# **Northern Pygmy Mouse** (Baiomys taylori)

**ORDER:** Rodentia FAMILY: Muridae

Northern Pygmy Mice are the smallest rodents in North America. They live in a variety of habitats where there is dense ground cover, and eat grass seeds and leaves, prickly pear cactus fruit and stems, mesquite beans, and granjeno berries (granjeno is an evergreen shrub). They will also eat snakes, snails, and insects if presented with them. They cope with desert heat by entering torpor. Males help care for the young, grooming them and returning them to the nest. Nests have been found under fallen logs or in thick clumps of grass. Young Mice reach sexual maturity quickly, females at about 60 days and males at about 70-80 days. The median life span is only 23 weeks, although captives, in laboratories, have been known to live as long as 170 weeks. Snakes and owls prey on them.

**Sexual Dimorphism:** None

Length: Range: 87-123 mm

Weight: Range: 6–9.5 g

	-

Credit: painting by Wendy Smith from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



## **FIELD NOTES**



# White-throated Woodrat (Neotoma albigula)

**ORDER:** Rodentia FAMILY: Muridae

Woodrats are also known as Packrats, because they cache various manmade objects in their dens. This habit of collecting foreign objects is useful to scientists, who can place numbered sticks throughout an area and later open a den, record the numbers of the sticks the woodrat has carried home, and determine the size of the animal's home range. White-throated Woodrats occur on forested hillsides, rocky mountainsides, and on flat scrubland. They especially like prickly pear cactus, but also eat cholla, yucca, grass, catclaw, soapweed, and various parts of juniper trees and mesquite. They make their dens of some of these plants, which they can use as a food supply when fresh food is not available. Fossilized woodrat dens can supply information about ancient vegetation and therefore, what the climate must have been like at different times.

Also known as:

Packrat

## Length:

Average: 328 mm Range: 282-400 mm

## Weight:

Average: 224 g males; 188 g females Range: 135-283 g



Credit: painting by Ron Klinger from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



#### **FIELD NOTES**



# **Bushy-tailed Woodrat** (Neotoma cinerea)

**ORDER:** Rodentia FAMILY: Muridae

Bushy-tailed Woodrats are highly territorial. A male will permit a female in his territory, but not another male. Both males and females mark their territories with a musky substance that can leave both scent and white color on rock ridges. The Woodrats make piles of vegetation and various collected items, and these materials can accumulate into middens of substantial size. The animals defecate and urinate on some of them, and those that bake in the sun can become rock-hard and last for tens of thousands of years. Paleobotanists using information from ancient middens have gained tremendous insight into the botanical history of the vast arid areas inhabited by woodrats.

#### Also known as:

Bushy-tailed Packrat

#### Length:

Average: 379 mm males; 356 mm females Range: 310-470 mm males; 272-410 mm females

#### Weight:

Average: 337 g males; 275 g females Range: 181–585 g males; 166–370 g females



Neotoma cinerea - darker coat on left (cooler climates),

#### lighter coat on right

Credit: painting by Ron Klinger from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



## FIELD NOTES



# **Eastern Woodrat** (Neotoma floridana)

**ORDER:** Rodentia FAMILY: Muridae

Conservation Status: Neotoma floridana smalli, the Key Largo Woodrat, is Endangered; Bailey's Eastern Woodrat (N. floridana baileyi) and the Southern Appalachian Eastern Woodrat (N. floridana haematoreia) are Near Threatened.

Eastern Woodrats are common in wooded areas with dense understories, in hedgerows, and in rocky outcrops. Their dens are occupied by a succession of individuals, each one adding more sticks and other material to the collection. Dens average 2-3 feet in height. They offer protection from some predators, but not from snakes and weasels, which can follow the Woodrat into its den. The Woodrats store edible and non-edible material in their dens, and it is not known why the inedible materials are kept. Woodrats are born nearly naked, with their eyes and ears closed, and they immediately attach to one of the four teats on their mother's underside. They remain attached to the nipples, only rarely letting go, for three to four weeks.

