



Living with Montana's Snakes

For many, snakes evoke feelings ranging from unease to outright panic. Sometimes these feelings cause people to run away from snakes. Many, however, respond by killing snakes, even when those snakes pose no threat to the wellbeing of themselves or loved ones. This bulletin has two important goals. First, it will explain basic snake biology and the role snakes have in Montana's ecosystem. The goal is to use the following information to overcome fear, increase appreciation of the role snakes play in our environment and to be safe around snakes.

Montana's Snakes

Montana only has ten native snake species, namely, the Common Gartersnake (*Thamnophis sirtalis*), Gophersnake (*Pituophis catenifer*), North American Racer (*Coluber constrictor*), Northern Rubber Boa (*Charina bottae*), Plains Gartersnake (*Thamnophis radix*), Plains Hog-nosed Snake (*Heterodon nasicus*), Smooth Greensnake (*Opheodrys vernalis*), Terrestrial Gartersnake (*Thamnophis elegans*), Western Milksnake (*Lampropeltis gentilis*) and the Prairie Rattlesnake (*Crotalis viridis*). Of the ten snakes, only the Prairie Rattlesnake is venomous.

Snake Identification

In some parts of the United States, snake identification can be difficult because different snakes can have similar coloring and patterning. Fortunately, Montana's native snakes are relatively easy to identify by their patterning and to some extent by their coloration. Simply determine if the snake's patterning is solid, striped or patterned/banded.

- Solid color: North American Racer (adult), Rubber Boa and Smooth Green Snake.
- Longitudinal stripes (lines that extend the length of the snake's body): Common Gartersnake, Plains Gartersnake and Terrestrial Gartersnake.

- Banded or spotted color: North American Racer (Juvenile), Gopher Snake, Plains Hog-nosed Snake, Western Milk Snake and Prairie Rattlesnake.

Pattern Before Color

You may be inclined to focus on color to identify snakes, but a better way is to focus on patterning first and then refine your identification by using color and location. The reason is quite simple, sometimes two individuals of the same species of snake will display different coloration.

Solid-colored Snakes

When describing snakes as solid colored, herpetologists (those that study snakes) do not mean that there is no color variation in the snake's color. Rather, they mean that one color dominates the snake's body either on the back or on the belly.

North American Racer

Racers can be identified by their large round black eyes and the even olive green (Figure 1) to gray colored bodies (Figure 2).



Figure 1. Olive green colored racer in periscope position (head extended from the ground, for better visibility).

The belly of the snakes can be yellowish. Juvenile racers have brown blotches on their backs and brown dots on the sides of their body which at a glance can look like bands. Coloration changes to the uniform color as the

racer matures. Adult racers range in size from 23-48 inches with females being larger than males.



Figure 2 A gray colored racer.

Racers emerge from hibernation in April to early May and begin mating shortly thereafter. Pregnant females lay eggs in burrows which hatch in August. Racers are found throughout Montana at elevations below 6,600 feet (Figure 3). They prefer areas with grasslands and sagebrush where insects and rodents are abundant. They are visual hunters and are active during daylight hours.



Figure 3. Range of the North American Racer.

Northern Rubber Boa

Boas have a brown, dark brown or olive coloration whose intensity fades at the stomach area (Figure 4). Boas are uniformly thick with no real indentation at the neck area behind the head as in other snakes. Juvenile boas are similar to adults in coloration except that they have a lighter shade and with belly color of either pink, cream or yellow. Adults range in size from 14 to 28 inches with females slightly longer than males.



Figure 4. Northern Rubber Boa.

This species prefers wooded areas found in the western third of the state and have been found at elevations up to 7,000 feet (Figure 5). Boas emerge from hibernation in April with mating likely occurring in May. They hunt primarily at night preferring small mammals such as shrews. Prey is killed by constriction.



Figure 5. Range of the Northern Rubber Boa.

Smooth Greensnake (species of concern)

Smooth Greensnakes are uniformly colored on their back with their belly exhibiting a cream to light yellow coloration (Figure 6). Their tongue has bright red coloration with a black tip. Newly born snakes have brown, olive green or bluish colored backs that turn green following their first shedding of skin (i.e. molt). Adults range in size from 12 to 28 inches.



