

**White-throated Sparrow as Foster Parent of Fledgling Dark-eyed Juncos.**—The phenomenon of "helping" in birds (a bird providing services, e.g., feeding, nest building, or brooding, to another bird that is neither its mate nor its dependent young) has attracted considerable comment in the literature since Skutch's early paper (1935) on the subject. This literature has been ably reviewed by Skutch (1961, 1976). The present note documents an instance of interspecific helping by an adult White-throated Sparrow (*Zonotrichia albicollis*). The helping relationship was nonreciprocal and involved feeding fledgling Dark-eyed Juncos (*Junco hyemalis*), a closely related species with which this sparrow occasionally hybridizes (there are about a dozen known hybrids; Dickerman, 1961; Short and Simon, 1965).

The mixed sparrow-junco family was discovered early on 19 July 1972 in partly cut-over spruce-fir forest on the bank of the Arrostook River (Clayton Deadwater, 46°29'N, 68°24'W) near Marsardis, Maine. The adult white-throat was a bright, white-striped variant (Vardy, 1971) and its two dependent charges were stub-tailed and capable of short, sustained flights. I watched the mixed group for extended intervals during the day and for a short period the following morning, a total of nearly six hours. I was unable to locate them on a visit to that area on 22 July.

During the time they were under observation, only the white-throat fed the two young juncos, roughly at a rate of one feeding every 4-8 minutes with infrequent longer and shorter intervals. Behaviorally, the group acted as a family-unit. The white-throat spent nearly all its time near the fledglings, foraging, carrying food, and reacting to disturbances from my presence by rapid "chink" calling accompanied by close approach and frequent perch-shifting. The juncos tended to remain near one another, sometimes following the foraging white-throat and "begging" persistently, and other times waiting on separate low perches and occasionally uttering a light single or double note (incomplete or low intensity food-soliciting call). When the foster parent appeared with food or when it suddenly gave a short, light, sibilant "tsee" call nearby after a period of silent foraging, the young juncos commenced intense soliciting and sometimes flew to meet the sparrow. At one point a junco family (one adult and one fledgling junco) and the mixed sparrow-junco group came together for a brief period. The adult birds soon separated with their respective fledglings without having shared feeding duties.

Unilateral interspecific helping of the sort described here may arise in different ways (Skutch 1961, 1976). Generally the unusual adult-young bond forms when a breeding bird of one species accidentally comes in contact with the offspring of a nonspecific neighbor nesting nearby. If the unrelated adult is ready to feed its own offspring, the food-soliciting calls of the latter's young may then stimulate it to bring food to them.

In this case, the circumstances responsible for the development of the bond between adult sparrow and fledgling juncos are not known. Yet it is quite likely that the similarity of the food solicitation call of juvenile juncos to that of young white-throats helped to cement this relationship. Sound spectrograms of these calls show that the young of both species utter short bursts of frequency modulated sounds over high frequency ranges. To my ear, the sounds were remarkably alike although those of young juncos seemed somewhat buzzy.

The fledgling birds tended by the white-throat clearly were not hybrids. I observed them repeatedly at very close range and compared their plumage color and their calls (sound spectrograms) with those of dependent juncos and white-throats in unmixed families in the area. The phenotypes of the juvenile birds fed by the sparrow showed no evidence of intermediacy between those of the two pure forms. Apparently the special conditions, close genetic relationship (Mayr and Short, 1970: 86) and broadly overlapping geographic and ecological distributions, that sometimes lead to mixed matings between white-throat and junco, also provide the circumstances for the rare development of interspecific helping between the two species.

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**A Mortality Table for Wood Ducks.**—I obtained records of recoveries of banded Wood Ducks (*Aix sponsa*) from the Bird Banding Laboratory, Migratory Bird Populations Station, Laurel, Maryland, enabling me to prepare what I consider to be a reasonably representative table of the mortality rate of these birds. In an effort to represent the full life spans of the birds, I selected data that pertained only to birds banded as locals. The data were further selected to include only birds shot by hunters and only birds with full information at the time of recovery. In order to assure that no further recoveries will be made of the banded sample used, only birds banded before 1967 were used, and the data obtained included birds recovered through 10 March 1976. The records used included birds banded in various states scattered throughout the Wood Duck's range.

TABLE 1.

Mortality table for Wood Ducks banded as locals

Age in years	Alive at start of year	Died during year	Percent mortality
0-1	543	356	65.6
1-2	187	92	49.2
2-3	95	45	47.4
3-4	50	25	50.0
4-5	25	14	56.0
5-6	11	6	54.5
6-7	5	1	20.0
7-8	4	2	50.0
8-9	2	2	100.0
Total and average	543	354	54.7

The annual mortality rate for 543 Wood Ducks is presented in Table 1. Nearly two thirds of the birds were killed in their first year of life, and the average annual mortality rate was 54.7 percent. The oldest bird lived into its eighth year. Of the 543 birds, the sex was indicated for 431. The average annual mortality rate was 51.4 percent for the males and 59.6 percent for the females. Thus, the mortality rate was slightly higher for the females, and there was no evidence that hunters selected the more beautiful and conspicuous males, as might have been expected.—PATR. A. SIEWICZ, 202 Moorland Drive, Oxford, North Carolina 27565. Received 30 January 1977, accepted 11 March 1977.

