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TRUMPETER SWAN (*CYGNUS BUCCINATOR*) FROM THE PLEISTOCENE OF UTAH

Alan Feduccia¹ and Charles G. Oviatt²

ABSTRACT.—A Trumpeter Swan (*Cygnus buccinator*) is reported from Pleistocene deposits in Utah.

Among fossil bones recovered from a deposit of Pleistocene age in Utah are numerous elements of the Trumpeter Swan (*Cygnus buccinator*)³. These fossils were collected by Oviatt from pre-Lake Bonneville marginal lacustrine deposits in an exposure along the West Side Canal in the NW 1/4, Sec 4, T12N, R2W, Cutler Dam, Utah, 7.5 minute quadrangle. The exposure is approximately 140 ft above the Bear River at an altitude of about 4,400 ft. The bones were excavated from a silty clay unit that contained many gastropods, including the genera *Helisoma*, *Lymnaea*, and *Valvata*.

Amino acid ratios on gastropods from this locality (W. D. McCoy, personal communication, 1984) and available radiocarbon dates indicate that the marginal lacustrine deposits are approximately 40,000 to 65,000 years old and are part of a sequence of pre-Lake Bonneville lacustrine beds well exposed in this area (Oviatt et al., 1985: 260). A soil profile at the top of the marginal lacustrine deposits is overlain by lacustrine deposits of the Bonneville Alloformation. The marginal lacustrine deposits were deposited near the shore of a lake that rose to a maximum altitude of slightly less than 4,400 feet. The presence of a lake of this size in the Bonneville basin indicates that the climate was relatively cool or moist at the time the Trumpeter Swan bones were deposited.

The elements recovered include parts of two humeri, a coracoid, radius, ulna, scapula, and pieces of vertebrae, all of which are assignable to *C. buccinator* on the basis of larger size and more robust nature when com-

pared to similar elements of modern *Cygnus columbianus*, the Tundra Swan.

The Trumpeter Swan, the largest living swan, lives on ponds, lakes, and marshes during the breeding season, when it occurs in Alaska, and in parts of western Canada and the United States, south from Saskatchewan to southeastern Oregon, eastern Idaho, and northwestern Wyoming. It bred formerly south to Nebraska, Iowa, Missouri, and Indiana. During the winter months this swan occurs over parts of Alaska and western Canada, south to California, and occasionally to Utah, New Mexico, and Colorado (American Ornithologists' Union, 1983: 63-64). It formerly wintered south to the Mexican border, the Gulf Coast of Texas and Louisiana, and the Mississippi Valley and on the Atlantic Coast from New Jersey and Pennsylvania to North Carolina (Banko 1960: 26). It is known from Pleistocene deposits from Oregon, Illinois, and Florida and from prehistoric sites from Alaska, Iowa, Illinois, and Ohio (Brodkorb 1964: 233). Thus, this is the first Pleistocene record of the Trumpeter Swan from Utah and could well be an additional indication of the more expansive range occupied by this species in the past, because it presently only occasionally visits Utah during the winter months.

Trumpeter Swans feed primarily in shallow water, plunging the head and neck below the surface in their quest for aquatic plants growing on the bottom. This type of habitat conforms to the picture of the deposits from which these bones were recovered.

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³The swan bones are housed with the vertebrate paleontology collections at the Antiquities Section, Utah Division of State History, 300 Rio Grande, Salt Lake City, Utah 84101. Catalogue number UVPO99, collection locality number 42B6049v.

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