

Fla. Field Nat. 23(2): 33-34, 1995.

## TOOL USE BY BROWN-HEADED NUTHATCHES IN TWO FLORIDA SLASH PINE FORESTS

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Morse (1968) described Brown-headed Nuthatches (*Sitta pusilla*) in Tangipahoa Parish, Louisiana, methodically using pieces of pine bark to pry off other flakes of bark, presumably to expose prey hiding underneath. Although he observed the behavior on many occasions in fall 1963, winter 1963-1964, and fall 1964, no similar observations were published during the next two decades, which caused Ehrlich et al. (1988:437-439) to wonder if the behavior was highly localized. Here, I report on two instances of tool use by Brown-headed Nuthatches from different areas in peninsular Florida, and briefly discuss other recent reports of nuthatches using tools.

On 10 October 1987, while birding in the J. B. Starkey Wilderness Park in western Pasco County, I watched a Brown-headed Nuthatch land on the trunk of a living slash pine (*Pinus elliottii*) with a flake of bark about 2x2 cm in size in its bill. Using the flake as a wedge, the nuthatch pried another flake of bark off the trunk. It briefly investigated the exposed surface but then flew off, with the bark flake still in its bill.

On 8 December 1993, while surveying for Red-cockaded Woodpeckers (*Picoides borealis*) on the Walter Johnson Ranch in southern Highlands County, I again observed a Brown-headed Nuthatch using a flake of pine bark about 2x2 cm in size to pry another flake off the trunk of a living slash pine. This time the technique was apparently successful, as the nuthatch dropped the flake from its bill and appeared to capture a small insect from the trunk. Although I watched this bird forage for another two minutes, I did not observe additional instances of tool use.

On three occasions in November 1989, Peter Yaukey (pers. comm.) observed Brown-headed Nuthatches near Athens, Georgia, using bark flakes to conceal seeds cached in the bark of shortleaf pines (*P. echinata*) and loblolly pines (*P. taeda*), a behavior also noted in the White-breasted Nuthatch (*S. carolinensis*) (Kilham 1974 and Petit et al. 1989 in Pravosudov and Grubb 1993). In October 1994, Jay Withgott (pers. comm.) observed Brown-headed Nuthatches in Ouchita National Forest, Arkansas, twice carrying bark flakes and once what appeared to be a cone bract from a shortleaf pine, although use of these implements was not observed.

Steve Russell (pers. comm.) et al. once observed a Pygmy Nuthatch (*S. pygmaea*) in the Chiricahua Mountains in Arizona use a twig to probe crevices of a pine. As *S. pygmaea* and *S. pusilla* constitute a superspecies (A.O.U. 1983:519-520), it is not surprising that both species may occasionally use tools.

Three points about the two Florida observations deserve specific mention. The nuthatches watched by Morse (1968) foraged on longleaf pines (*P. palustris*) and the Florida birds foraged on slash pines. Flakes of bark can be removed easily from both of these pine species. In Louisiana, Morse also watched nuthatches forage on loblolly pines and spruce pines (*P. glabra*), but observed no use of bark flakes as tools. He attributed this to characteristics of the bark of these two species, from which flakes cannot be removed as easily.

To date, the few observations of tool use by Brown-headed Nuthatches are restricted to fall and winter. Morse suggested that a poor crop of pine seeds, which becomes available in the fall and which constitutes a major portion of the nuthatches' diet, may cause the birds to use tools to increase their foraging efficiency for insects.

Lastly, the observations of tool use in Florida and elsewhere, as well as a similar observation in a congener, suggest that tool use is widespread in the Brown-headed Nuthatch.

I thank Steve Russell, Jay Withgott, and Peter Yaukey for sharing their data, and Glen Woolfenden, Cameron Ghalambor, Keith Tarvin, Walter Taylor, Jay Withgott, and an anonymous reviewer for commenting on earlier drafts of the manuscript.

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