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Venomous
Terrestrial Animals
of Texas



Introduction

This is an introduction to venomous terrestrial animals of Texas—mostly insects, spiders and snakes. The species highlighted here are some of the best known, most commonly encountered, and most dangerous of venomous animals. Many species were not included in this field guide because they are rarely encountered or because their venom is mild and causes few problems. Venomous organisms in the ocean are not covered in this publication.

A venomous animal is one that produces a toxin (or poison) to attack its victims or defend itself. The type and amount of toxin the victim receives determines the seriousness of the reaction. People react differently to different toxins, and the same person may even react differently to the same toxin from one time to the next. Venoms are usually a complex of toxic chemicals that can cause a variety of symptoms.

Most venomous animals either bite with their mouths (examples are spiders and snakes) or sting with a modified egg-laying organ (called an ovipositor) or with a separate stinging organ. Some venomous animals neither bite nor sting. Centipedes can drip toxin on an open wound. Blister beetles can rub a toxin on the skin.

Common reactions to toxic substances are pain, itching, swelling or other symptoms. In addition to the effects of the venom itself, some people have allergic reactions that can be serious. Symptoms of allergic reactions include difficulty breathing or swallowing, weakness, dizziness, vomiting, rashes or unconsciousness. If the victim has any of these symptoms, seek medical help quickly.

Each year in the U.S. about 25 deaths are reported from bee and wasp stings, five from spider bites and scorpion stings, and 15 from snake bites (most of these are caused by diamondback rattlesnakes). Only about one death from bees or wasps and one from snakes are reported each year in Texas. However, many bites and stings go unreported.

John A. Jackman

Professor and Extension Entomologist
The Texas A&M University System

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4



Honey Bee
Apis mellifera Linnaeus
[Hymenoptera: Apidae]

Identification

- Honey bees are about 1/2 inch long; color varies from light brown to black mixed with yellow.
- The abdomen is banded and the thorax covered with dense hairs.
- Africanized honey bee is a strain of this species and difficult to distinguish from managed honey bees.

Biology

- This is the common bee that is kept for honey production and pollination. There are wild colonies in addition to managed hives.
- Colonies can have 20,000 to 90,000 bees.
- Only female bees can sting; males (called drones) do not sting.
- Usually there is one queen per colony.
- New colonies are formed when bees “swarm” to new locations.

Reaction to Stings

- The reaction to the sting is intense and immediate.
- The stinger and a poison sac are left in the skin. Remove them quickly by scraping with a knife or fingernail.
- Worker honey bees die after stinging.

5



Bumble Bees
Bombus spp.
[Hymenoptera: Apidae]

Identification

- These large, husky bees are about 3/4 inch long, but the size is variable.
- Bodies are fuzzy with black and yellow or black and orange hairs.

Biology

- These bees live in small colonies, usually with fewer than 2,000 bees.
- Fertilized queens overwinter and form colonies in the spring.
- They usually nest in the ground or in clumps of dry grass, old bird nests, abandoned rodent burrows, old buildings, or discarded cushions.
- Honey is stored in a “pot” rather than honey comb.
- Disturbed colonies may attack in groups.

Reaction to Stings

- Sharp pain and local swelling are typical.

Related Species

- Carpenter bees resemble bumble bees but have shiny abdomens.
- Male carpenter bees may attack to defend a territory but cannot sting.
- There are many other bees, such as leaf-cutting bees and sweat bees, one may encounter.

6



Southern Yellowjacket
Vespula squamosa (Drury)
[Hymenoptera: Vespidae]

Identification

- Yellowjackets are usually black with yellow markings on the head, thorax and abdomen.
- The body is smooth and the wings are clear.
- They are about 1/2 inch long.

Biology

- They may be aggressive when foraging, especially in the fall.
- Colonies are often underground, sometimes in walls or indoors.
- The queen is larger and more orange than workers.
- The queen overwinters and starts a new colony in the spring.
- Adults feed on nectar, rotting fruit, carrion and various arthropods.
- Southern yellowjackets can sting repeatedly.
- The nest looks like a paper carton and may be enlarged and reused for many years.

