VENOMOUS SNAKES OF THE HORN OF AFRICA

Venomous Snake Identification

MAMBAS *Dendroaspis spp.*	Long, Flattened Head, Slightly Distinct from Neck	Round Pupils	Fixed Front Fangs	Smooth Scales	Long, Cylindrical Body, Thin Tail 5-8 feet in length
GARTER SNAKES *Elapsoidea spp.*	Short Head, Barely Distinct from Neck	Round Pupils	Fixed Front Fangs	Smooth Scales	Cylindrical Body, Short Tail 1-2 feet in length
BURROWING ASPS *Atractaspis spp.*	Short Head, Barely Distinct from Neck	Round Pupils	Hinged Front Fangs	Smooth Scales	Cylindrical Body, Little Spine at End of Short Tail 1-2½ feet in length
COBRAS *Naja, Pseudohaje spp.*	Broad, Flattened Head, Slightly Distinct from Neck	Round Pupils	Fixed Front Fangs	Smooth Scales	Cylindrical Body, Long Tail 5-9 feet in length
YELLOW-BELLIED SEASNAKES *Pelamis platurus*	Narrow and Flattened Head	Round Pupils	Fixed Front Fangs	Smooth Scales	Thin Body, Oar-Like Tail for Swimming 3 feet in length
NIGHT ADDERS *Causus spp.*	Short Head, Slightly Distinct from Neck	Round Pupils	Movable Front Fangs	Keeled (Ridged), Velvety Scales	Cylindrical Body, Short Tail 3 feet in length
VIPERS *Bitis, Echis spp.*	Wide Head, Narrow Neck	Vertically Elliptical Pupils	Hinged Front Fangs	Keeled Scales	Stout Body, Short Tail 1½-3 feet in length
BUSH VIPERS *Atheris spp.*	Broad Head, Narrow Neck	Vertically Elliptical Pupils	Hinged Front Fangs	Keeled, Overlapping Scales	Slender Body, Tail Used to Grasp Tree Limbs 2 feet in length
BOOMSLANG *Dispholidus typus*	Oval Head, Distinct from Neck	Round Pupils	Rear Fangs	Keeled Scales	Slender, Elongate Body 6 feet in length
VINE SNAKES *Thelotornis spp.*	Long, Lance-Shaped Head, Distinct from Neck	Horizontal Keyhole Pupils	Rear Fangs	Keeled Scales	Long, Slender Body, Thin Tail 4 feet in length
BLANDING'S TREE SNAKE *Boiga blandingii*	Broad Head, Thin Neck	Vertically Elliptical Pupils	Rear Fangs	Smooth, Velvety Scales	Stocky Body, Long, Thin Tail 5-6½ feet in length

Mambas and Garter Snakes

Behavior:
- Mambas are most active during the daytime and are tree-dwellers but can be encountered in low shrubs, on rocks, or on the ground.
- Mambas are not aggressive: when encountered or threatened, they will try to move away or freeze, attempting to remain unseen.
- Mambas will enter houses and shelter in thatched roofs, also termite hills, animal burrows, hollow trees, and rock crevices.
- Garter snakes burrow in the soil or hide in logs, holes or leaf litter during the day and emerge on the surface at night, especially after heavy rains.
- Garter snakes are not aggressive: if provoked, will flatten and inflate their bodies, lift the front of their bodies and jerk from side to side; will only bite if restrained.

Habitats: Villages and farms, thatched roof houses, savannas, tree crop plantations, open woodlands, and coastal thickets.

Burrowing Asps

Behavior:
- Burrowing asps spend the majority of time underground in burrows under stones, concrete slabs, logs, or wooden planks.
- They are active on the surface only during the nighttime hours or after heavy rains flood their burrows.
- They feed on small reptiles and rodents found in holes or underground. They do not climb.
- They are not aggressive: bites usually occur at night when snakes are stepped on accidentally.

