

## PYGMY NUTHATCH FEEDS MOUNTAIN BLUEBIRD NESTLINGS

BENEDICT C. PINKOWSKI, P.O. Box 308, New Town, North Dakota 58763

Instances of adults of one avian species unilaterally feeding the young of another species have been reported for a variety of passerines (Powell 1946, Logan 1951, Eddinger 1970, Moore 1973). This unusual behavior sometimes occurs following a recent nesting failure by the feeding adults (Lack 1946:87, Norris 1958, Skutch 1976:370), but there are also reported nest failures caused by errors in feeding (Williams 1942). Documentation of whether a nest failure precedes or follows a feeding error requires knowledge of the nesting histories of all birds involved in an interspecific feeding, and these histories are often unknown.

At 1045 on 4 July 1979 I found a nest containing four young Mountain Bluebirds (*Sialia currucoides*) about 12 days old. The nest was in an abandoned woodpecker cavity in the main trunk of a Quaking Aspen (*Populus tremuloides*) near Wilkerson Pass, Park County, Colorado (elev. 2600 m). The cavity opening was 1.9 m above ground and faced a compass direction of 224°. The young bluebirds were being fed by adult male and female bluebirds as well as an adult-plumaged Pygmy Nuthatch (*Sitta pygmaea*). During the following 2 hours I observed 14 feedings by the bluebirds and 19 by the nuthatch. The nuthatch also removed excreta by leaning into the cavity; it did not enter the cavity but did utter alarm notes in response to my presence near the nest tree. Both adult bluebirds briefly chased the nuthatch when both species arrived at the nest cavity with food, in which case the nuthatch fed the nestlings after the adult bluebirds departed. The young bluebirds always gaped vigorously in response to the arrival of the nuthatch at the nest entrance. A second adult-plumaged nuthatch was also in the area but it did not feed the bluebirds. It soon became apparent that this second nuthatch was attending a nest in another cavity in the main trunk of the same tree; this cavity opening was 2.4 m above the ground and faced a compass direction of 249°, so the entrances to the two cavities were not far apart and had similar orientations. At 1230 I checked the second cavity with a mirror and found that it contained 7 nuthatch eggs.

I revisited the nest tree at 1800 on 7 July and recorded 8 bluebird feedings and 15 nuthatch feedings at the bluebird nest in the following 1.5 hours. The second nuthatch accompanied the feeding nuthatch in searching for food, but it did not approach either cavity. At 1930 I checked the nuthatch nest and found six dead young about 24 hours old. Inasmuch as both male and female nuthatches feed the young and the male sometimes feeds the female while she incubates (Bent 1948, Norris 1958), the feeding bird was evidently the male of the pair nesting above the bluebird cavity. On neither occasion did the male nuthatch approach the nuthatch nest. Thus it seems that the male's unusual behavior led to the nest failure because the young nuthatches were insufficiently fed, although the female may have deserted the nest or stayed off the nest for excessively long periods while searching for food.

Two other instances of Pygmy Nuthatch and Mountain Bluebird nests in a same tree were found in the general area of these observations. No abnormal feeding behavior was observed though in one case the nuthatch and bluebird young hatched at about the same time in cavities having opening heights and compass directions more similar (2.5 m, 355° and 2.1 m, 3°, respectively) than was the case for the nests at which interspecific feeding occurred. Thus, although the proximity of the nests may have contributed to the error that resulted in failure of the nuthatch nest, a greater influence may have been the timing of the nestings, which allowed the calling bluebirds to stimulate the nuthatch to feed them at a time when the nuthatch's own nest did not contain young. Such errors that result in nest failures appear uncommon among the

## NOTES

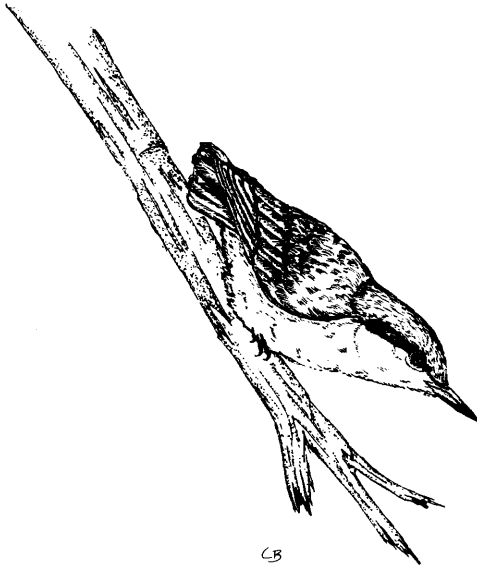
large number of instances of interspecific feeding that have been summarized for many species by Skutch (1976).

This research was supported by the Frank M. Chapman Memorial Fund of the American Museum of Natural History.

## LITERATURE CITED

- Bent, A.C. 1948. Life histories of North American nuthatches, wrens, thrashers, and their allies. U.S. Natl. Mus. Bull. 195.
- Eddinger, C.R. 1970. The white-eye as an interspecific feeding helper. *Condor* 72:240.
- Lack, D. 1946. The life of the robin. H. F. and G. Witherby, Ltd., London.
- Logan, D. 1951. Cardinal, *Richmondena cardinalis*, assists in feeding robins. *Auk* 68:516-517.
- Moore, M. 1973. Male Blackbirds (*Turdus merula*) helping to rear young Song Thrushes (*T. philomelos*). *Brit. Birds* 66:365.
- Norris, R.A. 1958. Comparative biosystematics and life history of the nuthatches *Sitta pygmaea* and *Sitta pusilla*. Univ. California Publ. Zool. 56:119-300.
- Powell, H. 1946. Nuthatch feeds nestling Starlings. *Brit. Birds* 39:316.
- Skutch, A.F. 1976. Parent birds and their young. Univ. Texas Press, Austin.
- Williams, L. 1942. Interrelations in a nesting group of four species of birds. *Wilson Bull.* 54:238-249.

Accepted 23 May 1980



Pygmy Nuthatch

Sketch by Cameron Barrows