Reaction to Stings

- There is sharp, immediate pain with local swelling.
- Pain and swelling subside within a few days but itching may continue.

Related Species

- Other species of yellowjackets are also found in Texas.
- Yellowjackets are often called "hornets."

7



Paper Wasps
Polistes spp.
[Hymenoptera: Vespidae]

Identification

- The common "red wasp" is a type of paper wasp.
- Body color varies with species; may be reddish brown or brown with yellow markings.
- They are about 3/4 to 1 inch long with a narrow "waist."
- Cloudy wings are folded lengthwise when at rest.
- Nests are open on the bottom and not encased in papery covering.
- Nests are made of chewed and reshaped wood fiber.

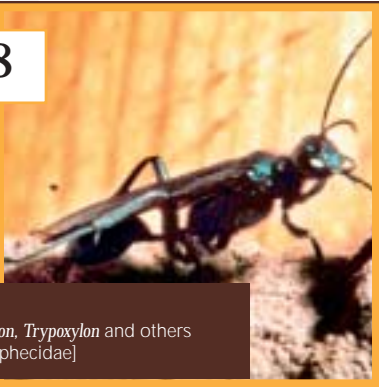
Biology

- They usually nest under eaves and in other sheltered areas.
- Nests are generally small with fewer than 200 cells dangling on a single filament.
- Paper wasps are semi-social with males, females and workers.
- A mature colony usually has only 20 to 30 individuals at one time.
- Fertilized queens overwinter in cracks and crevices in structures or under tree bark.
- Eggs are laid individually in cells of the nest.
- Paper wasps feed on nectar and insects.
- They are active during daylight hours.

Reaction to Stings

- Reaction is immediate but should subside in a few hours to a few days.

8



Mud Daubers

Chalybion, *Sceliphron*, *Trypoxylon* and others
[Hymenoptera: Sphecidae]

Identification

- The several species may be dull black, iridescent blue-black, or black and yellow.
- They are $\frac{3}{4}$ inch to 1 inch long.
- The long, thread-like "waist" is distinct.
- They build mud tubes on the sides of buildings or in other sheltered areas.

Biology

- These beneficial insects forage for spiders, crickets, leafhoppers or other prey.
- They collect and store prey in the mud tubes as food for the larvae.
- They are generally a solitary nesting species.
- Mud daubers have a relatively mild temperament.

Reaction to Stings

- Most attacks are bluffs.
- Stings are rapid and the reaction is immediate.

9



Cicada Killer

Sphecius speciosus (Drury)
[Hymenoptera: Sphecidae]

Identification

- These large wasps are up to 1½ inches long.
- The head and thorax are dark red; the abdomen is black with yellow spots or bands.
- Wings are honey- or russet-colored.

Biology

- They build nest burrows in sandy soil or embankments.
- Burrows are about 6 inches deep, surrounded with piles of excavated soil.
- They may congregate at ideal nest sites.
- Females sting cicadas to paralyze them and carry them to the nest.
- There is one generation per year; larvae or pupae spend the winter in the soil. Adults emerge in the summer and form new nests.
- Females can sting but rarely are aggressive.
- Males are aggressive but cannot sting.

Reaction to Stings

- Stings produce sharp pain and local swelling.

10



Red Velvet Ant
Dasymutilla occidentalis (Linnaeus)
[Hymenoptera: Mutillidae]

Identification

- They are approximately $\frac{3}{4}$ inch long.
- These wingless wasps look like “fuzzy ants,” but they are not ants.
- The black and orange-red markings make them strikingly colorful.

Biology

- Females crawl rapidly along the ground in search of food or nesting sites.
- Females invade nests of ground-nesting bees and other insects and use the broods in the nests as food for their own offspring.
- Females and males can “squeak” when cornered.
- Males have wings and fly low over grass in search of females. Males cannot sting.

