
Forty regurgitated pellets were collected from the barn in August 1981 and examined for identifiable remains. Skulls, feet, and feathers of birds, and skull, mandibles, and fur of mammals were contained in the pellets and were used to identify prey, primarily by comparing with museum specimens. Numbers of individuals consumed were determined by counting skulls or skull fragments within pellets. Biomass of each prey type was estimated from published weights (Marti 1974) and museum specimens.

Avian material occurred in 39 of 40 (98%) pellets and mammalian remains occurred in only four (10%). Remains of 21 Red-winged Blackbirds (*Agelaius phoeniceus*), four Starlings (*Sturnus vulgaris*), one Rusty Blackbird (*Euphagus carolinus*), one Common Grackle (*Quiscalus quiscula*), one *Microtus* sp., and one *Peromyscus* sp. were identified. Based on prey weight estimates (in parentheses) the relative contribution to diet biomass of these taxa was as follows: Red-winged Blackbird (60 g) 69.6%; Starling (80 g) 17.7%; Rusty Blackbird (65 g) 3.6%; Common Grackle (100 g) 5.5%; *Microtus* sp. (45 g) 2.5%; *Peromyscus* sp. (20 g) 1.1%. Birds comprised 96.7% of the food ingested.

Marsh areas of the Marais Temps Clair Wildlife Area were used by large flocks of “blackbirds” during winter 1980–81. Although Barn Owls typically feed on small mammals, their diets have been shown to shift to include more avian prey when rodent populations decline (Hawbecker, Condor 47:161–166, 1945; Otteni et al., Wilson Bull. 84:434–448, 1972; Smith et al., Great Basin Nat. 32:229–234, 1972). No studies in North America have documented a proportion of birds in the diet as large as that reported here. Lacking information on small mammal abundance, we don’t know if the higher incidence of birds resulted from a decline in rodent populations or was simply a dietary response to a readily available concentration of marsh dwelling birds.

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