A FATAL ATTACK ON A YOUNG BOY BY AN AFRICAN ROCK PYTHON *PYTHON SEBAE*

Despite popular views to the contrary, unprovoked attacks by large pythons or boas on man are exceptionally rare. Very few reports have ever been published, and these have usually consisted of unsubstantiated newspaper reports, written in emotive style and giving few details concerning the circumstances of the tragedy. (Caras, 1975; Minton and Minton, 1973; and Pope, 1961) have all reviewed previous reports, and found that the world's five largest snakes, i.e. the anaconda *(Eunectus murinus),* reticulated python *(Python reticulatus),* African rock python *(P. sebae),* Indian python *(P. molurus)* and Australian amethystine python *(P. amethystinus)* have all been implicated in attacks on humans. However, the only well substantiated case concerns the death of a 14 year old Malay boy who was swallowed by a 5.17 m reticulated python on the Indonesian Island of Salebabu (Kopstein, 1927).

The African rock python is found throughout almost the whole of sub-Saharan Africa, and inhabits a diverse range of habitats. In many regions it is very common, and adapts readily to disturbed environments, i.e. sugar cane fields, etc. It is thus frequently found around human habitations. Despite this, reliably documented attacks on humans by these giant constrictors are almost non-existant. Loveridge (1931) describes the death of a woman, possibly weakened by recent childbirth, on Ukerewe Island in Lake Victoria. She was discovered lying dead in the coils of a large python, that measured about 4.5 m when subsequently killed. Local Africans stated that a youth had also been killed by a python on the island 30 years previously.

Other reports of attacks by African pythons occur in unsubstantiated newspaper stories. A 1951 Uganda newspaper reported that a 13 year old Lango youth had been attacked and swallowed, but that the snake (whose size was unspecified) was forced to disgorge the body (Pitman, 1974). In 1973 a Mocambique newspaper reported the death of a Portuguese soldier, who vanished while on guard duty, and whose body was later recovered from the stomach of a large python (whose size was again unspecified).

The recent attack described below, was again first reported in South African newspapers (November 1979). However, fuller details of the case have been substantiated by conversations with a number of the people involved, and from the official coroner's report.

The incident occurred at about 5:30 p.m. on Thursday 22 November 1979, on the farm Grootfontein (28°17′E, 24°05′S, No. 31 Waterberg district), east of the Dorset police station, Northern Transvaal, South Africa. Two young Tswana herd boys were chasing cattle along a pathway, when the leading boy (Johannes Makau, 13 years old, 1.3 m high, 45 kg, and in general good health) was grabbed on the right calf by a large python that lay in long grass by the side of the path. The other boy ran to a nearby kraal, situated 0.5 km away to get help. When he returned 20 minutes later with two elders, the victim was completely entwined by the python. One of the elders (55 years old) tried to attack the snake with a pickaxe, but reported that the snake grabbed the handle of the tool in its mouth, and in trying to wrench it free he dislocated his shoulder, causing him to drop the weapon. However, when hit by stones the python released its victim and retreated. The victim at this stage was already dead, and the body was taken back to the kraal. The police at Vaalwater were informed of the attack by telephone, and arrived approximately 2 hours after the incident. The circumstances of the attack were recorded, and the body, which at this stage had been cleaned was taken away by ambulance for autopsy at the Nylstroom mortuary. The coroner's report states that "death resulted from suffocation and internal injuries". The African elder whose shoulder had been dislocated was also taken for treatment. He reported that when recovered the victim's head was covered in saliva.

Attempts were made to locate the python responsible for the attack, but it was not until Saturday, 24 November 1979 that the snake was found by Mr Louis van Wyk, principal of the Vaalwater school, and Police Sergeant Zagrys van Emmenis. Its tracks were followed approximately 0.5 km, and the snake was found coiled under an overhanging rock.

Commedably, it was captured alive, and handed over to the Transvaal Department of Nature Conservation, who subsequently released it on the Farm Witbank (27°43′E, 23°58′S), No. 31 Waterberg district, which is part of the Mogol River Nature Reserve in the northern Transvaal. The snake was approximately 4.5 m long, of unknown sex and in good condition.

The weather at the time of the attack, was warm with intermittent sun and approximately 50% cloud cover, but no rain. The area is covered in relatively thick rooibos scrub, with many emergent rock koppies. Pythons are very common in the region, but usually of smaller size (2,5–3 m). Predation by pythons on small game has been observed by the local farmers on a number of occasions, but no previous atacks on stock or humans had occurred.

Although large boids are quite capable of swallowing big prey, it is probably more usual for them to take smaller, more frequent meals. Pope (1961) has discussed the maximum reported prey size for all the giant constrictors, and noted that *P. sebae* is quite capable of eating prey as large as any of the other species. Indeed the largest prey item recorded for any snake is that of a 59 kg impala consumed by a 4.72 m African python (Rose, 1955). It is often stated that although these snakes may kill adult humans, they could not swallow them due to the great width of the shoulder region. However, in the case of the African rock python this may not be so. The shoulders of an adult man when collapsed forward may measure only 35–40 cm wide, and could probably be engulfed by pythons in excess of 5 m.