Reaction to Stings

- Stings are considered extremely painful.
- This species is called the “cow killer” because of its painful sting.
- The (stinger) ovipositor is very long.

Related species

- Other species of velvet ants have black, red, orange or white in various patterns.
- Most similar species are much smaller.

11



Red Imported Fire Ant
Solenopsis invicta (Buren)
[Hymenoptera: Formicidae]

Identification

- Workers are $\frac{1}{16}$ to $\frac{3}{16}$ inch long and queens are $\frac{3}{8}$ inch long.
- Females are reddish brown; males are darker.
- They are found mainly in the eastern two-thirds of Texas.
- This species was accidentally introduced into the U.S. in Alabama around the 1930s.
- Three other species of fire ants are native to Texas, but are less aggressive.

Biology

- Many worker ants sting at the same time in reaction to an alarm chemical.
- Mounds may not be obvious, especially in dry weather.
- There may be more than one queen per colony.
- A colony may contain more than 200,000 ants.

Reaction to Stings

- There is an immediate burning sensation.
- A fluid-filled blister or pustule often develops in a day or two.
- The pustule and irritation may last for a week or more.
- Secondary infection is common, which slows the recovery.
- Hypersensitive reactions are possible.

12



Blister Beetles
Epicauta and other genera
[Coleoptera: Meloidae]

Identification

- These beetles have long, cylindrical bodies with narrow necks.
- They are $\frac{3}{8}$ to 1 inch long.
- Color is highly variable, commonly solid black, gray, yellow or even metallic blue .
- They may be marked with lines or spots.
- There are more than 50 species in Texas.

Biology

- Adult beetles are attracted to lights at night.
- They often congregate in high numbers.
- Adults feed on alfalfa, soybeans and other legumes.
- Larvae feed on grasshopper eggs, bee nests, or other insects in the soil.

Reaction to Toxin

- Blister beetles do not bite or sting, but produce a fluid called cantharidin which blisters the skin.
- They are dangerous if eaten, and can cause a reaction in the urinary tract. Horses have died from eating dead blister beetles in hay.

13



Puss Caterpillar
Megalopyge opercularis (J. E. Smith)
[Lepidoptera: Megalopygidae]

Identification

- They are sometimes called "asps" or asp caterpillars.
- Caterpillars are covered with a thick mat of hair that lies flat.
- Color can vary from nearly white to almost black, but they are usually tan or grey.
- Adults of the family are called flannel moths.

Biology

- Caterpillars feed on elms, oaks, palms, holly and other woody plants.
- Adult moths are seldom seen except near lights.
- Puss caterpillars overwinter as pupae in cocoons.

Reaction to Stings

- The hairs are irritating but they also inject toxic chemicals.
- A persistent skin rash may last for several hours or days.
- Victims may have fever, inflammation and nausea.
- A generalized systemic or allergic reaction may require medical attention.
- Even dead larvae or pupae can cause a reaction.
- Several other caterpillars also can cause skin irritation.
- Avoid contact with caterpillars and pupae.

14



Recluse Spiders
Loxosceles spp.
[Araneae: Sicariidae]

Identification

- This brown spider often has a violin-shaped marking on the front of the body near the head.
- It is up to the size of a half dollar when the legs are extended.
- There are six eyes in three pairs (most spiders have eight eyes).
- The front body region (cephalothorax) is flat.
- There are five species in this genus in Texas; all are venomous.

Biology

- Recluse spiders prefer undisturbed areas such as piles of boards, firewood and rocks.
- They spin small webs as retreats or shelters.
- They wander and hunt during the night.

Reaction to Bites

- There is little pain at the time of a bite; reaction may be delayed for up to a week.
- The bite area spreads and develops a red ring.
- Later the skin falls off, creating an open wound.
- Healing can take months and secondary infection is common.
- Bites can cause serious reactions. Seek medical treatment.

