

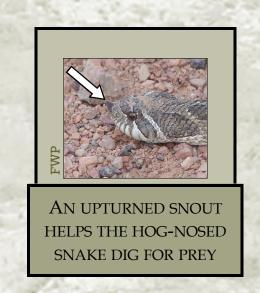
SNAKES HAVE AN IMPORTANT ROLE IN OUR ECOSYSTEM, INCLUDING <u>FREE</u> RODENT CONTROL. BUT THEY DON'T HAVE IT EASY; HABITAT LOSS AND HUMAN FEAR RESULT IN THE LOSS OF MANY SNAKES.







FWP/A. Puchniak Begley

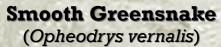


Eastern Racer (Coluber constrictor)

Rubber Boa (Charina bottae)

Western Hog-nosed Snake (Heterodon nasicus)







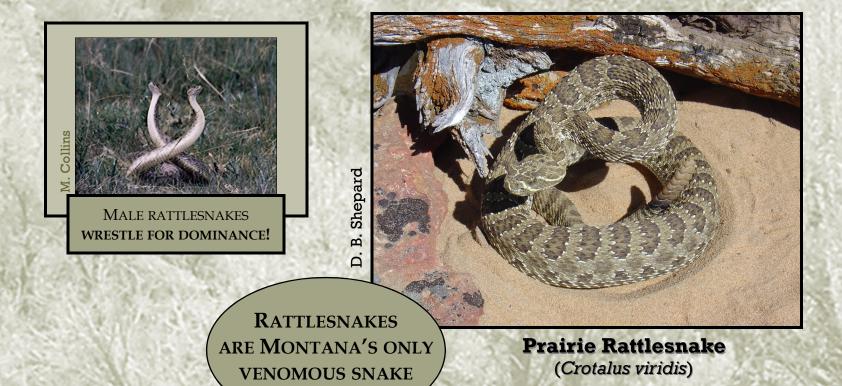
Terrestrial Gartersnake (Thamnophis elegans)



Plains Gartersnake (Thamnophis radix)



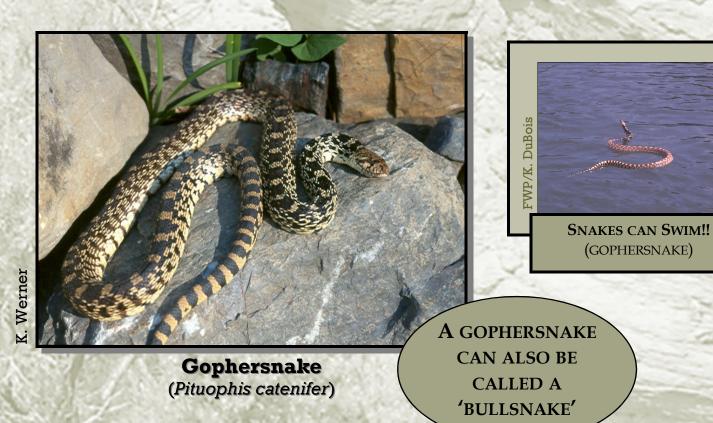
Common Gartersnake (Thamnophis sirtalis)







Milksnake (Lampropeltis triangulum)



# Discover Montana's Wildlife

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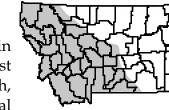




#### **RUBBER BOA**

(Charina bottae)

These small, stout snakes are found within both dry and moist mountainous forest habitats. They have a blunt tail, small, smooth, uniform scales, and small eyes with vertical



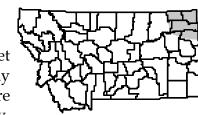
pupils. Back color is uniform from head to tail: tan, dark brown, gray or olive green. Belly is yellow, cream to tan. Anal spurs (remnants of hind limbs) are present on males, small or absent on females. Adult length, including tail, is 14-28 inches; females generally longer than males.

They are active from April to October; mating in April or May. Females give birth to 2-8 young in late summer or early fall; young resemble adults, but are lighter in color. Sexual maturity is reached at about 14 inches. Life span in the wild is unknown but reported as long as 18 years in captivity. Rubber boas are mostly active at night, but are occasionally found sunning in open areas. They typically burrow underneath soil or leaves, rocks and logs, but are capable of swimming and climbing. When threatened, the snake coils into a loose ball and presents its tail to mimic the head. This constrictor can eat a variety of animals but is primarily a hunter of small mammals. No other boas are found this far north.

