

Guide:

COMMON SNAKES

“DANGEROUS”



Puff Adder

(*Bitis arietans*)
VERY DANGEROUS!

Adults are thick and heavy bodied snakes which rarely exceed 1 m in maximum head-body length in this region. In East Africa specimens as large as 1,7m have been recorded. The head is large, flattened, and triangular in shape, has large nostrils pointing vertically upwards and is covered with small, keeled, overlapping scales. The basic dorsal colour is variable from blackish to brown, light brown, orangey, yellowish to straw yellow, with a certain regional consistency. The back has a row of backward pointing, dark brown to black, pale-edged chevrons and transverse bars on the tail. Specimens from the moister eastern areas tend to be darker, while specimens from the more arid western areas tend to be paler. Puff adders tend to become active at dusk, although they may bask and also move about during the day. When hungry it will take up an ambush position to waylay its small mammal prey, consisting mainly of ground-living mice and rats, although birds, lizards and toads may also be taken. This snake is ovoviviparous, which means that it reproduces by retaining the eggs with the developing fetus until full term.

The puff adder is probably the most widespread snake in Africa, avoiding the severe parts of the Sahara desert, tropical rain forests and high altitudes; it extends from the southern Cape to southern Morocco and also into southern Arabia. In southern Africa it may be found in most areas, but it avoids the extreme desert conditions, dense forests and altitudes above 2000 meters.

The venom is cytotoxic with strong haematoxic and some cardiotoxic effects and large volumes are produced. It causes severe pain, swellings in the bitten limb, hemorrhages and nausea. Death is caused by secondary effects, s. a. kidney failure, due to severe swellings. The long fangs (12 - 18 mm) assure that the venom is injected rather deeply. Even if the patient does not die, serious necrosis usually follows the swellings. In most cases of puff adder bites the use of antivenom is essential.

Mating may take place from late autumn to early spring, according to the area. Males are known to engage in combat to compete for a female. The young are born from late summer into early autumn. New born young tend to be from 15 to 20 cm in length and average batch sizes in our area vary from 20 to 40.

Normally a sluggish species that relies on camouflage for protection. Locomotion is primarily rectilinear, using their broad ventral scales in a caterpillar fashion and aided by their own weight for traction. When agitated, they can resort to a typical serpentine movement and move with surprising speed.

Although mainly terrestrial, these snakes are good swimmers and can also climb with ease; often they are found basking in low bushes. One specimen was found 4.6 m above the ground in a densely branched tree.

If disturbed, they will hiss loudly and continuously, adopting a tightly coiled defensive posture with the fore part of their body held in a taut 'S' shape. At the same time, they may attempt to back away from the threat towards cover. They may strike suddenly and with very high speed, doing so to the side as easily as forwards before returning quickly to the defensive position, ready to strike again. During a strike, the force of the impact is so strong and the long fangs penetrate so deeply, that prey items are often killed by the physical trauma alone. They are apparently able to penetrate soft leather.

They can strike to a distance of about one-third of their body length. Juveniles, however, will launch their entire body forwards in the process. These snakes rarely grip their victims, instead releasing quickly to return to striking position.

This species is responsible for more fatalities than any other African snake. This is due to a combination of factors, including its wide distribution, common occurrence, large size, potent venom that is produced in large amounts, long fangs that inject it deeply, their reliance on camouflage which makes these snakes reluctant to flee, their habit of basking by footpaths and sitting quietly when approached, and their willingness to bite.

The venom is one of the most toxic of any viper. The LD50 values in mice vary: 0.4–2.0 mg/kg IV, 0.9–3.7 mg/kg IP, 4.4–7.7 mg/kg SC. Mallow et al. (2003) give an LD50 range of 1.0–7.75 mg/kg SC. Venom yield is typically between 100–350 mg, with a maximum of 750 mg. Brown (1973) mentions a venom yield of 180–750 mg. About 100 mg is thought to be enough to kill a healthy adult human male, with death occurring after 25 hours or more. The average specimen may have enough venom to kill 4 to 5 men.