Figure 6. Smooth Greensnake.

This snake is found only in the upper northeast corner of Montana (Figure 7). Very little is known about its reproductive activity but researchers believe the snake mates in May or June with young hatching in July or August. Greensnakes feed on spiders, grasshoppers and slugs. They are very docile but will secrete fluid when handled.



Figure 7. Range of the Smoothgreen Snake.

Species of Concern

The status “species of concern” is Montana’s designation for native animals experiencing declines in population, habitat or have restricted distribution. These species are considered “at risk” and therefore receive the “species of concern” designation. The concern is for the future of the species in the state of Montana and not necessarily to the future of the species nationally. A complete list of species with this designation can be found by visiting <http://fwp.mt.gov/fishAndWildlife/species/speciesOfConcern/>.

If you happen to encounter a snake listed as a species of concern, visit the Montana Natural Heritage Project’s online reporting tool at <http://mtnhp.org/AddObs/> and submit a tool. Your information can be of enormous help in the conservation of these species.

Striped Snakes

Gartersnakes

Gartersnakes are easily identified because they are the only snake that has stripes extending along the length of their bodies. The stripes are usually yellow but for some species can have a blue or red hue. Montana has three species of garter snakes, Common (Figure 8), Plains (Figure 10) and Terrestrial (Figure 12). Adult gartersnakes can range in length from 16 to 42 inches for the Common Gartersnake to 16 to 43 inches for the Terrestrial Gartersnake.

They have broad ranges which overlap enough to ensure that the range of the snakes taken collectively cover the entire state even up to elevations of 9,000 feet (Figs, 9, 11 and 13). Gartersnakes give birth to 5 to 27 young with the Common Gartersnake brood reaching numbers as high as 42.



Figure 8. Common Garter Snake.

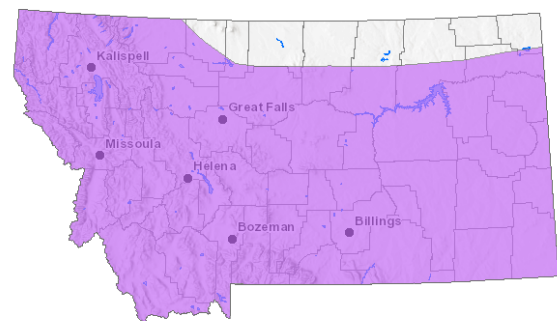


Figure 9. Range of the Common Garter Snake.



Figure 10. Plains Gartersnake.



Figure 11. Range of the Plains Gartersnake.



Figure 12. Terrestrial Gartersnake.

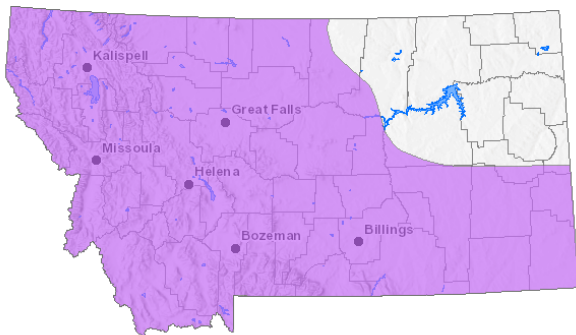


Figure 13. Range of the Terrestrial Gartersnake.

Gartersnakes feed on amphibians and insects and are typically found in moister areas where prey is abundant. Gartersnakes give birth to 6 to 18 live young during the

summer months. Gartersnakes are docile seeking to avoid human encounters. They will excrete a fluid when handled.

Patterned Snakes

Gophersnake

Gophersnakes (aka Bullsnake) have a blotched pattern extending the length of their body (Figure 14). Blotches can be black or brown. The eye will have a dark band extending below it like a thick drip of paint (Figure 15). Gopher snakes average between 3 to 5 feet in length with some adults reaching 7 feet making them the longest snakes in Montana. Females lay on average 12 to 13 eggs in late June to July. Eggs hatch about 30 days later.



Figure 14. A coiled Gophersnake.



Figure 15. Head of a Gophersnake showing the black line below the eye.

Gophersnakes occur primarily in central and eastern Montana (Figure 16). However, they will be found in the valleys of western Montana up to elevations of 5,000

feet. They feed on rodents, rabbits and ground nesting birds and to some extent on lizards.

