VENOMOUS SNAKES SOUTH OF THE SAHARA: PART 2

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INTRODUCTION

Below are some data on the most frequently found venomous snakes in the area south of the Sahara that I encountered in the Savannah areas of Kumi district (1° 32′ N and 33° 5′ E) of Eastern Uganda during the period of 1983-2000.

BOOMSLANG *(DISPHOLIDUS TYPUS)*

Is present in 16 of the 31 sub-Saharan countries. The average length of my captured boomslangs was 100-150 cm. I caught four specimens, in 1986, 1994, 1995 and 1998. Boomslangs are graceful, slender snakes with an angular head that is slightly blunt at the front and very large eyes and round pupils. The colour is a bluish dark green with a fine black lattice between the scales. Fangs: in the rear half of the upper jaw.

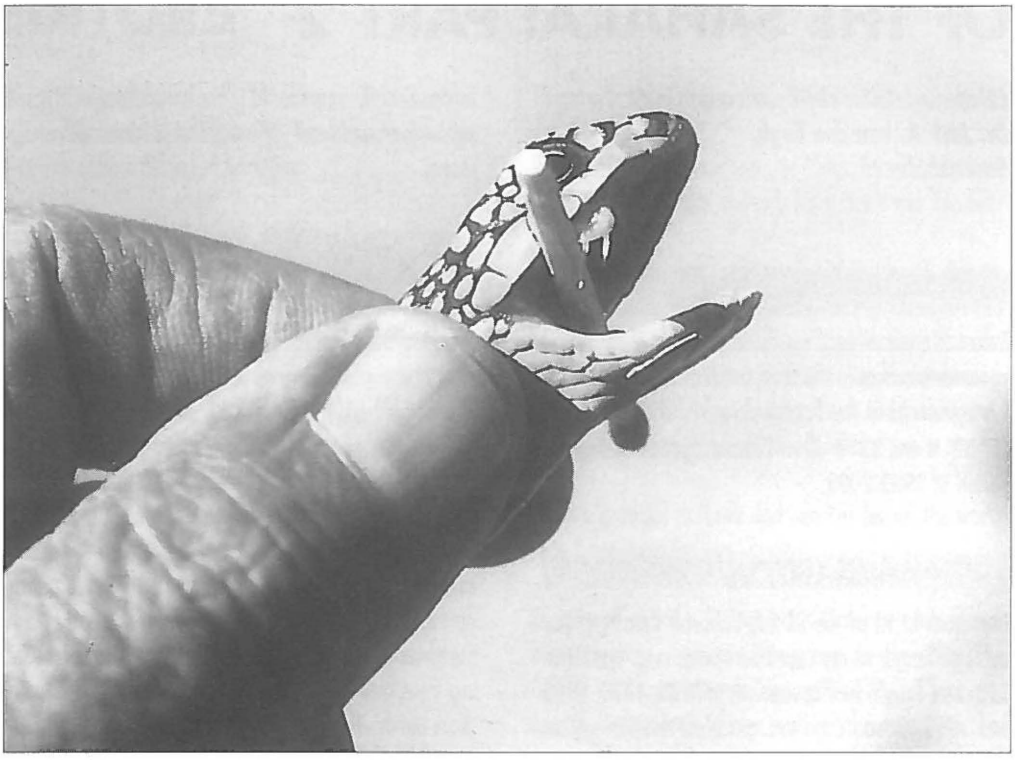
Literature data: The injected amount of venom per bite is maximally about 1mg. Action: the venom is more powerful than that of cobras; it mostly acts haemotoxically. Symptoms: serious internal bleeding that can become fatal, blood can drip from all mucous membranes. Symptoms can occur after 24 to 48 hours. Habitat: open, wooded areas and savannah, mostly in trees. Distribution: areas south of the Sahara. The snake has excellent vision. Normal prey: chameleons, birds. Inflates the neck when excited or cornered. Breeding: 4 to 14 eggs laid once a year. Neonate boomslangs have emerald green coloured eyes. Therapy: antiserum, blood / plasma transfusions with coagulants.

THE COMMON PUFF ADDER *(BITIS ARIETANS)*

Found in fifteen of the 31 sub Saharan countries. During the period from 1995 to 2000 I caught more than fifteen puff adders. The length varied between 80 to 110 cm, the females have a greater girth and length than the males. They are plump, slow snakes, that open their mouth widely when excited, during which the erected fangs are very impressive. Furthermore, a cornered snake makes random jumping movements, during which the body can lift several centimetres from the ground. They also widen the body with a threatening pose and make a puffing sound by exhaling in short bursts. The skin consists of rough, drought resistant, skin plates.

Most of the animals were observed during the day and caught during the dry season (November to mid April). Three lay in darkness in the middle of a sandy, still warm, footpath. I would have certainly stepped on them if I did not have a flashlight on me. The skin is brown with a yellow and black pattern. On the back these brown oval spots are surrounded by straw yellow longitudinally 'chevrons'. These markings provide excellent camouflage in a savannah landscape, especially during the dry season. The snake has elliptical pupils and is preferentially nocturnal. The fangs were about 15 mm long.

