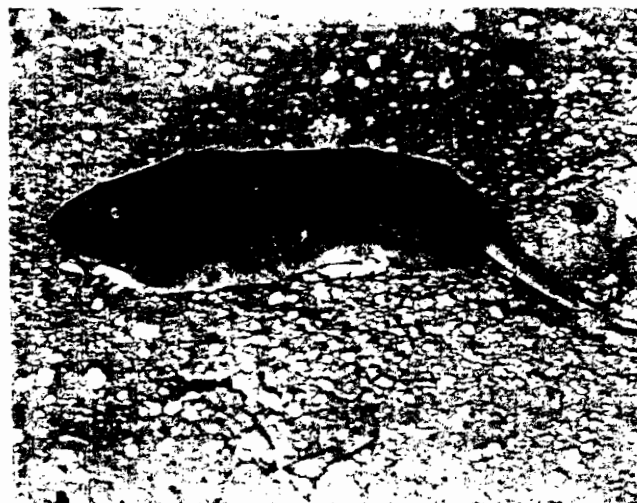


Jones's pocket gopher | *Geomys knoxjonesi*

Jones's pocket gopher is restricted to regions of western Texas and eastern New Mexico with deep, sandy soil. Throughout its arid range, its habitat is characterized by the presence of aeolian (wind-deposited) soils, indicating that it may be a specialist in reference to soil composition. Alternatively, it may be that *G. knoxjonesi* has been displaced by *G. bursarius* from the harder, more endurate soils surrounding this region. *G. knoxjonesi* typically occurs in native yucca-grassland communities, although it has adapted well to grassy roadsides, pastures, and lawns. Pocket gophers are fossorial, spending their entire lives underground, so little is known about their nesting habits. However, burrows are generally designed with a central nest site connected to a multitude of feeding burrows. Typically, the presence of pocket gophers is documented by the small mounds of dirt (often referred to as mima mounds in the early literature) that are deposited on the surface when the animals excavate new burrows.

Pocket gophers can readily be distinguished from other species of mammals because of their fur-lined external cheek pouches, short tails, reduced external ears, and the greatly enlarged claws on their front feet. Within the genus *Geomys*, it is difficult if not impossible to distinguish among the different species without genetic or geographic data. The color pattern—pale buffy brown on the back, grading to paler sides and white on the ventor—sometimes can be used to distinguish *G. knoxjonesi* from *G. attwateri*, *G. breviceps*, *G. pinetis*, and *G. tropicalis* (a Mexican species), which are generally darker. It is extremely difficult to distinguish *G. knoxjonesi* from *G. personatus* based on pelage color, and *G. arenarius* is essentially identical in color and size. *G. bursarius* usually cannot be distinguished from *G. knoxjonesi* without genetic data. For a number of years,



these two taxa were considered to be conspecifics. Only after intensive genetic studies (starch-gel analysis of proteins, DNA markers, and chromosomes) of a hybrid zone between the two taxa were they recognized as distinct species.

The ranges of two other genera of pocket gophers (*Thomomys* and *Pappogeomys*) approach that of *G. knoxjonesi* in eastern New Mexico and western Texas, and *P. castanops* is known to be sympatric with *G. knoxjonesi* at two localities. However, these genera are easily distinguishable based on the number of grooves on the upper incisors. *Pappogeomys* has a single groove on each upper incisor. *Geomys* has two, and *Thomomys* has no grooves.

Geomys knoxjonesi breeds in the fall of the year. Most young are born in the spring and early summer. The gestation period is unknown, but probably approaches 23 days, as is typical for

most species of rodents. If so, this indicates delayed implantation or sperm storage by females following the fall breeding season. Generally only one litter is raised per year, with two to four young (average two) being produced per litter. The young are born hairless and blind and require maternal care for the first few weeks. Growth and development are similar to that observed for other rodent species, with young being weaned at approximately three to four weeks of age. As is true of other species of *Geomys*, *G. knoxjonesi* is extremely territorial. Males and females only come into contact during the mating season and aggressively defend their territory (burrow system) the remainder of the year. *Geomys knoxjonesi* appears to feed on a variety of tubers, roots, and stems. These include yucca, sunflowers, and grasses.

Many arid-adapted species of rodents occur in the region occupied by *G. knoxjonesi*, including kangaroo rats, pocket mice, harvest mice, deer mice, grasshopper mice, and ground squirrels. Except for *P. castanops*, these species are all terrestrial rather than fossorial. R. D. Bradley and R. J. Baker



Geomys knoxjonesi

Size

Significant sexual dimorphism
 Total length: 203–282 (236) mm
 Length of tail: 57–104 (81) mm
 Weight: 160–185g

Identification

Geomys knoxjonesi is small in size for the genus. Its tail is shorter than the head and body, but proportionately long compared to that of other species of pocket gopher. It is pale in coloration, with buffy-brown upperparts; the sides and ventor are paler to white, and the feet are white. *Geomys knoxjonesi* does not occur

with other species of *Geomys* except *G. bursarius*, with which it has a narrow contact zone in eastern New Mexico. These two species generally cannot be distinguished without genetic data. Although *Geomys knoxjonesi* is sympatric with the yellow-faced pocket gopher (*Pappogeomys castanops*) in at least two localities in eastern New Mexico and western Texas, it is readily distinguishable by its smaller size, paler coloration, and smoother pelage.

Recent Synonyms

Geomys bursarius knoxjonesi

Status

Common

References

Baker, Davis, Bradley, Hamilton, and Van Den Bussche, 1989; Baker and Genoways, 1975; Bradley, Davis, and Baker, 1991; Bradley, Davis, Lockwood, Bickham, and Baker, 1991; Davis and Schmidly, 1994; Findley, Harris, Wilson, and Jones, 1975