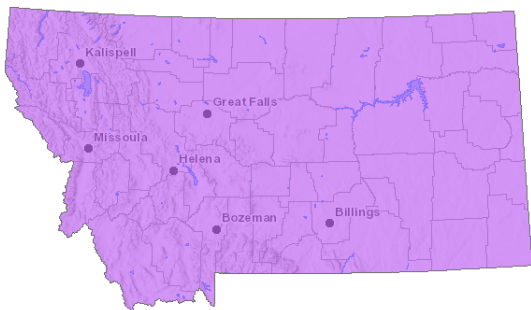


Figure 16. Range of the Gophersnake.

Plains Hog-nosed Snake (*species of concern*)

Plains Hog-nosed Snakes (Figures 17-18) are easily identified by its upturned snout which is used to dig in soft soil. The snake is covered with colored blotches which range in color from tan to gray depending on the snake. At the tail, the blotches turn to rings. Adults range in length from 15 to 25 inches. Mating is believed to occur in May with eggs being laid in June or July. Fifty to sixty days later 2 to 15 of the young hatch.



Figure 17. Plains Hog-nosed Snake.



Figure 18. Plains Hog-nosed Snake.

Hognose snakes occur in the plains characteristics of the eastern two-thirds of Montana at elevations below 4,000 feet (Figure 19).

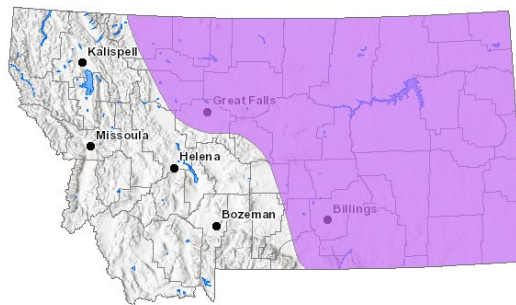


Figure 19. Range of the Hog-nosed Snake.

Hognose snakes feed on amphibians such as salamanders and particularly toads. When threatened, hognose snakes flatten their head, hiss and rattle their tails making the unobservant think it's a rattlesnake. But hognose snakes rarely bite and lack the exposed bones in the tail. In other words, the behavior is a big bluff. If the bluff fails to make the enemy leave, then the snake rolls over onto its back, defecating and throwing up in an attempt to play dead.

Western Milksnake (*species of concern*)

The Western Milksnake exhibits an orange/red, black and white pattern on the length of its body (Figure 20). Those familiar with the venomous Coral Snake of the southeastern United States will recognize that the red bands do not directly touch the yellow. Adults range in size from 14 to 25 inches. Females lay 4 to 13 eggs between mid-June and mid-July. Young emerge 42 to 60 days later.



Figure 20. Western Milksnake.

Milksnakes occur in the eastern two-thirds of Montana in elevations below 4,000 feet (Figure 21). Their diet includes worms, insects, small rodents and other snakes. Larger prey is killed by constriction.

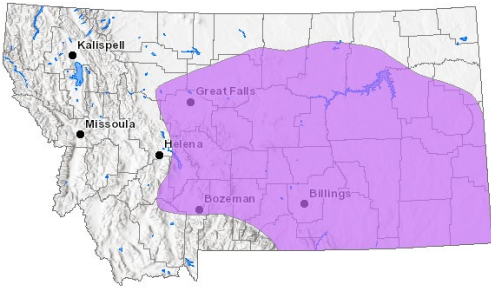


Figure 21. Range of the Western Milksnake.

Milkshakes defend themselves by coiling, rattling their tails and biting. If handled, they will defecate.

Poisonous vs. Venomous

You may have wondered why the term venomous was associated with snakes rather than the word “poisonous.” The reason is one of definition. Venomous refers to an animal that can inject a toxin into prey. Poisonous refers to an item or animal that has a toxin that can harm another creature when it is eaten or touched. Snakes are called venomous because they inject venom but are edible.

Prairie Rattlesnake (Venomous)

While many people fear all snakes, the rattlesnake is the only native Montanan snake where fear is remotely justified. Prairie Rattlesnakes have black to dark blotches along the back extending to the tail where they change from blotches to rings (Figure 22).