#### Also known as:

Packrat

#### Length:

Average: 320 mm males; 369 mm females Range: 305-450 mm males; 300-399 mm females

#### Weight:

Average: 299 g males; 216 g females Range: 220–384 g males; 174–260 g females

## FIELD NOTES

DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_



Credit: painting by Ron Klinger from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)





## Mexican Woodrat (*Neotoma mexicana*)

ORDER: Rodentia FAMILY: Muridae

Mexican Woodrats inhabits rocky outcrops, cliffs, and slopes, primarily in montane regions from northern Colorado to Honduras. They eat a wide variety of leaves, seeds, and berries, and sometimes store large amounts of food. They are medium–sized, grayish–brown woodrats with white underparts, bushy tails, and gray throat hairs. Owls, foxes, coyotes, bobcats, weasels, and rattlesnakes all prey on them. Many Mexican Woodrat populations are separate from each other (disjunct), because patches of suitable habitat are separated from each other by terrain the Woodrat cannot cross. For example, Woodrats living on one mountaintop may remain isolated from Woodrats on another. Fossils of this species that are more than 10,000 years old have been found in Arizona, New Mexico, Texas, and Mexico.

Also known as: Trade Rat, Packrat

Length: Range: 290–417 mm

Weight: Range: 151–253 g



Neotoma mexicana – gray (upper) or rufous brown (lower) coat

Credit: painting by Ron Klinger from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



#### FIELD NOTES



# Southern plains Woodrat (Neotoma micropus)

**ORDER:** Rodentia FAMILY: Muridae

Southern Plains Woodrats are found in places where grasses, creosotebush, mesquite, and cactus grow. Local populations can reach high levels and then crash. Crashes can be associated with changes in habitat-for example, an unusually rainy year may kill cactus the Woodrats rely on for food. Like many rodents, these woodrats are active between dusk and midnight. When disturbed, individuals thump or drum their hindfeet, possibly to communicate territorial ownership. They live in association with many other mammals, including armadillos, cotton rats, kangaroo rats, grasshopper mice, jackrabbits, and cottontails.

#### Also known as:

Hoary Woodrat, Baird Woodrat, Black Woodrat, Plains Woodrat, Gray Woodrat, Rata de Campo

#### **Sexual Dimorphism:**

Males are larger than females.

#### Length:

Average: 370 mm males; 356 mm females Range: 334-411 mm males; 310-382 mm females

#### Weight:

Range: 210–317 g males; 180–274 g females



Credit: painting by Ron Klinger from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



#### **FIELD NOTES**



# **Stephen's Woodrat** (Neotoma stephensi)

**ORDER:** Rodentia FAMILY: Muridae

Juniper trees are the main source of food, water, and shelter for Stephen's Woodrat. Like Red Tree Voles, which feed mostly on Douglas-fir, the Woodrats are able to feed primarily on conifer leaves, which contain chemical compounds - tannins and terepenoids - that interfere with digestion in most mammals. Stephen's Woodrats usually nest at or near the base of junipers, in habitats that include rocks and crevices. Fossils and studies of preserved middens indicate that these Woodrats have been associated with junipers for at least 15,000 years. Females of this species can reproduce when they are nine months old, and can produce offspring five times a year. Usually only one young is born at a time, but occasionally there are twins.

#### **Sexual Dimorphism:**

Males are larger than females.

#### Length:

Average: 293 mm Range: 274-312 mm

#### Weight:

Range: 117-180 g



Neotoma stephensi - darker coat (western, top), lighter coat

#### (eastern, lower)

Credit: painting by Ron Klinger from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



## **FIELD NOTES**



# Mearn's Grasshopper Mouse (Onychomys arenicola)

**ORDER:** Rodentia FAMILY: Muridae

Grasshopper Mice are adapted to a predatory lifestyle. Their molar teeth have high-cusped shearing surfaces for puncturing and slicing, and their biting strength is increased through enlarged muscle attachments on the lower jaw and skull. Their fingers and claws are long, for grasping and manipulating prey. ("Onychomys" means 'clawed mouse.") They feed primarily on grasshoppers, crickets, and beetles. Mearns's Grasshopper Mouse and the southern Grasshopper Mouse can be distinguished only by comparing genetic details. However, their ranges do not overlap: Mearns's Grasshopper Mouse lives in the Chihuahuan desert, and the southern Grasshopper Mouse inhabits areas west of the Continental Divide in southern Arizona and New Mexico.