The largest python known to the authors from the Northern Transvaal, and indeed from the whole of Southern Africa, measured 5.8 m (H. Erasmus, pers. comm.). Loveridge (1929) measured a fresh skin of 9.1 m, which allowing for natural stretching must still have come from a snake at least 7 m in length. The largest African pythons, however, appear to come from West Africa, and Minton and Minton (1973) list 2 apparently well documented records of snakes of 9.8 m and 7.3 m from the Ivory Coast. Snakes of this size would have no difficulty in eating adult humans.

On occasions pythons may successfully tackle prey they cannot subsequently swallow. Pienaar (1978) records 2 occasions of large pythons in the Kruger National Park, killing kudu calves, but disgorging them when they proved too big to swallow. The 4.5 m python responsible for the attack described above was disturbed before it could swallow its victim. However, the covering of saliva on the head of the recovered body is indicative that the python had begun to swallow the boy when his would-be rescuers arrived. It is very likely that it could have easily succeeded in swallowing the boy if it had not been interrupted.

Attacks from large constrictors may be stimulated by either feeding or self-defence. Such cases as the attack on a nurse by a large python near Mwanza on Lake Victoria (Ionides, 1965), and that by a 2.2 m python on an African gardener in Durban (Caras, 1975), are both most likely to have been in self-defence, when the pytons concerned were startled by the sudden close approach of the victims. The case reported here, however, is almost certainly a true feeding attack, and indeed there is every indication that the snake would have continued swallowing the boy had it not been disturbed. Pythons are known to catch antelope, etc., by lying in ambush by the sides of game paths. The close proximity of the cattle being herded by the victim, and his sudden arrival as he ran along the path, probably initiated an instinctive feeding reflex in the python.

It is surprising, but nonetheless gratifying, that the python when eventually captured was not killed in retribution. Unlike other large carnivores, i.e. lions, leopards, crocodiles, etc., pythons are unlikely to become regular man-eaters, and there is little likelihood that the python will repeat this act in its new surroundings.

ACKNOWLEDGMENTS.—We are indebted to both Mr. Louis van Wyk and Police Sergeant Zagrys van Emmenis, both intimately concerned with this case, for bringing this incident to our attention and for helping us in compiling this report.

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Accepted 31 Jan 1980

1980 JOURNAL OF HERPETOLOGY 14(3):305–307

OF DIFFERENTIAL HEAD–BODY PIGMENTATION IN SNAKES

Although snakes often exhibit a differential pigmentation of head and body, no assessment of the correlates of this phenomenon has been made, nor have ideas been presented on its functional significance. Specifically we will ask: 1) Is differential head-body pigmentation more frequent in snakes versus other elongated reptiles and amphibians? 2) Is differential head-body pigmentation more often associated with certain categories of ophidian dorsal body patterns? To address these questions, we have scored specific and infraspecific taxa for the presence of three categories of differential head-body pigmentation: neck rings, nuchal spots and head-body dichromatism. After assessing the correlates of the phenomenon, we will hypothesize possible functions.

Because categorizing pigmentation patterns is subjective, scoring of taxa should be done simultaneously to maximize consistency. Hence scoring of live specimens is not feasible. We therefore chose to survey only those faunas—North American north of Mexico, and Australian—for which compilations of adequate illustrations are available. For North American salamanders and lizards, we scored all taxa illustrated by Conant (1975) and/or Stebbins (1966). Basing our scoring on Barbour, 1971; Collins, 1974; Conant, 1975; Mount, 1975; Shaw and Campbell, 1974; Stebbins, 1966; Wright and Wright, 1957, we scored the taxa of North American snakes listed by Collins et al. (1978). For comparison with North American salamanders and lizards, we defined the subset of snake taxa illustrated by Conant (1975) and/or Stebbins (1966). We scored the Australian taxa of lizards and snakes (excluding hydrophiids) illustrated by Cogger (1975). In addition, pygopodids were scored separately based on Cogger, 1975; and Kluge, 1974. For testing significance of differences we used chi-square analyses of contingency tables.

Guidelines utilized for separating the categories are given below. Nuchal spots were defined as one or more pairs of contrasting blotches on the anterior dorsolateral region of the neck, of a different color or conspicuously larger than any blotches on the rest of the body. Excepting regularly banded snakes, a taxon was scored for the presence of a neck ring when the nape or posterior edge of the head was crossed by one or more contrasting bands. No regular bands were scored as neck rings. Head-body dichromatism was defined as a marked and abrupt color change from the dorsum of the body to the dorsum of the head. Anterior-posterior body dichromatism (e.g., *Masticophis f. flagellum*) was not considered. Snakes with regularly banded heads and bodies were scored as dichromatic only if the bands on the head were of distinctly different width or color. For snakes, the dorsal body pattern was scored as unicolored-speckled (US), striped (ST), blotched-spotted (BS), irregularly banded (IB), or regularly banded (RB), following Jackson et al. (1976). Where two or more body pattern morphs were present, each was considered.

Results.—Table 1 presents frequencies of differential head-body pigmentation for taxa by region. Differential head-body pigmentation was rare in salamanders. Head-body dichromatism and neck rings were significantly more frequent in snakes than in salamanders ($p < .05$); the frequency