In humans, bites from this species can produce severe local and systemic symptoms. Based on the degree and type of local effect, bites can be divided into two symptomatic categories: those with little or no surface extravasation, and those with hemorrhages evident as ecchymosis, bleeding and swelling. In both cases there is severe pain and tenderness, but in the latter there is widespread superficial or deep necrosis. Serious bites cause limbs to become immovably flexed as a result of significant hemorrhage or coagulation in the affected muscles. Residual induration, however, is rare and usually these areas completely resolve.

Other bite symptoms that may occur in humans include oedema, which may become extensive, shock, watery blood oozing from the puncture wounds, nausea and vomiting, subcutaneous bruising, blood blisters that may form rapidly, and a painful swelling of the regional lymph nodes. Swelling usually decreases after a few days, except for the area immediately around the bite site. Hypotension, together with weakness, dizziness and periods of semi- or unconsciousness is also reported.

If not treated carefully, necrosis will spread, causing skin, subcutaneous tissue and

muscle to separate from healthy tissue and eventually slough with serous exudate. The slough may be superficial or deep, sometimes down to the bone. Gangrene and secondary infections commonly occurs and can result in loss of digits and limbs.

Despite all of this, deaths are exceptional and probably occur in less than 10% of all untreated cases, usually in 2–4 days from complications following blood volume deficit and a disseminated intravascular coagulopathy. Most fatalities are associated with bad clinical management and neglect.

Found in all habitats except true deserts and rain forests. Most often associated with rocky grasslands.

Females produce a pheromone to attract males, which engage in neck-wrestling combat dances. A female in Malindi was followed by seven males. They give birth to large numbers of offspring: litters of over 80 have been reported, while 50–60 is not unusual. Newborns are 12.5–17.5 cm in length. Very large specimens, particularly those from East Africa, give birth to the highest numbers of offspring. A Kenyan female in a Czech zoo gave birth to 156 young: the largest litter for any species of snake in the world

Does well in captivity, but there are reports of gluttony. Kauffeld (1969) mentions that specimens can be maintained for years on only one mouse a week, but that when offered all they can eat, the result is often death, or at best wholesale regurgitation. They are bad-tempered snakes and some specimens never settle down in captivity, always hissing and puffing when approached.

Horned Adder

(*Bitis caudalis*)
DANGEROUS

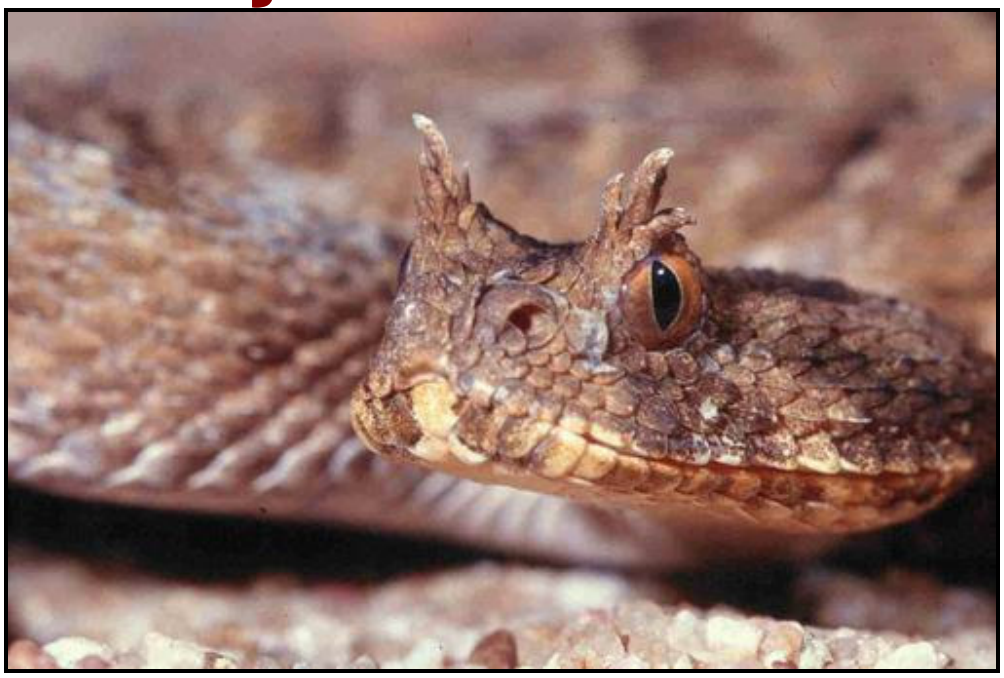
This adder is distinguished by the presence if a single hornlike scale above each eye. The head is triangular and distinct from the body which ends in a short thin tail. The maximum recorded head-body length recorded for males is 372 mm and 548 mm for females. The dorsal scales are strongly keeled. The basic colour varies from pale grey, light reddish, grayish to dark brown and tends to match the regional substrate. A dark mark on the head may vary from a V- to an hourglass-shape. The tail tip may be black, while the underside of the body is cream to yellowish white. Becoming active at dusk, it tends to lie in ambush at the base of shrubs, tufts of grass or bushes, may shuffle into sand until only the top of the head and the tail are visible. Feeds on rodents, lizards and occasionally on sand frogs, often with strong regional or individual preferences for either warm or cold blooded prey items.

