



MAMMALS of Wisconsin

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ORDER RODENTIA

Rodents or Gnawing Mammals

Mammals of this order are for the most part small to medium size. Among the largest ones are the beaver and the South American agouti and capybara. Members of this order are complicated as to relationship and origin. The order contains many races and large populations. In fact living rodents are believed to be as numerous both as to races and individuals as all other living mammals. Rodents were originally absent from New Zealand, Antarctica, the extreme Arctic, and several oceanic islands, but are now practically worldwide in distribution and occur, often through unintentional introduction, wherever man has gone.

The order Rodentia may be defined as follows: Terrestrial and fossorial (occasionally arboreal or semiaquatic) placental mammals with both brain and placentation generalized in type; feet unguiculate; elbow joint always permitting free rotary motion of forearm; fibula never articulating with calcaneum; masseter muscle highly specialized, divided into three or more distinct portions having slightly different functions; caecum without spiral fold;

dental formula not known to exceed

$$I \frac{1}{1}, C \frac{0}{0}, PM \frac{2}{1}, M \frac{3}{3} = 22 \text{ permanent teeth;}$$

incisors scalpriform, growing from persistent pulp, the enamel of the upper tooth not extending to posterior surface; distance between mandibular and maxillary toothrows approximately equal, both pairs of rows capable of partial or complete apposition at the same time, the primary motion of the lower jaw in mastication longitudinal or oblique (Miller and Gidley, 1918: 432).

The order Rodentia is currently divided into three suborders, namely the Sciuromorpha, containing some 60 genera of living forms; the Myomorpha, some 216 genera of living forms; and the Hystricomorpha, some 53 genera of living forms. In Wisconsin the Sciuromorpha are represented by the families Sciuridae, Geomyidae, and Castoridae; the Myomorpha by the families Cricetidae, Muridae, and Zapodidae; and the Hystricomorpha by the family Erethizontidae.

Key to the Families of Living Wisconsin Rodentia

- a. Body more or less covered with sharp pointed quills; infraorbital foramen larger than foramen magnum. *Erethizontidae*
- aa. Body covered with ordinary soft hair or fur; infraorbital foramen smaller than foramen magnum.
 - b. Tail broad and flat dorsoventrally, scaly; total length of adult more than 3 feet; molars with 8 to 10 transverse ridges or cemented folds of enamel. *Castoridae*
 - bb. Tail not broad and flat dorsoventrally, variable; total length less than 3 feet; molars without 8 to 10 transverse ridges.
 - c. Tail more or less bushy, hair on middle longer than diameter or fleshy part of tail at that point; postorbital processes well developed, conspicuous; molars with an internal heel from which 2 or 3 ridges pass to the outside margin of the tooth. *Sciuridae*
 - cc. Tail not bushy, hair on middle shorter than diameter of fleshy part of tail at that point; postorbital processes absent or inconspicuous; molar pattern not as in *Sciuridae*.
 - d. External fur-lined cheek pouches present; front feet longer than hind feet with long claws; 4 molariform teeth, in each lower jaw. *Geomyidae*
 - dd. No external fur-lined cheek pouches; front feet normal, not exceptionally long claws; 3 molariform teeth in each lower jaw.
 - e. Hind feet long and kangaroo-like; tail very much longer (20 per cent longer) than head and body; infraorbital foramen broad and not a long narrow slit. *Zapodidae*

- ee. Hind feet normal; tail equal or less than length of head and body; infra-orbital foramen a long vertical slit.
- f. Tail nearly naked, the annulations clearly visible; upper molars with tubercles in 3 longitudinal rows. *Muridae*
- ff. Tail haired, the annulations nearly or completely invisible; upper molars with tubercles arranged in two longitudinal rows or of prismatic triangles. . *Cricetidae*

Family Sciuridae

Squirrels and Allies

The family Sciuridae ranges throughout most of the temperate and tropical regions of the earth. It is not found in the extreme north or south, nor in Australia, New Zealand, New Guinea, Madagascar, or the Pacific islands. It consists of about 42 genera exclusive of fossil forms, of which 7 occur in Wisconsin.