Identification

Always keep in mind that unusual animals can occur. For example, some rattlesnakes lack (or lose) their rattles. Wheatland County reported a rattlesnake that did not have the characteristic blotched pattern on the back. If you cannot positively identify a snake, it is best to leave it alone and/or take a photo from a safe distance.



Figure 22. Prairie Rattlesnake.

Identification is confirmed by the triangular head and bony tail that rattles when shaken. A rattle is added to the tail following each shedding of skin, which can be as frequent as four times per year. Rattle counts should not be used to age rattlesnakes because the rattles often fall off during the snake’s life. Adult rattlesnakes range in size from 24 to 45 inches with females being larger than males. Mating occurs during the summer with females giving birth in late August to early October. Rattlesnakes occur throughout Montana below 6,400 feet (Figure 23). The majority of their diet consists of rodents, including prairie dogs and rabbits.



Figure 23. Range of the Prairie Rattlesnake.

Rattlesnakes primarily respond to threats by remaining still and moving away. But when escape is not possible or when handled, rattlesnakes will coil, rattle and strike if time permits. Additional information about rattlesnakes may be found in the Snake Safety section below.

Snake Safety

Just the sight of a snake makes some people recoil in horror and others to chase it with a shovel. Chances are

you or loved ones rationalize this behavior by saying “It might be poisonous and I don’t want my (fill in the blank) to be bitten.” Ideally, the safest way to be safe around snakes is to avoid them altogether. As noted above, nine of Montana’s ten native snakes, lack venom. Nevertheless, use care around snakes as even a non-venomous bite can potentially lead to infection. Wash the wound with soap and water, treat with an antibiotic ointment, bandage and monitor. Many non-venomous snakes will defecate and urinate when handled. While native, wild snakes are not known to carry salmonella, one should always wash hands and other exposed areas after handling wild animals.

Being safe around snakes is rather straightforward.

- Know that snakes are not active when temperatures dip below 60° F. Unsurprisingly, 85% of bites occur between April and September when snakes and people are most active outdoors.
- When hiking, carry a walking stick and make noise to let snakes know of your presence. The fact is snakes are far more afraid of you than you are of them. Use care around rock piles, ledges and locations where two habitats meet (e.g. grass and rocks) as snakes like to hunt edges. As a rule, areas favorable to mice will be favorable to venomous snakes.
- Wear snake-bite resistant clothing. Wear shoes, preferably boots, that cover the foot and extend above the ankle. Snake-proof gaiters are ideal, but full-length and loose-fitting denim jeans can also provide a fair amount of protection against snake bites on the lower leg.
- Look before you touch. Do not insert hands into holes or other obscure areas without visually inspecting the area first.
- Maintain a safe distance from snakes. Snakes, even those that bite, can only reach out to half of their body length. So, if a snake is three-feet long, its maximum biting distance would be 18 inches. An exception occurs when the snake abuts a wall or tuft of grass. In those situations, the snake can strike up to their full length.
- Teach children not to approach or handle snakes without parental supervision. Snake phobias are a learned behavior. Use opportunities to teach

children to appreciate and respect snakes for the role they play in the ecosystem.

Venomous Snake Safety

Montana’s only venomous snake is the Prairie Rattlesnake. This snake is classified as a Pit Viper. Pit vipers get their name because of the hole (pit) between the eye and nostril (Figure 24). The pit helps them sense heat emanating from prey allowing the viper to locate prey in the dark. Pit vipers also have elliptical eyes (like a cat’s) and a pair of well-formed fangs. Their venom is primarily hemotoxic (affecting the blood). Pit vipers include rattlesnakes, copperheads, and cottonmouths.

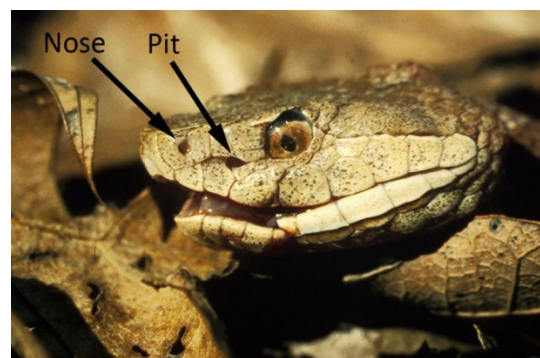


Figure 24. Notice the "pit" on the face of this Copperhead Snake, half-way between the nose and the eye.

