

Conchas Lake--New Mexico State Park Series

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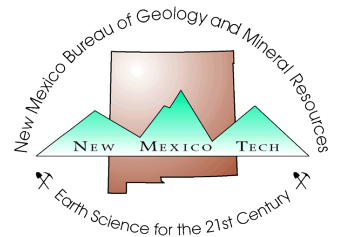
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Introduction

Conchas Lake State Park was established in 1955 and named after the Conchas River, one of the tributaries of the Canadian River. It is 24 mi north of Newkirk and 31 mi northwest of Tucumcari on NM-104 and NM-129 (Fig. 1). Conchas is Spanish for shells and was applied to a group of Indians living in the area when Spanish explorers arrived in the 17th century. The word conchas may be a corrupted name that is confused with the Spanish word conchos, a term also used to describe the Native American tribes in northern New Mexico (Julyan, 1996).

The dam that formed Conchas Lake was the 17th dam in the country built by the U.S. Army Corp of Engineers (Fig. 2; Young, 1984). One of the state's oldest dams, it was completed in 1939 to control floods, store water for irrigation and local supplies, and assist in local economic recovery from the Depression (Welsh, 1985). More than 3,000 people were employed to build this concrete and earthen dam that is 235 ft high and 1,250 ft long. The lake has a reservoir capacity of 528,951 acre-ft of water and sediment. It extends 14 mi upstream of the Canadian River and 11 mi upstream of the Conchas River. The total cost of land purchases, construction, and maintenance amounted to nearly \$15.8 million (Welsh, 1985; Young, 1984). Water from the lake is used to irrigate 41,400 acres of farmland in the Tucumcari Irrigation Project and travels through 300 mi of canals and laterals (Fig. 3).

Accommodations and facilities

Conchas Lake State Park ranges in elevation from 4,150 to 4,250 ft above sea level and occupies 1,160 acres of land and 9,000 acres of water (surface). Only three sites are administered by the State Parks Department (North, Central, and South; Fig. 4). A visitor's center (open on weekdays) and day-use site are administered by the U.S. Army Corp of Engineers. Most of the land surrounding Conchas Lake is private, but all the water is open to the public. Sandy beaches are separated by rocky beaches and offer a diversity appreciated by both swimmers and fisherman. Coves abound and offer solitude even during busy holiday weekends.

Piñon pine, juniper, mesquite, and yucca cover the hillslopes and mesas surrounding the lake, and various wild flowers and cacti, including cholla and prickly pear, are common. Falcons, mountain bluebirds, quail, dove, ducks, and geese are plentiful (Table 1). A few bald eagles and Peregrine falcons inhabit the area as well. Antelope and deer roam the countryside.

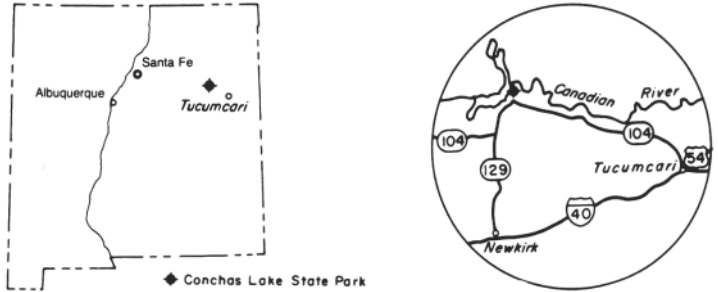


FIGURE 1—Location of Conchas Lake State Park.

Recreational activities include hiking, picnicking, camping, swimming, fishing, boating, sailing (Fig. 5), scuba diving, and water skiing. Camp and picnic sites are along the lake as well as on hills and mesas. Launching ramps for boats and a marina are available (Fig. 2). The State Park Office is located at the North Recreation Area. The lake is stocked by the State Game and Fish with walleye pike, small- and large-mouth bass, catfish, crappie, bluegill, and northern pike. A playground, golf course, lodge, seaplane landing area, paved airport, full restroom facilities with showers, and water and electrical hookups are available. Scuba diving is popular. The Boy Scouts of America operate an aquatics camp along the lake to train the scouts in water activities. Cannon Air Force Base also has a small recreation area for military personnel.

History

Arrowheads, stone tools, and pottery shards remind us that prehistoric man probably inhabited the area long ago. Arrowheads found in bison now extinct indicate that Folsom man, named for the town in Union County, lived north of Conchas Lake about 8,000-10,000 yrs ago. Petroglyphs found in sandstones along some of the bays and inlets of Conchas Lake also testify to the presence of early inhabitants, most of whom were primarily hunters and gatherers. One petroglyph has been moved to a building near the Army Corps of Engineers administration building north of the spillway.

The first Spaniard in the area was probably Don Antonio de Valverde who traveled along the Canadian River to Kansas in 1719 (Scott, 1986). Later, Spanish explorers settled in the area that was



FIGURE 2—Conchas Dam, looking northeast.