Also known as: Southern Grasshopper Mouse, Chihuahuan Grasshopper Mouse

**Sexual Dimorphism:** None

Length: Average: 138.7 mm Range: 121-158 mm

Weight: Range: 20-35 g



Credit: photo by R. B. Forbes, © American Society of Mammalogists



## **FIELD NOTES**

# FIELD GUIDE TO NORTH AMERICAN MAMMALS Northern Grasshopper Mouse (Onychomys leucogaster)

ORDER: Rodentia FAMILY: Muridae

Northern Grasshopper Mice are highly predatory, and their skulls and teeth resemble those of flesh—eating carnivores such as cats and dogs. Their forelimbs, equipped with elongated fingers and claws, have developed great dexterity, so they are able to manipulate captured prey. These Mice have a complex social system, using howling vocalizations to broadcast information on sex, identity, body size, and location. Grasshopper Mice prey primarily on grasshoppers, crickets, and beetles, yet they incorporate some seeds into their diet, presumably a dietary preference retained from a seed—eating ancestry.



Onychomys leucogaster – gray (left) and cinnamon (right) variations

Credit: painting by Ron Klinger from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



Length: Range: 119–190 mm

Weight: Range: 26–49 g



### **FIELD NOTES**



# FIELD GUIDE TO NORTH AMERICAN MAMMALS Southern Grasshopper Mouse (Onychomys torridus)

**ORDER:** Rodentia FAMILY: Muridae

Southern Grasshopper Mice are also known as scorpion Mice: they are able to kill (and then eat) scorpions, by first immobilizing the venomous tail and then biting the head. They also prey on beetles that secrete defensive chemicals from the tip of the abdomen, by jamming the pointed barb into the ground and then striking a deathblow to the head. Of the three species of grasshopper mice, the southern Grasshopper Mouse inhabits the driest regions. Although it does not have the physiological adaptations of some other desert rodents, such as kangaroo rats or pocket mice, it may be able to get enough water from the bodies of its prey – arthropods and small mammals - to live without drinking water.

Also known as: Scorpion Mouse

**Sexual Dimorphism:** None

Length: Average: 143.9 mm Range: 130–160 mm

Weight:

Range: 20-40 g



Credit: painting by Ron Klinger from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



## **FIELD NOTES**

# **Brush Mouse** (Peromyscus boylii)

**ORDER:** Rodentia FAMILY: Muridae

Brush Mice occupy rocky and brushy or forested environments in which rock ledges, piles of brush, fallen trees, and boulders offer shelter and denning sites. Although they are reportedly good climbers, they only occasionally build their nests in tree cavities. Within their enormous range, these Mice are found only at elevations above 2,000 m. They consume many kinds of nuts, seeds, and fruit, including grass seeds, acorns, pine nuts, hackberries, juniper berries, and fir seeds.

**Sexual Dimorphism:** None

Length: Average: 194 mm Range: 175-210 mm

Weight: Range: 22-36 g



Credit: painting by Wendy Smith from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



#### **FIELD NOTES**



# **Canyon Mouse** (Peromyscus crinitus)

**ORDER:** Rodentia FAMILY: Muridae

Canyon Mice inhabit arid shrublands and grasslands in the inhospitable "slickrock" deserts of the West. In the canyons where they live, the common denominator is bare rock, and they are remarkably agile at scampering on vertical or even overhanging walls. Where they are in competition with other mice, canyon Mice live in rockier, more desolate areas and the other, larger species use the areas with trees or shrubs. When they can, canyon Mice feed mostly on green vegetation and insects, but when those are not available, fruits and seeds are the mainstays of their diets. They are active all year long, but probably enter torpor if food (and therefore the water they need, which they obtain from food) is scarce.



Peromyscus crinitus - left (with P. californicus) Credit: painting by Wendy Smith from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)

## **Sexual Dimorphism:**

None

#### Length:

Average: 175 mm Range: 162-191 mm

#### Weight:

Average: 17 g Range: 13–23 g



#### **FIELD NOTES**

# **Osgood's Mouse** (Peromyscus gratus)

**ORDER:** Rodentia FAMILY: Muridae

Osgood's Mouse is a very close relative of the pinyon Mouse, but is larger, and its tail is longer than the head and body. Osgood's Mouse lives in the mountains of southern New Mexico and throughout mountainous central Mexico. It lives in a wide variety of vegetation, but there are always rocks in its habitat where it can shelter, hide, and den. It is an expert climber, comfortable negotiating cracks and fissures in rocks.

