



ANNALS  
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V. FITZSIMONS

A check-list, with synoptic keys, to the snakes of Southern Africa

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## CORRIGENDA

ANNALS OF THE TRANSVAAL MUSEUM, VOLUME 25, NO. 2.

Pp. 1-14 to be re-numbered: 21-34.

p. 21. Line 3 from bottom: *for* antennaires *read* antennes

p. 23. Line 3 from bottom: *for* (Fr.) *read* (Er.)

p. 26. Line 12 from top: *for* armés de denticules *read* armés de six à sept denticules

p. 27. Line 17 from top: *for* du Province *read* de la Province

p. 27. Line 25 from top: *for* *Platysomalus* *read* *Platylomalus*

p. 31. Line 5 from bottom: *for* Uduma *read* Ndumu

p. 32. First line: *for* *H. hottentotus* *read* *H. hottentotta*

p. 32. Line 10 from bottom: *for* (Fr.) *read* (Er.)

p. 33. Line 8 from top: *for* Uduma *read* Ndumu

p. 33. Line 16 from top: *for* *gerhardti* *read* *gerardti*.

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No. 3

A CHECK-LIST, WITH SYNOPTIC KEYS,  
TO THE SNAKES OF SOUTHERN AFRICA

BY V. FITZSIMONS

*Transvaal Museum, Pretoria*

INTRODUCTION

The last systematic check-list of South African snakes was compiled by Boulenger (1910), when a total of 96 species was recorded. As a considerable number of forms have since been added to the original list and many nomenclatorial changes made, it was considered that a useful purpose could be served by the compilation of a new list to express the position as it exists at the present day.

In the present list 138 species and subspecies (falling under 46 genera and seven families) are recognized, of which some 69 may be regarded as endemic, i.e. confined to Southern Africa. Of the remainder, 10 appear to have their centre of distribution in Southern Africa, but extend north of our limits, while 55 are intruders from the north, three are cosmopolitan and one species (of Sea-Snake) occasionally reaches our eastern seaboard from its centre of distribution in the eastern Indian Ocean.

It may be noted that, for the purposes of this work, Southern Africa is taken to represent that part of the subcontinent lying south of a line bounded by the Zambezi River on the east and the Kunene River on the west. Furthermore, what was formerly known as Southern Rhodesia is now referred to as Rhodesia.

Class: REPTILIA  
Order: SQUAMATA  
Suborder: SERPENTES

KEY TO THE FAMILIES

1. Body wormlike, covered above and below with small, smoothly polished, close-fitting and more or less uniformly sized scales; three to four scales immediately anterior to the vent; eye vestigial, situated below the head shields and at best indistinct; mouth inferior, very small and with either the upper or lower jaw toothless
- Body covered with small scales above, but usually with transversely enlarged plates (or ventrals) below; a single or at most two scales (or anals) immediately anterior to the vent (except in Hydrophiidae); eye well developed, distinct and movable below a transparent scale or spectacle;

2

- mouth moderate to large, with well-developed teeth in both jaws (except in *Dasyveltis*) 3
2. Ocular shield not bordering the mouth; teeth present only in the upper jaw; 18 or more rows of scales round middle of body; tail very short, as long as, or only slightly longer than broad *TYPHLOPIDAE* (Blind-Snakes)
- Ocular shield bordering the mouth; teeth present only in the lower jaw; 14 rows of scales round middle of body; tail at least three times as long as broad *LEPTOTYPHLOPIDAE* (Worm-Snakes)
3. Ventral plates distinctly narrower than body width; supra-ocular, if distinct, broken up into two or more shields; labial shields pitted; vestiges of hind-limbs present and usually visible externally as horny, claw-like spurs on either side of the vent; coronoid and supraorbital bones present *PYTHONIDAE* (Pythons)
- Ventral plates as broad as, or almost as broad as, the body (except in *Hydrophiidae*); supraocular, if present, not broken up, but represented by a single shield; labials not pitted; no vestiges of hind-limbs present; coronoid and supraorbital bones absent 4
4. No enlarged poison fangs present at the front of the upper jaw; fangs, when present, are grooved only and situated well back in the upper jaw, usually below the eye; loreal shield usually present 5
- One or more pairs of enlarged, caniculate or tubular poison fangs present at the front of the upper jaw 6
5. Teeth well developed and distinct; no processes projecting from the cervical vertebrae into the gullet; scales on body for most part smooth (except in *Mehelya*)  
*COLUBRIDAE*—subfams.: *COLUBRINAE* and *BOIGINAE* (Ordinary Snakes)
- Teeth, for the most part, minute, barely discernible and few in number; elongate processes projecting from the cervical vertebrae into the gullet; scales on body distinctly keeled  
*COLUBRIDAE*—subfam.: *DASYPELTINAE* (Egg-Eaters)
6. Tail cylindrical; dorsal scales imbricate; ventral plates as broad, or nearly as broad, as the body 7
- Tail strongly compressed vertically and paddle-shaped; dorsal scales very small and usually juxtaposed; ventral plates much narrower than the body or not differentiated in size from the dorsals  
*HYDROPHIIDAE* (Sea-Snakes)
7. Poison fangs relatively small or of moderate size, canaliculate, more or less fixed or immovable and not enclosed in a membranous sheath; loreal shield absent; maxillary bone of moderate length and bearing both solid teeth and fangs *ELAPIDAE* (Cobras, Mambas etc.)
- Poison fangs proportionately very large, tubular, movable and capable of being folded back in a membranous sheath against the roof of the mouth when not in use; maxillary bone very short, vertically movable and bearing only the fangs *VIPERIDAE* (Adders and Vipers)

Family: *TYPHLOPIDAE*Genus: *TYPHLOPS* Oppel

Oppel, 1811, Ord. Fam. Gattung Rept., p. 54 (Type species: *Anguis lumbri-calis* Linn.).