FIGURE 3—Headworks of the irrigation system.

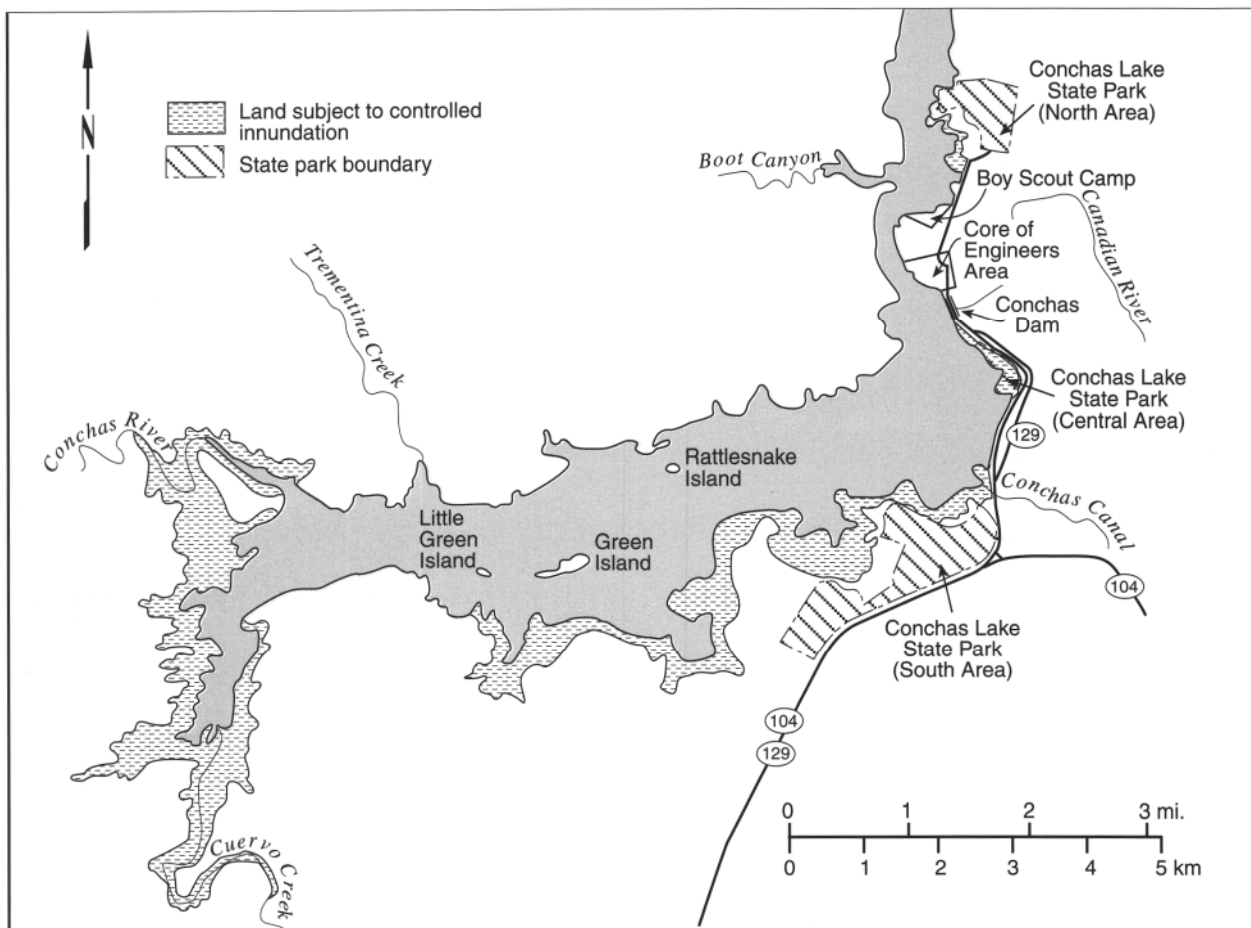


FIGURE 4—Map of Conchas Lake State Park.

once part of the Pablo Montoya or Baca land grant. In 1867 John Watts acquired title to the Baca land grant and transferred it to Wilson Waddington in 1872. Waddington conveyed use of the land to the Consolidated Land, Cattle, and Wool Growing Co. This was the beginning of the Bell Ranch.

Geology

Conchas Lake State Park is in the Pecos Valley section of the great Plains physiographic province. It lies on the north edge of the Llano Estacado or "staked plains" of the Great Plains

physiographic province. This feature extends from the Pecos River on the west to Palo Duro Canyon in Texas on the east and southward to Hobbs, New Mexico, covering an area of about 32,000 mi² (Reeves, 1972). The origin and meaning of Llano Estacado is controversial. Some claim that the name refers to natural stockades created along the rough rim of this plateau, which rises 150 ft above the adjacent plains and river valleys. Estacada is Spanish for palisade or fence, and canyons along the rim became famous as pasture for cattle and

TABLE 1—Common waterfowl at Conchas Lake State Park. How many can you find?