Also known as: Piñon Mouse

**Sexual Dimorphism:** None

Length: Average: 199 mm Range: 171-231 mm

Weight: Average: 26.9 g Range: 19-32.8 g



Peromyscus gratus - right (with P. nasutus)

Credit: painting by Wendy Smith from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



## **FIELD NOTES**



# White-footed Mouse (Peromyscus leucopus)

**ORDER:** Rodentia FAMILY: Muridae

The White-footed Mouse has a very wide distribution. It is the most abundant rodent in mixed deciduous and coniferous forests in the eastern United States, and is probably equally abundant near farms. Its habitat preferences are very different in southern Mexico, however, as it prospers in semi-desert vegetation. White-footed Mice are excellent swimmers, and so are able to colonize islands in lakes with relative ease. They are not agricultural pests, and they are important ecologically because owls, weasels, snakes, and many other predators eat them. Individuals may live several years in captivity, but an almost complete turnover occurs annually in wild populations. In some places they carry the tick that transmits Lyme disease.

Also known as: Wood Mouse, Deermouse

Length: Range: 150-205 mm

Weight: Range: 15-25 g



Credit: painting by Wendy Smith from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



#### **FIELD NOTES**



## Deermouse (Peromyscus maniculatus)

**ORDER:** Rodentia FAMILY: Muridae

Conservation Status: Two subspecies (P. maniculatus anacapae, the Anacapa Deermouse, and P. maniculatus clementis, the San Clemente Deermouse) are Near Threatened.

Deermice rarely leave their homes during the day, but feed opportunistically at night on whatever is available: seeds, nuts, fruit, berries, insects and other animal matter, and whatever they find tasty in houses. Deermice have the most extensive range of any North American rodent, and are found in almost every kind of habitat. They climb easily, tunnel through snow or scurry about on its surface, and find shelter everywhere from mattresses to tree cavities to burrows in the ground. Populations fluctuate in cycles of three to five years, sometimes correlated with the amount of food available. The Deermouse is important as a laboratory animal, and can be a factor in the spread of some human diseases, including hantavirus, plague, and Lyme disease.

#### Also known as:

Wood Mouse, Woodland Deermouse, Prairie Deermouse

Length: Range: 120-225 mm

Weight: Range: 10-30 g



Credit: painting by Wendy Smith from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



### **FIELD NOTES**



# **Northern Rock Mouse**

(Peromyscus nasutus)

**ORDER:** Rodentia FAMILY: Muridae

Northern rock Mice live in rocky outcrops and among boulders in pinyon-juniper-oak woodlands in the foothills of mountains from Colorado and New Mexico south to Texas and northern Mexico. Populations of the Mice are separated from one another because the rocky habitat they find suitable is patchy. This Mouse has large ears shaped like oyster shells and a long, hairy, tail with which it can grasp branches as it climbs. Acorns appear to be important in its diet, but like other Peromyscus mice it is opportunistic, eating various nuts, berries, and plant materials, insects, and mushrooms. Much has vet to be discovered about this rare mouse.

Also known as: Colorado Cliff Mouse, Juniper Mouse

**Sexual Dimorphism:** None

Length: Average: 195 mm Range: 194-198 mm

Weight: Range: 24-32 g



Peromyscus nasutus - left (with P. gratus)

Credit: painting by Wendy Smith from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



## **FIELD NOTES**



# White-ankled Mouse (Peromyscus pectoralis)

**ORDER:** Rodentia FAMILY: Muridae

The White-ankled Mouse is common in rocky areas in both dry and humid regions on the Central Plateau of Mexico and in west and central Texas, southern New Mexico, and Oklahoma. It clearly prefers rocky situations, whether it lives in forests or in brush-covered foothills. Many other Peromyscus mice share its range, as do woodrats, cotton rats, harvest mice, shrews, and squirrels.