**Ectoparasites Found in the Nest Cavities of Pileated Woodpeckers in Oregon.**—Ectoparasites of the Pileated Woodpecker (*Dryocopus pileatus*) have been little studied. A few species collected from the birds have been reported but apparently no one has examined nests for ectoparasites or inquilines. The nest fauna of the European representative of the genus (*D. martius*) has received more attention, and there are several papers listing insect species found in nests (Hicks, 1959, 1962). The most extensive of these lists 28 species of insects, two of which are considered ectoparasites (Nordberg, 1936).

We examined the contents of 18 nest cavities collected in 1975 (8) and 1976 (10) on the Starkey Experimental Forest, 35-40 km southwest of La Grande, Union Co., Oregon. Twelve nest cavities, sampled in June and July, contained nestlings (one within a week) at the time collections were made. Six nest cavities were examined in September, approximately eight weeks after nestlings had

fledged. Three of these contained secondary nests of squirrels as indicated by ectoparasites recovered. The pileated nest material, in order of abundance, consisted of fine brown dirt and sand, wood chips, insect parts, bird droppings, and feathers. The three squirrel nests were composed of grass, a lichen, and/or hair.

Nest material was placed in a plastic bag and frozen. Later each collection was placed in a white tray and sorted. All arthropods were dead when the nests were examined, decreasing the chances of finding some species, especially mites which resembled particles of soil.

Eight species of ectoparasites were found in six nest cavities. Four fleas and one mite were primarily ectoparasites of squirrels. Another mite could have been either a bird or squirrel ectoparasite, and the remaining mite and fly were considered to be true bird ectoparasites.

## LIST OF SPECIES

*Dermomyssus gallinoides* Moss—Five females were collected from four nests on 5 September 1975, 23 June 1976, and 2 July 1976. Two were in a squirrel nest, the others in pileated nests. *D. gallinoides* was known previously on the basis of four records from four species of woodpeckers or their nests from British Columbia, Colorado, and Oregon (Moss, 1966; Moss et al., 1970). The type series from British Columbia consisted of 89 mites, other records limited to one or two specimens. The present specimens are the first to be associated with the pileated.

*Antholachaps caualis* (Berlese)—One female was collected 5 September 1975 from a squirrel nest. This is a cosmopolitan mite reported from a variety of birds, mammals, their nests, and other organic material. It is a frequent inhabitant of bird nests and is often collected from tree squirrels (*Sciurus*, *Tamiasciurus*, and *Glaucomys*) or their nests. The present record is the first certain one from Oregon although Hansen (1964) listed three probable specimens from crested rodents.

*Haemoganaxia reidi* Ewing—Four females were collected 5 September 1975 from two squirrel nests. It has been collected from a variety of rodents, predominantly tree squirrels.

*Carnus hemapterus* Nitzsch—One deslanted female was collected 2 July 1976 from pileated nest material. This dipteran shows a preference for nesting birds in holes or under protective canopies. It is known from a variety of birds in Europe, with knowledge of its distribution and host relationships in North America more limited. There are records from nine host species, including three woodpeckers, in eight states, two Canadian Provinces, and Mexico (Capelle and Whitworth, 1973). Additional specimens have been collected from pileated nestlings by Bull. The present record is the first from Oregon and the pileated.

*Megarthroglossus divinus divinus* (Baker), *Monopsyllus rison* (Baker), *Orchopeus caedens caedens* (Jordan), and *Opisodaps respersalis* (Jordan)—Eight males, 13 females; 1 male; 1 female; and 4 males, 9 females, respectively, were collected 5 September 1975 from the three squirrel nests. These fleas primarily parasitize tree squirrels, and their presence in pileated nest cavities is due to secondary use of these cavities by either red squirrels (*Tamiasciurus hudsonicus*) or northern flying squirrels (*Glaucomys sabrinus*). The first three species are reported from both hosts, but far more frequently from red squirrels. The great majority of host records for the last species are from northern flying squirrels; it has not been recorded from red squirrels.

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## OBITUARY

ELIZABETH S. AUSTIN

Elizabeth S. Austin, well-known authoress of bird books for young people, frequent contributor to the Recent Literature section of *Bird-Banding*, and wife of Dr. Oliver L. Austin, Jr., died in her sleep on 23 May 1977, after a long illness. Elizabeth, or "Sliver," as she was affectionately known to her husband and many friends, was born in New York City, 23 January 1907. Her early life was spent largely in the New York City area, where she attended Saint Elizabeth Academy, Convent Station, New Jersey. Her early interest in and talent for writing was at first directed toward verse and romantic tales. Following the Academy, while traveling abroad she continued to write; but interests in and devotion to natural history were not kindled until her marriage to Oliver, whereupon she "found birds a more interesting subject than anything I had ever imagined in my wildest dreams."

Raising her children, Anthony and Timothy, occupied much of her attention until the late 1950's, when the Austins moved to Gainesville, where Oliver assumed the curatorship in ornithology with the Florida State Museum. In this stimulating atmosphere of a world of nature and scholarly endeavor and while her husband labored on his magnum opus "Birds of the World," Elizabeth's authorship blossomed in a variety of ways. For a time she wrote a weekly column, "Wild Adventure," for the Florida Times-Union Sunday Magazine. Surely her most important scholarly publication was the book "Frank M. Chapman in Florida: His Journals and Letters" (1967). But just as surely she was most widely acclaimed for two excellent books for young people: Penguins, the "Birds with Flippers" (1968) and "Birds that Stopped Flying" (1969). She co-authored with Oliver: "The Random House Book of Birds" and was a contributor to the "Golden Book Encyclopedia of Natural Science." Readers of *Bird-Banding* and *Auk* will perhaps best remember her careful literature reviews and as a specialist on