

THE HOUSE SNAKES OF SOUTHERN AFRICA (GENUS *LAMP-*  
*PROPHIS*).

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INTRODUCTION

House snakes are characteristic of Africa. Presently 13 species are recognised. Most have relatively small ranges, but one (*fuliginosus*) is found throughout sub-Saharan Africa. It also extends in the west through Mauritania into southern Morocco, and in the east into the Arabian peninsula (where it has sometimes been treated as a separate species - *arabicus*). An isolated species, *Lamprophis geometricus*, is endemic to the Seychelles.

For many years two genera were recognised; *Boaedon* and *Lamprophis*, the former having a diastema (gap) separating its enlarged anterior maxillary teeth from the smaller posterior series (an unbroken series in *Lamprophis*), and apical pits (absent in *Lamprophis*). However, these characters are not constant (Bogert, 1940; Broadley, 1969) and the genera are now merged. *Lamprophis* has priority. All are small and medium-sized snakes, and only a few (e.g. *fuliginosus* and *inornatus*) grow longer than a metre. They are harmless constrictors, feeding for the most part on small mammals. Some, however, have more specialised diets. Their eyes are not large and have a vertical, elliptical pupil that dilates at night to aid vision. All are terrestrial, although some have moved underground, whilst others climb into rock cracks. They are ovi-

parous, laying white, oval eggs. Clutch size varies with the species, the larger taxa laying more eggs.

The following key (based on Broadley, 1983) separates the seven southern African species.

KEY TO THE GENUS *LAMPROPHIS* IN SOUTHERN AFRICA

- 1a. Scales in 17 rows at midbody; apical pits single; subcaudals 75-91 ..... *swazicus*
- b. Scales in 19 or more rows at midbody; apical pits paired or absent; subcaudals less than 75 ..... see 2
- 2a. Scales in 19 rows at midbody; uniform brown or olive above, upper lips and two outer scale rows yellow ..... *fuscus*
- b. Scales in 21 or more rows at midbody ... see 3
- 3a. Internasals longer than prefrontals; loreal about as long as deep; subcaudals 28-34; colour above lemon yellow with brown markings ..... *fiskii*
- b. Internasals shorter than prefrontals; loreal longer than deep; subcaudals 37 or more. see 4
- 4a. Midbody scale rows 21-23 (rarely 25); no pale stripes on top of head ..... see 5
- b. Midbody scale rows 27-35 (rarely 25); a pair of pale stripes extending along head from tip of snout through eye onto temporals ..... *fuliginosus*
- 5a. Rich olive to olive green above, with a yellow to orange vertebral stripe; subcaudals 46-58 in males, 35-48 in females ..... *aurora*
- b. Brown, dark olive or black above, with or without dark blotches; subcaudals 58-72 in males, 45-56 in females ..... see 6
- 6a. Eye diameter greater than its distance from lip; yellow brown to grey brown above, usually

with dark blotches; ventrals 186-230 . guttatus

- b. Eye diameter less than its distance from lip;  
no dark blotches; ventrals 170-196 . inornatus

## SPECIES ACCOUNTS

Brown house snake Lamprophis fuliginosus (Boie)

Colouration: Despite its scientific name (*fuliginosus* = black) the southern African populations are usually light, reddish brown in colour. Some specimens, especially from more arid regions, may be very lightly coloured. Large, old specimens darken, turning almost black. Two pale streaks run on either side of the head, from the snout, through the upper half of the eye, and onto the temporal region. These readily distinguish the species from all other southern African snakes. However, in some specimens they may be absent, whilst in others they may extend halfway along the body. Young are usually indistinctly spotted on the sides, and this may persist in some adults. The belly is cream to off-white in colour. Xanthic specimens are known.

Size: Usually 60-90 cm, although exceptional specimens of 150 cm have been found.

Distribution: Found throughout southern Africa.

Biology: A common species. Human habitation always generates squallor, and rats and mice abound around homes. These attract the snake, hence its common name. But the species is by no means restricted to urbanisation, or to a diet of rodents. It is common on the highfield grasslands, and in the arid karroid regions. Lizards are eaten as readily as rodents. Upto 16 eggs, averaging 30 x 15 mm in size, are laid in summer. They take 60-90 days to develop (depending as always with reptiles on the incubation tem-

perature) and the young measure 22-25 cm in length. In captivity females can lay clutches every month during a breeding season, but there is no indication that this happens in the wild.