#### **SMOOTH GREENSNAKE**

(Opheodrys vernalis)

These small, slender snakes are found in wet meadows with dense vegetation, usually under rocks, logs, bark, or boards. They are bright green with a white or pale yellow belly

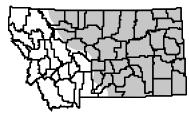


Their tongue is red with black tip. Adult body length, including tail, is 12-28 inches. Mating probably occurs soon after emerging from hibernation. Females lay one or two clutches of 3-13 eggs in early to mid summer, under logs or rocks, or in shallow burrows or rotting logs. Hatching occurs from late summer to early fall. Juveniles are olive gray to blue, and 3-6 inches at hatching. Sexual maturity is reached at about 3 years when the body length is about 9 inches.

Smooth green snakes rarely climb more than a few inches off the ground in their search for insects and other invertebrates. They are susceptible to chemicals sprayed for pest control. They have only been found in the far northeastern corner of Montana, and are listed as a Species of Concern.

#### WESTERN HOG-NOSED SNAKE (Heterodon nasicus)

Found in habitats such as floodplains and farmlands with well-drained, loose, sandy soil. A mid-sized, heavy-bodied snake, it's upturned snout is used for extracting buried



toads from shallow burrows. Dark brown to black blotches run longitudinally along the back in three rows. Base color ranges from grayish brown to pale green. Belly is dark gray to black, and frequently checkered. Adult body length, including tail, is 15-25 inches.

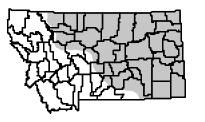
Mating probably occurs in May soon after emerging from hibernation. Females lay 2-15 eggs every other year in early to mid summer in shallow excavations. Eggs hatch in late summer, early fall; hatchlings are about 5 ½ inches in length with coloration similar to adults. Females reach sexual maturity in 2-3 years and 15 inches, males 2 years and 12 inches. Life span in the wild is estimated 8-9 years.

Hog-nosed snakes are specialized predators of amphibians, especially toads, but can also eat small mammals. They possess modified teeth at the back of the mouth that are enlarged to puncture and deflate toads (toads inflate with air as a predator defense). When threatened, they spread their neck, while hissing and striking at the attacker. If this is unsuccessful they roll over, flatten their stomach, opening their mouth wide and allow their tongue to hang out, feigning death. Listed as a Species of Concern.

#### PLAINS GARTERSNAKE

(Thamnophis radix)

Inhabits grasslands or riparian habitats near water. Dorsal background color is olive, brown, or black. A dorsal medial orange or red stripe, and a lateral greenishyellow stripe on each side on the 3rd and 4th

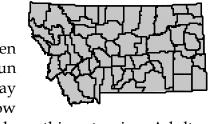


scale rows run the length of the body. May have black vertical bars on scales around the mouth. Adult body length, including tail, is 13-34 inches, females are generally larger than males. Mating occurs soon after emerging from hibernation. Not all females will breed every year. The female gives birth to 5-25 young in late summer, early fall. Young are 6-8 inches at birth and coloration resembles adults. Sexual maturity is reached in 2-3 years. Capable of eating toxic animals, such as toads. Uses vegetation or water to escape predators. Uses tongue flicks to detect prey; eats fish, amphibians, invertebrates.

#### EASTERN RACER

(Coluber constrictor)

Racers are common in prairies, open woodlands and rocky habitats with sun exposure. Their color varies from greenish gray to blue or brown, with a white or pale yellow



belly. Eyes are large, and the tail tapers into a long, thin extension. Adult length, including tail, is 23-48 inches, females generally larger than

Mating occurs in April or May after emerging from hibernation. Females lay 2-31 (usually 9-12) eggs in mammal burrows or rotting logs; can be laid communally. Young hatch in late summer, early fall. Juveniles have a light base color and brown to black blotches, which fade away during the second year when they reach about 27 inches in length. Sexual maturity is reached in 2-3 years.

Slender and long, the racer is smooth-scaled and very quick. They are active during the day, good climbers, and can travel rapidly with head raised above the grass to gain a better view. When not actively hunting or basking, they usually retreat to a burrow or under rocks. If captured, racers may bite repeatedly, thrash about, and vibrate their tail. Racers are opportunistic hunters feeding on a variety of small animals such as lizards, frogs, small mammals and insects. They may overwinter with gophersnakes and rattlesnakes.

