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THE POCKET MOUSE (*PEROGNATHUS FLAVESCENS*) A NEW SPECIES IN IOWA?

EMMETT B. POLDERBOER

The pocket mouse, as near as we can determine, has not been reported as occurring within the state. The purpose of this report, therefore, is to give a description of the species *Perognathus flavescens* obtained in Black Hawk County, Iowa, during the summer of 1936.

On July 17, 1936, I set 50 mouse traps along the edge of a bean field in Union township; upon tending these traps on July 18, I found a small pocket mouse included in my catch. This specimen was taken to Iowa State Teachers College and examined closely by Dr. Abbott and myself. As nearly as we could determine, the specimen corresponded with the description of the dusky pocket mouse, *Perognathus flavescens*, as described by Vernon Baily of the U. S. Biological Survey.¹

A description of the specimen and its habits, food, and natural habitat follows:

DESCRIPTION

1. Measurements of type specimen

Length— $4\frac{1}{2}$ inches (121 cm.)

Hind foot— $\frac{11}{16}$ inches (17 mm.)

Tail— $1\frac{1}{2}$ inches (44 mm.)

2. Dental formula— I. $\frac{1-1}{1-1}$; C. $\frac{0-0}{0-0}$; P.M. $\frac{2-2}{2-2}$; M. $\frac{2-2}{2-2}$ = 20

3. Characteristics—The upper parts of this mouse are grayish tan with a peppering of black; the belly and sides are ochraceous yellow; a small diamond shaped patch of white marks the center of the chest; the face, around the eyes and muzzle, is pale tan; the tail is unicolor gray; the ears are small and lie close to the head. The upper incisors are grooved. The most distinctive characteristic of this mammal is its external cheek pouches which compare in location and function with those of the pocket gopher.

BREEDING HABITS

As yet our study of these mice has yielded no data on their breeding habits. All captured specimens which we obtained were fully mature (none examined for embryos). Nelson found that a closely related species, *Perog-*

¹ Vernon Baily, *Biological Survey of the Mammals of North Dakota*; North American Fauna, Bul. 49, 121, 1921.

nathus flavus, produced from 2 to 6 young at varying times from April to September.² Vernon Baily's examinations of 3 females of *Perognathus flavescens* on July 30 and August 12, 1912, showed the presence of four embryos per mouse; this was his complete knowledge of the breeding habits of this species at the time of his writing in 1921.³

FOOD HABITS

A study of contents of the cheek pouches of 15 specimens revealed the following seeds:

1. grass (*Panicum*)
2. sandbur (*Cenchrus*)
3. foxtail (*Setaria*)
4. sedge (*Carex*)

The sedge seeds composed the major portion of the contents of the cheek pouches. No insects or other forms of animal matter were found with their food supply. It is generally agreed by mammalogists that pocket mice are not carnivorous.

A captive specimen which we kept under observation was never observed to drink water. Nelson states that they do not take water directly, but obtain water through a complex digestive arrangement, when digesting seeds and other plant food. However, Baily says captive specimens kept in a warm dry house nibble cabbage, parsnips, potatoes, and grass more for the purpose of obtaining water than for food. He states further that when very thirsty they will suck water from saturated cotton or even drink from a small dish of water. Our live specimen never drank water, nor touched apple or potato, but did eat seeds of pigeon grass, radish and oats; the seeds which it didn't devour, it tucked back into the cheek pouches.

DISTRIBUTION

Aside from Baily's suggestion that the dusky pocket mouse may be in Northwest Iowa, I have been unable to find other evidence of the possible distribution of this species within the state. The only specimens which we have been able to secure were taken in Union township, Black Hawk County.

Union township lies in the northwestern corner of Black Hawk County. A large percent of the township consists of bottom lands of the Beaver, Westfork and Cedar rivers; the higher ridges in the township are mostly sandy prairies. The county soil survey shows much of the central part of the township to be covered with Carrington sand and Carrington sand loam soils. Carrington sand is a drift type and occurs in ridges and mounds. It is of little agricultural value and consequently is not pastured. A few sparse plants such as bur clover, panicum, sandburs, roses, sedge and mullein grow here. It is in this type of environment that the pocket mice are found. From all evidences it appears that the pocket mouse is a mammal which prefers the dry, sparsely covered sandy soils as does its desert dwelling relatives of the southwest.

² E. W. Nelson; *Smaller North American Mammals*, (National Geographic) May, 1918, p. 396.

³ Baily—*Mammals of North Dakota*, p. 123.

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