

Pygmy Nuthatch *Sitta pygmaea*

The Pygmy Nuthatch is a bird of montane coniferous forests, where it prefers open stands of pines. As a result, it is most common in the Laguna Mountains, where such habitat is widespread, less common in the Cuyamaca, Volcan, and Hot Springs mountains, and rare and localized on Palomar Mountain. The Pygmy Nuthatch is highly social, flock members calling to each other constantly, roosting, and even breeding communally. Invasions of Pygmy Nuthatches out of their normal range are rare.

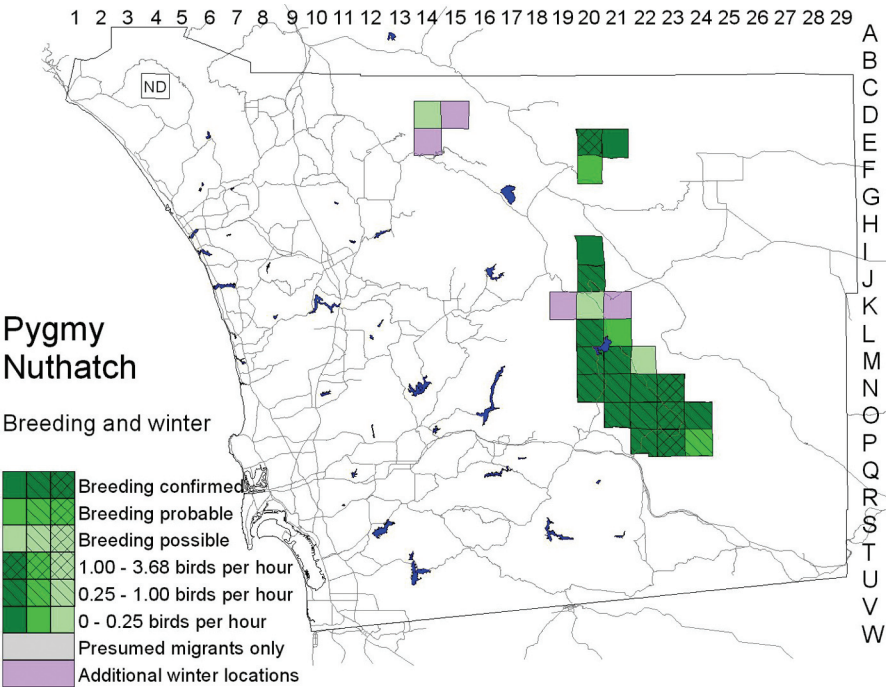
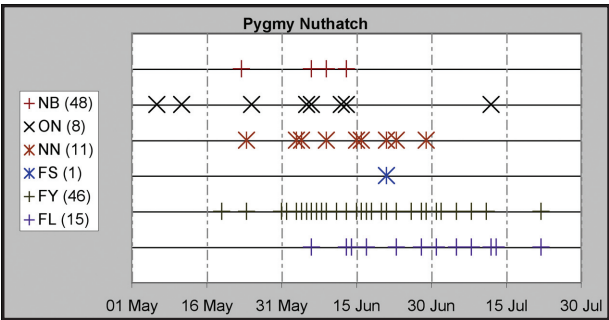
Breeding distribution: The Pygmy Nuthatch is one of the commonest birds in the Laguna Mountains, where daily counts run as high as 75 between Burnt Rancheria Campground and Horse Meadow (P23) 23 June 2000 (E. C. Hall, J. O. Zimmer). The large pines surrounding the meadows on the mountains' plateau offer ideal habitat. The Pygmy Nuthatch is also common in the Cuyamaca Mountains (up to 25 on Middle Peak, M20, 2 July 2000, R. E. Webster) and in the Volcan Mountains down to Julian (up to 20 north of Julian, J20, 17 August 2000, M. B. Stowe), but there is a short gap between these populations: during the breeding season we noted only a single individual on one occasion between Julian and William Heise County Park (K20). Another population is isolated on Hot Springs Mountain, where it is concentrated near the summit (E20; up to 14 on 17 June 2000, K. L. Weaver, C. R. Mahrtdt). On Palomar Mountain, forested largely in big-cone Douglas fir rather than pine, the Pygmy Nuthatch has been found during the breeding season only in Lower Doane Valley (D14; seven on 17 July 1999, J. R. Barth; six, including a juvenile, on 4 August 2000, P. D. Jorgensen). Elevationally, the Pygmy Nuthatch ranges in San Diego County from about 4000 feet in Green



Photo by Anthony Mercieca

Valley, Cuyamaca Mountains (N20; three on 26 June 1999, B. Siegel) to 6533 feet at the summit of Hot Springs Mountain.

