

borhood house cats. Because the stage of incubation was unknown, it was necessary to check the clutch for hatching signs several times. The hen submitted to handling without flushing. When the eggs began to hatch, the hen and the entire clutch were removed from the cavity and transplanted to a nest box on the Great Meadows National Wildlife Refuge, 1.5 kilometers northwest of the tree nest. The hen was blocked in with the clutch for an hour and a half during which time the entire clutch hatched. The eleven ducklings were web-tagged according to methods described by Grice and Rogers in *The Wood Duck in Massachusetts* (Massachusetts Division of Fisheries and Game, Westboro, 1965), and the hen and brood blocked in the box. After a wait of twenty minutes, the entrance was opened. The hen remained in the box until we left the site.

Four of the ducklings were recovered during subsequent fall trapping, indicating a successful relocation.—H. W. HEUSMANN AND JAMES E. CARDOZA, *Massachusetts Division of Fisheries and Game, Westboro, Massachusetts 01581, 14 November 1972.*

**An upland nest of the Redhead far from water.**—On 30 May 1972 while searching for duck nests in a field of smooth brome grass (*Bromus inermis*) and alfalfa (*Medicago sativa*) near Roscoe, South Dakota, we flushed a female Redhead (*Aythya americana*) from a nest with 12 eggs. The eggs had been incubated about 8 days and were surrounded by abundant white down. Nest material was dead brome grass, and the base of the nest was elevated about 4 inches above the ground. The nest was located 872 feet from the nearest wetland with water. No wetland basins that could have held water earlier were nearer to the nest. The surrounding region contained a good complex of 30–40 temporary, seasonal and semipermanent wetlands per square mile. Our next visit to the nest on 22 June revealed it had been destroyed, probably by a raccoon (*Procyon lotor*).

Redheads usually nest in emergent vegetation over or near water. Low (Ecol. Monogr., 15:35–69, 1945) studied 160 Redhead nests in Iowa and found that all were over water. Miller and Collins (California Fish and Game, 40:17–37, 1954) found that 59 of 60 Redhead nests were in emergent vegetation, on muskrat houses, or on islands. The other nest was in nettle (*Urtica californica*). However, in Utah, McKnight (Waterfowl production on a spring-fed salt marsh in Utah. Ph.D. Thesis, Utah State University, Logan, 1969) found 50 of 69 Redhead nests on unwatered sites, and in an Alberta study, Keith (Wildlife Monogr. No. 6, 1961) found 50 percent of the Redhead nests on land. Nests in the Utah study were an average of 7 feet from water; three of these were located 20 feet or more from water. Nests in the Alberta study were an average of 5 feet from water. Hammond and Mann (J. Wildl. Mgmt., 20:345–352, 1956) reported Redheads nesting as far as 50 feet from water on islands but seldom more than 1 foot from water on the mainland.—JOHN T. LOKEMOEN AND HAROLD F. DUEBBERT, *U.S. Bureau of Sport Fisheries and Wildlife, Northern Prairie Wildlife Research Center, Jamestown, North Dakota 58401, 26 February 1973.*

**Additional records of non-fish prey taken by Ospreys.**—Although the food of the Osprey (*Pandion haliaetus*) is considered to be almost entirely live fish (Fisher, 1893; Bent, 1937; Brown, 1964; Brown and Amadon, 1968) there are numerous accounts of non-fish prey being taken by this species: Mammals—ground squirrels, mice, steppe voles (Dement'ev and Gladkov, 1951), rabbit (Long, 1968), marsh rabbit (John C. Ogden, pers. comm.), rice rat (McCoy, 1966), rat (King, 1972), and an unidentified small mammal (Tait, et al., 1972); Birds—crow, Black-crowned Night Heron (Allen, 1892), storm petrel (Brown and Amadon, 1968), sandpiper (Jourdain, 1939), chicken (Clark-Kennedy, 1874;