Genus *Marmota* Blumenbach

Woodchucks

$$I \frac{1-1}{1-1}, C \frac{0-0}{0-0}, P \frac{2-2}{1-1}, M \frac{3-3}{3-3} = 22.$$

Marmota monax monax (Linnaeus)

Southern Woodchuck

Mus monax Linnaeus, *Systema Naturae*, edition 10, vol. 1, p. 60, 1758.

Arctomys monax Latham, p. 339, 1853.

Arctomys monax Strong, p. 440, 1883; Snyder, p. 120, 1902.

Marmota monax Jackson, p. 19, 1908; Hollister, p. 25, 1910; Jackson, p. 88, 1910; Cory, p. 150, 1912.

Vernacular names.—In Wisconsin commonly called woodchuck or chuck, sometimes groundhog. Other names include eastern marmot, eastern woodchuck, *kuk-wah-geeser* (Chippewa), marmot, monax, monk, moonack, *murmeltier* (German), *siffleur* (French-Canadian), whistle-pig or whistling pig, whistler, and woodshock.

Identification marks.—The heaviest Wisconsin member of the squirrel family, body short and thickset; head relatively broad; ears not prominent, rounded, short; tail well furred, moderately bushy, rather short, about one-fourth or less of the total length of animal and less than twice the length of hind foot; legs short and strong, the hind feet with five toes, the front feet with four well-developed toes bearing slightly curved claws and a rudimentary thumb with small nail; pelage rather coarse, not dense.

Woodchuck, Fish Creek, Wisconsin. U.S. Fish and Wildlife Service photograph by the author.

Skulls of woodchucks. Left, *MARMOTA M. MONAX*, Platteville, Wisconsin; right, *M. M. RUFESCENS*, St. Croix Falls, Wisconsin. $\frac{1}{2} \times$.

General color above dark grayish to brown, often considerably paled or grizzled by light buff hairtips; the basal part of hairs dark fuscous to deep mouse gray, next succeeded above by a band of pinkish cinnamon; top of head and face fuscous to clove brown; lower side of face, chin, and lips whitish buff; legs blackish fuscous, overlaid and mixed with burnt sienna, producing a distinct reddish-brown effect, particularly on the forelegs; feet blackish brown; general tone of under parts reddish brown, sometimes ochraceous buff, more or less mixed with tawny, ochraceous, and black hairs; tail clove brown to near black. There is one molt annually, usually in July, but sometimes molting is well advanced by June 1.

The skull is rather large and broad, flat and nearly straight in upper outline, constricted post-orbitally, the occipital region scarcely depressed posteriorly, the rostrum considerably and gradually depressed anteriorly; brain case broad and somewhat flattened; interorbital region broad, depressed, and weakly concave between postorbital processes, which are relatively long and prominent, and extend at right angles to the antero-posterior axis of the skull; rostrum large and massive, nearly as broad apically as basally; maxillary tooth rows nearly parallel; incisors heavy, anterior faces ivory to pale yellow and somewhat roughened by faint longitudinal grooves.

The male woodchuck averages about 3 per cent heavier than the female, but there is no

difference in coloration. The young soon acquire the pelage, which is quite variable in the amount of black or rufous in the darker parts and in the tones of buff or cinnamon in the paler parts. Albinism rarely occurs in the woodchuck. A tendency towards melanism is more frequent. The author found a totally melanistic specimen of *M. m. rufescens* washed upon the beach of Lake Superior west of Herbster, Bayfield County, in August, 1922, but the body may have drifted many miles, possibly even from the Canadian shore.

