

1918; Bent, Life Histories of North American Flycatchers, Larks, Swallows and Their Allies, Dover, New York, N.Y. 1963:429) these insects are taken as adults through aerial foraging by the swallows. This observation seems to represent an opportunistic foraging technique in response to a short-term, high density food source on the part of at least 1 of the observed pair.—RICHARD A. WOLINSKI, 11460 Chamberlain Dr., South Lyon, Michigan 48178. (Present address: 3143 Braeburn Circle, Ann Arbor, Michigan 48104.) Accepted 20 Jan. 1979.

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Sandhill Cranes prey on Canada Goose eggs.—Harvey et al. (*Wilson Bull.* 80:421–425, 1968) reported Lesser Sandhill Cranes (*Grus canadensis canadensis*) feeding on the eggs and hatching young of Blue Geese (*Anser caeruleus*) and Willow Ptarmigan (*Lagopus lagopus*). Littlefield (*Wilson Bull.* 88:503–504, 1976) saw Greater Sandhill Cranes (*G. c. tabida*) eat young Gadwalls (*Anas strepera*) and Mallards (*A. platyrhynchos*). The literature does not mention Sandhill Cranes eating Canada Goose (*Branta canadensis*) eggs.

On 12 April 1978, I was walking with a biology class along the edge of a marsh in northwestern Washtenaw County, Michigan. With 8 × 40 binoculars, I observed 3 Sandhill Cranes standing approximately 60 m away. Another crane was sitting on a nest about 15 m from these cranes, and a Canada Goose was incubating a clutch of eggs approximately 30 m equidistant from the 3 cranes and the nest. Two of the 3 cranes walked toward the goose nest. When 5 m from the nest the goose flew at the cranes and was joined by another goose in a short, but unsuccessful attempt to chase the cranes away. The cranes then approached the nest and first one, then the other ate the eggs. The geese swam nearby calling repeatedly but they did not attempt to chase the cranes. The cranes also did a great deal of calling while at the goose nest.

I waded out to the goose nest 2 h later and found a few eggshells and some eggwhite in the water next to the nest. A crane was still sitting on its nest and another crane was standing nearby; the other 2 cranes and the geese had gone.

The 2 cranes that ate the goose eggs were undoubtedly nonbreeders, although it is unusual for nesting cranes to allow such nonbreeders in their territory. A nonbreeding pair of cranes was also seen several times before and after 12 April in the marsh, but never again as close to the crane nest.

In the marshes of southern Michigan, Sandhill Cranes and Canada Geese frequently nest close to each other with little interaction. In the past 10 years, while studying 138 Sandhill Crane nests, I have found no evidence of cranes feeding on goose eggs, even when the 2 species had nests in much closer proximity than in the above example of egg predation. Cranes are opportunistic feeders (Mullins and Bizeau, *Auk* 95:175–178, 1978) and will uncommonly eat Canada Goose eggs.—RONALD H. HOFFMAN, 6142 Territorial Rd., Pleasant Lake, Michigan 49272. Accepted 3 Jan. 1979.

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Adult Brown Pelican robs Great Blue Heron of fish.—At 11:45 on 7 March 1978, on Little Cumberland Island, Georgia, I watched a Brown Pelican (*Pelecanus occidentalis*) rob a Great Blue Heron (*Ardea herodias*) of a fish. The heron captured a 28–33 cm fish in a 60 × 80 m tidal pond located 150 m from the open ocean and carried it to the ground and

there manipulated it. Within 45 sec, 3 of 8 adult pelicans that were fishing over the pond circled in a 7 m radius, 8–10 m above the heron. Each stooped several times within 3–4 m of the fish. After 8–10 circuits 1 of the pelicans landed on the heron's head forcing it to release the fish from its bill, whereupon the pelican dropped to the ground next to the heron, picked up the fish and swallowed it. Simultaneously, the other 2 pelicans landed within 1 m of the first and watched it as it consumed the fish. Neither attempted piracy and all 3 took wing as soon as the fish was eaten and recommenced flying over the pond. The heron did not attempt to recover its dropped prey.

Although they themselves are sometimes victims of piracy (Findley, *Condor* 9:35, 1907; Meinertzhagen, *Pirates and Predators*, Oliver and Boyd, Edinburgh, Scotland, 1959; Palmer, *Handbook of North American Birds*, Vol. 1, 1962), and are known to scavenge and fight with gulls for offal thrown overboard (Gifford, *Proc. Cal. Acad. Sci.* 4th Ser., Vol. 2, Pt. 1, 1913; Sefton, *Condor* 52:136–137, 1950), piracy of Great Blue Herons by Brown Pelicans is previously unreported.—KEITH L. BILDSTEIN, *Dept. Biology, Winthrop College, Rock Hill, South Carolina 29733. Accepted 28 Nov. 1978.*

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Food habits of White Pelicans during 1976 and 1977 at Chase Lake National Wildlife Refuge, North Dakota.—Quantitative studies of White Pelican (*Pelecanus erythrorhynchos*) food are lacking; however, lists of prey species taken in North Dakota have been reported by Coues (Govt. Printing Office, Washington, D.C., 1874), Kolstoe (North Dakota Outdoors 29:16–20, 1966) and Anderson et al. (*Can. Field-Nat.* 83:91–112, 1969). During the summers of 1976 and 1977, we studied prey species consumed by White Pelican chicks at Chase Lake National Wildlife Refuge, North Dakota.

The 1774.6 ha Chase Lake N.W.R. is 13 km north of Crystal Springs, Stutsman Co., North Dakota. Most of the refuge is covered by water (50%) and native and cultivated grasses (45%); the remainder is brush and marsh. It lies in the Missouri Coteau of the glaciated Prairie Pothole region (U.S.D.I., Bur. Sport Fisheries and Wildl., Washington, D.C., 1971) and supports the largest breeding population of White Pelicans in North America, ranging from 8000–10,000 nesting birds (Sloan, *I.B.B. News* 45:83–86, 1973).

Methods and materials.—Disgorged food samples were collected from chicks of varying ages, and analyzed. From 2 June through 3 August 1976, 84 regurgitated boli were collected and analyzed volumetrically with water displacement recorded as the volume per sample. When several prey species were present in the sample, each item was measured independently and a percent of the total volume was recorded. In addition, 458 boli were qualitatively analyzed, i.e., prey species noted and percent composition per sample calculated.

From 6 June–8 August 1977, 60 boli were volumetrically analyzed and 489 were qualitatively analyzed; 1091 samples were studied during both years. Relative frequency by number (RFN), frequency of occurrence (FO) and relative frequency by volume (RFV) of each prey species were computed (see Table 1 for definitions). RFN and FO were based on both volumetric and qualitative analysis, while RFV was based only on volumetric measurements.

To determine the distance traveled by White Pelicans in search of food 130 adults were marked in June 1977 with picric acid using a modification of the color-marking device described by Moseley and Mueller (*Bird-Banding* 46:341–342, 1975). A request for information on sightings of marked individuals was sent to all state and federal personnel in North and South Dakota.