Common name	Season	Sighted where?
Canada goose	winter	
White-fronted goose	winter	
Mallard	all year	
Gadwall	all year	
Pintail	winter	
Green-winged teal	winter	
Blue-winged teal	all year	
Cinnamon teal	summer	
American widgeon	winter	
Shoveller	summer	
Redhead	summer	
Ring-necked duck	winter	
Canvasback	winter	
Lesser scaup	winter	
Common golden-eye	winter	
Bufflehead	winter	
Ruddy duck	summer	
Hooded merganser	winter	
Common merganser	winter	
American coot	all year	



FIGURE 5—Breezes at Conchas Lake make camping and sailing favorite activities.

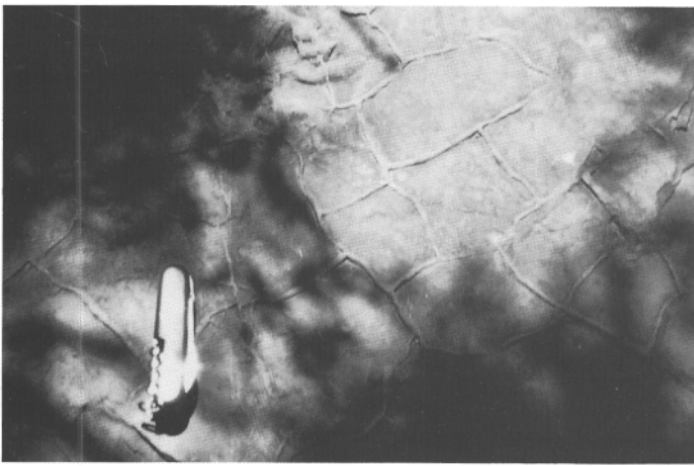


FIGURE 6—Mudcracks in Chinle sandstone indicate exposure to the air.

horses. Other explanations for the term range from the tall native yuccas resembling stakes at a distance to tales of Indians and later wagon trains from the east marking their routes across this vast, featureless plateau with stakes (Julyan, 1996).

Most of the rocks surrounding the lake, including those that form the bedrock of the dam, belong to the Upper Triassic Chinle Group. The Chinle Group consists of alternating layers of red-brown to maroon to gray mudstone, siltstone, and sandstone that were deposited in continental fluvial and lacustrine environments about 220 million years ago. The Chinle Group is divided into five formations in this area: Santa Rosa, Garita Creek, Trujillo, Bull Canyon, and Redonda Formations (Lucas, 1995). The medium- to light-gray, massive to cross-bedded sandstone exposed at the dam was called the Logan Sandstone by earlier geologists; but the unit was never formerly described or named, and more recent investigations indicate that it belongs to the Trujillo Formation that extends into west Texas (Lucas et al., 1985; Lucas, 1995; Bureau of Economic Geology, 1977; Finch and Wright, 1983). The crossbeds in the sandstone are consistent with fluvial deposition. Mudcracks indicate that sometimes the sandstones were exposed to drying (Fig. 6). The red color is produced by the oxidation of iron in the minerals forming the sandstone; this oxidation is common to seasonally arid environments such as existed at the time the Chinle was deposited. Sections of the core drilled and recovered during construction of the dam are on display near the Army Corps of Engineers administration building, north of the spillway.

Channel deposits of gravel and sand derived from the glaciated terrains in the Sangre de Cristo Mountains during the Pleistocene are found along the Canadian River above and below the dam (Spiegel, 1972a, b, c).

The Canadian River formed during the Pleistocene after the Wisconsin glaciation. The headwaters are in the Rocky Mountains in Las Animas County, Colorado, northwest of Raton, New Mexico. The river flows southeastward from the headwaters to Raton, where it flows south to Conchas Lake State Park. At Conchas Lake the river flows due east to Ute Lake State Park and eastward into west Texas and Oklahoma. For most of the river's course in New Mexico, it is a sinuous, meander belt that rarely exceeds 750 ft in

width (Kessler, 1972). Floods since 1938 have eroded and degraded the river rather than deposited new stream deposits (Kessler, 1972).

Summary

Conchas Lake State Park is one of several lakes in New Mexico that offers hiking, picnicking, camping, swimming, fishing, boating, sailing, scuba diving, and water skiing. Only three sites are administered by the State Parks Department (North, Central, and South); most of the land surrounding Conchas Lake is private, but the water is open to the public. The park was established in 1955 and named after the Conchas River, one of the tributaries of the Canadian River. The dam was the 17th in the country built by the U. S. Army Corp of Engineers and impounds Conchas Lake, which extends 14 mi upstream of the Canadian River and 11 mi upstream of the Conchas River.

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