Remarks: Taxonomy is rarely simple, and the house snakes of the *fuliginosus* complex are no exception. In West Africa two species are readily distinguished (Dunger, 1978) and logically named; *fuliginosus* - which in the region is black, and *lineatus* - which has the typical southern African colour pattern. Analysis of characters other than colour pattern, however, indicate that central and southern African house snakes which have the *lineatus* colouration, are conspecific with *fuliginosus* and not *lineatus*. A phenomenon known as character displacement is involved. Two species (both probably having the *lineatus* colouration) evolved in isolation after some event bisected the range of their common ancestor. This barrier then broke down and the species expanded into each others range. Selective pressures (possibly associated with mate recognition) resulted in a colour shift (to black) of the populations of the southern species (*fuliginosus*) in sympatry with the northern striped species (*lineatus*). Central and southern African populations of *fuliginosus* retained the *lineatus* colouration. A number of subspecies of *fuliginosus* have been described (i.e. *mentalis*, *arabicus*, and *bedriagae*). The status of all is doubtful.

Olive house snake *Lamprophis inornatus* Duméril and Bibron

Colouration: Usually a uniform light or dark olive, although occasional darker, more brownish specimens occur. The belly is lighter, ranging from plumbeous to light grey/green.

Size: Average 75 cm, exceptionally 130 cm. Females are usually larger (as in most snakes). House snakes, like most lycodontines, have well developed hemipenes, and males can be readily distinguished by the swollen tail base.

Distribution: Restricted to the wetter coastal belt of the Cape Fold Mountains and Drakensberg Escarpment, although it extends into drier regions of the Transvaal highlands. It is commoner than the brown house snake along the Eastern Cape coastal belt, but replaced by its congener in drier, karroid situations.

Biology: Similar to that of the brown house snake. Its diet is more varied, and many individuals will readily eat other snakes.

Eggs, numbering 5-15 and measuring approximately 38-25 mm, are laid in October-December, and take 3-4 months to hatch. The young measure about 21-24 cm and are identical in appearance to the adults.

Spotted house snake *Lamprophis guttatus* (A. Smith)

Colouration: Regionally variable. The basic pattern consists of a series of blotches or spots on the dorsum, arranged in either alternating or adjacent pairs. Some may merge to form an irregular zigzag pattern. Northern populations are more distinctly marked, the spots are dark brown, almost black, and often dark-edged; the dorsal ground colour is a pinkish grey brown. The colour dulls in populations in the Eastern Cape Mountains, whilst western Cape populations become almost light brown or tan, with the pattern restricted to diffuse spots on the anterior third of the body. The belly is yellowish white, occasionally with pale reddish brown spots on the sides.

Size: A relatively small (rarely exceeding 60 cm),

slender bodied snake, with a flattened head and large eyes.

Distribution: An inhabitant of the dry, inland mountains of the southern Cape Province, extending peripherally into southern Namibia in the west, and in the east to Natal, Swaziland, the eastern Transvaal and adjacent Mocambique.

Biology: A shy nocturnal snake that hunts for lizards in the cracks of the dry, rock koppies of the Karoo, and inland mountains. Sleeping skinks (e.g. *Mabuya sulcata*, *Mabuya variegata*, etc.) are taken in their retreats under exfoliating flakes, whilst active geckos (e.g. *Pachydactylus serval*, *Pachydactylus oculatus*, *Pachydactylus bibroni*, etc.) are ambushed. In suitable habitat it is a common snake, but rarely seen. 3-6 elongate eggs (38 x 20 mm) are laid in mid-summer.

Aurora house snake *Lamprophis aurora* (Linnaeus)

Colouration: A beautiful marked species. Adults are somewhat drabber compared with the sparkling juveniles, but handsome nonetheless. The dorsum is green, ranging from a rich olive to a yellowish citrine. A prominent vertebral stripe (usually orange, but occasionally yellowish) runs from the top of the head to the tip of the tail. It distinguishes the snake from all other southern African species. Juveniles are speckled, their dorsal scales having a pale transverse bar, while the head is spotted with black. The belly is immaculate white to yellowish or greenish white, and the adjacent scale rows usually yellow.

Size: A short, stocky snake averaging 60 cm in length, but exceptionally reaching 90 cm.

Distribution: Endemic to South Africa and Lesotho, but absent from the central Karoo and western

arid regions.

Biology: Unfortunately this beautiful species is nowhere common. Its habitats are similar to those of the brown and olive house snakes, but is a shy, peaceful species. Even when first discovered it rarely attempts to bite. Nestling rodents seem to form the staple diet, although small adult mice are also taken. 8-12 oval eggs, measuring 35 x 20 mm, are laid in summer.

