

## Clayton Lake--New Mexico State Park series

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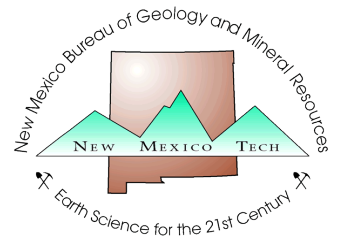
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Clayton Lake State Park, 12 mi northwest of Clayton, is reached via NM-370 from US-64 and US-87 on the west side of Clayton.

Just north of Clayton, the road descends Rabbit Ear Creek valley. Crossing a low divide between Rabbit Ear and Bible Top peaks, the route continues over a series of lava flows to the park on the south side of Clayton Lake.

### Clayton Lake dam and reservoir

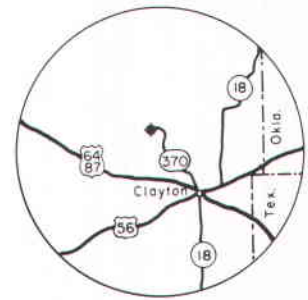
Clayton dam was completed in 1955 by the State Game and Fish Department as a recreation lake. The dam impounds the water of Cieneguilla (also known as Seneca) Creek. The maximum height of the dam above the stream bed is 92 ft, width of the crest is 20 ft, and length of the ungated spillway is 150 ft. The dam is an earth-fill structure containing approximately 400,000 yds<sup>3</sup> of earth, with a blanket of basalt riprap on the upstream face. Outlet works consist of a reinforced concrete tower and outlet conduit controlled by a 2-ft<sup>2</sup> steel gate. At capacity, the lake covers 170 acres; capacity of the reservoir is over a billion gallons. Cieneguilla Creek runs only after substantial rainfalls. Water occurs at a shallow depth beneath the stream bed, emerging locally as small seeps that flow along the surface for short distances.

### Facilities

Established in 1966, the 400-acre park includes 35 small shelters complete with tables and fireplaces and one large group shelter. Additional tables with fireplaces are distributed along the shore. Numerous toilets are conveniently located; one large comfort station, with showers and hot water, is located near the park entrance. Drinking water is available from four outlets.

Recreational facilities include camping, limited boating, picnicking, fishing, and an equipped playground area. An elevation slightly over 5,000 ft and the pleasant surroundings of rock formations, water, and trees make for excellent overnight camping. Boating is limited to trolling speeds and allowed only during the legal fishing season. A boat launching ramp and small dock are located at an inlet along the southeast shore.

Rainbow trout, with an average size of approximately 9 inches, are stocked throughout the fishing season by the State Game and



Fish Department. In addition, fingerlings from 3 to 4 inches in length are placed in the lake and soon grow to legal size. Walleye pike, crappie, bluegills, bullhead and channel catfish, and largemouth bass have been introduced.

The lake also serves as a refuge for waterfowl—the reason boating is prohibited after fishing season. The surrounding mesas and plains abound in mule deer and pronghorn antelope.

### Geologic and physiographic setting

The area around Clayton Lake is part of the Great Plains province, one of the main physiographic divisions of the United States. To the west is the Rocky Mountain province, to the east the Central Lowlands province. The Great Plains extend south through Canada to the Mexican border east of Big Bend. Most people visualize the Great Plains as the "wide open spaces" of the west—flat, monotonous, and treeless. In truth, the area has a great variety of landforms, enough to subdivide it into ten sections. The Clayton area is part of a remnant of a once continuous higher land surface known as the High Plains section. This upper surface is capped mostly by sands and gravels deposited across the area by east-flowing streams that headed in the Rocky Mountains. This cycle of deposition occurred during the later part of Tertiary time, 5 to 10 m. y. ago. The gravels and sands filled in the older river channels, leaving behind a fairly smooth surface that sloped gently to the east and south toward the Central Lowlands. During more recent times the area has been highly dissected leaving behind only remnants of this once great alluvial plain. A large intact part of this high plain is the Llano Estacado, or Staked Plains, astride the Texas-New Mexico border south of Tucumcari. The Llano Estacado is detached from the Clayton area by the Canadian River and its tributaries. The Clayton area of the High Plains section differs in being capped by fairly extensive lava flows, volcanic craters, and remnants of craters. Furthermore, the tributaries of the Canadian and Cimarron Rivers have