Also known as: **Encinal Mouse** 

**Sexual Dimorphism:** None

Length: Range: 185-219 mm

Weight: Range: 24-39 g



Credit: painting by Wendy Smith from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



## **FIELD NOTES**

# **Pinyon Mouse** (Peromyscus truei)

**ORDER:** Rodentia FAMILY: Muridae

**Conservation Status:** The subspecies *P. truei comanche*, the Palo Duro mouse, is Near Threatened.

Pinyon Mice reproduce from mid-February through mid-November, giving birth to litters of 3–6 blind, hairless young that weigh about 2.3 g each. The young have fur by the time they are two weeks old. At about 16–21 days, their eyes open and their ears unfold. They nurse for 3-4 weeks; sometimes a female becomes pregnant while she is still nursing a litter. These Mice are common in arid and semi-arid regions in the West, at elevations from sea level to more than 2,300 m. They are found most often among rocks where pinyon pine and juniper grow, but are not limited to this habitat.

Also known as: Big-eared Cliff Mouse, Palo Duro Mouse

**Sexual Dimorphism:** None

Length: Average: 195 mm Range: 171-231 mm

Weight: Range: 15-50 g



Peromyscus truei - color variations: yellowish-brown (left)

and gravish-brown (right)

Credit: painting by Wendy Smith from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



#### **FIELD NOTES**

# **Fulvous Harvest Mouse** (Reithrodontomys fulvescens)

**ORDER:** Rodentia FAMILY: Muridae

The fulvous Harvest Mouse is a nocturnal species that lives in grassy fields where there are shrubs. These Mice are good climbers, and build baseball-sized nests up off the ground, in vegetation. Winter nests are sturdier than summer nests. When a nest is occupied-often by two Mice-the one or two entrances are plugged. Fulvous Harvest Mice eat invertebrates when they are available, during the spring and summer, and switch to seeds in fall and winter. Along the Texas coast, where invertebrates are available year-round, they are the dominant item in the diet. Males and females seem to travel together, which suggests they may pair-bond in monogamous relationships, a rarity for mammals. These Mice live for about a year, and seldom longer than 14 months.

#### **Sexual Dimorphism:**

Males are larger than females.

Length: Range: 134–189 mm

Weight: Range: 6.5-25 g



Credit: painting by Wendy Smith from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



#### FIELD NOTES

# Western Harvest Mouse (*Reithrodontomys megalotis*)

ORDER: Rodentia FAMILY: Muridae

Western Harvest Mouse are adaptable, widespread, and abundant, especially in meadows, prairies, old pastures, stream valleys, and marshes. They eat seeds, insects, and plants. They rarely live for more than a year, but under optimal conditions, a female can produce more than 50 young in her lifetime. Their nests are built of plant material, usually on the ground, but sometimes in burrows or in vegetation slightly above the ground. Each mouse may have several nests, which it uses at different times. The Mice are nonterritorial and show a great deal of tolerance for one another, even huddling together when it is cold. Such intimate contact carries risks: they are afflicted with many parasites, including protozoans, worms, fleas, chiggers, mites, and lice. They are a vector for a hantavirus that can cause acute respiratory illness and hemorrhagic fever in humans.

#### Also known as:

Long-tailed Harvest Mouse, Desert Harvest Mouse, Dusky Harvest Mouse

# Sexual Dimorphism:

None

#### Length:

Average: 140 mm Range: 118–170 mm

#### Weight:

Range: 8-15 g

## FIELD NOTES

DATE:	LOCATION:	



Credit: painting by Wendy Smith from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



# **Plains Harvest Mouse** (Reithrodontomys montanus)

**ORDER:** Rodentia FAMILY: Muridae

Plains Harvest Mice are found in grassy areas, including hay and wheat fields. They seem to prefer shorter grasses, and build round nests of grass on or near the ground. Newborns are blind and hairless, and weigh about a gram, but are weaned at about two weeks and are adult-size in five weeks.

**Sexual Dimorphism:** None

Length: Average: 116 mm Range: 54–116 mm

Weight: Range: 6-13 g



Credit: painting by Wendy Smith from Kays and Wilson's Mammals of North America, © Princeton University Press (2002)



#### **FIELD NOTES**