The woodchuck is the largest member of the squirrel family, and among Wisconsin rodents is exceeded in size only by the beaver with its broad, flat, scaly tail and the porcupine with its body and tail covered with sharp quills or spines. The total length of an adult of either *Marmota m. monax* or *M. m. rufescens* is between 21 and 26 inches, of which one-fourth or less is the brushy tail. The more southerly of the two, *Marmota m. monax*, averages larger than *M. m. rufescens*, has a correspondingly larger skull, and is of somewhat paler and more buffy color above, with the under parts buffy white or light

Left hind foot of woodchuck. Specimen from Mamie Lake, Wisconsin. $1 \times$.

ochraceous, whereas in *rufescens* the under parts usually are tawny with a distinct deep reddish tone, but sometimes mixed brown and buff with some red. Many of the individuals from areas where the two subspecies intergrade, approximately within 15 miles of latitude 44° N., are intermediate in characteristics and are difficult to assign to either race. A specimen from Trempealeau, for example, an immature male, approaches *M. m. monax* in size but is nearer *rufescens* in color. In most instances color appears to be a more pertinent and stable characteristic than size.

Measurements.—Total length of adults, 550 to 640 mm. (21.6 to 25.2 in.); tail 135 to 160 mm. (5.3 to 6.3 in.); hind foot, 82 to 92 mm. (3.2 to 3.6 in.). Weight, from about 5 lbs. when just out of hibernation in the spring to about 12 lbs. when prepared for hibernation in the fall. Skull length, 94 to 102 mm.; width, 60 to 69 mm.

Distribution in Wisconsin.—Southern part of the state from La Crosse, Sauk, Columbia, Dodge, Washington, and Ozaukee counties south to the Illinois state line.



Map 26. Distribution of *MARMOTA MONAX*. Solid symbols = specimens examined. Open symbols = authentic records. ●, ○ = *M. m. rufescens*. ▲, △ = *M. m. monax*.

Habitat.—The woodchuck is primarily a forest border mammal, and as such occurred throughout Wisconsin in early days, probably never in the heart of heavy, dense forest. It favors edges of brushy woodland, particularly near open fields along streams or lake banks, poorly cleared fence lines, railroads, and roads; also clearings, meadows, pastures, and grainfields, especially where near the crest or brow of a hill; attracted to old stumps, rocky outcrops, and piles; not infrequently near a barn or other outbuilding, an unoccupied house or shack, or a lumber pile (as near the depot at Danbury, Burnett County, May 28, 1919).

Status and Habits.—When the first white settlers arrived in Wisconsin the woodchuck was found in nearly all parts of the state. Its remains were present in the Indian mounds at Aztalan, Jefferson County (Somers, in Barrett, 1933: 386). Its numbers have varied in different parts of the state coincident with the whims and urge of man for its destruction on account of its interest as a sportman's target, but more on account of its economic damage, either real or fancied. In many of the intensive agricultural and dairying regions of the state, particularly in the southern parts, the woodchuck by 1950 had been almost extirpated.

In the year 1901 near Milton, Rock County, I could easily locate woodchucks or their holes in numbers, and in areas habitable to woodchucks there often was an average population of up to nearly 50 individuals to the square mile. Fifty years later, in May, 1951, in the same region, I searched diligently with experienced help over many miles before finding an occupied hole. The subspecies *monax* has been depleted more than *rufescens*, which with its more northerly range has had a more favorably protective environment. The woodchuck has legal protection in Wisconsin, as it does in some other states, without which it might become a scarce animal. There are a few places in northern and central Wisconsin where an average of 30 to 40 woodchucks a square mile may occur over a considerable area, and the average for the state as a whole is possibly not less than four or five to the square mile. In this low population of the woodchuck there are probably less than three hundred thousand of them in the state. The home range of the woodchuck is rather limited, usually within two or three hun-

ton, 1934: 95). Its curiosity often prompts it to peek from its hole for a look at man or dog, often to its destruction. It is sluggish as a rule in both physical and mental reactions, rates low in intelligence, and is easily trapped or shot. Its normal longevity is probably less than five years, possibly on the average less than three years in localities where it is heavily trapped or hunted. Its potential longevity is about ten years. One lived in the National Zoological Park, Washington, D. C., for nine years, three months (Mann, 1930: 303). Usually it does not live well in confinement, nor make a good pet.