The second group of snakes, consisting of only four species, are known as Coral snakes. Unlike pit vipers, the venom of Coral snakes is neurotoxic (affecting nerves) rather than hemotoxic. Coral snakes differ from pit vipers by having round eyes, teeth (not fangs) and distinct red, yellow, and black bands. In venomous snakes, the red band is adjacent to the yellow band. If the red band is adjacent to the black band then the snake is non-venomous. A mnemonic is used to distinguish the venomous Coral snakes from similarly looking non-venomous ones, such as the Milk snake. To help you remember which is which, memorize the following mnemonic: “Red on yellow, kill a fellow, red on black, venom lack.”

Identification of Rattlesnakes

Too often, the fear of snakes causes people to misidentify non-venomous snakes. Stress, surprise and phobias make it easier for us to turn a non-venomous snake into a venomous one.

To make matters more difficult, some non-venomous snakes actually mimic rattlesnakes in the hope of convincing predators to leave them alone. Fortunately, knowing a few simple rules will help you correctly identify rattlesnakes from the rest.

1. Head Shape

Head shape is a strong diagnostic clue (Figure 25).

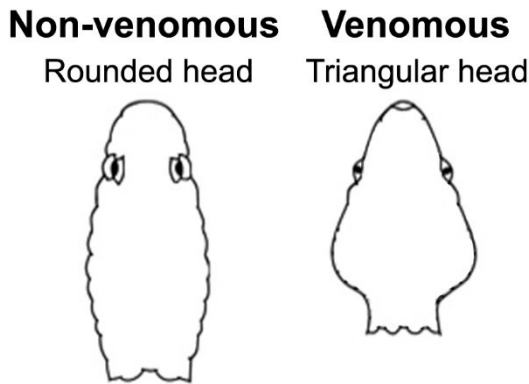


Figure 25. Head shape of non-venomous and venomous snakes.

2. Eyes and Pit

Eyes and the presence or absence of the “pit” is another strong diagnostic clue (Figure 26). However, these clues do require viewers to have strong vision or be very close to the snake, perhaps too close.

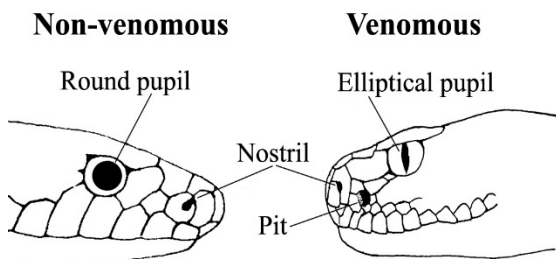


Figure 26. Eye and pit comparison between non-venomous and venomous snakes.

3. Belly Scale Patterning

Scales underneath the end of the tail (below the cloacal i.e. anus; Figure 27) typically differ between non-venomous and venomous snakes. This identification tip has limited usefulness because 1. It requires handling of the snake and 2. some snakes violate this pattern, meaning a venomous snake may have single banding and vice versa.

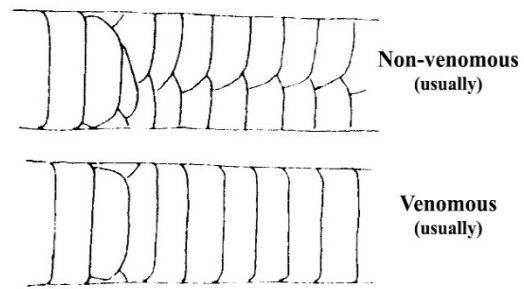


Figure 27. Belly-scale pattern below the cloacal opening.

4. Color Patterning

Some snake species have similar color patterning making it easy to misidentify. Juvenile racers, for example, look similar to juvenile rattle snakes unless one looks very carefully (Figure 28).



Figure 28. Patterning of this juvenile racer can look very similar to that of a rattlesnake.

Likewise, the tail bands of the Gophersnake can be confused with those of a rattlesnake (Figure 29). In all of these instances, confirmation of identity can be made by looking at the eyes and head shape.