Habitats: Burrows in sand or soft soil, semi-desert areas, woodlands, and savannas.

Cobras and Seasnakes

Behavior:
- Cobras are active both day and night. They seek shelter in termite mounds, rock formations, rodent burrows, and buildings.
- Cobras are ground-dwellers, but can climb and are good swimmers.
- When threatened, cobras will expand their necks into hoods by flattening their ribs; when provoked they will hiss loudly, and may try to attack rather than escape.
- Seasnakes are sometimes found along the Gulf of Aden and Indian Ocean shorelines where currents converge, or floating vegetation and debris accumulate; they are not found in the Red Sea.
- On land, seasnakes are relatively helpless and cannot crawl.
- Seasnakes are not aggressive, but will bite if handled or stepped on.

Habitats: Gulf of Aden and Indian Ocean shorelines (seasnakes only), villages and farms, open woodlands, termite mounds, oases in semi-desert areas.

Adders and Vipers

Behavior:
- Night adders (*Causus* spp.) are active by day and by night. They inflate their bodies when angry, assume a cobra-like stance and appearance, and strike by swiping their heads sideways.
- Bush vipers (*Atheris* spp.) are active both day and night. They live on the ground and in trees, and are quick to strike, if disturbed. Some species have very small ranges.
- African vipers (*Bitis* spp.) are found throughout the region, absent only from mountaintops and the harshest deserts. They are most active at night but bask during the day along footpaths.
- Carpet vipers (*Echis* spp.) become active at twilight. During the day they hide under logs, rocks, and brush piles or bury themselves in the sand. When disturbed, they will stand their ground, rub their scales together to make a hissing sound, and strike quickly and repeatedly. They have been known to chase humans for some distance.

Habitats: Mountain and rain forests, edges of rivers and lakes, tree crop plantations, rocky outcrops, open grasslands and savannas, villages and farms.

Boomslang, Vine and Tree Snakes

Behavior:
- They are active during both the daytime and nighttime.
- They live in trees and feed on bats, birds, and lizards.
- They are not aggressive: will quickly flee to nearest tree or bush if surprised on ground.
- When molested, they inflate their bodies or necks as threat posture before biting.

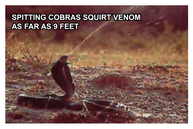
Habitats: Trees next to caves, coastal bush and reeds, tropical forests, open savannas, towns and farms near forests.

Spitting African Cobras First Aid for an Eyeful of Venom

Venom from a black-necked or red spitting cobra that gets in the eyes will cause:
- Immediate, intense and long-lasting burning pain
- Profuse eye-watering
- Spasms and swelling of the eyelids
- Cloudy vision

Venom in the eye is not life-threatening but long-term effects include infections, or permanent visual impairment or blindness.

The most effective treatment is:
- Immediately flush the affected eye with large volumes of water.
- Put a pad over the eye, bandage it, and have victim wear dark glasses.
- Don't let the victim rub the eye.
- Seek urgent medical attention.



Snake Venoms and Their Effects

SNAKE VENOMS are complex mixtures of many toxins and enzymes. Snakes use their venom to subdue and digest their prey. The effects of a snakebite can range from a simple puncture wound to death. The severity and types of symptoms depend on the species of snake and how much venom is injected. It is possible to be bitten by a venomous snake and not be poisoned, since the snake does not always inject venom.

EFFECTS OF SNAKE VENOMS on humans vary. Depending on the species of snake, the venom either has hemotoxins that affect the blood system, neurotoxins that affect the nervous system, or sometimes both.

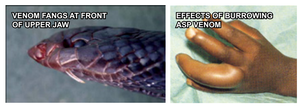
- The venoms of adders, vipers, boomslang, and vine snakes are made up mainly of **hemotoxins**. Their venom attacks blood cells and destroys muscles and blood vessels. Hemotoxins cause blood to leak into surrounding tissues, causing severe swelling, pain, and discoloration at the site of the snakebite.
- The venoms of tree snakes, cobras, seasnakes, and mambas are made up mainly of **neurotoxins**. Their venom attacks the brain and nerves, and can destroy or paralyze the nerves that control the heart and breathing.