15



Widow Spiders
Latrodectus spp.
[Araneae: Theridiidae]

Identification

- They hang upside down in irregular cobwebs.
- They are usually black but may have red, white, green and other colored markings.
- Males and juveniles tend to have more markings.
- There is always a red marking on the underbelly but it does not always form an hourglass.
- Females are larger than males and produce more venom.
- Four species are found in Texas; all are dangerous.
- Other cobweb spiders are not considered dangerous.

Biology

- They are found around homes, in gardens, and in agricultural fields.
- They prefer to nest in a sheltered area—under tables, chairs, latrines, eaves or plants.
- They are sometimes abundant in well-lighted areas such as power plants.
- Widow spiders usually avoid confrontations and prefer to run.
- They bite only when cornered or threatened.

Reaction to Bites

- Pain occurs soon after the bite and may persist for a few days.
- Pain occurs throughout the body, including the abdomen and joints.
- Less than 5 percent of reported bites result in death.

16



Striped Bark Scorpion
Centruroides vittatus (Say)
[Scorpionida: Buthidae]

Identification

- It is generally brown with darker stripes down the back.
- Color may vary from pale to dark.
- It is seldom more than 2 ¼ inches long.
- It is found throughout the state (the only scorpion found in the eastern part of Texas).
- Texas has 18 scorpion species, but most are limited to the Big Bend area.
- None of the scorpions in Texas are considered “deadly.”

Biology

- Females usually have about 25 young.
- Females may carry the young for a few days after birth.
- Scorpions prefer wood piles, stored boards and firewood.
- They climb up trees and the sides of homes.
- They are most active at night.
- They can enter homes through cracks and crevices.

Reaction to Stings

- Stings cause sharp, immediate pain.
- Localized swelling often persists for days, but individual reaction varies.

17



Centipedes
Scolopendra and other genera
[Scolopendromorpha: Scolopendridae]

Identification

- Centipedes have one pair of legs per body segment.
- This group has 21 to 23 pairs of legs and 17 to 30 segments on the antennae.
- Some grow to about 7 inches in length.
- The body is brown to deep blue with yellowish to orange head, legs and tail appendages.

Biology

- Centipedes feed on other arthropods and small vertebrates.
- Females may coil around the egg mass to protect it.
- They are more common in central Texas and westward, but can be found almost anywhere.
- The first pair of “legs” is actually a pair of hollow fangs with a venom gland at the base.

Reaction to Bites

- Centipedes pinch with the jaws and legs.
- There may be burning pain, nausea and temporary paralysis.
- Claw scratches can cause pain, probably from toxins produced in the walking legs.

Related Species

- Several other smaller and less hazardous centipedes occur in Texas.

Arthropods Mistaken as Venomous

Many insects, arachnids and other arthropods are mistakenly thought to be venomous.

Wind spiders, wind scorpions, sun spiders and sun scorpions are common names applied to Solifugae. These arachnids have four powerful jaws and can pierce impressively but are not venomous.

It is sometimes said that "daddy long-legs" (or harvestmen) produce a highly toxic substance. There is no scientific evidence to support this claim.

Pseudoscorpions are very small, seldom more than $\frac{1}{4}$ inch long. These arachnids do not have a tail, but otherwise resemble scorpions because of their claws. They are usually found in decaying organic matter or under loose tree bark. They are not venomous.

Jerusalem crickets, or "children of the earth," live in the soil and are large, husky, wingless relatives of grasshoppers. They are more common in western parts of the state. They do not produce a poison, in spite of stories to the contrary.

Syrphiid flies are also called hover flies and flower flies. These common insects feed on flower nectar. There are many species and they vary in size and color. They superficially resemble bees and wasps but they neither bite nor produce venom.

Crane flies look like giant mosquitoes and are sometimes called "mosquito hawks." They are commonly seen around lights at night, especially during the spring. They frequently enter homes. They do not feed as adults and do not sting.

Scorpionflies are winged insects with bold wing patterns. The males hold their abdomens over their backs and have enlarged genitalia that resembles a scorpion tail. They cannot sting.