Occurs on rocky mountain ridges in Gauteng. A regionally common resident of the dryer western areas, ranging from the Atlantic coast through Namibia, southern Botswana into southern Zimbabwe, the North West Province to Gauteng, the Northern Cape and south into the little Karoo. Avoids the wind-blown dunes of the Namib but otherwise inhabits

arid to dry sandy savannah.

Mating takes place in spring to early summer and 4 to 15 (max.27) young, with a total length of 100 to 150 mm, are born in between December and February. Although the poison is remarkably effective and quick acting on rodents, its effect on humans is mild, causing a local swelling and sometimes some necrosis at the bite site.

Many-Horned Adder



(*Bitis cornuta*)
DANGEROUS

This small adder, with an average length of about 30 cm, is rather distinct because of the tufts of 2 - 4 hornlike scales above each eye. The general appearance is characteristic of small adders, namely with a triangular head and a stout body with a short distinct tail. The overall impression is that of a dull grey snake with black and pale markings, although some populations in Namaqualand are reddish brown. They may be active during the day, especially early in the morning when they like to bask. They lie in ambush waiting for prey which usually consists of lizards, but also rodents and even the occasional rain or sand frog.

This adder is usually associated with harder soils to stony ground and, although it is claimed for this species, side winding and burying itself in sand has not been noticed by this author. Its range is restricted to the area along the west coast and adjacent inland areas from southern Namibia, through Namaqualand southwards to the south-western Cape. Although its range falls within the famous Namaqualand flower areas, tourists attracted during the flowering season will rarely meet these interesting looking snakes, as they tend to still be hibernating until early spring.

From 5 to 20 live young are produced during late summer. The poison is very effective against rodents but not lethal for human beings and no antivenom should be used. Serious blistering with gangrene may occur at the bite site

Has a nervous disposition. When disturbed, it will hiss loudly and strike so energetically that most of its body is lifted off the ground in the process. However, it usually settles down in captivity

The poison is very effective against rodents but not lethal for human beings and no antivenom should be used.

The many-horned adder buries itself in loose sand for camouflage against predators and prey, and can often be observed with only the top of its head protruding above the surface. It also adopts a side-winding mode of locomotion to help it move on the loose surface of desert sands. When threatened, this snake hisses loudly and writhes vigorously, and may strike with such force that its whole body comes completely off the ground. These small adders prey primarily on lizards, but will also occasionally take rodents, birds and amphibians

The many-horned adder is solitary, only coming together to breed. Between 5 and 14 live young are born, usually during the latter part of the summer or early autumn.