#### **MILKSNAKE**

#### (Lampropeltis triangulum)

Milksnakes inhabit grasslands, and can be found around rock outcroppings, along riparian zones and margins of agricultural land. These nocturnal snakes, spend the day in

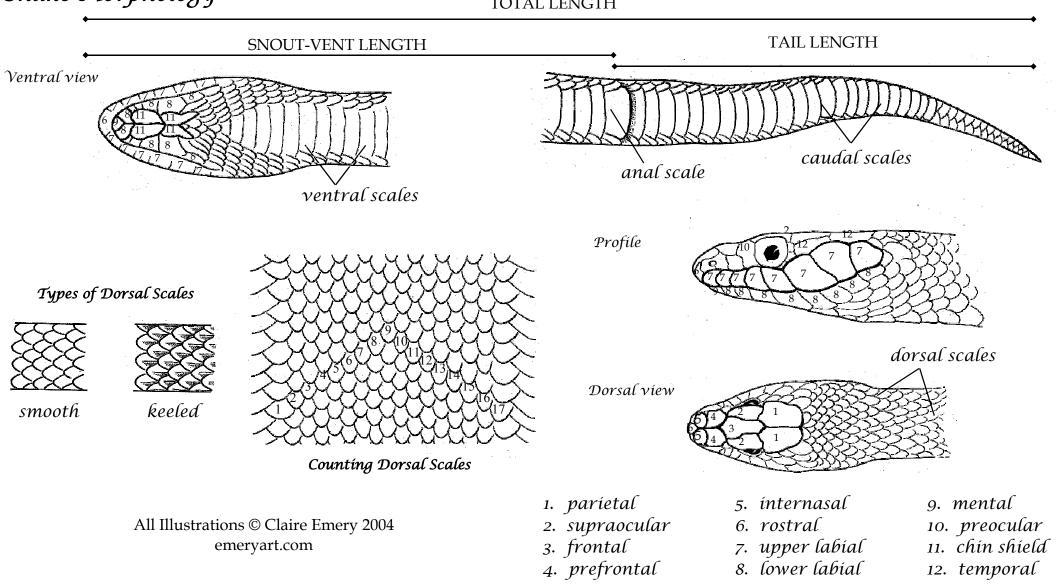
burrows, under logs, rocks, bark, and boards. They sport pale to bright orange bands bordered in black, alternating with white to yellow bands Adult body length, including tail, is 16-28 inches, males slightly longer.

Mating occurs soon after emerging from hibernation. Females lay 4-13 eggs in early to mid summer under rocks, in mammal burrows or rotting stumps and logs, sometimes communally. Hatchlings emerge late summer, early fall at about 9 inches in length; patterned similar to adults. Sexual maturity is reached in 3-4 years. Life span is more than 20 years in captivity.

The milksnake is harmless, although its coloration mimics the venomous coral snakes native to the southern US. The mimicry of colors similar to venomous animals is thought to protect non-venomous snakes from predators. Milksnakes are an elusive hunter of small mammals and lizards, killing larger prey by constriction. The milksnake is difficult to observe in nature due to its secretive habits. Listed as a Species of

## Snake Morphology

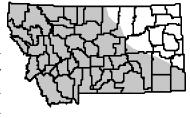
#### TOTAL LENGTH



### TERRESTRIAL GARTERSNAKE

(Thamnophis elegans)

Inhabits a variety of habitats: grasslands and forests near water. Brownish green basecolored snake with three yellow longitudinal stripes. The lateral stripes cover the second and



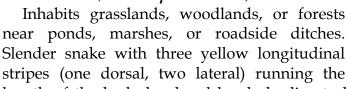
third scale rows, and the remaining stripe runs medial; stripes are narrower than other Montana gartersnakes. Between the stripes, black blotches occur giving a wavy appearance. Belly is bluish, gray, or brownish, flecked or blotched. Adult body length, including tail, is 18-30 inches, with females usually larger than males.

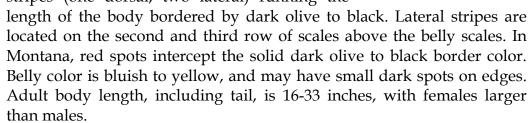
Mating takes place in early spring. Not all females will reproduce every year. Females give birth to 3-27 young in late summer, early fall. Young are 6-8 inches at birth with coloration similar to adults. Sexual maturity is probably obtained at 2 years. Life span greater than 6 years in captivity.

A diurnal snake capable of eating toxic animals, such as toads. Uses vegetation or water to escape predators. Eat amphibians, fish, invertebrates, small mammals and birds.

# **COMMON GARTERSNAKE**

(Thamnophis sirtalis)





Mating usually occurs soon after emerging from hibernation, but can take place in fall. Females may reproduce every other year. Birth to 5-42 young usually occurs late summer to early fall. Juveniles are about 6 ½ inches in length at birth and coloration resembles the adult. Sexual maturity is reached at 2 years. Life span is 6-9 years in the wild.