Dragonflies and damselflies are large and conspicuous insects. They do not sting, but can "pinch" if held firmly on the skin.

House dust mites do not bite but can cause allergic respiratory reactions.

Nuisance Biters and Sprayers

Various insects, spiders and other arthropods can produce painful bites that vary in intensity depending on the victim's sensitivity. These are considered nuisance biters because reactions to their bites are not long lasting or life threatening. Nevertheless, these bites can be quite painful or irritating for a short while. Fortunately, bites from these animals are relatively uncommon. Among the nuisance biters are giant water bugs, backswimmers, water-crawling bugs, and other true bugs. Wolf spiders are relatively harmless but their bite can produce local pain and swelling, as well as lightheadedness. Tarantula bites are painful but temporary and are not considered dangerous. Tarantulas can brush hairs off of their abdomens, which can irritate eyes or skin. Some jumping spiders have been reported to cause a sharp pain that may last up to 2 weeks, but their bites are seldom that severe. The agrarian sac spider is known to cause severe reactions in some people.

Ground beetles such as caterpillar hunters and bombardier beetles spray caustic substances that can burn or irritate the skin. Whip scorpions can spray a vinegar-like substance from near the tail if disturbed. Millipedes produce chemicals that irritate the skin if they are handled.

Blood Feeders

Several types of insects and arachnids feed on the blood of humans and/or animals. They inject fluids into the host as they feed. The irritation caused by these fluids is usually temporary and minor, but some people may have more severe reactions. Blood feeders sometimes transmit diseases. Blood-feeding flies include mosquitoes, horse flies, deer flies, black flies and no-see-ums. Blood-feeding true bugs include blood-sucking conenose bugs and bed bugs. Other blood-feeding insects include fleas and lice. Blood-feeding arachnids include ticks, chiggers and a few mites.

Snakes

There are approximately 120 kinds of snakes in Texas (including species and subspecies), but only 15 kinds are poisonous. The poisonous snakes in Texas can be grouped into copperheads, cottonmouths, rattlesnakes and coral snakes.

There is a single species of copperhead (with three subspecies), and a single species of cottonmouth (with one subspecies) in Texas. The rattlesnakes in Texas are in two genera: *Sistrurus* and *Crotalus*. There are two species of *Sistrurus* (with three subspecies) and six species of *Crotalus* (with seven subspecies) in Texas. A single species of coral snake (with one subspecies) occurs in Texas. All of these are pit vipers except the coral snakes. There are a few other species with rear fangs that produce a mild toxin. However, they are considered harmless because they are not very aggressive, produce little venom, and are not very good at injecting it.

There is no easy way to recognize all poisonous snakes quickly in the field. Proper identification often requires close examination. So it is best to become familiar with the snakes in your area and learn their characteristics. Be aware that the color of snakes can vary a lot. Snakes are often dull before shedding their skins (molting) and much brighter in color afterward. Juveniles may be marked quite differently than adults. Occasionally a snake may be an aberrant color such as all white, all black or all yellow. It is risky to assume that all rattlesnakes have rattles, because the rattles can be broken off. They may also strike without rattling, so you should not expect a warning from a rattlesnake.

Snakes Mistaken as Venomous

Water snakes, especially the diamondback water snake, yellow-bellied water snake, and broad-banded water snake, are sometimes misidentified as cottonmouths. Many other snakes are also mistakenly thought to be poisonous.



21

Copperhead
Agkistrodon contortrix (Linnaeus)
[Squamata: Viperidae]

Identification

- Color is pale tan to reddish tan, and darker toward the midline.
- There are 10 to 18 reddish-brown, hourglass-shaped markings that are darker toward their edges.
- The top of the head is plain except for a small, dark spot near each eye.
- Copperheads are found in the eastern, central, and most of the Trans-Pecos regions of Texas. They are not found in the High Plains or South Texas.
- Most adults are 18 to 24 inches long; few are more than 38 inches.

