

highly correlated. Food size for this guild may reflect the type of food which the birds must take in order to meet their energetic requirements.

E. Macleod, J. Bouseman, G. Godfrey, and J. Sternburg helped with insect identification. R. W. McFarlane, J. P. Skorupa, and an anonymous reviewer made helpful suggestions on an earlier draft.—JOSEPH B. WILLIAMS AND GEORGE O. BATZLI, *Ecology Program and Dept. of Ecology, Ethology and Evolution, Univ. of Illinois, Urbana, IL 61801*. (Present address of JBW: *Dept. Natural Science, Pepperdine Univ., Malibu, CA 90265*). Accepted 9 Jan. 1978.

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**Mantids selected as prey by Blue Grosbeaks.**—I observed Blue Grosbeaks (*Guiraca caerulea*) at their nests in Hawkins County in upper eastern Tennessee to feed their nestlings on mantids almost exclusively. Two active nests 1.65 km apart were photographed from blinds, each over a period of 3–4 consecutive days. Observations began on 29 June and 5 July 1977 when the nestlings were approximately 1 day old. In addition Rick A. Phillips and I observed 3 other nesting pairs of grosbeaks while they were feeding nestlings at sites 1.0, 9.7, and 38.7 km from the 2 photographed nests. The behavior of the adult birds was essentially the same at all nests in over 100 observed feedings.

All the mantids these birds were gathering were very large, in excess of 75 mm, and were probably the introduced Chinese Mantid (*Tenodera aridisolia*). The head and wings had been removed from all the carcasses as had all, or most, of the legs before the insect was brought to the nest-site. This 1 food was almost the exclusive prey item (greater than 96%) brought to the young at all nests observed. The only other known food presented was an occasional grasshopper.

Males showed no strong tendency to feed and were easily discouraged by the sounds of the camera and strobes, often eating the food they carried. Females seemed little disturbed by the photographer's activities once I was concealed in the blind. They fed more often than the males, averaging 3–5 trips to each made by the male (if the male was feeding the young at all). Frequency of feeding depended, at least in part, on how far the birds went from the nest to gather food and how quickly they found it once there. Usually they would return to the same area in which the previous insect was taken upon completing a feeding. Mantids were brought to the nest as often as 5–10 min apart, but the average time between feedings was approximately 25–30 min. Most active feeding periods were the first 3 h after daylight and the last 2 h before dark. There were periods in each day when both birds would be absent from the nest and out of sight of the observer for more than an hour followed by intense activities of feeding the young.

The methods used by Blue Grosbeaks to catch mantids consisted principally of 1 or both birds flying to a weed-top perch and sitting motionless for a few seconds. The birds then either made low short flights and hovered over or adjacent to the weedy vegetation, plucking the insect from the leaves and stems, or flew to the ground and hopped among the grasses until a capture was made. The male often followed the female from place to place as she hunted and accompanied her return to the nest though not having made a kill himself.

The most common large insect in the fields where these birds were feeding were grasshoppers. These invertebrates, ranging in size from 20 mm to approximately 50 mm, were abundant in the vegetation—many jumped and flew from underfoot in all directions as I walked through the birds' nesting and feeding areas. This orthopteran is reported by McAtee (1908, *in* Bent, U.S. Natl. Mus. Bull. 327, 1968) as the most important element of the animal food eaten by this species and comprises more than 74% of the food fed to the young. The mantid's large size (most were 75–100 mm and some were in excess of 100 mm), in addition to their slow movements and their tendency to remain motionless when approached must make them most desirable to grosbeaks. Blue Grosbeaks in upper eastern Tennessee are exploiting a food source for which I find no previous record in the literature.—FRED J. ALSOP, III, *Dept. of Biology, East Tennessee State Univ., Kingsport Univ. Center, University Blvd., Kingsport, TN 37660. Accepted 7 Feb. 1978.*

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**Red fox predation on Greater Sandhill Crane chicks.**—At the Malheur National Wildlife Refuge in Oregon, Littlefield (Proc. Int. Crane Workshop, Baraboo, Wis., 1976: 86–92) established the coyote (*Canis latrans*) as a predator on Sandhill Crane (*Grus canadensis*) chicks. He recorded heavy losses of Sandhill Crane young to coyotes in 1973 and 1974 during a low point in black-tailed jackrabbit (*Lepus californicus*) populations. Walkinshaw (The Sandhill Cranes, Cranbrook Inst. Sci., 1949), however, reports having searched many red fox (*Vulpes fulva*) dens located near Sandhill Crane nests without finding any crane remains. During the spring of 1977 we observed 2 instances of red fox predation upon Greater Sandhill Crane chicks (*G. c. tabida*) in southeastern Wisconsin.

On 15 May 1977 Drieslein discovered 2 freshly killed Sandhill Crane chicks at an active red fox den within the Horicon National Wildlife Refuge in Dodge County, Wisconsin. The chicks were lying at an entrance to a den where 3 fox pups had been observed on several occasions earlier in the week. Both chicks had been bitten in the back and neck, and judging from their fresh appearance, they were probably killed that same day. Based on growth curves developed for captive Sandhill Cranes, the chicks were between 3 and 5 days old (Ron Sauey, pers. comm.).

On 22 May 1977 Bennett was observing a pair of Sandhill Cranes and their 6-day-old chick with a 60× spotting scope at a distance of 200 m. The birds were feeding in a 2 ha field of short grass surrounded on 3 sides by shrubs in northern Green Lake County, Wisconsin. At 07:10 a red fox approached from an adjacent field and disappeared into a row of shrubs at the edge of the field where the cranes were feeding. The cranes were visually screened from the fox and did not appear to be aware of his presence. At 07:20 the fox reappeared on a wooded ditch bank directly in line with the cranes at a distance of about 30 m. For the next 15–20 min, the fox remained partially concealed and motionless while the cranes continued feeding along the edge of the ditch. At 07:40 the fox ran toward the cranes, picked up the chick which was within 2 m of 1 adult, and continued running with the chick into the nearest shrubs. Both adult cranes had their heads down when the fox charged and did not react until it was within 6–8 m of the chick. Their initial response was a distraction display with each adult running in opposite directions with head and wings lowered. They continued this display for