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INTERSPECIFIC FEEDING OF MOUNTAIN BLUEBIRD NESTLINGS BY A PYGMY NUTHATCH

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On 17 June and 20 June 2014 Zamek and his sister, J. Zamek, observed an adult Pygmy Nuthatch (*Sitta pygmaea*) feeding Mountain Bluebird (*Sialia currucoides*) nestlings near Prosser Creek Reservoir, Nevada County, California. The bluebirds' nest cavity was approximately 2 m above the ground in a large snag. An active Pygmy Nuthatch nest with nestlings was in a cavity in the same snag approximately 2 m above the bluebird nest. There were other nest holes in this snag, but they did not appear to contain active nests. During approximately two hours of observation in late afternoon on 17 June and three hours in early morning on 20 June, a female Mountain Bluebird frequently fed the three bluebird nestlings. A male Mountain Bluebird was also present and remained close to the nest most of the time but visited the nest only four times on 17 June and twice on 20 June. A Pygmy Nuthatch also fed the Mountain Bluebird nestlings at least ten times on 17 June and at least nine times on 20 June. The Pygmy Nuthatch also reached into the Mountain Bluebird nest and removed fecal sacs two times on 20 June. Zamek obtained photographs of the bluebirds and the nuthatch feeding the bluebird nestlings and removing a fecal sac (see this issue's back cover), making this one of very few photographically documented examples of interspecific feeding of nestlings and nest maintenance.

The male bluebird jabbed at the nestlings' open bills but did not actually feed them during two visits to the nest on 20 June. These apparent "mock" feedings occurred immediately after the male bluebird had chased the nuthatch away from the nest. The nuthatch was persistent in its attempts to feed the bluebird nestlings, despite the male bluebird's aggression, making approximately as many visits as the female bluebird. The female bluebird never chased the nuthatch. The active Pygmy Nuthatch nest in this snag was well attended by at least two adult Pygmy Nuthatches, but Zamek never observed any nuthatch make a direct visit to the bluebird nest from the nuthatch nest. Although up to three nuthatches were observed simultaneously, it was not possible to determine if the bluebirds were being fed by one of the nesting pair or by the third nuthatch.

Cases associated with brood parasitism excluded, interspecific feeding of nestlings or fledglings has been described in at least 78 species of birds (Eddinger 1970, Shy 1982, McGowan 1990, McNair and Duyck 1991, Erickson 1998, Drozd et al. 2004, Pierce 2005, Archer and Stansfield 2006, Kristin 2009, Hall et al. 2010, Matsuda 2011, Heber 2012).

Pinkowski (1980) also observed a Pygmy Nuthatch feeding Mountain Bluebird nestlings and removing fecal sacs in Colorado, making the observation described here only the second published example of interspecific feeding between these two species. Pinkowski also noted that the frequency of feeding by the nuthatch was similar to that of the bluebirds and that the nuthatch removed fecal sacs by leaning into, but not entering, the nest cavity. In contrast to Zamek's observations, Pinkowski noted that both bluebird parents chased the nuthatch. Shy (1982) proposed seven possible proximate causes for a bird of one species feeding the young of another: (1) the bird was raising a mixed-species clutch; (2) the original nest of the bird failed or was destroyed; (3) the nest of the other species was close to the nest of the bird engaging in interspecific feeding; (4) begging of the heterospecific young stimulated the bird to

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feed them; (5) orphaned heterospecific young were “adopted” by the feeding bird; (6) a male bird with an active nest fed another species while his mate incubated; (7) an unmated bird formed an interspecific parental relationship with the actual parent of the young. In the case we describe, one can rule out a mixed-species clutch, orphaned heterospecific young, or an interspecific parental relationship as proximate causes. If the nuthatch feeding the bluebirds was one of the pair nesting in the same snag, then the proximity of the two nests could have been a contributing factor. While the presence of begging young may have been a factor, Zamek heard no begging from the nestlings during either of his visits. Still, the young may have begged at other times and thus stimulated the feeding response in this nuthatch. Therefore, the interspecific feeding reported here could have been due to one or more of the following factors: the nuthatch having lost a nest; proximity of the bluebird nest to the nuthatch nest; the nuthatch having an incubating female in a different nest in the general area; the presence of begging bluebirds stimulating the feeding instinct. It is possible that the nuthatch feeding the bluebirds was a nonparental helper at the nearby Pygmy Nuthatch nest, as such nest helpers have been observed at 17–40% of Pygmy Nuthatch nests studied (Norris 1958, Storer 1977, Sydeman et al. 1988).

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“Featured Photos” by © Steve Zamek of Los Altos, California: Nest of a Mountain Bluebird (*Sialia currucoides*) near Prosser Creek Reservoir, Nevada Co., California—and a Pygmy Nuthatch (*Sitta pygmaea*) that fed the nestling bluebirds repeatedly.