MAMBAS AND GARTER SNAKES

- Large, hollow, fixed front fangs are used to deliver venom.
- Mambas can strike a long way out and up.
- Mambas are among the most dangerous snakes in the world. Their neurotoxic venom causes swelling at the bite site and death from respiratory failure.
- Very little is known about garter snake venom. Bites can cause pain and swelling at the bite site, nausea, dizziness and weakness.
- Garter snake bites have not caused any deaths.

BURROWING ASPS

- Burrowing asps can bite sideways using large, hollow front fangs that extend outside of the closed mouth.
- Little is known about burrowing asp venom.
- Most bites cause only local pain and swelling. Severe bites cause fever, vomiting, and blood in the urine.
- Small-scaled and variable burrowing asps can cause fatal bites.



COBRAS AND SEASNAKES

- Venom is delivered by fixed, hollow fangs at the front of the mouth.
- Cobras and seasnakes have lethal neurotoxic venom.
- Cobra bites are painful and can cause swelling, blistering, and tissue death at the bite site.
- A serious bite can cause drooling, slurred speech, confusion, blurred vision, and dilated pupils.
- Bites from seasnakes are not very painful and cause little or no swelling or discoloration.

ADDERS AND VIPERS

- Hollow, hinged fangs in front of mouth deliver venom.
- African vipers have a strong hemotoxic venom that causes widespread tissue destruction, and external and internal bleeding.
- Puff adders probably kill more people than any other African snake.
- Bush viper bites are uncommon and little is known about their venoms. Bites cause pain, swelling, and blood clotting failure.
- Carpet viper venom is highly toxic and deadly. Bites can cause swelling at the bite site, blistering and death of skin tissue, internal bleeding, and kidney failure.
- Night adder bites are merely painful and can result in minor swelling.

BOOMSLANG, VINE AND TREE SNAKES

- Venom is delivered from grooved, enlarged teeth at the back of the upper jaw.
- These snakes must chew for a few seconds to deliver much venom.
- Drop-for-drop, boomslang venom is more toxic than the local vipers and cobras.
- Boomslang and vine snakes have a deadly hemotoxic venom. It destroys the blood's ability to clot.
- Severe boomslang and vine snake bites cause internal bleeding, huge "bruises" all over the body, and bleeding from mucous membranes.
- Tree snakes have mild neurotoxic venom that can affect the brain and nerves.

Snakebite Prevention

- Venomous snakes are found throughout the Horn of Africa. Assume that any snake you encounter is venomous. Leave snakes alone. Many people are bitten because they try to kill a snake or get a closer look at it.
- Snakebites occur most often:
  - After rainstorms that follow long, dry spells or after rains in desert areas.
  - During the half-hour before total darkness and the first two hours after dark.
- As tactical situations permit, avoid high risk snake habitats. Locate bivouacs away from piles of brush, rocks, or other debris. Swim only at approved beaches.
- Get rid of things that attract snakes. Remove wood piles, rock piles, construction debris, dumps, dense undergrowth, and similar shelter for snakes. Store supplies elevated off the ground. Practice good sanitation. Control rodents.
- Practice "SNAKE-SMART" behavior. Shake out bedding and clothes before use. Sleep off the ground, if possible. Wear thick leather boots for the best foot protection. Avoid walking alone. Keep to clear paths.
- Be alert in areas where snakes may be hiding or sunning. Don't reach or place parts of body in places you cannot see into directly, especially high grass or among rocks. Keep hands off of rock ledges. Never sit on or step over large rocks or logs without first checking to see what is on the other side.
- In the unit compound, keep doors, windows, and vents closed whenever possible. Block holes in foundations, crawl spaces, ceilings, and roofs.
- If a snake is encountered at close quarters, try to remain calm and stand still. Do not make threatening gestures toward the snake. Move backward slowly. Protect/shield eyes if in close proximity to a cobra that has "reared up."
- Do not pick up a "dead" snake; it may only be injured, stunned or playing dead. Even a recently killed snake can bite by reflex action. Use a stick, and a hard container, and do not handle the head when transporting a dead snake that needs to be identified.