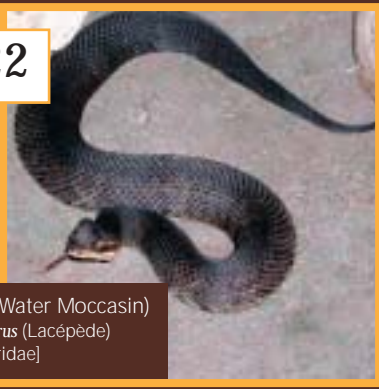
Biology

- Copperheads bear live young, giving birth from July to September.
- Litters are small, typically four to eight.
- They prefer woodlands, but may occur in semi-open habitats.
- They adapt well to urban areas, especially wooded suburbs.
- They are opportunistic feeders; foods include mice, frogs and birds.

Reaction to Bites

- Copperheads are responsible for most venom poisonings within their range.
- Their venom is the least toxic of common venomous snakes.
- Few deaths are reported.
- A bite may be fatal to a small child and occasionally causes loss of limbs or digits.

22



Cottonmouth (Water Moccasin)
Agkistrodon piscivorus (Lacépède)
[Squamata: Viperidae]

Identification

- It has a short, stout body with a broad, flat head and a narrow tail.
- The black or drab body has 10 to 15 wide crossbands that are usually lighter.
- Upper and lower jaws are lighter than the rest of the head.
- It often threatens with mouth open, showing a white "cotton mouth."
- Adults are 20 to 42 inches long; the largest recorded was 62 inches.
- Juveniles have a bolder pattern, may have yellow tails, and are sometimes confused with copperheads.
- Adults are often confused with harmless water snakes.

Biology

- They prefer woodlands and grasslands, usually near water.
- They are found throughout eastern and central Texas, but not in south Texas, the Trans-Pecos or High Plains.
- Cottonmouths bear three to twelve live young (average of five).
- They feed on frogs, fish, mammals (up to the size of muskrats), water birds and other snakes.

Reaction to Bites

- Bites are rarely fatal, but may cause permanent tissue damage.
- Seven percent of snake bites in Texas are from cottonmouths.

23



Western Diamondback Rattlesnake
Crotalus atrox (Baird and Girard)
[Squamata: Viperidae]

Identification

- There are diamond-shaped blotches on the back.
- The black and white colors give a "coon-tail" appearance to the end of the tail.
- The belly is yellowish white and unmarked.

Biology

- This species is found throughout most of Texas except the eastern Piney Woods and the eastern tip of the Panhandle.
- They are common around farm buildings, where they eat rodents and mice.
- The average size is 3 to 4 feet; few grow more than 6 feet long.
- This rattlesnake feeds mostly on mammals (up to the size of jackrabbits) and on ground-dwelling birds.
- They bear live young, usually in September.

Reaction to Bites

- There is immediate, severe pain, accompanied by swelling, weakness, sweating and chills, faintness and dizziness, elevated or depressed pulse rate, nausea and vomiting, and swelling of lymph nodes.

24



Timber Rattlesnake
Crotalus horridus (Linnaeus)
[Squamata: Viperidae]

Identification

- The background color is yellow to black, and may include shades of brown, tan or gray.
- There are 15 to 34 dark, transverse chevrons or irregular V-shaped markings.
- The sooty-brown or black color of the tail extends up the body.
- The only other rattlesnake with a black tail is the blacktail rattlesnake. Most timber rattlesnakes in Texas have a distinct red or orange stripe from the neck to the tail.
- Males and females average about 4 feet.

Biology

- They are found in eastern and central Texas.
- They prefer wooded areas.
- These snakes are mild-tempered unless provoked.
- Litters of five to sixteen are produced in late summer.
- Timber rattlesnakes feed on mice, rats, squirrels and rabbits.
- They are protected as a threatened species in Texas.

Reaction to Bites

- The toxicity of the venom and reactions to bites are similar to western diamondback rattlesnake.

