

Northern Pygmy Mouse

Baiomys taylori (Thomas, 1887)

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CONTENT AND TAXONOMIC COMMENTS

There are eight described subspecies of the northern pygmy mouse (*Baiomys taylori*). Two occur in the South: *B. taylori subater* and *B. t. taylori* (Packard 1960, Hall 1981). The literature was summarized by Eshelman and Cameron (1987).

DISTINGUISHING CHARACTERISTICS

The northern pygmy mouse is among the smallest of North American rodents. Its measurements are: total length, 87–123 mm; tail, 34–53 mm; hind foot, 12–15 mm; ear, 9–12 mm; weight, 6–10 g. The dental formula is: I 1/1, C 0/0, P 0/0, M 3/3 = 16 (Figure 1). The pelage of the northern pygmy mouse is highly variable, ranging from grizzled reddish-brown to gray dorsally, and white, creamy buff, or gray ventrally. The tail is short, sparsely haired, and can be either uniformly gray or bicolored. This species is not confused easily with other sympatric sigmodontine rodents, such as *Peromyscus* and *Reithrodontomys*, all of which have longer body, tail, and hind foot lengths. See keys for details.

CONSERVATION STATUS

The northern pygmy mouse has a global rank of Apparently Secure. Texas also considers it Apparently Secure. (NatureServe 2007).

DISTRIBUTION

The northern pygmy mouse has been expanding its range both northward and eastward since the turn of the 20th century (Hunsaker et al. 1959, Schmidly 1983, Eshelman and Cameron 1987, Davis and Schmidly 1994). Figure 2 depicts the distribution of the northern pygmy mouse in the South. This species ranges throughout central and northern Mexico north into Arizona and New Mexico, with another northern extension into central and eastern Texas along the coast close to Louisiana (Blair 1941, Blair 1950, Hunsaker et al. 1959, Dalquest 1968, Schmidly 1983). Significant northern and western range expansions have been reported in Texas (Austin and Kitchens 1986, Hollander et al. 1987, Pitts and Smolen 1989, Jones and Manning 1989, Roberts et al. 1997, Pitts et al. 2001). Northern pygmy mice also have been reported recently from south-central and

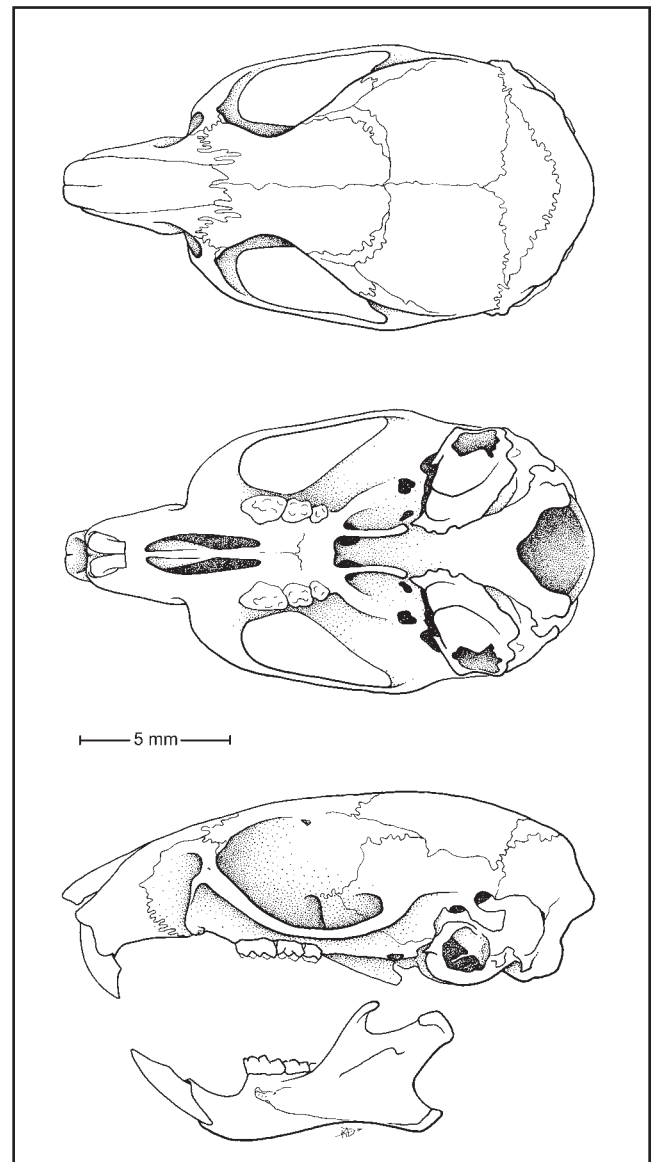


Figure 1. Dorsal, ventral, and lateral view of cranium and lateral view of mandible of *Baiomys taylori* from Nayarit, Mexico (USNM 509957, female).

western Oklahoma (Stangl and Dalquest 1986, Cleveland 1986, Caire et al. 1989, Tumlinson et al. 1993). Northern populations probably are limited by cold weather and winter-kill (Caire 1991).