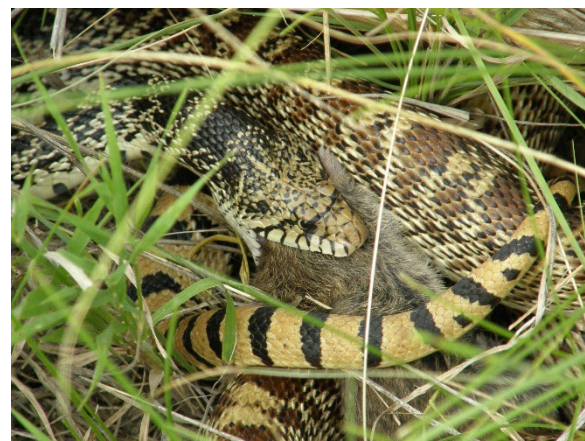


Figure 29. The tail banding of the Gophersnake may be confused with that of a rattlesnake.

5. Behavior

Many snakes shake their tails causing people to identify them as rattlesnakes. But careful observation will reveal that not all tail rattlers are rattlesnakes. Rattlesnakes hold their tails vertically so the rattle can be clearly heard. Non-venomous snakes shake their tails side to side to strike objects and make the rattle sound.

What are the Odds?

According to the Centers for Disease Control, 7,000 to 8,000 people are bitten by venomous snakes each year in the United States. Of those, over 99 percent of the bites are from pit vipers. While that statistic sounds scary, it is also quite misleading. As approximately 50% of those bites occurred to people handling snakes (often pets), hunting snakes, or failing to move away from the snake once they noticed it was nearby. A surprising number of these bite victims were under the influence of alcohol. The point is that about 35 percent of snakebite victims encountered snakes by accident, meaning they were not hunting or deliberately seeking to handle snakes. While those numbers may still seem high to you, keep in mind that not every bite from a venomous snake contains venom. In fact, up to 25 percent of venomous snake bites are dry, meaning no venom has been released into the victim.

Even when venom is present, most bites are not lethal. Venomous snake bites are very rare and deaths are extremely rare. Nationwide, only five to six people die each year from snake bites. Typically, death due to snakebites occur with children, the elderly, those who do not receive antivenin (the antidote for venom), those who do not receive the antivenin quickly enough or those who fail to receive sufficient amounts of antivenin.

Why Rattlesnakes Bite

Rattlesnakes bite either for aggressive reasons (i.e. capture food) or defensive reasons (to deter a threat). Rattlesnakes know they cannot eat a human. Thus, when they bite a human it is for defensive purposes only, namely the snake feels threatened.

The severity of a rattlesnake bite depends on several factors, including the size the victim, site of bite (i.e. bites to the face are more serious than a bite to an

extremity), amount of venom injected, the toxicity of the venom, and speed and quality of medical treatment.

Victims of venomous bites will typically show signs within 30 to 60 minutes of the bite. Signs and symptoms of envenomation can include: intense pain, swelling, weakness, numbness or tingling, vomiting, confusion, rapid pulse and black and blue coloration of the skin. Even if you do not experience any of these signs and symptoms following a snake bite, go to the hospital as soon as possible for medical evaluation.

First Aid for Venomous Snake Bites

- Get yourself and others away from the snake to avoid additional bites.
- Do not attempt to capture the snake as this behavior significantly increases the risk of a second bite. Even dead rattlesnakes can perform what is called “reflex biting” when handled.
- Identify the snake. Take a picture if you can do so safely.
- Take off all restrictive items, such as rings, watches etc. as venom occasionally causes swelling.
- Never cut the wound.
- Do not use your mouth to “suck” out the venom.
- Keep calm. Anxiety and movement will raise your heart rate thereby causing the venom to travel through your body faster.
- Obtain assistance as soon as possible. When it comes to venomous snake bites, “time is tissue”. The faster the victim obtains treatment, the faster the recovery.

Identification of Snake Presence

Though most snakes are encountered directly, snakes can also make their presence known through shed skins and scat. Snakes shed their skin when they need to increase in size. Interestingly, the skin is about 20% longer than the actual snake.