The woodchuck breeds when one year old. Mating occurs from the first of March to early in April, possibly as late as the middle of April in northern Wisconsin. Copulation often occurs near the entrance to the den, sometimes in an exposed field nearby. The gestation period is about thirty days. One litter a year is produced by each pair. It may contain from two to seven kits, usually four to six, the average number being close to five, although litters of eight and nine have been recorded (Howell, 1915: 12). The litter of nine, which I observed, lived in a hole under a tobacco shed at the edge of a tobacco field (June, 1900, south of Milton, Wisconsin). At birth the woodchuck is blind, naked, and helpless, is about four inches long, of which one-half inch is tail, and weighs about one ounce. At the end of four weeks the kit has doubled its length, weighs some six times its birth weight, is covered with short hairs, and has eyes open. When five or six weeks old the kit is weaned and begins to wander from the burrow and shift for itself. Sometimes it wanders too far, and the mother will carry it in her mouth back to the burrow, holding it by the nape of the neck. The kit usually is supporting itself by the last of June, or at the age of eight weeks, by which time it weighs two pounds or more. It does not complete full growth until about two years old, but is sexually mature when one year old. The mammae are eight, four pectoral, two abdominal, two inguinal.

This efficient digger lives in a burrow which it excavates in the ground, usually on the side of a hill—especially near the top if in a meadow or a hay field—underneath a stump, the roots of a tree, a stone wall, or possibly an old building, or sometimes in an opening in cliffs. It has often

been stated, following the lead of C. Hart Merriam (1884 a: 148), that the burrows are of two principal types: the first type slopes at a moderate angle from the surface and has a mound of dirt near its entrance; the second is more or less vertical for several feet immediately below the surface, and no loose earth can be found in its neighborhood. Actually, when it starts digging its hole, the woodchuck always faces the surface of the ground with head and shoulders perpendicular to it, and thus when it digs on a slope the burrow inclines from the general ground level of the earth, and most of the soil removed accumulates at the entrance, whereas when it digs on level ground the burrow is vertical to the general ground level and a considerable amount of soil removed may fall back into the burrow. When a woodchuck burrows into a steep vertical bank, which it rarely does, it starts the hole horizontally inward, still perpendicular to the surface. Probably the burrow termed the second type by Merriam and others refers to the plunge hole, which is usually constructed on level ground, has no hill of soil at the entrance, and is dug from the inside of the burrow. The plunge or escape hole usually is well hidden in vegetation and is not used as a nesting place or regular resting place, nor for hibernation. The animal digs with its front feet and throws the dirt to the rear with its hind feet. It uses its heavy incisors for gnawing and tearing away roots and similar obstructions. The entrance to the burrow is slightly wider than high and is variable in size, not always in proportion to the size of its occupant. Possibly the length of time a burrow is occupied or its multiple use may cause an increase in the size of the entrance, which is usually between six and seven inches high and seven and eight inches wide. A large one that I measured at Milton, Rock County, was ten inches high and twelve inches wide. Hamilton (1934: 128) records one in New York 12 by 14 inches which housed a woodchuck weighing nearly 12 pounds. Usually there are two entrances to each burrow, often three, and sometimes four. The burrow varies in diameter but always narrows just inside the entrance. It goes directly inward for 2 to 4 feet, then inclines upward and generally extends more or less parallel to the surface for 15 to 30 feet, sometimes 50 feet or even farther, and frequently has

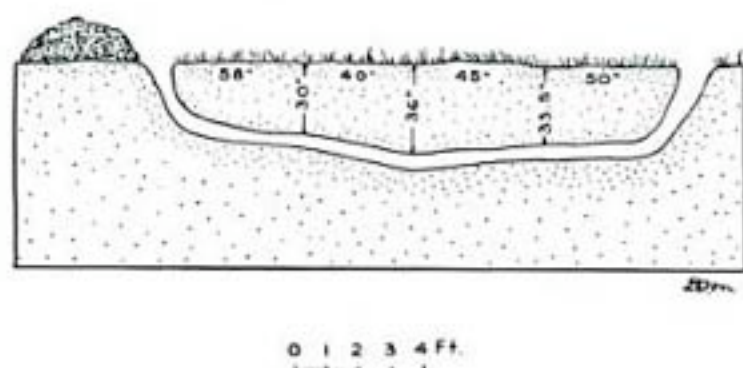


Diagram of woodchuck burrow on level ground.
Copied from Fisher, 1893.