Harvie-Brown, 1868; May, 1935; Witherby, et al., 1939), Jackdaws, ducks, Herring Gulls (Dement'ev and Gladkov, 1951), duck, Mallard (Kuser, 1929), Coot (Jourdain, 1939), Cardinal (Sindelar and Schuller, 1968), Lapwing (Swaine, 1947), grebe (Bannerman, 1956); Reptiles—turtles (Bent, 1937), snakes (Macoun and Macoun, 1909), water snake (May, 1935), seasnakes (Grossman and Hamlet, 1964), painted turtle (Postupalsky and Kleiman, 1965), alligator (Ogden, pers. comm.); Amphibians—frogs (Dement'ev and Gladkov, 1951; May, 1935; Witherby, et al., 1939); Invertebrates—crustaceans (Brown and Amadon, 1968), sea snails (Grossman and Hamlet, 1964), beetles (Witherby, et al., 1939). Among the reasons suggested to explain Ospreys taking prey other than live fish are scarcity of fish due to a kill (Tait, et al., 1972); murky water or inclement weather (Dement'ev and Gladkov, 1951); lack of fishing skill due to youth (Brown and Amadon, 1968); or the attraction of easily captured crippled birds (Dement'ev and Gladkov, 1951; Brown and Amadon, 1968), captive birds (ducks, Kuser, 1929; chickens, at least five references), or nearby nesting herons (Allen, 1892). Our observations of a solitary pair of Ospreys nesting near the University of South Florida, Tampa, along the Hillsborough River, Hillsborough County, Florida, indicate that non-fish prey may be more regular in the diet under some circumstances than the literature suggests.

During April to June 1972 we saw this pair capturing or carrying non-fish prey on several occasions. Wiley observed an Osprey capture a cotton rat (*Sigmodon hispidus*) in a marshy pasture adjacent to the river-bottom nest area on three separate mornings. The captures were made as the bird flew low over the open marsh in the direction of a regularly hunted pond. Two of the rats were taken by a direct stoop from flapping flight. In the third case the bird hovered about four seconds before dropping onto the prey. All three cotton rats were carried directly to the nest. In the same area Bruce Barbour (pers. comm.) witnessed one of the Ospreys capture a small mammal with a direct stoop on 5 May 1972.

Between a pond on the west edge of the University of South Florida campus where the pair of Ospreys usually hunted for fish during the breeding season and the nest is a partially cleared live oak (*Quercus virginiana*) woodland with a drainage ditch leading to the pond. Cotton rats were often seen during daylight along this ditch. Wiley observed an unidentified rodent (probably *S. hispidus*) being carried to the nest from this area on 7 April and 17 May 1972. On 7 May 1972 Ed. Carlson (pers. comm.) saw an Osprey, probably one of this pair, north of the campus carrying a rat-sized mammal.

On 14 May 1972 Lohrer saw one of the Ospreys being mobbed by several Mockingbirds (*Mimus polyglottos*) as it perched in a live oak area on campus with a bird in its talons. The prey appeared to be a full-grown Mockingbird or possibly a Loggerhead Shrike (*Lanius ludovicianus*).

In addition to the above observations, remains of three adult cotton rats (consisting of heads, tails, and pellets containing fur), a two-week-old Wood Duck (*Aix sponsa*), and an 8-inch Florida red-bellied turtle (*Pseudemys nelsoni*) were collected at the nest by Wiley. Elsewhere in Florida during 1972, Brian Harrington (pers. comm.) observed an Osprey carrying a large rodent over the St. Johns River marshes, Brevard County, on 9 April, and King (ibid) recorded an Osprey capturing a rat in a field near Oviedo, Seminole County, on 5 April.

During the period of our observations there was little or no rain, local waters were not murky, and the pond at which the Ospreys often fished appeared to contain numerous pan fish, bass, and *Tilapia*. It appears, therefore, that poor hunting conditions or fish scarcity did not account for the relative frequency with which this pair preyed on small mammals. During the spring and summer of 1972 cotton rat populations were unusually high in

Central Florida at the Archbold Biological Station (James N. Layne, pers. comm.) and Merritt Island (Llewellyn M. Ehrhart, pers. comm.). Therefore, we think it is possible that some inland nesting Ospreys might exploit an abundant alternative food source, in this case, cotton rats, since they are presented with more opportunities for non-fish prey, particularly mammals and reptiles, as they fly from the nest to scattered bodies of water than are coastal nesting Ospreys.

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