

OHIO RECORDS OF THE JUMPING MOUSE.
Zapus hudsonius, Zimmerman.

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This species has been assumed to be present in Ohio by the earlier writers, because it was known to be found north, south, east and west of it, but definite records of its occurrence in the state seem to be very few. A. W. Brayton in his Report on the Mammalia of Ohio, Vol. IV, p. 132, Geological Survey of Ohio, states "Mr. Langdon has recognized it satisfactorily in Ohio, but mentions no specific locality." Mr. Brayton observes that "We should naturally expect an animal (in Ohio) whose dispersion is probably not less than that of *Hesperomys leucopus*, particularly as it shows a strong preference for woodlands and as there are no very extensive treeless areas in Ohio."

I have found three definite records of its occurrence in this state. The first is recorded in the Second Annual Report of the Ohio Academy of Science, p. 15. Ernest W. Vickers exhibited a specimen at the second annual meeting, 1894, taken in a grain field, September, 1893, at Ellsworth, Mahoning County. Two more were captured and others seen later in September. The second is in North American Fauna, Bull. 15, p. 17, Aug., 1899, where E. A. Preble records it from Portland Station, doubtless Portland in Meigs County, well toward the southeastern part of the state. The third is in the Ohio Naturalist for June, 1906, Vol. VI, p. 551, where Professor J. S. Hine says: "The jumping mouse, *Zapus hudsonius americana*, was observed to be abundant in certain parts of Summit County last summer. Mr. Eugene F. Cranz captured a number of specimens at Ira. They were found mostly in fields of standing grain and hay."

I am able to add a fourth record because in December, 1922, I received from County Agricultural Agent C. O. Reed, of Tiffin, Ohio, a specimen of this mouse, collected by Mr. Frank Hepp of Berwick, Seneca County, Ohio. Mr. Hepp writes: "They made their appearance in our neighborhood about 5 or 6 years ago, at least they first attracted my attention at that time. They seem to live in colonies in some localities, as about New Riegel. They are now quite plentiful in some other localities. I have yet four mounted specimens."

Dr. R. C. Osburn also reports that specimens, said to have been collected in Scioto and Ross Counties, have been brought to him, making in all six authenticated records for the state.

In the publications of the Field Museum of Natural History, Zoological Series, Vol. XI, p. 251, Feb., 1912, C. B. Cory gives a map illustrating the approximate distribution of this species and indicates that it is found over the whole of Ohio except in a few of the southern counties along the Ohio River.

Ernest Thompson Seton in his Life Histories of Northern Animals or Mammals of Manitoba, gives in Vol. I, p. 589, a provisional map which includes only the northern one-third or one-fourth of Ohio in its range. If Preble's record refers to Portland in Meigs County, the map by Cory is the more nearly correct.

An inquiry addressed to Gerrit S. Miller, Curator of Mammals, U. S. Nat. Mus., has failed to uncover any additional Ohio records. The only Ohio specimen in the National Museum is the one collected by E. A. Preble.

The specimen sent me by Mr. Hepp seems to be typical *hudsonius*, 8 inches long, hind foot 1 1-8 inches long, tail 4 5-8 inches in length. The coloring is also typical for *hudsonius* so far as can be determined from the printed description.

NATURAL HISTORY.

This mouse is commonly found in thickets by meadows and along the edges of woods. The prairie form is an inhabitant of the prairie border-lands, usually near low thickets of brush and weeds, near streams or ponds, among groves of the half-open country.

The species is never abundant in the sense that we apply that word to other species of mice. As an example of maximum abundance it is recorded that E. A. Preble once obtained a score of specimens in four days at Oxford House, Canada.

It is a solitary species, except that a family seems to stay together near the mother until they are nearly grown. In Iowa, twenty-five or thirty years ago, the writer saw 5 or 6 of a family in action almost simultaneously, much like a bunch of frogs behave when startled. When quite young and until they are nearly grown, the offspring cling to the teats of the mother when she is frightened and are carried along with her in her leaps.

This mouse does not jump in ordinary traveling or when searching for food, but when escaping from danger, real or supposed. It may cover 10 or 12 feet at the first bound, three or four

others of 8 to 10 feet follow, then it slows down to leaps of 3 or 4 feet, which are continued until it considers itself out of danger. Its course of flight is often irregular, sharply angular or reversed according to necessity. In these leaps the long tail acts both as a rudder to steer the course and as ballast to keep the head skyward. G. S. Miller, Jr., in his *Mammals of New York*, refers to an individual that had lost its tail by the knife of a mowing machine. It could leap to a tremendous distance but had no power to steer its movements. Once launched into the air, its body would turn end over end, and it was likely to alight facing the direction from which it had come. The next frantic leap would carry it back to its starting point.

The species feeds on small seeds, such as *Amaranthus*, *Ambrosia*, burr-marigold, beggar or sheep ticks, beech nuts, berries and grain; also buds, leaves, twigs, bark, grass and almost any sort of vegetable growth. It stores grain, buck-wheat and nuts for winter use.

It makes for the winter a warm, comfortable nest below the reach of frost, preferably under an old stump, and in this hibernates like the woodchuck and skunk. It may awaken from its torpor several times during the winter if warm periods violently alternate with cold ones.

While departing considerably from the burrowing type of mouse, this species is a true burrower and in summer lives in short, shallow burrows underground; in fall and winter these are made much deeper.

The distribution of the type species is from Hudson Bay south to New Jersey and in the mountains to North Carolina, west to Iowa and Missouri and northwest to Alaska.

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Received for publication May 20, 1923.