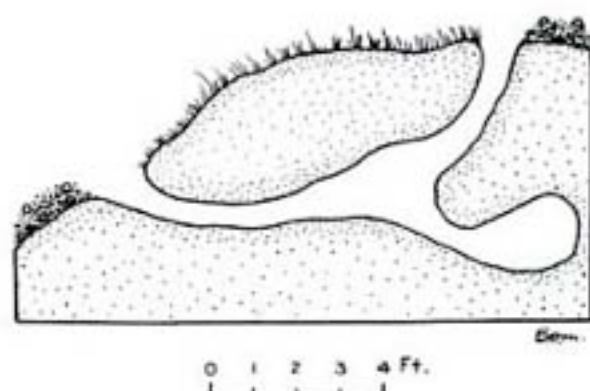


Diagram of woodchuck burrow on hillside. Drawn
from field sketch by the author.

branch burrows. The passageway ordinarily is about two feet under ground, sometimes approaches within one foot of the surface, and rarely may be as deep as four or five feet under soil cover. A side gallery may lead to the nesting chamber, some 15 inches in diameter and

about 8 inches high. The nesting material is rather scant and usually consists of vegetable material readily available, such as dried leaves, grasses, and weed stalks. Other branches may end in a blind chamber used as a latrine where the animal deposits and covers with soil its feces and urine. Dried urine mixed with soil may be brought outside the burrow for deposition, usually in the mound at the entrance to the hole. The hibernating chamber is similar to the nesting chamber, but is always plugged with soil by the animal to isolate it from the regular burrow, which may be occupied by a rabbit, skunk, or even a fox while the woodchuck is dormant.

Late afternoon is the heavy feeding time for the woodchuck, though it also feeds extensively in the morning. When it first appears from hibernation in the spring, green vegetation may be scarce, and it frequently resorts to the bark and buds of various trees and shrubs for food, and such early spring plants as the dandelion, chickweeds, sorrel, and plantains. It is particularly fond of legumes such as clover, alfalfa, vetch, beans, and peas. It eats sweet clover, growing buckwheat, oats, wheat, corn, and other grains and many grasses. It relishes ripe raspberries, blackberries, strawberries, cherries, and apples, and will feed upon beet and turnip tops, cabbage, kale, and cantaloupe. Once in a while it eats an insect or two, such as a grasshopper or a June bug (Gianini, 1925). It has been known to eat a nestling bird (Hatt, 1930: 640), and unverified claims have been made that it will pursue, kill and eat young chickens.

Man, the domestic dog, and the red fox, in the order named, are the chief enemies of the wood-

Image sous droits d'auteur

Woodchuck burrow in bank along road, Rock County,
Wisconsin. Photograph by the author.

Woodchuck burrow in alfalfa field, Rock County,
Wisconsin. Note observation hillock in front of
hole. Photograph by the author.

chuck, but even these have difficulty in capturing the prey because of the ease by which the woodchuck can quickly drop into its burrow. The timber rattlesnake also kills some, particularly young ones which at times it seeks in woodchuck burrows. The automobile kills only a very few on highways. External parasites include the louse *Enderleinellus saturalis*, the tick *Ixodes cookei*, and four species of fleas, *Oropsylla arctomys*, *Opisodasys pseudarctomys*, *Orchopeas wickhami*, and *Ctenocephalides canis*, of which the first is most common. Internal parasites include ten species of Protozoa (Gabel, 1954) and five kinds of helminths (Rausch and Tiner, 1948: 746; Tiner, 1951). Disease affects the life of the woodchuck but little. Malformed incisors sometimes occur in many species of rodents, and in the woodchuck seem to be especially frequent, occurring in more than 1 per cent of the individuals. The malformation is caused by a slight deflection of one or more of the incisors so that the tips do not meet and one or more of them grows unworn. Such a condition may cause serious malnutrition, or the incisor may even penetrate the skull and cause death. An interesting case of malocclusion caused by disease from a gunshot wound in a skull of *Marmota m. rufescens* found by W. E. Slagg on the shore of Sand Lake, Chippewa County, Wisconsin, in 1922, has been described by Professor George Wagner (1923):