The number of patients admitted to the Kumi hospital with snakebite is about three per year. In the period



Head of Dispholidus typus

between 1995-2000 fourteen patients were treated for snakebites, of which five died. The hospital does not have snake antiserum; it is too expensive. All snakebite patients are therefore treated symptomatically. Six patients had foot or lower leg amputations within weeks after being admitted, due to extensive gangrene. In light of the symptoms a puff adder bite was surmised. All bites were on the lower part of the leg, mostly the foot or the area of the ankle.

Literature data: Distribution: throughout Africa except for desert areas and mountainous terrain. Prey: rodents, especially rats and mice. Capacity of the venom glands: 100-350 mg; 100 mg is fatal. Action: mostly cytotoxic and tissue damaging, within hours extensive swelling and bluish purple discoloration is present in the affected area, accompanied by pain and necrosis. Length of the fangs: 12-25 mm. Fatal due to kidney failure. Maximum age in captivity: 14 years. Breeding: 20-40 young in July/August, which are 15-20 cm at birth. Therapy: antiserum and symptomatic treatment.

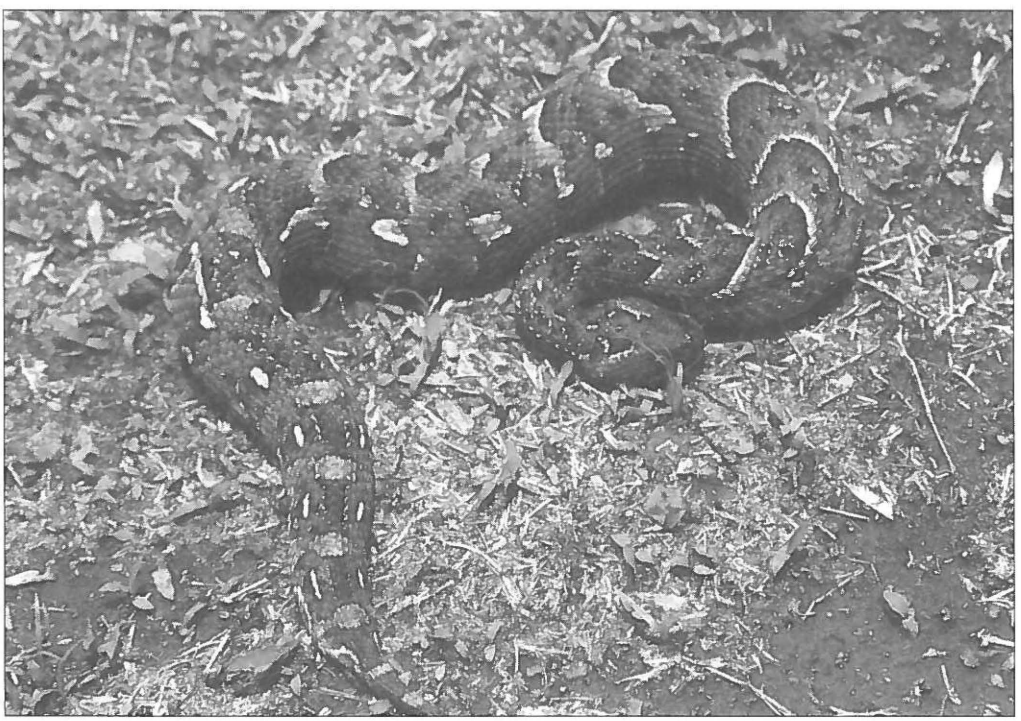
THE BLACK-NECKED SPITTING COBRA *(NAJA NIGRICOLLIS)*

This snake occurs in 17 of the 31 sub Saharan countries. Between 1995 and 2000 I caught five cobras that were identified as black-necked cobras. The aver-

age length was 125 centimetres. This species of cobra is also locally called the "spitting cobra" because the animal, if cornered, spits venom in the direction of the attacker. Spitting is not technically the correct term for what really happens. If this snake is cornered when faced with danger, it raises itself to a height of about 60 cm and rotates the ribs in the neck outward, widening the flattened neck to about the width of a hand. Subsequently muscles force drops of venom out of the glands through the small hollow fangs that are in the front of the upper jaw, which are then blown towards the opponent by forcefully exhaling air. It can be regarded more as a venom spray than real spitting. The animal is very accurate and aims at the eyes of the attacker.

I experienced the fine spray of drops of venom which hit my left eye, and my bare left arm, like a sort of drizzle. The spray bridged a distance of at least two meters on those occasions. It resulted in a strong burning sensation, as if diluted hydrochloric acid had entered my eye. By quickly and extensively rinsing my eye with water, followed by a treatment with tetracycline eye cream, as prevention against a secondary infection, I experienced no negative consequences, except for an infected conjunctiva that lasted 48 hours.