Like many other reptiles of southern Africa, this adder is threatened by habitat destruction as a result of development and/or wild veld fires, and also by illegal collection for the pet trade

Black Mamba

(*Dendroaspis polylepis*)
VERY DANGEROUS

This specimen is hardly ever pitch black in colour but the lining of the mouth being dark is where the name has derived from. Of all the African snakes the Black Mamba is the most feared and is known for being aggressive when agitated or confronted and will strike with deadly precision. The outer colour varies between a pale grey-green to gunmetal blue. The head is also distinctive in being narrowly shaped and having round eyes with round pupils. The snake being neurotoxic causes respiratory failure and leaves the pray paralyzed which causes death in 7-15 hours.

The average length of a specimen varies between 2 to 2.5 meters but an exceptional case was recorded of 4.5 meters. This snake has quite a large distribution stretching from Senegal (West Africa) to Somalia in the East down to Pondoland (Port St Johns) including Namibia and Angola. They are absent from Equatorial forests and desert areas. They prefer more open Bushveld / Savanna with an attitude not exceeding 1500 meters.

A batch of 12 to 17 eggs is usually laid but can be as few as 9 or 10 and is oval shaped hatching between 80-90 days. The young are usually dark in colour and measures between 40 to 60 cm in length.

Bites from Black Mambas to humans are rare, but they are very deadly. A single bite can have enough venom to kill anywhere from 20-40 grown men. They tend to become extremely aggressive and will readily attack, especially if they can not escape. Many snake experts have cited the black mamba as the world's most aggressive snake, being actively aggressive and attacking without provocation. If confronted by a large threat, such as a human, the Black Mamba will aggressively defend its territory. When in the striking position, the mamba flattens its neck, hisses very loudly and displays its inky black mouth and deadly fangs. It can rear up around one-third of its body from the ground which puts it at about four feet high. When warding off a threat, the black mamba delivers multiple strikes, injecting large amounts of potent neuro- and cardiotoxin with each strike, often landing bites on the body or head, unlike other snakes.

If left undisturbed, Black Mambas tend to live in their lairs for long periods of time, which are often vacated insect mounds or hollow trees. Black mambas are diurnal snakes that hunt prey actively day or night. When hunting small animals, the Black Mamba delivers a single deadly bite and backs off, waiting for the neurotoxin in its venom to paralyze the prey. When killing a bird, however, the Black Mamba will cling to its prey, preventing it from flying away.

Black mambas are among the ten most venomous snakes in the world. With an LD50 of 0.25-0.32 mg/kg, the black mamba is more than 3 times as venomous as the Cape Cobra, over 5 times as venomous as the King cobra and about 40 times as venomous as the Gaboon viper. Black mamba venom contains powerful, rapid-acting neurotoxins and cardiotoxins. Its bite delivers about 100-120 mg of venom on average, however it can deliver up to 400 mg of venom; 10 to 15 mg is deadly to a human adult. The initial symptom of the bite is local pain in the bite area, although not as severe as snakes with hemotoxins. The victim then experiences a tingling sensation in the extremities, drooping eyelids (eyelid ptosis), tunnel vision, sweating, excessive salivation, and lack of muscle control (specifically the mouth and tongue). If the victim does not receive medical attention, symptoms rapidly progress to nausea, shortness of breath, confusion, and

paralysis. Eventually, the victim experiences convulsions, respiratory failure, and coma, and dies due to suffocation resulting from paralysis of the muscles used for breathing. Without treatment the mortality rate is 100%, the highest among all venomous snakes in the world.

Black mambas live primarily in scrubland and, though not considered an arboreal species, can live in bushes and small trees. Its diet consists mainly of small birds and rodents and, despite the negative reputation; it plays a crucial role in regulating pests.

Breeding usually takes place in late spring or early summer. After mating the male will return back to its own home. The female will then lay between 10 and 25 eggs. The offspring are independent as soon as they are born and can capture prey the size of a rat

Green Mamba

(*Dendroaspis angusticeps*)
VERY DANGEROUS

The Green Mamba is build a bit lighter and more slender than the Black Mamba but has the same shaped head. The scales are smooth and not keeled as in the Boomslang. The total length seldom exceeds 2.5 meters making them a smaller snake than the Black Mamba.

