

MOUNTAIN CHICKADEES NEST IN DESERT RIPARIAN FOREST

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The breeding habitat of the Mountain Chickadee (*Parus gambeli*) throughout its range is coniferous forest at middle to high elevations (Grinnell and Miller 1944, Bent 1946, Behle 1956, Dixon 1961, Laudenslayer and Balda 1976, Garrett and Dunn 1981, Unitt 1984). This species is most typically associated with coniferous forests but can also occur in mixed stands of conifers and hardwoods, including Black Oak (*Quercus kelloggii*), Quaking Aspen (*Populus tremuloides*), and cottonwoods (*Populus* spp.) (Linsdale 1938, Grinnell and Miller 1944). At their lower elevational limit and in the mountain ranges of the Great Basin and eastern Mojave Desert, Mountain Chickadees nest in pinyon–juniper woodland (van Rossem 1936, Linsdale 1938, Johnson 1965, Cardiff and Remsen 1981, Garrett and Dunn 1981). Pinyon Pine (*Pinus monophylla*, *P. edulis*), Utah Juniper (*Juniperus osteosperma*), and White Fir (*Abies concolor*) are the dominant conifers of these ranges.

During the spring of 1987, while conducting field work for the San Bernardino County breeding–willow bird atlas project, I confirmed nesting by Mountain Chickadees in cottonwood–willow riparian forest along the Mojave River, in Victorville, California. Victorville is located at 820 m elevation in the southwestern Mojave Desert, about 25 km north of the San Bernardino Mountains. Breeding was confirmed on 5 June, when an adult was observed feeding two fledglings. The first evidence of nesting at Victorville was during spring of 1984, when an adult was observed carrying food into a cavity in a White Alder (*Alnus rhombifolia*) (McCaskie 1984, S. Cardiff and D. Dittman pers. comm.).

Censuses in subsequent years (1988–1991) have suggested that at least five pairs nest each year along the river in the Victorville area. Four active nest cavities have been observed, two in Fremont Cottonwood (*Populus fremontii*) and two in White Alder.

The area is within a broad floodplain (about 1400 m wide), and contains large tracts of deciduous forest interspersed with open deciduous woodland and meadows. Mountain Chickadees are nesting within closed-canopy forest dominated by Fremont Cottonwood and Red Willow (*Salix laevigata*). Subdominants of the overstory include White Alder and Arizona Ash (*Fraxinus velutina*). Canopy height, as measured by clinometer, averages about 25 m. Along edges and where there are breaks in the canopy, there is a fairly well developed shrub understory consisting primarily of Narrowleaf Willow (*S. exigua*) and California Rose (*Rosa californica*). Herbaceous understory, mainly smartweeds (*Polygonum* spp.), alkali ryegrass (*Elymus triticoides*), and introduced brome grasses (*Bromus* spp.), are becoming quite dense in the moister portions of the forest. Occasional patches of standing water support cattail (*Typha latifolia*) and bulrush (*Scirpus acutus*, *S. olneyi*) marsh.

Historically, the region surrounding the Mojave River as it passed through Victorville was sparse Creosote Bush (*Larrea divaricata*) scrub, saltbush (*Atriplex* spp.) scrub, and Joshua Tree (*Yucca brevifolia*) woodland. In recent decades much of this desert habitat has been replaced by urban and suburban development. Although plantings in these developments commonly include stands of pines and other conifers, I have never found Mountain Chickadees associated with even the most extensive of these stands.

The nearest previously known Mountain Chickadee nesting location is between Silverwood Lake and the community of Crestline, in the San Bernardino Mountains nearly 30 km south of Victorville. This area is about 1240 m in elevation, and is located at the edge of extensive mixed coniferous forest.

NOTES

In reviewing the literature, the only instance I could find of Mountain Chickadees nesting in deciduous woodland or forest was Linsdale's (1938) report of them nesting in cottonwoods in the Toiyabe Mountains of central Nevada. In this case, however, the nesting occurred along streams bisecting coniferous habitats above 1980 m elevation.

Other montane nesting species have occasionally been noted nesting in the coastal lowlands of southern California. For example, Red-breasted Nuthatches (*Sitta canadensis*) have nested on Point Loma, San Diego County (Unitt 1984), and at Malibu, Los Angeles County, (K. Garrett pers. comm.), and Dark-eyed Juncos (*Junco hyemalis*) have nested at La Jolla, San Diego County (McCaskie 1986).

I thank Robert McKernan for encouraging me to prepare this note and for providing many helpful suggestions. Steven Cardiff and Donna Dittman graciously supplied data from their personal field notes. I also thank Chet McGaugh, William Wagner, Scott White, and Kimball Garrett for commenting on drafts of the manuscript.

LITERATURE CITED

- American Ornithologists' Union. 1957. Check-list of North American Birds, 6th ed. Am. Ornithol. Union, Washington, D.C.
- Behle, W. H. 1956. A systematic review of the Mountain Chickadee. *Condor* 58:51-70.
- Bent, A. C. 1946. Life histories of North American jays, crows, and titmice. U.S. Natl. Mus. Bull. 191.
- Cardiff, S. W., and Remsen, J. V. 1981. Breeding avifaunas of the New York Mountains and Kingston Range: Islands of conifers in the Mojave Desert of California. *W. Birds* 12:73-86.
- Dixon, K. L. 1961. Habitat distribution and niche relationships in North American species of *Parus*, in *Vertebrate Speciation* (W. F. Blair, ed.), pp. 179-216. Univ. Tex. Press, Austin.
- Garrett, K., and Dunn, J. 1981. *Birds of Southern California*. Los Angeles Audubon Soc., Los Angeles.
- Grinnell, J., and Miller, A. H. 1944. The distribution of the birds of California. *Pac. Coast Avifauna* 27.
- Johnson, N. K. 1965. The breeding avifaunas of the Sheep and Spring ranges in southern Nevada. *Condor* 67:93-124.
- Laudenslayer, W. F., and Balda, R. P. 1976. Breeding bird use of a pinyon-juniper-ponderosa pine ecotone. *Auk* 93:571-586.
- Linsdale, J. M. 1938. Environmental responses of vertebrates in the Great Basin. *Am. Midland Nat.* 19:1-206.
- McCaskie, G. 1984. The nesting season. Southern Pacific coast region. *Am. Birds* 38:1060-1063.
- McCaskie, G. 1986. The nesting season. Southern Pacific coast region. *Am. Birds* 40:1254-1257.
- Unitt, P. 1984. The birds of San Diego County. *San Diego Soc. Nat. Hist. Memoir* 13.
- Van Rossem, A. J. 1936. Birds of the Charleston Mountains, Nevada. *Pac. Coast Avifauna* 24.

Accepted 20 September 1992