

ZOOLOGY

Chairman: JAMES B. COPE, Earlham College
WILLIAM EBERLY, Manchester College, was elected chairman for 1963

The Southeastern Shrew (*Sorex longirostris*) in Indiana¹

RUSSELL E. MUMFORD and CHARLES L. RIPPY, Purdue University and
University of Kentucky

The southeastern shrew, (*Sorex longirostris*) is evidently a rare mammal in Indiana. Lyon (1936) knew of only three specimens, all from Knox County, collected in 1895 and 1910. Lindsay (1958) recorded the next specimen 48 years later from Jefferson County. In 1959, we took specimens in Marion and Tippecanoe Counties, and Don R. Helms trapped one in Fountain County. Subsequent trapping in Tippecanoe County by Arthur Johanningsmeier, David L. Herbst, Kenneth C. Nettles, and Rippy has now accounted for 13 additional specimens. The relative abundance of this shrew near Lafayette was unexpected, and the locality is the northern recorded limit of the animal's distribution in the midwest.

Shrews of the genus *Sorex* are usually difficult to trap in numbers by ordinary methods; it may or may not be significant that none was taken in Tippecanoe County in nearly 20 years of small mammal trapping prior to 1959. Three *longirostris* were captured on the Purdue Horticultural Farm in the spring of 1962. Long-eared Owls (*Asio otus*) regularly roosted on this area for many years and hundreds of their pellets were studied without finding *Sorex* remains (Kirkpatrick and Conaway, 1947). The remaining 11 Tippecanoe County specimens were trapped on the Purdue-Baker marsh, 10 miles west of Lafayette, an area not sampled by trapping prior to 1959.

Whether recent *longirostris* specimens represent relic populations cannot be determined with certainty. Past mammal collecting throughout the state has been sporadic, with few localities being intensively studied. Small, isolated populations of *Sorex*, or other small species, might go undetected for years; this may be the case with the southeastern shrew. On the other hand, the species may have a widespread distribution in Indiana, though seldom being taken in traps. The counties where specimens were taken are scattered; intensive work is now required within the limits of these stations in order to determine the true status of *longirostris*. Biologists living in this section of Indiana are urged to make an effort to obtain records of the species. Any small shrew of the genus *Sorex* from anywhere in Indiana should be preserved. The masked shrew (*Sorex cinereus*) occurs over most, or all, of the state, and it is distinguished from *longirostris* only by tooth and skull characteristics. Near Lafayette, 1 *cinereus* has been collected at the site where 11 *longirostris* were taken, but at other stations either one or the other species was found alone.

1. This is journal paper No. 2003 from the Purdue University Agricultural Experiment Station.

The habitats where *longirostris* have been taken in Indiana include (1) a barren fencerow bordering a close-cropped, upland pasture, (2) a small overgrown field containing scattered sprouts, rank weeds, and a seasonal (spring) damp area, (3) a marsh border vegetated with heavy grasses and weeds, and (4) a marsh area grown up to briars and bordering a small creek. All of the sites had some bluegrass as ground cover; otherwise, the habitats were not similar.

External measurements of *Sorex longirostris* from Indiana are as follows: 9 males—total length, 72-81 mm. (avg. 76.0); tail, 26-31 mm. (28.4); hind foot, 9-10.5 mm. (9.7). 5 females—total length, 77-86 mm. (80.1); tail, 28-30 mm. (28.8); hind foot, all 10. The weights of 8 males averaged 3.2 gm. (2.4-4.3); 3 females averaged 2.6 gm. (2.4-2.8).

There are no data pertaining to food habits, reproduction, or most other phases of the natural history of the southeastern shrew in Indiana. Males with the largest testes were trapped in late March and in April, suggesting that mating may occur in the spring. One animal was trapped between 10 a.m. and 1 p.m., indicating that the species may be diurnal to some extent. In Tippecanoe County, the southeastern shrew, masked shrew, least shrew (*Cryptotis parva*), and short-tailed shrew (*Blarina brevicauda*) have been taken in the same small area; how these species interact is unknown, but offers an interesting research problem. Of 20 *Sorex longirostris* specimens known from the state, 9 were caught in April, 3 in March, 3 in December, and 1 each in January, February, May, June, and October.

Literature Cited

- KIRKPATRICK, C. M. and C. H. CONAWAY. 1947. The winter foods of some Indiana owls. Amer. Midl. Nat. 38:755-766.
- LINDSAY, D. M. 1958. Mammals of Ripley and Jefferson Counties, Indiana. Ph. D. Thesis Univ. of Cincinnati. 104 pp.
- LYONS, M. W., JR. 1936. Mammals of Indiana. Amer. Midl. Nat. 17:1-384.