

The captive bird did not eat for the first three days, but then began eating once a day when food was put before it. Earthworms and sowbugs always seemed to be the first choice when a dish filled with a variety of invertebrates was offered. When the earthworms and sowbugs were not available, foods next in preference were small snails, carpenter ants, German roaches, black crickets, lepidopterous larvae, spiders, ground beetle larvae, horsefly larvae, and rat-tailed maggots. The dipterous larvae were always eaten last.

Ground beetles, lady beetles, aquatic beetles, and braconid wasps were eaten only if no other food was present. Usually the beetle heads and elytra were not eaten. The bird refused to eat millipedes, slugs, and large land snails. The refusal to eat the large snails probably was due to their large size and heavy shell.

With the help of Leroy Korschgen, Missouri Conservation Commission Biologist, the Yellow Rail gizzard and dropping contents were analyzed. The gizzard contents were from the Yellow Rail collected on 2 May the one dropping was collected from the Yellow Rail on the day that it was captured by hand, 7 April 1961.

The captive rail refused to eat millipedes (although it had previously done so as shown by its droppings). The gizzard contents of the Yellow Rail shot also indicated consumption of millipedes. Either there was a species difference between millipedes fed in captivity and those taken in the wild or the food selection of the captive rail was influenced by the fact that more desirable items (sowbugs, earthworms) were accessible most of the time. Perhaps the bird never became as hungry in captivity as it had been in the wild during this stage in its migration.—DAVID A. EASTERLA, *Missouri Cooperative Wildlife Research Unit, Stephens Hall, Columbia, Missouri, 19 July 1961.*

Winter Barn Owl foods in a Louisiana coastal marsh.—Although the Barn Owl (*Tyto alba*) is usually associated with agricultural or wooded areas, it has been frequently encountered in the coastal marshes of Louisiana (April issues of *Aubulon Field Notes*, 1952-61). During the annual Christmas bird count an average of five Barn Owls per year for a 10-year period was reported in the marsh near the Sabine National Waterfowl Refuge. The Barn Owl was the most common owl, with 14 being reported in 1953. The fact that coastal marshes are a somewhat unique habitat for Barn Owls stimulated our interest in the foods of this bird.

The primary purpose of the study was to determine the foods consumed by winter resident Barn Owls on Marsh Island and to associate this with the availability of such foods. Also, the study was to serve as a check of the relationship between Barn Owls and the young of furbearing animals and game species in a coastal marsh.

Marsh Island Wildlife Refuge, which is owned and managed by the Louisiana Wild Life and Fisheries Commission, consists of 85,000 acres of sub-delta marsh. It lies in the Gulf of Mexico just offshore in south central Louisiana. Over 90 per cent of the island is composed of soft brackish marsh and shallow lakes. The dominant marsh vegetation is salt-meadow grass (*Spartina patens*), three-cornered grass (*Scirpus Olneyi*), and rush (*Juncus Roemerianus*). The only area of firm marsh lies in the southwestern portion of the island adjacent to the Gulf beach. This beach ridge is sparsely covered by hackberry (*Celtis laevagata*), southern prickly ash (*Zanthoxylum Clava-Herculis*), and rattle box (*Daubentonia texana*). The largest trees are about 8 inches in diameter and 50 feet high.

Barn Owls were observed on Marsh Island under a wide variety of conditions. They were seen roosting in trapper's camps, trees, low shrubs, and on the ground. Since there

are no trees large enough to contain cavities of a size that could be inhabited by the owls, they were perching on branches. During daylight hours Barn Owls were frequently flushed in the marsh several miles from the nearest trees.

A total of 804 Barn Owl pellets were collected over a six-month period from November 1959 to April 1960. They were collected on the tree-covered portion of the Gulf beach, around a trapper's camp, at the main headquarters camp, and under a steel radio tower on the Refuge. Analysis revealed that the pellets contained remnants of 1,008 vertebrate animals. Of this number, 984 (97.5 per cent) were rice rats (*Oryzomys palustris*) and 24 (2.5 per cent) were small passerine birds. The pellets contained an average of 1.22 rice rat skulls and 0.03 bird skulls. Since the rice rat was the only small mammal found in the pellets, trap sampling was done to determine if other small rodents were present on the island. Snap-type mouse traps were operated for 300 trap-nights. Only ten animals were captured and all were rice rats. Since some traps were set at camp and no house mice were caught, it is assumed that none was present on the island.

Since the rice rat was the only small mammal found in the owl pellets and during the trapping operation, it is probable that it was the only small mammal present on the island in significant numbers; hence, the only one available to Barn Owls.

Although passerine birds were abundant during the time of the study, particularly during fall and spring migrations, they were of little importance in the diet of the owls. Of particular significance is the fact that many of the small birds were in a weakened condition on arrival at the Refuge during spring migration, many barely able to fly. Consequently, they could have easily fallen prey to Barn Owls.

The young of nutria (*Myocastor coypus*), muskrat (*Ondatra zibethica*), swamp rabbit (*Sylvilagus aquaticus*), and mink (*Mustela vison*) did not occur in the pellets. The nutria population was very high. The young of this species are not only nocturnal and precocial but they are also born and suckled on exposed platforms where they are readily exposed to Barn Owls. Evidently the young of nutria are larger than the prey items desired by Barn Owls. At birth the young of the other fur animals are concealed and thus are not available to owls until partially grown.—E. S. JEMISON, *Louisiana State University School of Forestry, Baton Rouge, Louisiana*, and ROBERT H. CHABRECK, *Louisiana Wildlife and Fisheries Commission, Grand Chenier, Louisiana*, 10 July 1961.

Nest sanitation of Yellow-bellied Sapsucker.—Yellow-bellied Sapsuckers (*Sphyrapicus varius*) feed sap to their young along with insects and the fact that nestlings have fairly liquid excreta may account for the somewhat unusual methods which this species uses in nest sanitation. The following observations were made over the course of six years on 20 pairs which nested at Tamworth, New Hampshire.

Male sapsuckers, do most of the nest cleaning. On 17 June 1957, for example, I heard a steady pecking from inside the nest hole of Pair A, then saw the male appear at the entrance with a large billful of mushy feces. He flew to a maple trunk 40 feet away, shook the excreta loose, and wiped his bill on the bark a few times as if cleaning it. The male then returned to the nest. He carried out his routine three times in a row, always flying to the same place on the maple trunk to scatter the feces onto the dry leaves on the ground below. Observations made in 1959 brought out additional aspects of this routine sapsucker behavior. Thus, on 21 June I saw a female emerge from a nest with a billful of feces, then fly to an oak trunk 25 feet away and scatter it. Three days later, I watched the male scattering excreta from the oak. Both members of the pair, therefore, were frequenting the same spot for this purpose and the spattered leaves below