Yellow-bellied house snake *Lamprophis fuscus*  
Boulenger

Colouration: Uniform olive brown to light olive green above. The upper lip and scale rows bordering the belly are yellowish green, the belly light yellow.

Size: A small species rarely exceeding 60 cm. The body and head are cylindrical, the neck barely constricted.

Distribution: Almost identical to that of the Aurora house snake. It has not been collected in the northern Cape Province, or as extensively in the Transvaal as *Lamprophis aurora*, but this may be due to poor collecting.

Biology: Generally a very rare species, but perhaps regionally common. Most specimens have been discovered in old termite nests, and the snake's small size, cylindrical build suggests this is its natural habitat. A southern Cape specimen had a small lacertid (*Tropidosaura montana*) in its belly, which may have been taken in its retreat at night. Specimens rarely feed in captivity.

Fisk's house snake *Lamprophis fiskii* Boulenger

Colouration: Another beautiful species. The dorsal ground colour is lemon yellow, with a median



Fig. 1. *Lamprophis fuliginosus*. Foto: W.R. Branch.



Fig. 2. *Lamprophis inornatus*. Foto: W.R. Branch.

series of irregular dark brown spots, which of often fuse to form crossbands. Scales of flanks and tail yellowish white with dark brown centres. Belly and upper lip creamy white. Head lemon yellow with symmetrical dark brown markings.

Size: A small species, probably not exceeding 40 cm.

Distribution: Very poorly known. Probably less than 20 individuals have been collected, most within the last 5 years. It is known from the southern regions of the Great Karoo, Cape Province, but recently specimens were collected in Little Namaqualand, and the species may be more widely distributed in the western karroid regions.

Biology: Very little is presently known. Captive specimens eat geckos, whilst another had a lacertid (*Eremias burchellii*) in its gut. The latter may have been captured in its nighttime retreat. When confronted the snake adopts a characteristic threat posture, simultaneously coiling and uncoiling the front and rear parts of the body, and hissing loudly.

#### Swazi rock snake *Lamprophis swazicus* Schaefer

Colouration: Uniform dark red-brown to light beige, fading to creamy white on the belly. The scales may be dark-edged.

Size: A thin, slender snake reaching 73 cm in length.

Distribution: Known only from the Eastern Transvaal highlands and western Swaziland.

Biology: Only recently described (1979), and still very poorly known. Most specimens have been collected under rock slabs on rock outcrops. Its build and prominent eyes suggest a nocturnal habit, and it is probable that the snake is



Fig. 3. *Lamprophis guttatus*, Krugerskraal, Graaff Reinet District. Foto: W.R. Branch.



Fig. 4. *Lamprophis aurora*, Burgersdorp, Cape Prov. Foto: W.R. Branch.

similar to the spotted house snake in habits. It is significant that the ranges of the two species are not known to overlap.

Remarks: Although placed in the genus *Lamprophis* it is not certain that this is correct. The snake's build is somewhat atypical for house snakes, and reminiscent of some boigines, e.g. *Telescopus* and *Dipsadoboa*. However, the hemipenis is bilobed with a centrifugal sulcus, and the snake's affinities lie with lycodontines. The subject is presently being investigated.

TABLE 1. SCUTELEATION DATA FOR SOUTHERN AFRICAN HOUSE SNAKES

SPECIES	Ventrals	Sub caudal	Scale rows	Upper labial	Lower labial	Oculars		Temporals
						Pre	Post	
<i>L. fuliginosus</i>	186-228	45-71	27-29	8(4-5)	8-10	1	2	1+2
<i>L. inornatus</i>	170-196	45-70	21-25	8(3-5)	7-8	1	2	1+2
<i>L. guttatus</i>	186-230	46-72	21-25	7(3-5)	7-9	1	2-3	1+2
<i>L. aurora</i>	165-185	35-58	21-23	8(4-5)	7-9	1	2	1+2
<i>L. fuscus</i>	165-199	56-74	19	7(4-5)	7-8	1	2	1+2
<i>L. fiskii</i>	178-183	28-34	21-23	7(4-5)	7-8	1	2	1+2
<i>L. swazicus</i>	199-208	75-91	17	8(3-6)	9-11	1	2	1+2



Fig. 5. *Lamprophis fuscus*, Stutterheim, Cape Prov.  
Foto: W.R. Branch.



Fig. 6. *Lamprophis fiskii*, Victoria West, Cape Province.  
Foto: W.R. Branch.

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Fig. 7. *Lamprophis swazicus*, Long Tom Pass, East Transvaal. Foto: W.R. Branch.