Being an arboreal snake they are restricted to the more thickly forested and bush-covered areas, this making there distribution range quite small. There distribution covers from Kenya in the north through Tanzania, Mozambique, Malawi and eastern Zimbabwe into North and South Natal and Transkei.

The green mamba is highly arboreal and seldom ventures to the ground unless following prey or basking. Green mambas are diurnal. Unlike the black mamba, it is a shy and nonaggressive snake, and does not often gape and strike if threatened but usually

makes a swift and elegant escape. Continued provocation will cause the snake to strike, and bites, although serious, are uncommon.

Green mambas make their homes near trees, often in evergreen forest, coastal scrub, or moist savannah. Bamboo thickets and mango plantations are also known to be mamba habitat.

Their diet consists primarily of adult and juvenile birds, birds' eggs, and small mammals. Young mambas occasionally eat other reptiles, such as chameleons.

The green mamba is oviparous, laying 6-17 eggs in summer. The eggs are usually laid in a hollow tree among decaying vegetation. Hatchlings measure between 35 and 45 cm (13 to 18 inches) and are venomous from birth. Males of this species are known to engage in combat for mating rights, similar to the combat practiced by male king cobras. The combat involves wrestling matches, with snakes twisting and pushing each other to the ground, which may last several hours. Combat does usually not include biting.

The green mamba's venom is highly neurotoxic. The venom is similar in composition and action to that of the more famous black mamba but only one-tenth as toxic, and the amount delivered is less due to the snake's smaller size. Despite this, the bites are still potentially fatal and should be treated by professionals immediately.

Green mambas make their homes near trees, often in evergreen forest, coastal scrub, or moist savannah. Bamboo thickets and mango plantations are also known to be mamba habitat.

The green mamba is oviparous, laying 6-17 eggs in summer. The eggs are usually laid in a hollow tree among decaying vegetation. Hatchlings measure between 35 and 45 cm (13 to 18 inches) and are venomous from birth. Males of this species are known to engage in combat for mating rights, similar to the combat practiced by male king cobras. The combat involves wrestling matches, with snakes twisting and pushing each other to the ground, which may last several hours. Combat does usually not include biting.

Mozambique Spitting Cobra or M'FEZI

(*Naja mossambica*)
DANGEROUS

This is probably the most dangerous snake second to the Mamba. When confronted this snake can rear up two thirds of its body and can spit its venom with quick moving accuracy. The venom is ejected from two small holes near the tip of the teeth and is usually aimed at the eyes. The effect is instantaneous causing intense smarting and inflammation and if not washed out with milk or water will cause permanent blindness.

The colour varies between olive-grey, tawny brown or grey with the scales in between a black colour. The belly is usually a lighter yellow colour. Adults average a length of 1 and 1.5 meters. The eggs average 10 to 22 in number, hatchlings measure 230-250mm.

The distribution includes Natal, Low veld south-eastern Tanzania and Pemba Island and

west to southern Angola and northern Namibia.

This snake is a nervous and highly strung snake. When confronted at close quarters this snake can rear up to as much as two-thirds of its length, spread its long narrow hood and will readily "spit" in defense, usually from a reared-up position. By doing this the venom can be ejected at a distance of 2-3 meters (5½ - 8¼ feet), with remarkable accuracy. The spitting cobra does not often actually bite despite its aggressive behaviour, and also shares the same habit of feigning death to avoid further molestation.

The average length of adults is between 900mm - 1,050mm (2½-3 feet), but largest specimen actually measured was a male 1,442mm (4 feet) long. (Trelawney, Zimbabwe)

It is considered one of the most dangerous snakes in Africa, second only to the Mamba. Like the Rinkhals, it can spit its venom. Its bite causes severe local tissue destruction (similar to that of the puff adder). Venom to the eyes can also cause impaired vision or blindness.