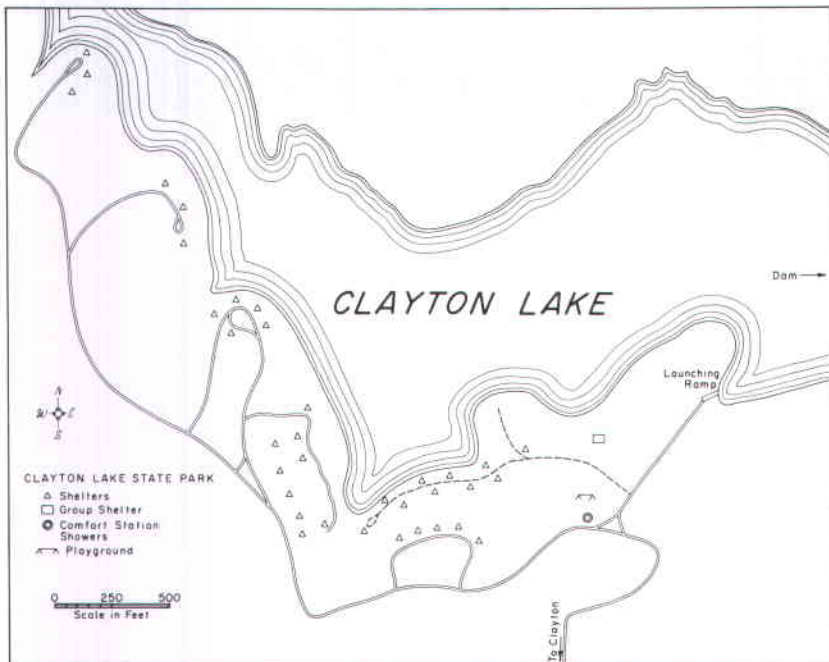
carved a more dissected topography than considered typical of the High Plains.

The lava flows that underlie the area between Clayton and Clayton Lake issued from a series of vents with a striking east-west alignment. The most prominent of these vents is Rabbit Ear Mountain. The elevation of the highest point on the peak is 6,062 ft. Just west of the peak along NM-370 the altitude is from 5,432 to 5,448 ft. Thus, the present peak is approximately 600 ft above the surrounding lava plain. Originally the volcano was considerably higher, but erosion has removed all but the outer slope on the southwest flank of the vent.

The black lava flows from the craters in this area consist of a rock called basalt because of its mineralogical composition. On close examination the rock is seen to be very fine grained with many small cavities called vesicles, the voids left behind by gas bubbles that formed when the lava was still fluid. Similar basalt flows are very common in New Mexico and are quite well known elsewhere in the United States, particularly in the Columbia Plateau and in the Hawaiian Islands. The age of the flows in this area is not accurately known. They occurred after the late Tertiary deposition of gravels and sands derived from the Rocky Mountains. A reasonable estimate would seem to be 1–2 m. y. ago. Geologists are now working on a more specific date by measuring the amount of radioactive decay of certain isotopes within the rocks.

Just after entering Clayton Lake State Park, the road descends abruptly past the cliff of basalt, affording an excellent view of the low bluffs surrounding the lake. These brown to yellow bluffs consist of a sandstone deposited during the Cretaceous about 90 m. y. ago. Closer examination of these sediments, particularly on the southwest side of the lake, also reveals some shales. This sequence was deposited along the shore of a vast marine sea that covered most of the Western Interior of the United States. The sediments were laid down by streams flowing into the tidal flats and lagoons bordering the sea, and, in part, reworked into offshore bars and dunes. The





only fossils known are some possible worm borings. As the sea deepened, shales and limestones were laid down over these basal sandstones. Although younger Cretaceous sediments were removed by erosion in the Clayton Lake area, elsewhere in northeast New Mexico these formations contain abundant remains of cephalopods, clams, oysters, and sharks.

### History

Clayton was named after a son of Senator Stephen Dorsey of Arkansas who served one term in the 1870's. Senator Dorsey was involved in establishing a trading post and making Clayton a division point on the Colorado and Southern, a subsidiary of the Denver and Fort Worth Railroad. The town was founded in 1887 on the site of a campground for cattle drovers. Large herds were moved through this area in the 1880's from Texas to northeast New Mexico and adjacent parts of Colorado.

In addition to bringing in settlers, the railroad attracted train robbers including the infamous Black Jack Ketchum. Near the turn of the century Black Jack was wounded in a single-handed holdup of a train at Folsom. He was tried and hanged at Clayton in 1901.

Clayton, the county seat of Union County, has a population of approximately 3,000; altitude is 5,050 ft. It serves as a cattle-shipping and supply point for a large part of northeast New Mexico and parts of Texas and Oklahoma. Recently the development of ground water has encouraged some irrigated farming.

Outstanding attractions within easy driving distance of Clayton include Capulin Mountain National Monument, Folsom Man State Monument, Cimarron Cutoff of the Santa Fe Trail, Sierra Grande (a symmetrical volcanic cone rising 4,000 ft above the surrounding plain), and the Dry Cimarron Canyon north of Clayton.

