

effect decapitation. This suggests that the sparrow was not killed as a result of simple aggression.

It appears, therefore, that the blackbird might have been outside the bag, uncaught, and had killed the Sharp-tailed Sparrow as an item of food, deserting his prey upon our intervention. That the sparrow was not merely killed, but also decapitated, strengthens this contention, as this seems to be a common starting point among avian predators on prey of only slightly smaller size.

A cursory survey of the literature on the Red-winged Blackbird suggests that the species eats nearly all invertebrate prey likely to be encountered by it. Only Bendire (*Life Histories of North American Birds*. 1895. Smithsonian Inst., U.S. Nat. Mus. Spec. Bull. No. 3:1-518) lists vertebrate food, namely, newts. It seems probable from this observation, that other vertebrates, including small birds, may be taken when available.

I am grateful to Mr. Gordon T. Nightingale, Director, Parker River N. W. Refuge, for permission to band on Plum Island, and to Mr. Murray Gardler for his help in the field. This work was supported by National Science Foundation Grant G 4811.—CARL W. HELMS, *Department of Biology, Bucknell University, Lewisburg, Pennsylvania, 18 August 1961*

Breeding of Red-winged Blackbird in captivity.—A pair of Red-winged Blackbirds (*Agelaius phoeniceus*) that had been caught as adults and kept together in captivity for a year was introduced into a screened pen 40 feet long, 20 feet wide, and 6 feet high on the campus of the University of Massachusetts during the winter of 1959-60. These birds nested, laid eggs, and presumably hatched young. The birds were fed, in addition to water, a high energy ration of the following ingredients in pounds per hundred weight (or grams): ground yellow corn, 79; soybean oil meal (95 per cent protein), 7; menhaden fish meal (60 per cent protein), 6.7; alfalfa leaf meal (20 per cent protein), 5; iodized salt 1; manganese sulfate (70 per cent), 0.025; dicalcium phosphate, 1; ground limestone, 0.25; dry vitamin A (10,000 IU/g), 45 grams; and dry vitamin D₃ (3,000 IU/g), 0.07 grams.

The field pen was planted to clover and grasses. Hussocks of marsh grasses were potted in the otherwise dry ground. Nesting materials, consisting of broken-apart fresh nests of other Red-winged Blackbirds available from a concurrent study, were scattered through the pen. During June the female constructed a nest on one of the purlins of the pen. It is not known how far nesting activity progressed as hatched shells were not discovered until long after the death of the female in late June. In early July a replacement female was introduced. This second bird was taken directly from a wild population that had been intensively studied. She was taken on a nest in the wild containing three slightly incubated eggs—her first clutch of the season (at least in that colony). Within a month after capture this female also built on a purlin instead of in the vegetation provided, laid eggs, and succeeded in hatching at least two young. The young died very soon after hatching presumably because insufficient protein and live food were available in the screened pen. To my knowledge this is the first record of Red-winged Blackbirds breeding in captivity. The possibility of controlled experimental work on reproductive physiology and reproductive behavior of this economically important species is suggested. I acknowledge the aid of Allyn Coombs in this study. The birds were contributed by the Section of Upland Ecology, Patuxent Wildlife Research Center; the diet was formulated and contributed by Dr. D. L. Anderson, Department of Poultry Science, University of Massachusetts.—DAVID KENNETH WETHERBEE, *Massachusetts Cooperative Wildlife Research Unit: University of Massachusetts, Amherst, Massachusetts, 16 November 1960.*