Boomslang

(*Dendroaspis polylepis*)
VERY DANGEROUS

A boomslang, Dispholidus typus is a large, venomous colubrid snake native to sub-Saharan Africa. It is the only species in its genus. Its name means "tree snake" in Afrikaans and Dutch.

It's long and slender build makes it well adapted for an arboreal life stile where it spends most of it's time among the bushes and trees as the name so clearly indicates. This snake can be distinguished from the Green Mamba and the Bush snakes by the big eyes in relation to the head and the prominently keeled scales. The juveniles have a very distinct pattern being dark on top and the other half of the body being light of colour leaving them looking completely different to the parents.

A length of 1.5 meters is about the average for a male but 2 meters has been recorded. They occur along the coast of South Africa up to tropical Africa around the 15EN Latitude. The female lays between 8 to 23 eggs and the young measure about 330 mm.

Unlike with other snakes that mate on the ground the boomslang mates in trees.

A different anti-venom is required that for other snake bites. The venom creates blood clotting in the patient and a blood transfusion might be needed. Symptoms can take up to 24-28 hours to develop but seeing that the boomslang is not an aggressive snake but rather flees when approached.

Boomslang are largely arboreal, are very fast moving, and are oviparous. Their diet includes chameleons and other arboreal lizards, frogs, and occasionally small mammals, birds and eggs from nesting birds, which they swallow whole.

Most members of their family are harmless, or have relatively weak venom, but the boomslang is an exception. It has highly potent venom which it delivers through large fangs that are located in the rear of the jaw. The venom of the boomslang is primarily a haemotoxin. It disables the blood clotting process and the victim often dies due to internal and external bleeding. Other symptoms include: headache, nausea, sleepiness and mental disorders. Being a relatively slow-acting venom, the symptoms may occur many hours after the bite. On one hand, this provides time for arranging the serum, while on the other hand it may lead victims to underestimate the bite (especially when, as with other snakes, not every bite injects venom).

An adult snake has 4-8 milligrams of venom. 5 milligrams is said to be enough to kill a man.

In 1957, well known herpetologist, Karl Schmidt died after being bitten by a boomslang. D.S. Chapman states that between 1919 and 1962 there were eight serious human envenomations by boomslang, two of which were fatal. The South African Vaccine Producers (formerly South African Institute of Medical Research) manufactures a monovalent antivenom for boomslang venom.

The boomslang is a timid snake, and bites generally occur only while attempting to handle, catch or kill the snake.

Found in forested areas. It will spend most of its time in trees or looking for chameleons and other prey in bushes.

The female lays between 8 to 23 eggs and the young measure about 330 mm. Unlike with other snakes that mate on the ground the boomslang mates in trees.

Rinkhals

(*Hemachatus haemachatus*)
DANGEROUS

The Rinkhals look fairly similar to the Cobras but has keeled scales and only has a single species in the Genus.

The colour may vary but is usually a spotted black (Adults of N Cape) to brown colour (Gauteng area) with yellow to white cross bars with 2- 3 large bands on the ventral side of the neck. In the adults the bars usually fade away to a uniform black colour as in the photos above. The average length is 1 meter with a record length of 1.5 metres. The Rinkhals is ovoviviparous meaning that they give birth to 15 up to 60 live young during the late summer. The occur under the 2 500 meters and usually in the grassy areas of the Southern Cape, Transkei, Orange Free State, Lesotho, Natal and western Swaziland and south east Transvaal but not in the Low Veld and should not be confused with the Mozambique Spitting Cobra.

The venom is neurotoxic but not as toxic as Cobras and is more diluted when spitted.

The hole in the fangs are not at the tip of the teeth as with the Cobras but has a canal that ends in an elbow that projects the poison up and forward. Venom in the eyes can be very painful and cause blurred vision and the eyes should be washed with water or milk

Rinkhals are definitely a nocturnal species, but may occasionally be observed basking during the day.

