

COWBIRD PARASITISM ON THE LEAD-COLORED BUSHTIT

ALAN A. GUBANICH, Department of Biology, University of Nevada, Reno, Nevada 89557

HOWARD R. PANIK, Western Nevada Community College, Carson City, Nevada 89701

The Bushtit (*Psaltriparus minimus*) is evidently not a common host of the Brown-headed Cowbird (*Molothrus ater*). Only eight instances of cowbird parasitism on this species have been reported (Bent 1946, Friedmann 1963, Friedmann 1966, Friedmann et al. 1977, Smith and Atkins 1979, Friedmann and Kiff 1985). One involved the subspecies *P. m. californicus*, the other seven, *P. m. minimus*. Here we report the first known instance of cowbird parasitism on the subspecies *P. m. plumbeus*, the Lead-colored Bushtit, and an observation of adult Lead-colored Bushtits feeding a fledgling Brown-headed Cowbird.

On 26 May 1988, while censusing pinyon-juniper woodland in the Pine Nut Mountains, Carson City, Nevada (39°06'N, 119°37'W), for a study on breeding bird densities, we discovered a Bushtit nest in a Single-leaf Pinyon (*Pinus monophylla*) by following two Bushtits that were carrying food. The nest was 4.7 meters from the ground and well hidden in the needles of the tree. We watched for several minutes as the birds entered the nest with food and exited without. We did not check the nest for contents. Although we passed the nest on six additional censuses between then and 14 June, we saw no more activity at the nest, and do not know if the young fledged. On 24 June we returned to the area to make measurements of nest-site characteristics. We collected the nest and found it contained six recently laid Bushtit eggs and one cowbird egg. The eggs were cold, and no adults were seen in the area during the 40 minutes we were there, suggesting that the nest had been abandoned. The nest showed no signs of damage, as had been reported in two prior instances of cowbird parasitism on this species (Friedmann 1977, Smith and Atkins 1979). The nest is now specimen number 68 in the nest collection of the University of Nevada Museum of Vertebrate Biology.

The second incident also occurred in the Pine Nut Mountains of Nevada, about 4.8 km south of the nest site described above. On 9 June 1988, during a morning census of pinyon-juniper woodland, we were attracted by the calls of Bushtits near the top of a pinyon, about 4.2 m from the ground. Adult Bushtits were carrying food to a nest in the tree, but instead of entering the nest, they fed the food to a fledgling Brown-headed Cowbird perched beside the nest. Whenever a Bushtit approached with food, the cowbird vibrated its wings rapidly, gaped, and uttered loud begging calls. At least three Bushtits brought food to the fledgling, indicating a possible helper at the nest. We caught and banded the cowbird; its flight feathers were about half grown, with sheaths still present. We placed the cowbird back near the Bushtit nest, but after a few minutes it flew to a nearby pinyon and we were unable to locate it again. The nest contained six nestling bushtits, all close to fledging. We banded the nestlings and returned them to the nest. During this time the three adults continually circled the nest tree uttering alarm calls while carrying food in their beaks.

We visited the nest site 4 days later. The nest was empty and we assumed the young had fledged. This was confirmed on 16 June when we saw the banded young foraging in a flock with unbanded adults 300 meters northeast of the nest site.

We do not know if the Bushtits were the actual foster parents of this cowbird. Observations of adults feeding fledgling cowbirds are not conclusive evidence that those adults are the foster parents; Klein and Rosenberg (1986) and Scott (1988) have reported several examples of cowbird fledglings being fed by more than one species.

NOTES

Thus, this particular individual could have been raised by some other host but attracted the Bushtits by its loud and persistent begging calls. However, to our knowledge, this is the first known instance of Bushtits feeding a fledgling cowbird.

LITERATURE CITED

- Bent, A. C. 1946. Life histories of North American jays, crows, and titmice. U.S. Natl. Mus. Bull. 191:1-495.
- Friedmann, H. 1963. Host relations of the parasitic cowbirds. Smithsonian Inst. Bull. 233:1-276.
- Friedmann, H. 1966. Additional data on the host relations of the parasitic cowbirds. Smithsonian Misc. Coll. 149:1-12.
- Friedmann, H., Kiff, L.F., and Rothstein, S.I. 1977. A further contribution to knowledge of the host relations of the parasitic cowbirds. Smithsonian Contrib. Zool. 235:1-175.
- Friedmann, H., and Kiff, L.F. 1985. The parasitic cowbirds and their hosts. Proc. W. Foundation Vert. Zool. 2(4):226-302.
- Klein, N.K., and Rosenberg, K.V. 1986. Feeding of Brown-headed Cowbird (*Molothrus ater*) fledglings by more than one "host" species. Auk 103:213-214.
- Scott, D.M. 1988. House Sparrow and Chipping Sparrow feed the same fledgling Brown-headed Cowbird. Wilson Bull. 100:324-325.
- Smith, J.P., and Atkins, R.J. 1979. Cowbird parasitism on Common Bushtit nest. Wilson Bull. 91:122-123.

Accepted 26 December 1989