Snake scat is tubular with a white end cap, similar to that found in bird droppings (Figure 30). But unlike bird droppings, snake scat will be found as isolated events and will usually not be coupled with other droppings characteristic of roosting birds.



Figure 30. Scat of a Prairie Rattlesnake.

Snake Control

Habitat Modification

All animals require food and shelter to survive. Habitat modification involves changing the landscape to be less hospitable to the animals you no longer want around. Removing the cover that snakes need to hide will significantly reduce the presence of snakes in an area. Keep lawns mowed and property clear of clutter (e.g. wood piles, rock piles, etc.) to remove the cover that snakes need for shelter. Remove or trim anything that disrupts your view of the ground.

Exclusion

Prevent snakes from entering structures by securing gaps that provide snakes cover. Gaps less than a half-inch wide can be secured with silicone-based sealants or other similar materials suited for the surface and weather conditions. Larger gaps should be filled with Xcluder™ or Copper Stuf-Fit and then secured with a sealant. In general terms, follow guidelines for excluding mice and insects and you will also exclude snakes.

If it is possible that snakes have used your home or structure as a hibernaculum (a place where snakes hibernate) or nesting area, then do not secure gaps, particularly around the foundation without consulting the Montana Department of Agriculture's Vertebrate Pest Specialist or a professional Wildlife Control Operator.

Snakes can be excluded or directed away from unwanted areas by constructing drift fences. Drift

fences may be built from erosion fabric or 20-inch wide aluminum flashing (Figure 31). Cut a shallow and narrow groove in the soil. Place the fabric or flashing vertically in the groove and secure in place with poles or survey stakes. Refill the groove with the soil so that the bottom portion is below the ground surface.



Figure 31. Drift fence made of aluminum flashing.

Repellents

Repellents are chemicals that cause avoidance behavior in animals. Montana has one repellent registered for use on gartersnakes and rattlesnakes. The granular repellent, with active ingredients: seven percent naphthalene and 28 percent sulfur, is labeled for use as a barrier to discourage snakes from entering an area and not as a chemical to evicts snakes from an area. Research on the repellent's effectiveness to repel Plains Gartersnakes (*Thamnophis radix*) in field conditions found that the repellent did not work.

Toxicants/Fumigants

No toxicants or fumigants are registered for the control of any snake native to Montana. Methyl bromide-based fumigants are labeled for control of the brown snake, but that species is not native to the continental U.S.

Trapping

Snakes may be removed from structures or other sensitive areas by trapping. The easiest way to trap snakes in or adjacent to structures is by using rat-sized glue boards. Place the traps along walls and areas where the snake was seen. If trapping larger snakes (i.e. 18

inches or larger) then place a couple of glue boards together and affix to thin sheets of plywood. Using a flashlight, check traps from a safe distance (i.e. 3 feet or more) in case the snake has not become completely affixed to the glue. It is preferable to monitor traps in the morning and evening but no more than four times per day.

If trapping outdoors, place glue boards inside protective enclosures made of wood or plastic. These enclosures will help protect the glue boards from rain as well as reduce the likelihood of capturing non-target animals such as birds. For example, place the glue board against a building foundation and then lean a large plywood board against the building to hide the glue board.

Glue boards specifically designed for snakes are available. Snake Guard™ uses a V-shaped glue strip inside a low-profile cardboard box. The V design allows the snake to be captured while remaining out of view (Figure 32).

The Cahaba Snake Trap uses a large glue board inside a plastic case that permits use in outdoor settings.



Figure 32. Snake Guard trap in the set position.

From a safe distance away (e.g. 3 feet or more), kneel and shine a flashlight into the opening of the trap. Never open the trap without checking first.

Snakes or other animals may be released from the glue by dissolving the glue with vegetable oil. First, consider a suitable location for release. Release sites should have cover for the snake as well as landowner permission. Move the trapped snake to the area. Then pour the vegetable oil where the snake and glue meet. Avoid covering its body. If the snake has not exhausted itself from struggling, it will wriggle free as it feels the glue

dissolving. Monitor the snake's progress periodically to see if additional oil is needed to free the snake. Do not linger in view of the snake to avoid increasing its stress. Once the snake has left the release location, place glue board in the trash.