A curious fact about this species is the ability to feign death. This snake, if presented with no possibility to flee, and faced with a "predator" unfazed by it's spitting- will roll over on it's back melodramatically, open it's mouth and let the tongue hang out, all this to discourage whoever may be hovering over it. Soon after the assumed predator has walked away, the animal will roll over on it's belly and slide carelessly away.

The venom of this species is less viscous (i.e. thinner) than that of other African elapids, naturally, as thinner fluid is naturally easier to spit. However, the venom of Hemachatus is produced in copious amounts- yields average 80-120 mg. (LD50 1.1-1.6 mg/kg) with an estimated lethal dose for humans of 50-60 mg.

Actual bites from Hemachatus are fairly rare, and deaths in modern times are so far unheard of. Local symptoms of swelling / bruising are reported in about 25% of cases. General symptoms of drowsiness, nausea, vomiting, violent abdominal pain / cramps and vertigo often occur, as does a mild pyrexial reaction. Neurotoxic symptoms are however rare and have only included diplopia and dyspnoea. Ophthalmia has been reported, but has not caused as severe complications as in some of the spitters in the genus Naja (especially N. nigricollis & N. mossambica).

Southern Vine, Twig or Bird Snake

(*Thelotornis capensis*)
DANGEROUS

This snake was named after the bark-like colouration of the skin that it uses very effectively in camouflaging. Like the Boomslang the Vine snake also inflates his throat region in a defensive display. The head is elongated and narrowly shaped and distinct from the neck with large eyes and a horizontal pupil.

They prefer savanna to coastal forests and there distribution ranges from East Africa into Mozambique, eastern Zimbabwe through the eastern part of South Africa. The largest specimen measured 1.38 meters in total length.

This oviparous species lays 4 to 13 eggs in the summer and the hatchlings measure 230-331mm in length and are perfect replicas of the adult snakes.

Gaboon Adder

(*Bitis gabonica*)
VERY DANGEROUS

Bitis gabonica is a venomous viper species found in the rainforests and savannas of Sub-Saharan Africa. This is not only the largest member of the genus Bitis, but also the world's heaviest viperid] and it has the longest fangs and the highest venom yield of any venomous snake. Two subspecies are currently recognized.

Primarily nocturnal, they have a reputation for being slow-moving and placid. They usually hunt by ambush, often spending long periods motionless, waiting for suitable prey to happen by. On the other hand, they have been known to hunt actively, mostly during the first six hours of the night. In Kumasi, Ghana, they were regularly killed around some stables in an open area with the forest some 500 m away — a sign that they were hunting rats in the grassland. They are usually very tolerant snakes, even when handled, and rarely bite or hiss. However, bad-tempered individuals do occur.

Locomotion is mostly rectilinear, in a sluggish "walking" motion of the ventral scales. They may writhe from side to side when alarmed, but only for short distances. Ditmars (1933) even described them as being capable of sidewinding.

If threatened, they may hiss loudly as a warning, doing so in a deep and steady rhythm, slightly flattening the head at the expiration of each breath. They are unlikely to strike unless severely provoked.

There have been numerous descriptions of their generally non-aggressive nature. Sweeney (1961) wrote that they are so docile that they "can be handled as freely as any non-venomous species", although this is absolutely not recommended. In Lane (1963), Ionides explained that he would capture specimens by first touching them lightly on the top of the head with a pair of tongs. Anger was rarely displayed, so that the tongs were usually set aside and the snake firmly grasped by the neck with one hand and the body supported with the other. He said the snakes hardly ever struggled.

Parry (1975) describes how this species has a wider range of eye movement than other snakes. Along a horizontal plane, eye movement can be maintained even if the head is rotated up or down to an angle of up to 45°. If the head is rotated 360°, one eye will tilt up and the other down, depending on the direction of rotation. Also, if one eye looks forwards the other looks back, as if both are connected to a fixed position on an axis between them. In general, the eyes often flick back and forth in a rapid and jerky manner. When asleep, there is no eye movement and the pupils are strongly contracted. The pupils dialate suddenly and eye movement resumes when the animal wakes up

Bites are relatively rare, due to their docile nature and the fact that their range is mainly limited to rainforest areas. Nevertheless, when it does occur it should always be considered a serious medical emergency. Even an average bite from an average sized specimen is potentially fatal.