25



Blacktail Rattlesnake
Crotalus molossus (Baird and Girard)
[Squamata: Viperidae]

Identification

- Adults are usually 2 1/2 to 3 feet long.
- Color varies from yellow to olive-green, or greenish gray to black.
- On the snake's back are 20 to 41 brown to red-brown rhomboid shapes bordered with lighter scales.
- The tail and rattle are uniformly black, like the timber rattlesnake.
- They are found in the Trans-Pecos and the Edwards Plateau.



Rock Rattlesnake
Crotalus lepidus (Kennicott)
[Squamata: Viperidae]

Identification

- They are small, usually 15 to 20 inches.
- They may be chalky white, buff, tan, pink, red, green, blue-gray or almost black. The color may match the rocks in the snake's habitat.
- There are 15 to 25 narrow, dark brown to black crossbands.
- They are found in the Trans-Pecos and the Edwards Plateau.

26



Mojave Rattlesnake
Crotalus scutulatus (Kennicott)
[Squamata: Viperidae]

Identification

- Adults are usually 2 to 3 feet long.
- Color can be shades of green, yellow, olive, gray or brown.
- On the snake's back are 24 to 36 dark gray to brown, diamond-shaped blotches, each with a border of lighter scales.
- A wide, poorly defined, dark eye stripe extends to the corner of the mouth. A well-defined, light stripe borders the dark one in the back.
- The tail has wide white and narrower black rings.
- These snakes are found only in the Trans-Pecos region.

27



Western Rattlesnake
Crotalus viridis (Rafinesque)
[Squamata: Viperidae]

Identification

- Adults are usually 32 to 46 inches long.
- Color is usually light brown, but can be greenish gray or greenish brown.
- The back has square, brown blotches with narrow white borders.
- There are two white slash marks on the side of the head.
- They are found in the Trans-Pecos, High Plains and Rolling Plains.
- The Texas subspecies is called the prairie rattlesnake.

28



Massasauga
Sistrurus catenatus (Rafinesque)
[Squamata: Viperidae]

Identification

- These small rattlesnakes are typically 18 to 26 inches long.
- The ground color is light gray to grayish brown. On the back are 22 to 50 grayish-brown blotches with dark borders and white outlines.
- There are also two to three series of similar blotches on the sides.
- Three to eleven brown bands cross the tail.
- The tail is short and the rattle is small.
- Newborns have yellow tails.
- They are found throughout the state except in east Texas.

Biology

- Typical habitats are tallgrass prairies, shortgrass prairies and open thorn scrub.
- They hibernate in wet areas.
- These snakes are active at twilight and at night.
- They are good swimmers.
- This rattlesnake species feeds on a wide variety of small vertebrates.

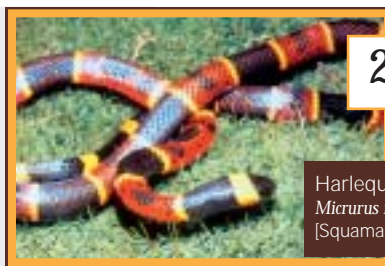
Reaction to Bites

- Because the snakes produce little venom, human fatalities are rare.

Related Species

- The pygmy rattlesnake, *Sistrurus miliarius* (Linnaeus), is smaller, similarly marked, occurs in East Texas, and is not believed capable of inflicting a fatal bite.

29



Harlequin Coral Snake
Micrurus fulvius (Linnaeus)
[Squamata: Elapidae]

Identification

- This snake has bands of black, red and yellow, with the red and yellow bands touching.
- Females average 26 1/2 inches; males are smaller. The largest recorded was 47 3/4 inches.

Biology

- They are found in dry habitats, eastern pine forests, oak-juniper brakes, and South Texas thorn brush.
- They are present roughly east and south of a line from Del Rio to Texarkana.
- Rock crevices or thick plant litter is important for their habitat.
- They are frequently found around human habitation.
- Coral snakes feed on snakes, skinks and other lizards.
- They lay three to five white, sausage-shaped eggs in June or July; the eggs hatch 2 months later.