The injury markedly altered the direction of growth of the right upper incisor, crowding it to the left. The apex of this tooth now lies to the left of the midline of the skull. This change in turn has forced a change in the direction of the growth of the left upper incisor, the tip of which now lies beyond the outline of the skull. . . . the position of the upper incisors has caused them to pass to the left of both lower incisors instead of opposing them. This in turn has forced the lower incisors to the right. As a result, with a closed mouth, these lower incisors must have come to bear on the upper lip of the right side.

Often severely condemned by farmers and truck gardeners as a damaging pest, the woodchuck in controlled numbers and places may be a useful asset. It is not known to be a vector of any human or animal disease. Not only does it directly supply an object for hunting and trapping in itself, but its numerous burrows are utilized as winter homes for rabbits, skunks, and

other mammals that are game or fur species. An insufficient number of retreat burrows has shown a lowering of the population of cottontails. The woodchuck probably is hunted with a rifle more than any other small game mammal except possibly the gray squirrel, and in many states it rates high in the annual game kill. As food it is not the best, yet it is frequently eaten. If the glands in the upper part of the forelegs are removed as soon as possible after the animal has been bagged and it is properly cooked, it can be delicious. Marmot fur as used commercially comes from Eurasian animals. The fur of our woodchuck is too coarse and thin to be valuable. The skin is durable, and though not yet utilized for leather might serve that purpose. The animal has some curiosity value as the center of ground-hog day folklore. When too numerous in agricultural areas it does considerable damage to crops, particularly to clover, alfalfa, peas, and several vegetables. At the same time, however, it destroys some weeds. The large holes it digs are sometimes a menace to livestock and tractors that may fall into them, but the damage is usually mostly to the temper of the owner. When too numerous the woodchuck should be controlled. The best method of reducing its numbers is by hunting and trapping. Fumigation of its burrow with gas from carbon bisulphide, cyanide, or exhaust fumes from an automobile or tractor may also be utilized in summer when only the woodchuck occupies the den and other wildlife is not endangered. Fumigation should be used only under the supervision of a trained pest control expert and with the approval of a representative of the State Conservation Department.

Specimens examined from Wisconsin.—Total 48, as follows: *Dane County*: Madison, 2 (UWZ). *Dodge County*: Beaver Dam, 18 (UWZ). *Grant County*: Platteville, 1; Potosi, 1 (10 mi. S. S. E.); Wyalusing Township (T 6 N, R 6 W, Sec. 14), 1. *Jefferson County*: Lake Koshkonong, 1 (MM). *La Crosse County*: No locality, 1. *Milwaukee County*: South Milwaukee, 1 (MM). *Racine County*: Racine, 2 (USNM). *Rock County*: Milton, 3 (2 UWZ). *Sauk County*: Sumpter, 1 (MM). *Walworth County*: Delavan, 4 (2 CAS); Lake Geneva, 4 (UWZ). *Washington County*: Hubertus, 1 (MM). *Waukesha County*: Nashotah, 2 (UWZ); Pewaukee, 3 (UWZ); Waukesha, 2 (MM).

Selected references.—Benedict, F. G., and R. C. Lee, 1938; Fisher, W. H., 1893; Grizzell, R. A., Jr., 1955; Hamilton, W. J., Jr., 1934; Howell, A. H., 1915; Landis, C. S., 1951.

