

more than 10 cc of blue mussels, or mussels more than 1 inch long, in section 1 at death.

Other common soft-shelled foods of wintering New England Black Ducks, such as bent nosed clams (*Macoma balthica*), ribbed mussels (*Modiolus demissus*), soft-shelled clams (*Mya arenaria*), and salt marsh snails (*Melampus bidentatus*), are probably digested and passed at the same rate as blue mussels. Non-shelled animal foods such as scuds (*Gammarus* sp.), beach fleas (*Orchestia* sp.), and worms (*Nereis* sp.) are probably digested at least as rapidly.

Hence, Black Ducks killed after more than 30 minutes of feeding may have eaten, digested, and passed certain animal foods. Conversely, if the Black Ducks have not been gorging or stuffing foods, any soft bodied or soft-shelled animal foods contained in the esophagus or crop probably were just eaten.

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Feeding interactions between Pied-billed Grebes and herons.—On 17 October 1970 we noted a Louisiana Heron (*Hydranassa tricolor*) and a Snowy Egret (*Leucophoyx thula*) feeding in a small (ca. 0.5 hectare) freshwater pond near the northern tip of Ashe Island, just south of the New River Inlet, in Onslow County, North Carolina. Both herons were moving slowly in shallow water near the edge of the pond. Three Pied-billed Grebes (*Podilymbus podiceps*) were swimming about 2 to 4 m from the herons, remaining just offshore of the birds. All five birds were feeding actively and occasionally catching small fish about 5 to 8 cm in length. After about 1 or 2 minutes, the Louisiana Heron flew to a small island in the pond, the Snowy Egret walked to the shoreline and remained stationary, and the grebes dispersed. Shortly thereafter the Louisiana Heron began to forage actively, and it was soon joined by two of the grebes. This association lasted about 2 minutes, and then the heron stopped moving and the grebes swam away. About 3 minutes later the Snowy Egret resumed active feeding and it was soon joined by all three grebes. Christman (Condor, 59: 343, 1957), Parks and Bressler (Auk, 80: 198, 1963), and Emlen and Ambrose (Auk, 87: 164–165, 1970) have reported commensal relationships between mergansers, cormorants and various species of herons. All these observers felt that the herons were reacting to the presence of the swimming birds, or the fish driven inshore by them. Our observations appear to be the first indicating a grebe-heron interaction, and the first in which the swimming birds were reacting to the herons. Possibly the grebes were reacting to the fish disturbed by the herons, but the rapidity with which the grebes assembled in the vicinity of a moving heron lead us to doubt this hypothesis. This incidental observation was made while the authors were engaged in a research project funded by the National Science Foundation (Grant GB-8771).—HELMUT C. MUELLER, MAXEEN G. BIBEN, and HAROLD F. SEARS, *Department of Zoology, University of North Carolina, Chapel Hill, North Carolina 27514.* Accepted 20 Jan. 71.