

plastic bands. The aluminum band was placed either on the left or the right leg according to the site of capture to enable immediate recognition of origin in the following season.

Of the 199 banded in 1972–1973, 59 (29.7%) were recaptured, or individually identified by their color bands, in the 1973–1974 breeding season. All returns were within 500 m of the banding site with the great majority within 200 m. Four birds were resighted singing from their same characteristic perches. Between the two banding sites 38 hr were spent searching the region but no banded birds were observed. Twelve days netting at a site 4 km below the 2,800 m banding site also failed to produce a banded bird. In the fifth season following banding (January 1978), several hours searching for banded birds at both banding sites yielded none. Given the ready visibility of territorial birds, the apparent absence of survivors suggests that five years may exceed the upper ceiling of mean survival for a cohort of these sparrows at this altitude. This is consistent with the indication of a 30% overall yearly survival rate. This estimate is considerably lower than the 50–84% survival reported for other small passerines by J. O. C. Roberts (*Bird-Banding*, **42**: 165–184, 1971), I. R. Savidge and D. E. Davis (*Bird-Banding*, **45**: 152–155, 1974), and L. R. Mewaldt (*N. Amer. Bird Bander*, **1**: 14–20).

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Anting by Common Crows.—In the past few decades anting has received the attention of several biologists (Whitaker, 1957; Potter, 1970; Potter and Hauser, 1974; Skutch, 1977). Most authors agree that observing anting in the wild is uncommon, even though Potter (1970) considers it a common form of avian behavior. This paradox can be attributed to the unpredictability of the behavior, in part an artifact of our lack of understanding its function. Because the purpose of anting is still unresolved, it seems desirable to continue documentation of observations of this activity in wild birds.

On 11 May 1979 along the Clark Fork River in Missoula, Montana, at 1000 (temp. 65°F), a Common Crow (*Corvus brachyrhynchos*) landed in the weeds in direct sunlight about 30 m in front of me. With binoculars I could see two other crows on the ground partly hidden in the weeds. I was able to approach to within 7 m of the birds before one saw me and flew away. The other two remained undisturbed. At that distance I could hear constant guttural vocalizations from both birds. One bird was settled atop a mound of ants (*Formica criniventris* Wheeler) with its wings partly spread at the sides, tail fanned, belly on the ground with body plumage ruffled. The other was settled in similar posture on a trail adjacent to the mound where ants were common also. Both birds remained in their positions for 10–15 sec, then stood and moved to new spots, one bird on the mound and one on the trail. I saw both birds do this 4 or 5 times each over a 3-min period before they flew away. During that time I was detected by both birds yet they continued to ant, leaving only when disturbed by the passage of a nearby train. One bird then perched atop a stationary boxcar for 1 min during which it picked at its legs and belly plumage several times, possibly removing ants.

The behavior of the crows fits the description of passive anting (defined in Whitaker, 1957, and Potter, 1970) in which the bird settles on ants and allows them to crawl through the plumage. In previous weeks crows in the area were molting remiges and retrices, but I failed to note plumage conditions of the anting birds. Thus I cannot provide additional evidence in support of Potter's (1970) hypothesis that anting is related to feather emergence. Passive anting by captive Common Crows has been described by Weber (1935) and Ivor (1956), but to my knowledge this is the first documented case of anting for this species in the wild.

I thank Dr. James Lowe of the University of Montana for identification of the ants.

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- PAUL HENDRICKS, 305 East Maplewood Ave., Littleton, CO 80121. Received 11 June 1979, accepted 7 October 1979.

An Analysis of the Stomach Contents of Some Sharp-shinned Hawks (*Accipiter striatus*).—Of the three North American accipiters occurring north of Mexico, it is generally assumed that the Sharp-shinned Hawk and Cooper's Hawk (*A. cooperii*) feed primarily on birds, whereas the Goshawk (*A. gentilis*) takes considerable numbers of mammals as well. An examination of the stomachs of 159 Sharp-shinned Hawks killed during the 1880's and 1890's revealed that, of 107 stomachs containing food, 103 (96%) had bird remains (Fisher, U.S. Dept. Agric. Div. Ornithol. and Mam. Bull., **3**: 35-37, 1893). Storer (*Auk*, **83**: 432, 1966) reported the food of Sharp-shinned Hawks as 97% birds and 3% mammals.

In the present study the stomachs of 110 Sharp-shinned Hawks taken between 1917 and 1941 were obtained from the U.S. Fish and Wildlife Service. All major geographical regions of the continental United States, including Alaska, were represented as well as some Canadian provinces (British Columbia, Alberta, Saskatchewan, Manitoba, and Ontario). Although some of the hawks were obtained in each season of the year, most were collected in September and October, probably while they were migrating.

Eighty-six stomachs (78%) contained prey fragments and 24 (22%) were empty. Seventy-three (85%) of the 86 stomachs with food in them contained parts of birds. Passerines made up the bulk of the avian fragments, and fringillids, ploceids, and parulids were encountered most frequently. Among those that could be identified positively, the three prey species that occurred most often were Dark-eyed Junco (*Junco hyemalis*) from 10 stomachs, House Sparrow (*Passer domesticus*) from 8, and Song Sparrow (*Melospiza melodia*) also from 8. Among the parulid fragments several were probably parts of Blackpoll Warblers (*Dendroica striata*), but they could not be identified with certainty. These data on most frequent prey species agree fairly well with Storer's list (op. cit., p. 429), although the order of frequency differs from his.

Nonpasserines that could be identified included three young chickens (*Gallus gallus*), two Bobwhite (*Colinus virginianus*), one Spotted Sandpiper (*Actitis macularia*), one Mourning Dove (*Zenaidura macroura*), one Common Flicker (*Colaptes auratus*), and three Downy Woodpeckers (*Picoides pubescens*).

Mammalian fragments were found in only five stomachs (6%), and consisted of remains of three mice (two *Peromyscus*, one *Microtus*) and two chipmunks (*Tamias*). Reptilian fragments from two stomachs (2%) were parts of one fence lizard (*Sceloporus*) and one garter snake (*Thamnophis*). No amphibian fragments were found.

An unexpectedly large number of stomachs contained insect fragments. Although Fisher (op. cit.) reported insects in only five (5%) of 103 stomachs, in the present study insect fragments were found in 14 stomachs (16%). Most were parts of grasshoppers (Orthoptera), but a few exoskeletal pieces of beetles (Coleoptera) and butterflies (Lepidoptera) were also found. Because some of the insect parts were found in stomachs that also contained bird remains, it is impossible to know which insects were actually captured by the hawks and not by their avian prey.—STEWART DUNCAN, *Biology Department, Boston University, Boston, MA 02215*. Received 5 August 1979, accepted 16 November 1979.

Starling Nest Sites and Cleared Land.—Starlings (*Sturnus vulgaris*) breed throughout Ontario, as far north as the village of Winisk near the Hudson Bay coast, where the first birds were reported in 1965 and the first nest was found in 1967. In forested northern