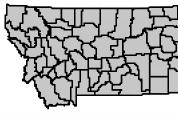
Active during the day and an excellent swimmer; frequently swims to catch prey or elude predators. Capable of eating toxic animals, such as

Thank you to all the contributing photographers, editors & sponsors that made this project possible

## GOPHERSNAKE or BULLSNAKE

(Pituophis catenifer)

This large snake is common in dry habitats, pine forests, prairies, and plains, and is active during the day. They inhabit abandoned rodent burrows, rock crevices or surface debris. The



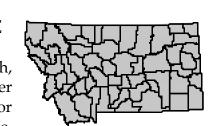
pupils of the eyes are round. They are usually black or dark brown in base color with pale yellow in a checkerboard pattern with a yellow to white belly spotted with black. Adult body length, including tail, 3-5 ft.; individuals greater than 8 ft. have been reported. This is Montana's

Mating takes place in spring. Females lay one or two clutches of 2-24 eggs in burrows in early to mid summer. Hatchlings emerge in fall, are 14-20 inches in length and resemble adults in coloration. Sexual maturity for females is reached between 3-5 years, 2-3 for males. Life span is greater than 30 years in captivity. Gophersnakes hunt rodents, birds, and bird eggs, and are excellent climbers and swimmers. They are important as a natural controller of rodent populations.

Non-venomous gophersnakes are often mistakenly identified as rattlesnakes and the resemblance between the species is no coincidence. When threatened, gophersnakes will mimic a rattlesnake by coiling into a striking position, vibrating their tail to make it look like a rattle, and hissing loudly. Once the threat has been rebuffed, they beat a hasty retreat down the nearest burrow or other safe place. Gophersnakes may share overwintering dens with rattlesnakes and racers. Gophersnakes cannot hybridize with rattlesnakes and are no threat to humans or livestock.

#### PRAIRIE (WESTERN) RATTLESNAKE (Crotalus viridis)

Rattlesnakes favor grasslands, sagebrush, badlands, open ponderosa pine and juniper habitats, often around rocky outcroppings or cliffs. They are a stout, heavy-bodied snake,



with a wide head. Their triangular head, blunt nose, and rattle at the end of the tail distinguish it from similar-colored gophersnakes and hognosed snakes. Pupils are vertical, and a heat-sensing pit is located between the nostril and the eye. Rattlesnakes are typically pale green to brown with a series of brown or black blotches extending down the dorsal side, and a solid pale yellow to white belly. Fangs are hollow and hinged, and fold against the roof of the mouth. Adult body length, including tail, is 24-45 inches, males slightly larger than females. A new 'rattle' (or segment) is added every time the snake sheds, which can be 1-4 times per year. Since rattles also break off, rattlesnakes cannot be aged by the number of rattles.

Females may reproduce every 2-3 years. Mating occurs the previous summer. Females give birth in late summer, early fall to 4-25 live young. Juveniles are 7-13 inches in length and patterned similar to adults, although their small "button" rattle may not provide the typical warning sound. Life span is nearly 28 years in captivity.

Rattlesnakes hunt rodents, including prairie dogs, mice, rats, voles and ground squirrels by ambush--striking at their prey and injecting them with venom. They often overwinter in large, communal dens located in rocky outcrops or burrows, often sharing dens with other species. Rattlesnakes are generally not very aggressive, and will try to escape if possible, when threatened. If escape is not possible, they will coil into a strike position, and may sound their rattle producing a loud buzzing. They may strike if further agitated.

Rattlesnakes consume mice and ground squirrels, and are important for controlling rodent pests. Rattlesnake bites are rare, but regularly occur in Montana as they will often seek refuge in cool, moist areas, where they can be accidentally encountered by people. Rattlesnake bites are rarely fatal, but can cause painful tissue damage, and are especially dangerous for small children. Full recovery is likely with prompt medical attention. If bitten by a rattlesnake DO (1) stay calm; (2) move the bitten area as little as possible; (3) seek medical attention as soon as possible. DO NOT (1) pack the bitten area in ice; (2) attempt to suck venom from the wound; (3) cut the wound; (4) apply electrical current.

For more information on all Montana's native species visit <a href="http://www.fwp.mt.gov">http://www.fwp.mt.gov</a> or the *Natural Heritage Tracker* at http://www.mtnhp.org/

> Morphology adapted from Amphibians and Reptiles of Montana (2004) J. Kirwin Werner, Bryce A. Maxell, Paul Hendricks, & Dennis Flath. Mountain Press Publishing