drained by the Humboldt River (Fig. 1), an area that currently supports thousands of cattle and probably provided suitable habitat for bison. Although male bison may spend much of the year alone (McHugh 1958) and sometimes wander substantial distances from other bison (McHugh 1958, Meagher 1989), females are highly gregarious (McHugh 1958). Thus, the occurrence of a female in addition to two males suggests that a breeding population of bison may have inhabited the Humboldt River drainage of northeastern Nevada.

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Roy Price and Carol Evans discovered the Susie Creek skull, Bryan Hockett and Tim Murphy supported and assisted in the investigation and excavation, and Robert Bettinger gave sound advice.

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