

MOUNTAIN BLUEBIRD NESTING IN AN ARROYO BANK IN NORTHERN NEW MEXICO

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The breeding range of the Mountain Bluebird (*Sialia currucoides*) extends from central Alaska along the eastern slopes of the coast ranges to northwestern California, the San Bernardino Mountains of southern California, and the Davis Mountains of western Texas (Power and Lombardo 1996). Breeding Mountain Bluebirds typically occupy open woodland or edge habitat with exposed perches and fairly sparse ground cover (Pinkowski 1979). They are attracted to burned areas, particularly those with dead trees and/or snags (McClelland et al. 1979, Hutto et al. 1992).

In northern Arizona, Mountain Bluebirds occupy clearcut stands of ponderosa pine (*Pinus ponderosa*) but not stands less heavily cut (Szaro and Balda 1986). A secondary cavity nester, the Mountain Bluebird typically uses cavities in trees and now often nest boxes. Hutto et al. (1992) emphasized the importance of snags for cavity nesters. The female selects the cavity, and both members of the pair build a loose cup nest with stems, grass, and twigs, lined with softer materials. Both parents feed the young, which fledge within two to three weeks of hatching (Power and Lombardo 1996).

If Mountain Bluebirds cannot locate a traditional tree cavity, they may nest in holes in cliffs or dirt banks or in old swallow nests (Bent 1949). Rowley (1939) found a Mountain Bluebird nest in a niche on the side of a cliff well above timberline in Mono County, California. Similarly, Haecker (1948) found a Mountain Bluebird nest under construction in a building on the summit of Pike's Peak, Colorado, above 14,000 feet elevation. Other sites of nontraditional Mountain Bluebird nests include old nests of other birds. For instance, Calder (1970) found a Mountain Bluebird nesting in a previously used American Dipper (*Cinclus mexicanus*) nest on the underside of a bridge.

We found no documented reports of the Western (*Sialia mexicana*) or Eastern (*S. sialis*) bluebirds nesting in cliffs or banks. Like the Mountain Bluebird, however, the Western has been reported using old mud nests of the Cliff Swallow (*Petrochelidon pyrrhonota*; Sims 1983). For all three species of bluebirds, it is commonly cited that they use cliff crevices (Oberholser 1974, Sims 1983); however, there is little documentation of these nests in the literature.

On 19 May 2007 we found a Mountain Bluebird nesting in a hole in the bank of an arroyo (Figure 1) in Nambé, New Mexico (35° 55' 00" N, 105° 59' 20" W, elevation 1867 m). The surrounding habitat included One-seed Juniper (*Juniperus monosperma*), Silver Sagebrush (*Artemisia cana*), and sparse Narrowleaf Cottonwood (*Populus angustifolia*). The soils were primarily Carjo soils (Nyhan et al. 1978). The embankment containing the nest edged an arroyo seasonally flooded two to three times per year. The bank was approximately 6 m high with the hole containing the nest 1.2 m from the top of the bank. There were no observable trails to this entrance; the only access appeared to be by flight. However, the hole was likely made by Rock Squirrels (*Spermophilus variegatus*) burrowing into the top of the bluff from above and excavating to the edge, either as ventilation or for escape.

The tunnel led to a junction with a side channel that curved to the right. It was within this side channel, approximately 51 cm into the bank, that the nest was built. The nest was composed primarily of grass, and when it was discovered it contained five one-day-old nestlings. We banded the nestlings with U.S. Fish and Wildlife Service bands at age 14 days, and all five fledged by day 20. The adults did not lay a second clutch at this site. Two pairs of the Western Bluebird nested in nest boxes within 137 m of the Mountain Bluebird nest and fledged two sets of nestlings each.

NOTES

Our observation represents one of the most recent records for bank nesting by bluebirds. The banks of this arroyo contained hundreds of similar holes, many occupied by the Rock Squirrel, Desert Cottontail (*Sylvilagus audubonii*), Spotted Ground Squirrel (*Spermophilus spilosoma*), Bullsnake (*Pituophis melanoleucus*), Western Rattlesnake (*Crotalus viridis*), and Coachwhip (*Masticophis flagellum*). We also found Rock Wrens (*Salpinctes obsoletus*) nesting in bank holes in the area.

Most studies of diversity of birds of cliffs, higher and more defined structures than arroyo banks, have found greater diversity at the base of the cliff where shrubs are taller (Reitan 1986, Ward and Anderson 1988, Camp and Knight 1998). Both the Western and Mountain bluebirds use cliffs for foraging but not for nesting (William et al. 2000). The suitability of cliff or bank faces as habitat for bluebird nesting depends on both scale and soil. However, for birds selecting shorter, less stable arroyo banks, the likely explanation for their use is the limited availability of other suitable nest sites in the area. Although suitable traditional sites for bluebird nests, such as previously excavated cavities in cottonwoods, exist in the Nambé area, they are few compared to the abundance of holes in arroyo banks.

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NOTES



Figure 1. Male Mountain Bluebird with food item for nestlings at nest-hole entrance.

Photo by L.K. Marsh

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