Reaction to Bites

- The venom depresses the central nervous system and is more poisonous than that of other North American reptiles.
- Usually there is immediate pain, but the reaction may be delayed for several hours.
- The snake's small fangs do not penetrate well, so many bites do not inject venom.
- Coral snakes seldom bite unless touched or handled.
- About 1 percent of all snake venom poisonings are from this species.

Avoiding Stings and Bites

- Learn to recognize the venomous animals in your area and know their biology so you can avoid them.
- Wear protective clothing if you might encounter venomous animals.
- Do not play with or handle them.
- Know what to do in an emergency.

First Aid for Arthropod Stings and Bites

- Move out of harm's way to avoid additional stings or bites. A short sprint often is enough to get away from bees and wasps. (Note: A quick movement may induce a snake to bite.)
- Protect your head and neck from bees and wasps by pulling your shirt over your head.
- Remain calm.
- Remove a bee stinger and poison sac by scraping with a fingernail, pocket knife, or even a credit card.
- Capture the animal (dead or alive) if possible without risking more stings or bites. Preserve the specimen in alcohol or put it on ice.
- Seek medical attention if any unusual symptoms occur. Take the specimen along if you have it.
- Remove rings, tight clothes and shoes before swelling occurs.
- Clean the wound area with soap and water.
- Treat the victim for shock by elevating the feet and covering the person with a blanket.
- If complications occur, call the Poison Center or have your doctor call (1-800-222-1222).

First Aid for Snake Bites

- Remain calm. Do not panic.
- Assume venom has been injected (this is true in 80 percent of bites by poisonous snakes). A physician can determine whether venom was injected within a few hours.
- Identify the snake, if possible, without risking additional bites. It is not necessary to capture the snake because the bites of pit vipers are all treated with the same antivenom.
- Go to the nearest emergency room immediately. Snake bites are seldom life threatening if treated promptly.
- Immobilize the extremity and wash the bite area.
- Remove jewelry, tight clothes, shoes, etc.
- Keep the victim still and position the bite below the head if possible.
- Treat the victim for shock by covering the person with a blanket and elevating the feet (unless that would put the bite higher than the head).
- Call the Poison Center (1-800-222-1222) or have your doctor call.

Things to Avoid with Snake Bites

- Do not run or exert yourself. This will spread the venom through your body more quickly.
- Do not cut open the bite area to suck out venom.
- Do not apply a tourniquet.
- Do not wrap the limb with a bandage or use anything that constricts the flow of blood or lymph fluids.
- Do not use ice packs or cold compresses.
- Do not use electric shock therapy.
- Do not drink alcohol.
- Do not take aspirin.
- Do not use antivenom or antihistamines unless administered by a doctor.

References

- Brodie, E. D., Jr. 1989. *Venomous Animals*. Golden Press, New York.
- Conant, R. and J. T. Collins. 1991. *A Field Guide to Reptiles and Amphibians*. Houghton Mifflin Company, Boston.
- Drees, B. M. and J. A. Jackman. 1998. *A Field Guide to the Common Insects of Texas*. Gulf Publishing, Houston, TX.
- Ellis, M. D. 1978. *Dangerous Plants, Snakes, Arthropods & Marine Life, with special reference to the State of Texas*. Drug Intelligence Publications, Inc., Hamilton, Illinois.
- Goddard, J. 1993. *Physician's Guide to Arthropods of Medical Importance*. CRC Press, Boca Raton, FL.
- Jackman, J. A. 1999. *A Field Guide to the Spiders and Scorpions of Texas*. Gulf Publishing, Houston, TX.
- Levi, H. W. and L. R. Levi. 1990. *Spiders and Their Kin*. Golden Press, New York.
- Price, A. H. 1998. *Poisonous Snakes of Texas*. Texas Parks and Wildlife. Jolley Printing, Houston, TX.
- Tennant, A. 1985. *A Field Guide to Texas Snakes*. Texas Monthly Press, Inc., Austin, TX.

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