

Starlings nesting at Churchill, Manitoba.—The most northerly point in North America, except for Greenland, where the Starling (*Sturnus vulgaris*) has been reported is Churchill, Manitoba, on Hudson Bay at 58° 45' north latitude. The Starling was first seen here by Ralph S. Palmer in June, 1940, when he found an individual but no evidence of nesting (1941, Canadian Field-Naturalist, 55: 52).

In the summer of 1952 several pairs nested successfully at Churchill. On June 8 and June 11, I watched at least four pairs feeding young. I was not able to climb to the nests, but from the calls of the young at the approach of the adults, I judged they were almost ready to leave. So when I found no Starlings near the nests on June 14, I concluded the young had left. A number of immatures were noted in a flock of about 60 Starlings seen in the vicinity by Mrs. Eva Beckett on June 24 and on several occasions thereafter.

The nests were located under the conveyor, which slants upward from the base of the grain elevator to the ship-loading dock. This conveyor is completely enclosed, but the corrugated siding does not fit snugly to the supporting girders at all points. Here, between the siding and the girders at estimated heights of 60 to 70 feet, the Starlings find cavities suitable for nests.—HAROLD MAYFIELD, 2557 Portsmouth Ave., Toledo 13, Ohio.

Nesting and Food of the Barn Owl (*Tyto alba*) in Hampshire County, Massachusetts.—Barn Owls were discovered breeding on the administration building of Mount Holyoke College in the summer of 1951. The four young had left the 'nest' by the second week of September. This means that the eggs had been laid early in June, since the incubation period is 30 days (Wallace, 1948) and it takes approximately two months for the nestlings to reach the stage where they are able to fly from their nesting quarters (Bagg and Eliot, 1937). From the fall of 1950 to the spring of 1951, 28 Barn Owl pellets had been collected in a nearby section of the campus and especially near an old, no-longer used schoolhouse, located directly west of the administration building. Possibly the birds had roosted there, and when the building was demolished in the spring of 1950, they sought refuge in the nearest available building.

According to Campbell (1952) the pair of Barn Owls that was located in Belchertown in the summer of 1951 established the third known breeding record for western Massachusetts. However, since their eggs failed to hatch, the rearing of young owls in South Hadley constitutes the third successful breeding record for this area.

The nesting site was on the front balcony of the third story, a site very similar to that described by Phillips (1951). The balcony faced west, and the portion used for the nest was approximately 8 feet by 1 foot. After the young had left the nest, it was found that the floor was covered to a depth of 15 inches with bones, fur, and fecal remains, but no whole pellets were present. This material was collected and later analyzed. Wallace (1948) noted that the female Barn Owl deliberately breaks up the regurgitated pellets to form a nest for her offspring. Although their decomposition is accelerated by rain, they may remain whole for 8 to 10 weeks (Wilson, 1938). Thus the absence of entire pellets in the nesting debris of the present study was not surprising, since it had been accumulating over a period of at least three months.

The 28 Barn Owl pellets that had been previously collected were also analyzed. They were oval and black, and seven of them, after having been stored for several months, averaged 7.6 grams in weight with a range of 3 to 11 grams. Wallace (1948) recorded an average dry weight of 6.8 grams for the 254 pellets he examined. The average dimensions of the pellets were 65.6 mm. by 32.7 mm., and they ranged

from 37 mm. \times 25 mm. to 85 mm. \times 31 mm. Measurements of Barn Owl pellets had been previously recorded as 3" \times 1," i.e., 76 mm. \times 25 mm. (Eliot, 1932); 50 mm. \times 31 mm. (Wilson, 1938) and 53 mm. \times 30 mm. (Wallace, 1948).

For both the 28 pellets and the nesting site material, skulls were saved for identification purposes and the mandibles counted so as to obtain an estimate of the number and kind of animal prey consumed. Sincere appreciation is accorded to Dr. W. J. Hamilton, Jr. of Cornell University and Mr. Andrew Starrett of the University of Connecticut for aid in identification of the material. The 28 pellets contained an average of 2.8 animals, 6 being the largest number present in a single one. Corresponding figures in the literature are 3.1 and 7 (Wilson, 1938) and 2.7 and 8 (Wallace, 1948). The results of the analysis are given in the following table.

FOOD OF THE BARN OWL AT SOUTH HADLEY, MASSACHUSETTS, EXPRESSED AS PER CENT OF THE TOTAL NUMBER OF INDIVIDUALS TAKEN

<i>Prey species</i>	<i>Pellets from roost (78 individuals)</i>	<i>Material from nest site (442 individuals)</i>	<i>Total (520 individuals)</i>
Starnose Mole (<i>Condylura cristata</i>)	2.6	10.9	9.6
Hairytail Mole (<i>Parascalops breweri</i>)	2.6	0.9	1.2
Shorttail Shrew (<i>Blarina brevicauda</i>)	26.7	17.4	18.8
White-footed Mouse (<i>Peromyscus leucopus</i>)	3.9	1.4	1.7
Meadow Vole (<i>Microtus pennsylvanicus</i>)	60.3	64.9	64.2
Norway Rat (<i>Rattus norvegicus</i>)	2.6	0.7	1.0
House Mouse (<i>Mus musculus</i>)	0.0	0.2	0.2
Meadow Jumping Mouse (<i>Zapus hudsonius</i>)	1.3	2.7	2.5
English Sparrow (<i>Passer domesticus</i>)	0.0	0.7	0.6
Unidentified amphibians	0.0	0.2	0.2
Total	100.0	100.0	100.0

