

The formation of pellets by the Barred Owl.—An adult female Barred Owl (*Strix varia*) from Tulsa, Oklahoma, was used in the following investigation of pellet formation, which was made in 1939 in the University of Michigan Laboratory of Vertebrate Biology at the suggestion of the Director, Lee R. Dice.

Deer mice (*Peromyscus*) were supplied to the owl as its only food, always in numbers exceeding its maximum nightly consumption. The pellets regurgitated by the owl were collected each day, stored, and examined later to determine the number of mice in each pellet. The number of pairs of mandibles each pellet contained was used as an index to the number of mice that went into its formation, since the mandibles are especially resistant to digestion and are easily identified. It was assumed that the parts of a mouse were not dissociated in digestion; that is, when both mandibles were present in any pellet, it was assumed that the remains of the whole mouse were there. Careful examination of all the bones in a number of pellets showed that this assumption was justified in general, though it could not be proved in every case, and it is possible that there was a certain amount of dissociation.

The owl ate 149 mice (all adult, or of near adult-size) between January 7 and March 25, an average of 1.9 mice per night. Of these, 148 mice, or 99.3 per cent, were counted in the pellets, which varied in size as follows: 68 pellets were small, and each contained the remains of a single mouse (46 per cent of the total mice consumed); 28 medium-sized pellets contained the remains of two mice each (38 per cent of the total mice); 8 pellets of large size carried the remains of three mice each (16 per cent of the mice). Pellets were always regurgitated within eight hours after a meal. Pellet size was apparently not determined by the number of mice taken at a feeding: the owl was occasionally observed in pellet regurgitation, and several times two or three small pellets, each containing the remains of a single mouse, were expelled at brief intervals.

When first regurgitated, a pellet is a solid, moist mass of closely packed hair and skeletal remains, held firmly together by a mucilaginous secretion. The pellets harden as they dry and are, for a time, quite resistant to dissection. They come apart easily if soaked in water; kept in dry storage, they disintegrate within a year.

In order to determine whether hair is essential as a binder for pellets, the owl was fed deer mice of a hairless strain for four consecutive nights. Pellets regurgitated after these feedings varied in size and content just as "normal" pellets did. Although less firm than the hair-containing pellets, they were cemented by the same thick mucilaginous substance which became firm on drying, and they retained their distinctive shape throughout regurgitation, the drop from perch to floor, and later handling by the investigator—demonstrating that neither the formation of pellets nor the retention of their characteristic form requires the presence of hair.—E. CARL SENSENIG, *Department of Anatomy, Tulane University, New Orleans.*

Cape May Warblers capturing flying insects.—From May 8 to 14, 1944, I observed five male and three female Cape May Warblers (*Dendroica tigrina*) about my orchard in Findlay, Hancock County, Ohio. The warblers fed for the most part in the topmost branches of the trees, but occasionally one of them, always a male, would descend to a wire cable that was stretched at a height of three feet between two posts of the grape arbor. The bird would remain there for 15 or 20 minutes at a time, half walking, half fluttering, back and forth on the wire while weaving from side to side, craning its neck, and snapping its beak. Sitting 15 feet away from the wire and using my binoculars, I determined the purpose of this peculiar behavior: the bird was catching the tiny insects that moved to and fro in pale wavering clouds in the shade of the trees. An insect was captured, on the average, every five seconds. The misses were few, averaging one in every 15 attempts. One bird, for example, caught 156 insects in 12 minutes. The insects were fruit flies (*Drosophila melanogaster*) and a species of midge.—RICHARD STUART PHILLIPS, *Findlay, Ohio.*