

## Pygmy Nuthatch

*Sitta pygmaea*

**DESCRIPTION:** The pygmy nuthatch is the smallest of the nuthatch species, weighing only 0.4 oz (10.6 g), on average. It is 9.5-11.5 cm (3.75-4.5 in) in length. It is sexually monomorphic, having white undersides, a blue-gray back, a brownish cap, and a black eye stripe. In contrast, white-breasted and red-breasted nuthatches have black caps and a white line over the eye.

**RANGE:** Its disjunct geographic distribution mostly coincides with the distribution of ponderosa pine (*Pinus ponderosa*) throughout the West, and south through most of Mexico. There are no known breeding records from the Greater Yellowstone Ecosystem, although pygmy nuthatches may breed in mixed ponderosa forest in the part of the Custer National Forest that is included within the GYE. Local nonbreeding movements into and out of the area may be common.

**HABITAT:** As implied above, the pygmy nuthatch appears to be restricted primarily to ponderosa pine habitat, especially older (mature to old-growth) stands that are fairly open (<70% canopy coverage). Pygmy nuthatches have also been found nesting in other pine species on the Pacific coast and in pinyon-juniper woodlands in Arizona.

**LIFE HISTORY AND ECOLOGY:** Pygmy nuthatches are year-round residents that eat primarily bark and leaf beetles, but occasionally eat seeds as well. They tend to restrict their searching activities to canopy branches rather than tree boles.

This highly vocal species occurs in social groups year round. In winter, individuals occur in groups of about eight, on average, and are frequently found foraging in mixed-species flocks with other resident insectivores. During the breeding season, pygmy nuthatches are known to be communal nesters, where one to three "helpers" (usually yearling males) may assist at the nest. In early April, both sexes begin to excavate a nest cavity in a large (usually >20 in [>50 cm] dbh) dead or decaying ponderosa pine snag at an average height of more than 20 ft (6 m). The female lays six to eight white, spotted eggs and incubates them for 2 weeks. Both sexes (and possibly some helpers) feed the young for about 3 more weeks before the young fledge. Each breeding pair occupies a territory of about 4.9 ac (2 ha) in size. During the nonbreeding season, however, more than 150 individuals have been reported roosting in the same cavity.

**CONSERVATION NEEDS:** Within its restricted habitat range, the pygmy nuthatch uses relatively large snags for nesting and roosting. The health of nuthatch populations may, therefore, hinge upon the availability of old-growth ponderosa pine. Biologists have documented that populations of nuthatches drop significantly after timber harvesting if snags are removed. They recommend that ponderosa pine forests be cut so that a minimum of three to five large (>19 in [48.3 cm] dbh) snags per acre are left standing. The distribution of the pygmy nuthatch in the GYE needs to be determined.

The pygmy nuthatch is a species of special concern in Idaho (Category C, draft list).

### REFERENCES:

- Anderson, S. H. 1976. Comparative food habits of Oregon nuthatches. Northwest Sci. 50:213-221.
- Diem, K. L., and I. Zeveloff. 1980. Ponderosa pine bird communities. Pp. 170-197 in R. M. DeGraff (tech. coord.). Management of western forests and grasslands for nongame birds. USDA For. Serv. Gen. Tech. Rep. INT-86.
- Franzreb, K. E. 1977. Bird population change after timber harvesting of a mixed-conifer forest in Arizona. USDA For. Serv. Res. Publ. RM-184.
- Hay, D. B., and M. Guntert. 1983. Seasonal selection of tree cavities by pygmy nuthatches based on cavity characteristics. Pp. 117-120 in J. W. Davis, G. A. Goodwin, and R. A. Ockenfels (tech. coords.). USDA For. Serv. Gen. Tech. Rep. RM-99.
- Johnsgard, P. A. 1986. Birds of the Rocky Mountains. Colorado Associated Univ. Press, Boulder, CO. 504 pp.
- Norris, R. A. 1958. Comparative biosystematics and life history of the nuthatches, *Sitta pygmaea* and *Sitta pusilla*. Univ. Calif. Publ. Zool. 56:119-300.

- Scott, V. E. 1978. Characteristics of ponderosa pine snags used by cavity nesting birds in Arizona. *J. Forestry* 76:26-28.
- Scott, V. E. 1979. Bird response to snag removal in ponderosa pine. *J. Forestry* 77:26-28.
- Scott, V. E., and J. L. Oldemeyer. 1983. Cavity-nesting bird requirements and responses to snag cutting in ponderosa pine. Pp. 19-23 in J. W. Davis, G. A. Goodwin, and R. A. Ockenfels (tech. coords.). USDA For. Serv. Gen. Tech. Rep. RM-99.
- Scott, V. E., J. A. Whelan, and P. L. Svoboda. 1980. Cavity-nesting birds and forest management. Pp. 311-324 in R. M. DeGraff (tech. coord.). Management of western forests and grasslands for nongame birds. USDA For. Serv. Gen. Tech. Rep. INT-86.
- Storer, B. E. 1977. Aspects of the breeding ecology of the pygmy nuthatch (*Sitta pygmaea*) and the foraging ecology of wintering mixed-species flocks in western Montana. Unpubl. Master's Thesis, Univ. Montana, Missoula.
- Sydeman, W. J., and M. Guntert. 1983. Winter communal roosting in the pygmy nuthatch. Pp. 121-124 in J. W. Davis, G. A. Goodwin, and R. A. Ockenfels (tech. coords.). USDA For. Serv. Gen. Tech. Rep. RM-99.
- Sydeman, W. J., M. Guntert, and R. P. Balda. 1988. Annual reproductive yield in the cooperative pygmy nuthatch (*Sitta pygmaea*). *Auk* 105:70-77.

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