Compared with similar investigations, the present study shows a relatively large number of moles (10.8 per cent). Forbush (1927: 193) stated that "the food of the Barn Owl in the east consists almost entirely of mice and rats, with some other small mammals and a very few birds." Again, Stearns (1950) obtained a 90 per cent incidence of *Microtus* and 10 per cent of *Blarina* in examination of several hundred pellets from Barn Owls in New Jersey. The frequency of shrews was fairly high though not as great as that reported by Price (1942) and Kirkpatrick and Conway (1947), namely 25.7 and 26.6 per cent, respectively. The combined percentage for all the insectivores in our study was approximately 30. As a result of this high incidence there was a correspondingly lower percentage of *Microtus*. The evidence that amphibians had contributed to the diet of these Barn Owls is of interest. The South Hadley data differ from those secured in an analysis of pellets from the neighboring Barn Owls in Springfield, in the presence of moles, many more shrews, but considerably fewer jumping mice, rats, and birds. In the Springfield collection, the higher incidence of rats and birds (mostly English Sparrows and Starlings) may be accounted for by the location of the nesting sites which were in the heart of the city. Phillips (1951) observed a similar condition in which the

nesting territory in the country revealed only 0.7 per cent bird remains compared with a 2.4 per cent bird content from two locations in the city. In contrast to this, South Hadley is rural, and the abundance of sandy soil with several lakes and streams scattered in the vicinity makes ideal environments, especially for the Hairytail and Star-nose moles. Availability probably determines the kind and number of prey consumed by Barn Owls.

LITERATURE CITED

- BAGG, A. C., and ELIOT, S. A., JR. 1937. Birds of the Connecticut Valley in Massachusetts. (Hampshire Bookshop, Northampton, Mass.) lxxiv + 813 pp.
- CAMPBELL, L. 1952. Not "Bats in Our Belfry"—Owls. Bull. Mass. Aud. Soc., 36: 3-11.
- ELIOT, S. A., JR. 1932. Goshawk and Barn Owl breeding in Massachusetts. Bird-Lore, 36: 1-4.
- FORBUSH, E. H. 1927. Birds of Massachusetts and other New England States. Part II (Norwood Press, Norwood, Mass.) 1 + 461 pp.
- KIRKPATRICK, C. M., and CONWAY, C. H. 1947. The winter foods of some Indiana owls. Amer. Midland Nat., 38: 755-766.
- PHILLIPS, R. S. 1951. Food of the Barn Owl, *Tyto alba pratincola*, in Hancock County, Ohio. Auk, 68: 239-241.
- PRICE, H. F. 1942. Contents of owl pellets. Amer. Midland Nat., 28: 524-525.
- STEARNS, E. I. 1950. Pampering Barn Owls. Aud. Mag. 52: 178-183.
- WALLACE, G. J. 1948. The Barn Owl in Michigan; its distribution, natural history and food habits. Tech. Bull., Agric. Exp. Sta., Michigan, 208: 1-61.
- WILSON, K. A. 1938. Owl studies at Ann Arbor, Michigan. Auk, 55: 187-197.
- ELIZABETH M. BOYD AND JOAN SHRINER, Department of Zoology, Mount Holyoke College, South Hadley, Massachusetts.

The Black-crested Titmouse of Trans-Pecos Texas.—In an earlier report (J. Van Tyne and G. M. Sutton, 1937. Univ. Mich. Mus. Zool. Misc. Publ. No. 37: 63) attention was called to some of the characters which distinguish the Black-crested Titmouse (*Parus atricristatus*) population of Brewster County, Texas. I have since been able to study more adequate material from that county and from Jeff Davis County and I propose that this form be called

***Parus atricristatus dysleptus*, new subspecies**

Type.—University of Michigan Museum of Zoology No. 65256; adult male; Texas, Brewster County, 5 miles south of Alpine, at 5,000 feet; February 15, 1935; collected by J. Van Tyne.

Characters.—Similar to *Parus atricristatus atricristatus* Cassin, described from "the Rio Grande, Texas," but the tail and wing considerably longer; crest shorter and broader; the black of crown and crest extending farther (to the nape and sometimes to the hind neck); and upper parts grayer (less olive).

Similar to *Parus atricristatus sennetti* (Ridgway), described from Bexar County, Leon Springs, but the crest shorter and broader, and the black of crown and crest deeper (not slaty), extending farther (to the nape and sometimes to the hind neck); the upper parts grayer; under parts whiter; and the cinnamon-rufous on flanks more extensive and, at least usually, darker.

Similar to *Parus atricristatus paloduro* (J. O. Stevenson, 1940. Proc. Biol. Soc. Wash., 53: 15), described from Armstrong County, Palo Duro Canyon, Harrell Ranch, but the wing slightly, the tail markedly, shorter; crest shorter and broader;