

it up and dropped it a second time, which insured its death. There were often 20 Dovekies struggling at the water's edge at one time, with the gulls fighting to get at them. On about 10 occasions a gull was seen actually catching a Dovekie on the wing, "picking it out of the air." Each time it was caught by the back of the neck and brought down to the ground, shaken hard until it became limp, and then eaten. Of the thousand or more Dovekies blown ashore here, Dr. Clark believes that few if any survived, "they were no doubt eaten at once as gulls were in the air everywhere."

No specific instance of this species catching Dovekies has been found in literature or through correspondence. The dropping of clams and other molluscs on hard surfaces by various species of gulls is well known. But Tinbergen ("The Herring Gull's World," Collins, 1953, p. 31) says: "I know of only one instance in which a gull was seen dropping something soft" (a Great Black-backed Gull dropping a rat).

The general features of this Dovekie wreck in eastern Massachusetts were described by Snyder, 1960, *Mass. Audubon*, 44 (3): 117-121.—DOROTHY E. SNYDER, *Curator of Natural History, Peabody Museum, Salem, Massachusetts.*

Starlings Fed by Purple Martins.—Observations made of a martin house on 4 July 1959, at Otsego, Michigan, revealed an incidence of foster parental care of a brood of Starlings (*Sturnus vulgaris*) by a pair of Purple Martins (*Progne subis*). Such behavior was not recorded in the studies of the Purple Martin by either Bent (1942, U.S. Nat. Mus. Bull. No. 179: 489-509) or Nice (1952, *Am. Midland Nat.*, 47: 606-665).

Early in the afternoon a considerable commotion from within the compartment adjacent to the Starlings' attracted my attention, and close scrutiny with binoculars disclosed a female martin struggling with some unidentifiable object. Some time later, as the male martin approached the entrance of the compartment with food, it was greeted by the heads of two young Starlings, and a short time later the number had increased to three. About midafternoon a fourth Starling, apparently the smallest of the brood, was observed walking across the balcony from its compartment and entering the martins' compartment.

The male martin made at least 40 trips during the remaining part of the afternoon and readily presented the food it had collected to the young Starlings, making no attempt to enter the compartment other than to pick up fecal material dropped near the entrance. The female martin made less than half as many trips as the male and frequently attempted to force its way into the compartment but was usually unsuccessful as the Starlings blocked the entrance and met the bird's advances with open mouths. Once the female had gained entrance, it had great difficulty pushing its way back out past the young birds.

The feeding of the Starling brood was continued the following day. As it was necessary to leave the area and thus discontinue further observations, one of the young Starlings was collected and is now held by the Department of Zoology, Michigan State University.—WILLET T. VAN VELZEN, *Department of Entomology, Michigan State University, East Lansing, Michigan.*

Foot-Quivering by Foraging Hermit Thrushes.—In his discussion of "hostile" behavior by Hylocichlid thrushes (*Auk*, 73: 313-353, 1956), Dilger interprets the foot-quivering that is done by some of these birds as a display indicating a very low general motivation of the attack and escape drives in balance (p. 331) and states (p. 332) that he has never seen it done by a foraging bird.

Eight out of nine Hermit Thrushes (*Hylocichla guttata*) that I have watched closely as they foraged on lawns have done foot-quivering, sometimes so vigorously that the whole body shook. Some of them have done it at practically every pause during as much as seven and eight minutes on the lawn, some others only occasionally. On a few occasions I have been able to see that the raised, quivering foot was patting only the tops of the grass blades; at other times the ground has clearly been patted.

A bird on a lawn in a wooded section of Baltimore city, 16 October 1953, was the first that I noticed doing foot-quivering. On 20 April 1956, on my lawn at the edge of a wood in Larchmont, Baltimore County, another did it; during that feeding period I banded the bird; six more times, then, through 25 April, I saw it forage on the lawn, and each time it did foot-quivering. On 23 and 25 April an unbanded Hermit Thrush fed on the lawn simultaneously with, but many yards away from, the banded bird, and both times did foot-quivering. On 30 April and 1 May a Hermit Thrush there did it three of seven times that it was seen; the last two times it performed it was identifiable by color bands as the same individual. One on my lawn 11 October 1956, did it on both of two occasions that it was watched; one there 15 April 1957, did not; one 12 October 1957, did it on two occasions that it was watched, and two birds on 13 October did it during four out of six observations.

An observation just published by Skutch ("Life Histories of Central American Birds," II: 101, 1960) on the Russet Nightingale-Thrush (*Catharus occidentalis*) appears to be another instance of foot-quivering during foraging. Of a bird he watched in a Guatemalan cloud forest as it ate the berries of a trailing vine, he says: "At intervals the bird was seized with a fit of trembling, and the tail, feet, and whole body quivered as though it suffered from the cold." *Catharus* is the genus to which Dilger (op. cit.) proposed that the Hermit Thrush be transferred.
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