Four of the five cobras I caught were in savannah, and one was in a local hut, which the animal had entered. This species of cobra has a beautiful transverse deep-black band at the lower end of the white coloured



Bitis arietans beaten by brutes

scales in the neck, the ventral scales are light pink. The dorsum consists of fine, thin, uniformly dark grey and brown coloured scales. The head has an oval shape and does not have the triangular form found with other venomous snakes. The eyes are dark brown to black with round pupils and are not exceptionally large.
All animals were caught during the day in the rainy season (from April until August). The fangs, which are firmly fixed in the front of the upper jaw, were about 3 millimetres long.

Literature data: Length: 120-220 centimetres. Ability to 'spit', during which the venom droplets can easily cover a distance of two metres. The animal aims at the eyes of the aggressor. Habitat and distribution: Savannah landscapes, from Northern Egypt to the Transvaal and in all areas south of the Sahara. Usually actively searching for prey after dark. Capacity of the venom glands: 200-350 mg, fatal dose 40-50 mg. Action: neurotoxic / haemotoxic.

THE FOREST COBRA *(NAJA MELANOLEUCA)*

Found in 13 of the 31 sub-Saharan countries. One weekend in 1987 I was at the shores of Lake Bisani, about 8 km from the town of Kumi in Eastern Uganda. About one hour before sunset, I caught a cobra that could be identified as a forest cobra. Her length was about 150 centimetres. On the upper lip and the sides several vertical and diagonally running yellowish, white stripes were clearly visible against a dark brown to black background. The fangs that were firmly fixed in the front of the mouth were 3 mm long. The dorsum was uniformly dark brown to black, with fine, shiny scales. The eyes were black with a round pupil and not remarkably large. The ventral side was cream coloured. That I did not catch more specimens of this species in the last years was probably due to the fact that I work in a savannah area, about 8 km from the lake.

Literature data: Habitat: wooded areas and close to water. Length 180-220 cm. Prey: frogs, fish. Venom: neurotoxic. Not a 'spitter'. Can raise himself to 60 % of his total length. Especially active after dark.

EGYPTIAN COBRA OR ASP *(NAJA HAJE)*

Found in nine of the 31 sub-Saharan countries. I caught four Egyptian cobras in five years. The average length was about 140 cm. Fangs: about 3 mm long, fixed in the front of the upper jaw. Dorsal side: uniform grey to dark brown, ventral side: uniform grey to light brown. During capture these specimens raised themselves, but the widening of the neck was less pronounced than with the forest cobra; they showed no spitting activity. Oval head, dark brown eyes, round pupil. I caught the animals in during daylight hours.

Literature data: While this species is called the Egyptian cobra, it is distributed widely in Africa, from Egypt to Southern Africa, except for desert areas and the slopes of mountains.
Length: 150-200 cm. Habitat: preference for savannah landscapes. Venom gland volume: 175-300 mg. Fatal dose: 25-35 mg. Action of the venom: neurotoxic, hardly painful, progressive paralysis of skeletal and facial muscles, fatal due to paralysis of the respiratory muscles: death by suffocation.
Prey animals: birds, other snakes. Cleopatra is supposed to have killed herself with this snake and it is therefore also called the 'Cleopatra-snake'. The

Pharaoh's carried her picture in their head-dress to show their divine status. The puff adder and the Egyptian cobra are thought to cause most of the fatal snakebites in Africa.

THE BLACK MAMBA *(DENDROASPIS POLYLEPIS)*

Found in ten of the 31 sub-Saharan countries. This snake, like the green mamba, is related to the cobras. In five years I encountered only one black mamba in Eastern Uganda. The reptile as crossing a wide sandy path during the day and was run over when I was driving in a Landrover. The snake could be identified as a black mamba. Colour: dark grey–brown, smooth frosted scales. Length: 220 cm. relatively slender build. Head: large, oval head, slightly tapered to the front. Fangs: fixed in the front of the upper jaw, length of the teeth about 4 mm.

Literature data: Length: 200-300 cm. Colour: olive brown to metallic. Habitat: savannah. Also found in trees, but mostly on the ground. Found often in termite mounds and other holes in the ground. Distribution: from Senegal to Kenya and South Africa. Active during the day. Amount of venom: capacity of the venom glands: 100-140 mg. fatal dose: 15-20 mg. Action of the venom: cardiotoxic, (tachycardia as a result of action on the vagal nerve that regulates the heartbeat, neurotoxic (paralysis of the respiratory muscles: death by suffocation). Fatal due to respiratory arrest within 7-15 hours after an untreated bite.

GREEN MAMBA *(DENDROASPIS ANGUSTICEPS)*

This snake is found in five of the 31 sub-Saharan countries. I never encountered this snake during the years I lived in Eastern Uganda.

Literature data: Length 200-350 cm. Skin: emerald green, evenly coloured, frosted, fine scales. Head: narrow, slghtly flattened to the front. Eyes: light to dark brown coloured, round pupils. Prey: chameleons and birds. Shy, fast moving reptiles. Diurnal. Habitat: lives mostly in trees. Distribution: in jungle and wooded areas of Eastern Africa, south to Natal and the Cape Province in South Africa. Amount of venom: capacity of the venom glands: 60-100 mg. Action of the venom: mildly neurotoxic, paralysis (eye muscles), seldom fatal.

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