Be aware that glue boards can catch a variety of small rodents and insects. Traps can also be inactivated by dust adhering to the glue. Replace traps when they have become too dirty and have lost their tackiness.

Direct Capture

Direct capture refers to the immediate handling of a snake either by hand or by means of a tool, such as snake tongs (Figures 33-34). Direct capture should be limited to non-venomous snakes. Direct capture of rattlesnake should only be done by properly trained professionals.



Figure 33. Dennis Ferraro demonstrates using snake tongs.



Figure 34. Narrow-mouthed tongs (top) and wide-mouthed tongs (bottom).

Though non-venomous snakes may be captured by hand, we do not recommend doing so. Hand capture is difficult because you must hold the snake firmly enough to keep it from fleeing while light enough to avoid crushing its spine. Hand-captured snakes may also attempt to bite and defecate in the attempt to convince you to let them go. Wash contaminated areas with warm soap and water and treat all wounds with basic first aid.

A safer option is to use snake tongs to capture snakes. Snake tongs with wide jaws are preferable as they spread the gripping force over a wider area thereby reducing the risk of injuring the snake. Ideally, you should familiarize yourself with the tongs by grasping uncooked chicken eggs. If you are cracking the eggs, you are tightening the jaws too much.

Captured snakes can be carried to the edge of the yard and released. Alternatively, place them in a pillow case and tie the end with a string or overhand knot. Make sure the snake will not be trapped in the knot. Buckets may also be used provided they are deeper than the snake is long. Snakes can escape from shallow buckets.

Dispatching Snakes

When snakes need to be killed, it is important to use methods that are effective, minimize animal suffering, while avoiding offending the public. Do not kill snakes in public view unless public safety demands doing so.

For snakes caught on glue boards, the easiest dispatch method is to drown them. First make sure the snake is

securely caught. Then place the snake in a bucket of water. A rock may be needed to weigh the glue board down. Keep the snake underwater for at least 15 minutes or for at least five minutes after it stops moving, whichever is longer.

Decapitation is also effective but can increase the likelihood of personal injury. If killing a rattlesnake, keep in mind that the venom is still dangerous for days following death. Dispose of the head in a manner, such as deep burial, to prevent accidental punctures.

Final Comments

Montana's snakes are an important part of our ecosystem. Endeavor to appreciate their diversity and natural beauty. When conflicts arise, use the methods that will solve the problem with the least amount of injury and death to these important animals.

DEPARTMENT SERVICES

The Montana Department of Agriculture Vertebrate Pest Specialist program will assist County Commissioners, Extension Agent, and landowners to establish a program suited to County, local and individual needs. Field demonstrations are provided to inform landowners how, when, and where to control snakes, field rodents and other vertebrate pests. Interested individuals should contact the Montana Department of Agriculture.

In Lewistown: Stephen M. Vantassel
Vertebrate Pest Specialist
625 NE Main St. Ste 3
Lewistown, MT 59457
(406) 538-3004 svantassel@mt.gov

Additional printed information on the control of vertebrates is available from the Montana Department of Agriculture website <https://agr.mt.gov/Vertebrate-Pests>

MONTANA POISON CONTROL
(Emergencies)
1-800-222-1222

**MONTANA DEPARTMENT of PUBLIC HEALTH &
HUMAN SERVICES**
Injury Prevention Program
1-406-444-4126

<http://dphhs.mt.gov/publichealth/EMSTS/prevention.aspx>

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Credits

Figure 1. Alan Scherer/Wikimedia

Figure 2. Montana Natural Heritage Program

Figures 3, 5, 7, 9, 11, 13, 16, 19, 21, 23. Montana Field Guide

Figure 4. J.R. Douglass/Wikimedia

Figures 6, 10, 14, 23. U.S. Fish & Wildlife Service

Figure 8. Alicia Lafever/NPS

Figures 12, 15, 21. National Park Service

Figure 18. Gary M. Stolz/USFWS

Figure 25. Image adapted from Merck Manual

Figures 26-7. Image adapted from one by Emily Oseas Routman in Prevention and Control of Wildlife Damage 1994.

Figures 17, 28-29. Montana Natural Heritage Program

Figures 20, 30-34. Wildlife Control Consultant, LLC

