

out the winter by juncos and Steller's Jays (*Cyanocitta stelleri*) have been made for several years. During periods of mild weather, jays and juncos show no antagonistic behavior toward each other, but during periods of extended cold weather and/or snow the presence of jays at the feeders is sufficient to keep juncos out of the immediate area.

In late December of 1970 Dr. and Mrs. Edwin H. Colbert observed a Steller's Jay capture and partially consume an adult Pygmy Nuthatch (*Sitta pygmaea*). A large flock of nuthatches had been attracted to a suet feeder near the Colbert house. An individual nuthatch flew into an open area in a large stand of pine (*Pinus ponderosa*) and was about 10 ft off the ground when a jay that had been perched on a branch in a nearby tree, swooped down on the nuthatch catching it in mid-air with its feet. The jay then flew back to its perch and as Dr. Colbert observed through binoculars, the jay used its beak to pluck and kill the nuthatch, holding it down with one foot while grasping the perch with the other. When the jay was approached it flew off into a deeper portion of the woods still clutching the dead nuthatch in its feet.

Another incident of Steller's Jay predation occurred on 20 February 1971, when during a heavy snowfall a jay was observed (Balda) attacking an adult Gray-headed Junco (*Junco caniceps*). The jay dove down to a platform feeder and caught the junco with its feet; it then flew about 40 ft to a perch in a pine where it proceeded to pluck and eat portions of the smaller bird. When the jay was approached it dropped the partially eaten carcass under the tree. Two days later when the snow began to melt, two other dismembered and partially eaten carcasses of Gray-headed Juncos were discovered. We believe these birds met their demise in the same manner as described above.

The weather preceding both of these incidents had been cold; the mean daily temperature for December 1970 was 4°C, with -11°C being the mean low for this month. Snow had fallen intermittently from 14 to 22 December, reaching a maximum depth of 53.3 cm by 22 December. The mean daily temperature for February 1971 was 7.3°C and the mean low was -8.3°C. Snow had begun falling on 17 February reaching a maximum depth of 30.5 cm by 21 February (U. S. Weather Bureau Records, 1970 and 1971, Flagstaff, Arizona).

Although jays are known to hold food objects with their feet while tearing them apart with their beak, we know of no other observation wherein a jay has been reported to capture prey with its feet during flight. Whether or not Steller's Jays make a habit of consuming other bird species as a food source during times of limited food availability is unknown. It is probable that during particularly harsh portions of the winter, lack of suitable vegetable material and insects force the jays to exploit alternate food sources. The facility with which the jays reported herein captured their unusual prey indicates that this food source may be exploited by jays to a greater extent than was previously thought.—STEVEN W. CAROTHERS, N. JOSEPH SHARBER, *Museum of Northern Arizona, Flagstaff, Arizona 86001* AND RUSSELL P. BALDA, *Department of Biological Sciences, Northern Arizona University, Flagstaff, Arizona 86001, 1 October 1971.*

Adult Carolina Chickadee carries young.—On rare occasions when nests are disturbed certain species of birds have been known to pick up and move their eggs to different locations (Truslow, *Natl. Geogr. Mag.*, 130:882-884, 1966; Pettingill, *Ornithology in laboratory and field*, Burgess Publ. Co., Minneapolis, 1970, p. 357). In addition, Welty (*The life of birds*, Alfred A. Knopf, New York, 1962, p. 336) and Pettingill (op. cit.:392) consider at least 10 known instances of non-passerine young being picked up and carried by their parents. This type of behavior is considered to be exceptional.

During the morning of 11 April 1971 we were examining a nest of a Carolina Chickadee (*Parus carolinensis*) which was located 10 m from shore in a small excavated cavity of a one meter-high post over the water of Cross Lake, near the western boundary of Shreveport, Louisiana. Due to a brisk wind the lake water was choppy so that some difficulty was had in maintaining the boat against or near the post in order to see into the nest. Because of the action of the waves, the post was jarred several times over a period of several minutes. There were four newly-hatched chickadees in the nest. After leaving the nest site, we saw an adult chickadee enter the nest and leave with something that was pink in color. It carried the object over the shoreline and disappeared into a grove of trees 50 m from the post. Shortly thereafter, the adult returned with what appeared to be food and entered the nest. With the aid of binoculars we now saw the adult leave the nest carrying a young bird. The bird flew in the same direction as the first time, holding the young bird in the beak, which was positioned around the body of the young bird. The additional two young were removed in the same manner. The entire removal took place in about 30 minutes. When observed again, the nest was empty of young and over a period of time the adult or adults did not reappear. Not more than one adult was seen at any one time. The shore area, where the adult disappeared with the young was searched but the new nest, if any, was not located.

In our observations of over 5,000 different nests that contained eggs or young, including the nests of 125 Carolina Chickadees, in northern Louisiana since 1963, we have never seen a parent bird carrying either its eggs or young, up to this time.—JOHN W. GOERTZ AND KIM RUTHERFORD, *Department of Zoology, Louisiana Tech University, Ruston, Louisiana 71270, 27 September 1971.*

Habitat differences of Swainson's and Hermit Thrushes.—Most Swainson's Thrushes (*Hylocichla ustulata*) along the coast of Maine nest in spruce forests; as a result, they seldom if ever overlap with Wood Thrushes (*H. mustelina*) or Veeries (*H. fuscescens*) in their breeding habits (see Morse, *Wilson Bull.*, 83:57-65, 1971). However, potential overlap does occur with Hermit Thrushes (*H. guttata*), and here I report spatial relationships of these two species.

I censused populations of thrushes in spruce forests and mixed coniferous-deciduous forests on islands in Muscongus Bay (Lincoln and Knox Counties), and the adjacent mainland (Table 1). Techniques followed those prescribed in Audubon Field Notes for breeding bird censuses.

In the absence of congeners the Swainson's Thrush occupies a wider range of habitats than it does in their presence, as demonstrated by its presence on small islands (particularly on Wreck and Haddock Islands) (Table 1). Further, while Swainson's Thrushes were absent from certain islands some years, no Hermit Thrushes used them at these times (Table 1). Wreck and Haddock Islands support mixed forests of mountain and striped maples (*Acer spicatum* and *A. pennsylvanicum*), yellow birch (*Betula lutea*), white spruce (*Picea glauca*), and balsam fir (*Abies balsamea*). They have been damaged heavily by storms in some areas (described fully in Morse, *Ecology*, in press). Similar areas on the adjacent mainland are occupied by other species of *Hylocichla* (Morse, *Wilson Bull.*, 83:57-65, 1971). In spruce forests on large islands and the mainland, Swainson's Thrushes usually appear in denser growth than does the Hermit Thrush. The spruce forests on Loud's, Harbor, and Marsh Islands (Table 1) have smaller trees (mean heights = 13-17 m) and denser growth than the mainland forests censused here, in Morse (op. cit.), and the forest on Hog Island (Morse, *Ecology*, 49:779-784,