ABUNDANCE STATUS

The species is relatively common throughout most of eastern Texas, with density estimates ranging from 2 to 84 animals/ha depending upon habitat type, ground cover density, and time of year (Raun and Wilks 1964, Schmidly 1983, Grant et al. 1985). Densities are lowest in summer and highest in early fall and winter, apparently because populations can be depressed by high populations of hispid cotton rats (*Sigmodon hispidus*; Stickel and Stickel 1949, Raun and Wilks 1964, Schmidly 1983, Grant et al. 1985).

PRIMARY HABITATS

Although the northern pygmy mouse occurs in a wide variety of habitats throughout its range (Eshelman and Cameron 1987), in Texas this species occurs in dense grassy areas such as oldfields, prairies, pastures, and road banks and ditches. It also has been reported in orchards, post oak (*Quercus stellata*) savannas, pine-oak (*Pinus-Quercus*) forests, and oak-hickory (*Carya* spp.) forests (Bailey 1905, Blair 1941, Taylor and Davis 1947, Blair 1952, Hunsaker et al. 1959, Schmidly 1983, Tumlinson et al. 1993, Hanchey and Wilkins 1998, Pitts et al. 2001).

REPRODUCTION

The northern pygmy mouse is capable of breeding year-round, with an average of 4 weeks between litters. However, there are peaks in the early spring and late fall (Blair 1941, Packard 1960, Asdell 1964, Raun and Wilks 1964). Gestation is 20–23 days and litter size ranges from 1 to 5. Young are weaned at 17–24 days and average sexual maturity is 60–90 days (Blair 1941, Packard 1960, Quadagno et al. 1970, Hudson 1974). Morrison et al. (1977) reported a median life span of 23 weeks (up to a maximum of 170 weeks) in captivity.

FOOD HABITS

Common foods of the northern pygmy mouse include prickly pear cactus (*Opuntia* spp.) stems and fruits, grass shoots and seeds, mesquite (*Prosopis glandulosa*) seeds, and granjero (*Celtis* spp.) berries. It also will feed on terrestrial gastropods and, at least in captivity, will consume small snakes and insects (Raun and Wilks 1964, Pitts 1978).

ASSOCIATED SPECIES

The northern pygmy mouse is sympatric with other early successional habitat and grassland/prairie species such as the least shrew (*Cryptotis parva*), fulvous harvest mouse (*Reithrodontomys fulvescens*), plains

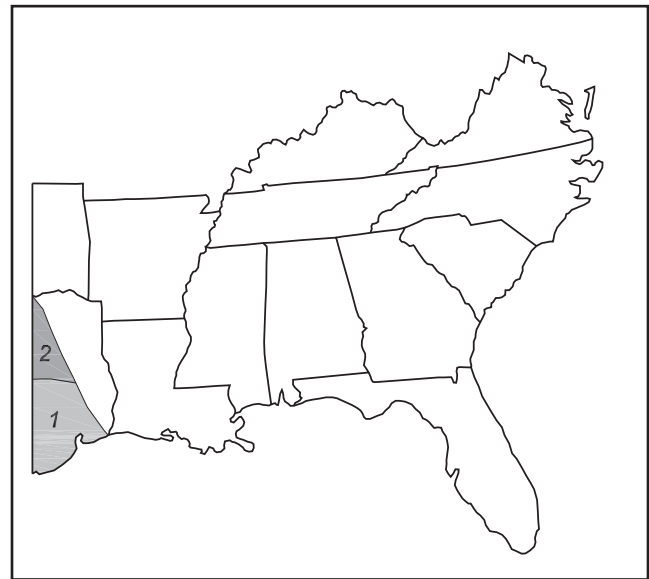


Figure 2. Distribution of *Baiomys taylori* in the South: (1) *B. t. subater*; (2) *B. t. taylori*.

harvest mouse (*R. montanus*), rice rat (*Oryzomys palustris*), white-footed mouse (*Peromyscus leucopus*), and hispid cotton rat.

VULNERABILITY AND THREATS

The northern pygmy mouse is at the eastern and northern limit of its range in this region. However, it is common, occurs in a variety of habitats, and shows evidence of range expansion. Killion et al. (1995) suggest that the northern pygmy mouse avoids locating its burrows in areas with high concentrations of the red imported fire ant (*Solenopsis invicta*). Although undetermined, red imported fire ants may adversely affect the reproductive success of the northern pygmy mouse.

MANAGEMENT SUGGESTIONS

Periodic habitat disturbance such as fire or mowing probably maintains northern pygmy mouse populations from a landscape perspective, particularly in wooded and shrubby conditions of eastern and coastal Texas. Nonetheless, activities that reduce or maintain a low ground cover density could favor other species that compete with the northern pygmy mouse, such as the hispid cotton rat.

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