Marmota monax rufescens Howell

Rufescent Woodchuck

Marmota monax rufescens Howell, Proc. Biol. Soc. Washington 27: 13, February 2, 1914.*Marmota monax rufescens* Schmidt, p. 110, 1931; Komarek, p. 207, 1932; Barger, p. 11, 1952.**Vernacular names.**—Most of the common names of the southern woodchuck.**Identification marks.**—Similar to *Marmota monax monax* but averaging smaller; darker and more richly colored, particularly the under parts, which are distinctly dark reddish in tone.**Measurements.**—Total length of adults, 510 to 600 mm. (20.1 to 23.6 in.); tail, 120 to 150 mm. (4.7 to 5.9 in.); hind foot, 76 to 88 mm. (3 to 3.5 in.). Weight, from about 4 lbs. or less when emerging from hibernation in the spring to about 10 or 11 lbs. when ready to hibernate in the fall. Skull length, 88 to 97 mm.; width, 56 to 65 mm.**Distribution in Wisconsin.**—Central and northern part of the state, north of and including Trempealeau, Jackson, Juneau, Adams, Marinette, Green Lake, Fond du Lac, and Sheboygan counties.**Habitat, Status, and Habits.**—So far as known essentially like those of *Marmota monax monax* with which they are included.**Specimens examined from Wisconsin.**—Total 46, as follows: Adams County: Friendship, 1. Ashland County: Mellen (8 mi. S. W.), 1. Barron County: Turtle Lake, 4 (UWZ). Bayfield County: Grandview, 1; Herbster, 2; Orienta, 8. Chippewa County: Stanley, 1. Clark County: Withee, 1; Worden Township, 1. Door County: Fish Creek, 4 (3 UWZ); Newport, 2 (MM). Iron County: Mercer, 1 (UWZ). Langlade County: T 34 N, R 11 E, 2 (UWZ). Marathon County: Rib Hill, 1. Oconto County: Kelley Lake, 1. Pierce County: Maiden Rock, 1 (MM); Prescott, 3 (MM). Polk County: Saint Croix Falls, 3. Trempealeau County: Trempealeau, 1. Vilas County: Conover, 1 (CNHM); Mamie Lake, 5. Washburn County: Long Lake, 1.**Selected references.**—Same as for *Marmota m. monax*.**Genus Citellus*** Oken

Ground Squirrels

Dental formula:

$$I \frac{1-1}{1-1}, C \frac{0-0}{0-0}, P \frac{2-2}{1-1}, M \frac{3-3}{3-3} = 22.$$

* In 1968 the Committee on Nomenclature of the American Society of Mammalogists recommended the use of *Spermophilus* as the generic name.

Image sous droits d'auteur

Skulls of ground squirrels and chipmunks. A. CITELLUS T. TRIDECIMLINEATUS, Danbury, Wisconsin, B. C. FRANKLINII, Delavan, Wisconsin, C. TAMIAS S. GRISEUS, Danbury, Wisconsin, D. EUTAMIAS M. JACKSONI, Crescent Lake, Wisconsin. $\frac{3}{8} \times$.

Citellus tridecemlineatus tridecemlineatus
(Mitchill)

Striped Ground Squirrel

Sciurus tridecem-lineatus Mitchill, Medical Repository (N. S.) 6(21): 248, 1821.*Spermophilus tridecemlineatus* Lapham, p. 44, 1852; Snyder, p. 114, 1902.*Spermophilus tridecemlineatus* Lapham, p. 339, 1853.*Spermophilus tridecem-lineatus* Strong, p. 440, 1883.*Citellus tridecemlineatus* 1908; Jackson, p. 87, 1910; Hollister, p. 24, 1910; Cory, p. 138, 1912.*Citellus tridecemlineatus tridecemlineatus* Schmidt, p. 111, 1931; Barger, p. 11, 1952.**Vernacular names.**—In Wisconsin commonly called gopher or striped gopher. Other names include *citelle* (French), federation squirrel or flag squirrel (13 stripes and several "stars" suggest U. S. flag), grass chippie, grass runner, grass whistler, leopard ground squirrel, leopard squirrel.*Striped ground squirrel and burrow.*

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