The venom itself is not considered particularly toxic. In mice, the LD50 is 0.8–5.0 mg/kg IV, 2.0 mg/kg IP and 5.0–6.0 mg/kg SC. However, the venom glands are enormous and produce the largest quantities of any venomous snake. Yield is apparently related to body weight, as opposed to milking interval. Brown (1973) gives a venom yield range of 200–1000 mg (of dried venom), A range of 200–600 mg for specimens 125–155 cm in length has also been reported. Spawls and Branch (1995) state that from 5–7 ml (450–600 mg) of venom may be injected in a single bite.

A study by Marsh and Whaler (1984) reported a maximum yield of 9.7 ml of wet venom, which translated to 2400 mg of dried venom. They attached "alligator" clip electrodes to the angle of the open jaw of anesthetized specimens (length 133–136 cm, girth 23–25 cm, weight 1.3–3.4 kg), yielding 1.3–7.6 ml (mean 4.4 ml) of venom. Two to three electrical bursts of five seconds each were enough to empty the glands. The snakes used for the study were milked 7–11 times over a 12-month period, during which they remained in good health and the potency of their venom remained the same.

Based on how sensitive monkeys were to the venom, Whaler (1971) estimated that 14 mg of venom would be enough to kill a human being: equivalent to 0.06 ml of venom, or 1/50–1/1000 of what can be obtained in a single milking. Branch (1992) suggested that 90–100 mg would be fatal in humans. Marsh and Whaler (1984) wrote that 35 mg would be enough to kill a man of 70 kg (1/30 of the average venom yield).

In humans, a bite causes rapid and conspicuous swelling, intense pain, severe shock and local blistering. Other symptoms may include uncoordinated movements, defecation, urination, swelling of the tongue and eyelids, convulsions and unconsciousness. Blistering, bruising and necrosis may be extensive. There may be sudden hypotension, heart damage and dyspnoea. The blood may become incoagulable with internal bleeding that may lead to haematuria and haematemesis. Local tissue damage may require surgical excision and possibly amputation. Healing may be slow and fatalities are not uncommon.

Generally, these snakes are sedentary opportunistic ambush predatory, but they will hunt actively, usually starting at dusk. Following a strike, they tend to hold on to their prey until it is dead. Prey is also lifted off of the ground to prevent it getting hold of anything. Anything large enough to pose more of a threat is released and searched for after a few minutes.

These snakes feed on a variety of birds and mammals, such as doves, many different species of rodents, hares and mongooses. There are also reports of more unlikely prey items, such as monkeys, the brush-tailed porcupine (Atherurus) and even the small royal antelope (Neotragus).

During peak sexual activity, males engage in combat. This starts with one male rubbing its chin along the back of the other. The second male will then raise its head as high as possible. As they both do the same, the necks intertwine. When the heads are level, they turn towards each other and push. Their bodies intertwine as they switch positions. They become oblivious to everything else, continuing even after they fall off of a surface or into water. Sometimes they intertwine and squeeze so tightly that their scales stand out from the pressure. They have also been observed to strike at each other with mouths closed. Occasionally, the combatants will tire and break off the fight by "mutual consent", resting for a while before resuming once more. The event is settled when one of the two succeeds in pushing the other's head to the ground and raising its own by 20–30 cm. In captivity, combat may occur 4–5 times a week until courtship and copulation ends.

Gestation takes about a year, which suggests a breeding cycle of 2–3 years. A 5-year breeding cycle may also be possible. Usually, they give birth in late summer. B. g. gabonica produces 8–43 live young. B. g. rhinoceros may produce as many as 60. However, the actual number of offspring rarely exceeds 24. Neonates are 25–32 cm in length and weigh 25–45g