Snakebite First Aid

- Stay calm.
- Move victim and any onlookers away from the snake.
- Have the victim lie down immediately; reassure and calm the victim.
- Remove constrictive items, such as jewelry, watches, rings, or shoes.
- Lightly immobilize the injured part of body and place in a comfortable position.
- Record the appearance and progress of symptoms in as much detail as possible.
- Take the victim to a medical facility as soon as possible.
- Try to note the appearance of the snake. If possible, kill it without destroying the head, scoop it up with a stick into a hard container and take it to the medical facility with the victim.

Venomous snakebites cannot be treated in the field. Don't waste valuable time trying. If bitten, always seek medical attention immediately. In a medical facility equipped to maintain stable body function and administer antivenin, no one need die or suffer permanent disfigurement/disability from a snakebite. Antivenins are available to treat the symptoms of the venoms of boomslang, mambas, African vipers (*Bitis* spp.), cobras, and carpet vipers. There are no antivenins for the venoms of seasnakes, vine snakes, tree snakes, burrowing asps, garter snakes, tree cobras, bush vipers, or night adders.

Snake Distribution Checklist

Species	*Country*						
Mambas and Garter Snakes	Djibouti	Eritrea	Ethiopia	Kenya	Somalia	Sudan	Uganda
Dendroaspis augusticeps				X	X		
Dendroaspis jamesoni				X		X	X
Dendroaspis polylepis		X	X	X	X	X	X
Elapsoidea chelazzii					X		
Elapsoidea laticincta						X	X
Elapsoidea loveridgei			X	X	X	X	X
Elapsoidea semiannulata							X
Burrowing Asps	Djibouti	Eritrea	Ethiopia	Kenya	Somalia	Sudan	Uganda
Atractaspis aterrima						X	X
Atractaspis bibronii				X	X		
Atractaspis engdahli				X	X		
Atractaspis irregularis		X	X	X		X	X
Atractaspis leucomelas	X		X		X		
Atractaspis microlepidota	X	X	X	X	X	X	
Atractaspis scortecci			X		X		
Cobras and Seasnakes	Djibouti	Eritrea	Ethiopia	Kenya	Somalia	Sudan	Uganda
Naja haje		X	X	X	X	X	X
Naja melanoleuca			X	X	X	X	X
Naja nigricollis			X	X	X	X	X
Naja pallida	X	X	X	X	X	X	
Pseudohaje goldii				X			X
Pelamis platurus	X			X	X		
Adders and Vipers	Djibouti	Eritrea	Ethiopia	Kenya	Somalia	Sudan	Uganda
Atheris desaixi				X			
Atheris hindii				X			
Atheris hispidus				X			X
Atheris nitschei							X
Atheris squamigera				X			X
Bitis arietans	X	X	X	X	X	X	X
Bitis gabonica				X		X	X
Bitis nasicornis				X		X	X
Bitis parviocula			X				
Bitis worthingtoni				X			
Causus defilippii				X			
Causus lichtensteinii				X			X
Causus maculatus			X			X	
Causus resimus			X	X	X	X	X
Causus rhombeatus		X	X	X		X	X
Echis ocellatus						X	
Echis pyramidum	X	X	X	X	X	X	
Boomslang, Vine and Tree Snakes	Djibouti	Eritrea	Ethiopia	Kenya	Somalia	Sudan	Uganda
Boiga blandingii				X			X
Disphollidus typus	X	X	X	X	X	X	X
Thelotornis capensis				X	X		
Thelotornis kirtlandii							X

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