—Roy Foster, 1973 □

## New Mexico Paleontological Society organized

D. L. Wolberg (New Mexico Bureau of Mines and Mineral Resources) and S. G. Lucas (University of New Mexico) have decided to form an organization of paleontologists interested in and/or conducting research on the paleontology of New Mexico. This organization, which we propose to name the New Mexico Paleontological Society (NMPS), will include all paleontological specialties. The aim of the NMPS is to promote and facilitate the study of paleontology of New Mexico. We propose to do this by: 1) compiling a comprehensive listing of paleontologists interested in and/or actively working on the paleontology of New Mexico, 2) making this list available to all those on the list as well as to other interested parties in government and private industry, and 3) encouraging greater cooperation among paleontologists working in New Mexico and between paleontologists and other interested parties. If you work on any aspect of paleontology of New Mexico, we urge you to contact us. Membership in the NMPS (which will cost nothing!) will entitle you to the following: 1) a complete compilation of the information obtained from questionnaires that we will be mailing out shortly; 2) a bi-annual newsletter that will report on ongoing projects, recent legislative developments, and recent publications concerned with New Mexico paleontology; 3) participation in a possible annual meeting, field trip, and publication; 4) the benefits we all derive from enhanced cooperation and communication between paleontologists working in New Mexico.

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### Geographic names (continued from page 80)

**Sacramento Mountains**—mountains, 142 km (88 mi) long, extend south-southeast from the Sierra Blanca Mountains east of Alamogordo; bound on the north by Tularosa Canyon, North Fork Tularosa Canyon, Cherokee Bill Canyon, and the Rio Ruidoso, on the east by the Pecos River valley and the Guadalupe Mountains, on the south by Crow Flats and Boardwell Canyon, and on the west by Tularosa Valley; Otero, Chaves, and Lincoln Counties, New Mexico; 33°24' N., 105°24' W. (north end), 32°10' N., 105°12' W. (south end); 1907 description revised.

**Sierra Blanca**—mountains, 80 km (50 mi) long, highest elevation 3,659 m (12,003 ft) at Sierra Blanca Peak, north of the Sacramento Mountains, 16 km (10 mi) southeast of Carrizozo; bound on the north by the Rio Bonito, Salado Creek, and Nogal Arroyo, on the west by the Tularosa Valley, and on the south by Tularosa Canyon, North Fork Tularosa Canyon, Cherokee Bill Canyon, and the Rio Ruidoso; Lincoln and Otero Counties, New Mexico; 33°23' N., 105°17' W. (east end), 33°11' N., 106°01' W. (west end); 1907 decision revised; *not*: Sacramento Mountains (BGN 1907).

**Temporal Creek**—stream, 22.5 km (14 mi) long, heads in the Sacramento Mountains at the junction of Rinconada Creek and an unnamed stream which flows through Dry Canyon at 33°12'36" N., 105°54'24" W., flows west-southwest to disappear in Tularosa Valley 12.9 km (8 mi) northwest of Tularosa; Otero County, New Mexico; sec. 30, T. 13 S., R. 9 E., NMPM; 33°08'57" N., 106°06'45" W.; *not*: Rinconada Creek.

**Tularosa Creek**—stream, 48 km (30 mi) long, heads in the Sacramento Mountains at Head Springs at 33°07'06" N., 105°43'32" W., flows west through Tularosa and South Fork Tularosa Canyons to Brazel Lake in the Tularosa Valley 14.5 km (9 mi) west of Tularosa; Otero County, New Mexico; sec. 22, T. 14 S., R. 8 E., NMPM; 33°05'10" N., 106°10'20" W.; *not*: Rio Tularosa, Tularosa River, Tule Creek.

**Wallace Hill**—hill, elevation 2,420 m (7,940 ft), 0.97 km (0.6 mi) northwest of the junction of Main Canyon and White House Canyon and 3.5 km (2.2 mi) northwest of Datil, Catron County, New Mexico; sec. 34, T. 1 S., R. 10 W., NMPM; 34°10'52" N., 107°52'12" W.; *not*: Dead Horse Mesa, Wallace Mesa.

**Webster Place**—locality, in Ox Spring Canyon 6.3 km (3.9 mi) north-northeast of Madre Mountain, 1.1 km (0.7 mi) east-southeast of Webster tank and 24.1 km (15 mi) north of Datil; Catron County, New Mexico; sec. 34, T. 2 N., R. 10 W., NMPM; 34°21'42" N., 107°52'44" W.; *not*: Webster cabin.

**West Pass**—pass, elevation 2,463 m (8,080 ft), 3.2 km (2 mi) long, between the Sawtooth Mountains and the Crosby Mountains 17.2 km (10.7 mi) northwest of Datil; Catron County, New Mexico; secs. 2 and 3, T. 1 S., R. 11 W., NMPM; 34°15'30" N., 107°57'30" W.

**White House Canyon**—canyon, 17.6 km (10.9 mi) long, heads at West Pass at 34°15'11" N., 107°56'49" W., trends south-southeast to open out 1.6 km (1 mi) east of Datil; named for Henry Davenport's "white house" whose log cabin was a landmark in the canyon; Catron County, New Mexico; sec. 12, T. 2 S., R. 10 W., NMPM; 34°08'40" N., 107°49'50" W.; *not*: White House Cañon.

—David W. Love  
NMBMMR Correspondent