Nesting: The Pygmy Nuthatch nests in tree cavities, which it often excavates itself. Unmated males often serve their relatives as nest helpers (Kingery and Ghalambor 2001). In San Diego County the birds commonly nest in pine snags but also use big-cone Douglas fir or oak if these trees are mixed among the pines. Our observations from 1997 to 2001 indicate that Pygmy Nuthatches



lay from about 4 May to about 5 June, slightly extending the 14 May–1 June range of seven egg sets collected in San Diego County 1920–35 but well within the 17 April–27 June range of 89 egg sets from throughout California (Bent 1948).

Migration: Dispersal of Pygmy Nuthatches outside their breeding range is very rare, concentrated into a few recorded invasions. None of these took place during the five-year atlas period. Large-scale irruptions are known only in 1966–67, 1972–73, and 1987–88. Wanderers have been recorded in San Diego County from 29 August (1987, 16 at Point Loma, S7, R. E. Webster, AB 42:137, 1988) to 30 May (1966, one at Point Loma, AFN

30:546, 1966). The pines planted on Point Loma have served as an attraction for dispersing Pygmy as well as Red-breasted Nuthatches.

Winter: The Pygmy Nuthatch, as a resident species, is seen in winter in much the same numbers as in summer (maximum daily count 100 around Laguna Meadow, O23, 21 January 2002, E. C. Hall, J. O. Zimmer). During exceptionally cold or stormy weather numbers seen may be depressed because the nuthatches may go a whole day without emerging from their roost holes (Kingery and Ghalambor 2001). Occasional birds are seen at sites, still in pine woods, where they are not known in the breeding season (up to six at Pine Hills, K19, 6 February 2002, M. B. Stowe). On Palomar Mountain, winter records are still largely from Lower Doane Valley, but the species has been noted also at nearby Doane Pond (E14; 24 December 2000, G. C. Hazard) and at the Palomar Observatory (D15; 13 on 28 December 2000, K. L. Weaver).

In invasion years Pygmy Nuthatches have dispersed over much of San Diego County's coastal slope but are unrecorded in the Anza-Borrego Desert. The most recent irruption was in 1987–88, which yielded 17 on the Oceanside Christmas bird count and four on the Rancho Santa Fe count—the only records of the Pygmy Nuthatch on either of these counts.

Conservation: Like other birds of coniferous forest, the Pygmy Nuthatch is threatened more by fire, prolonged drought, and climate change than by habitat loss to development. When stressed by drought, the pines on which the nuthatch depends are susceptible to attack by a bark beetle. Many pines died during the drought beginning in 1999. The effect of the death of these on birds

is unknown, but the Pygmy Nuthatch, which forages in pines almost exclusively, is more likely to be affected than other species.

Taxonomy: The Pygmy Nuthatches resident in San Diego County are *S. p. leuconucha* Anthony, 1889, which occurs also in the sierras Juárez and San Pedro Mártir of Baja California. This subspecies has been defined primarily by its larger size, especially of the bill, although the measurements tabulated by Norris (1958) reveal that no single linear measurement suffices to distinguish *leuconucha* from *S. p. melanotis* van Rossem, 1929, which inhabits mountain forests over the rest of western the United States. Though *leuconucha* does average significantly larger, it fails the test for extent of overlap (Patten and Unitt 2002) on the basis of any single measurement. Nevertheless, colorimetry of a small sample of fresh-plumaged specimens suggests that the paler back and especially paler crown of *leuconucha* might, perhaps combined with measurements in a multivariate function, distinguish the subspecies adequately. On the crown, seven August–November specimens of *melanotis* from northeastern California, Oregon, Nebraska, Colorado, and Arizona read $L = 28.1\text{--}33.3$, whereas six September–December specimens of *leuconucha* from the Laguna Mountains and Sierra Juárez read $L = 33.3\text{--}36.2$.

The one lowland specimen (Point Loma, 3 September 1985, SDNHM 35442) is *S. p. melanotis* on the basis of both its short bill (9.9 mm from nostril) and comparatively dark crown ($L = 32.9$). Thus it originated from north of San Diego County, a pattern likely typical of montane invaders.