*Key to the species*

1. Snout with a rounded edge 2
- Snout with an angular edge 3

2. Snout smoothly rounded; preocular in contact with 2nd and 3rd upper labials; 22 scales round middle of body, the diameter of which goes 42-46 times into total length *verticalis*
- Snout depressed and with a more or less distinct trilobate horizontal outline; preocular in contact with 3rd upper labial only; 24 scales round middle of body, the diameter of which goes 23-33 times into total length *forasinii*
3. Snout with an obtusely angular horizontal edge 4
- Snout with a sharp-cutting, horizontal edge 7
4. Rostral extending backwards to level of eyes or almost as far 5
- Rostral not extending backwards to level of eyes; 24 scales round middle of body, the diameter of which goes about 30 times into total length; preocular in contact with 2nd upper labial only (exceptionally with 2nd and 3rd) *mossambicus*
5. 30 or 32 scales round middle of body, the diameter of which goes 24 to 32 times into total length 6
- 26 or 28 scales round middle of body, the diameter of which goes 45 to 46 times into total length; nasal cleft proceeding from border of first upper labial or from suture between latter and second upper labial *boylei*
6. Nasal cleft proceeding from the lower lateral border of rostral; diameter of body goes about 24 times into total length; eye indiscernible *anchietae*
- Nasal cleft proceeding from about middle of upper border of 1st upper labial; diameter of body goes 25-32 times into total length; eye more or less visible below suture between preocular and ocular *bibronii*
7. Snout hooked in profile 8
- Snout not hooked in profile 9
8. Snout distinctly hooked in profile; 24 or 26 scales round middle of body, the diameter of which goes 45-57 times into total length; yellowish to pinkish above, with dark spots or irregular cross-bars *schinzii*
- Snout slightly hooked in profile; usually 28 (exceptionally 30) scales round middle of body, the diameter of which goes 35-50 times into total length; greyish to pinkish-brown above, with each scale bearing a darker central spot *delalandii*
9. 32-44 (usually 36-40) scales round middle of body; range south of the Limpopo River *schlegelii schlegelii*
- 30-36 (usually 32 or 34) scales round middle of body; range north of the Limpopo River *schlegelii mucruso*

*List of the species*

- (1) *Typhlops verticalis* (A. Smith). Yellow-brown Blind-Snake.  
*Onychocephalus verticalis* A. Smith, 1846, *Ill. Zool. S. Afr., Rept.*, pl. liv, ff. A and 18-20 (Type locality: 'Interior of South Africa').  
*Typhlops verticalis*, Boulenger, 1893, p. 32; FitzSimons, 1962, p. 65, f. 3.  
 SYNONYM: *Onychocephalus macrurus* Peters.  
 RANGE: Western Cape Province.
- (2) *Typhlops forasinii* Bianconi. Trilobate Blind-Snake.  
*Typhlops forasinii* Bianconi, 1847, *Spec. Zool. Mossamb.* p. 13, pl. iii, f. 1 (Type locality: Mozambique); Boulenger, 1893, p. 38; FitzSimons, 1962, p. 65, f. 4.  
 SYNONYM: *Onychocephalus trilobus* Peters.  
 RANGE: Coastal areas of Mozambique.

- (3) *Typhlops mossambicus* (Peters). Mozambique Blind-Snake.  
*Onychocephalus mossambicus* Peters, 1854, *Monatsb. Akad. Wiss. Berlin*, p. 621 (Type locality: Mozambique Island).  
*Typhlops mossambicus*, Boulenger, 1893, p. 41; FitzSimons, 1962, p. 66, f. 5.  
 SYNONYM: *Typhlops bianconi* Jan.  
 RANGE: Eastern coastal region, from Mozambique to Zululand.
- (4) *Typhlops anchietae* Bocage. Angola Blind-Snake.  
*Typhlops anchietae* Bocage, 1886, *Jorn. Sci. Lisb.* 11, p. 172 (Type locality: Huilla, Angola); Boulenger, 1893, p. 40; FitzSimons, 1962, p. 67.  
 RANGE: Southern Angola and possibly extending south into northern S.W. Africa.
- (5) *Typhlops bibronii* (A. Smith). Bibron's Blind-Snake.  
*Onychocephalus bibronii* A. Smith, 1846, *Ill. Zool. S. Afr., Rept.*, pl. li, f. 2; pl. liv, ff. 5-8 (Type locality: 'north of Latakoo', i.e. Kuruman).  
*Typhlops bibronii*, Boulenger, 1893, p. 44; FitzSimons, 1962, p. 67, ff. 2 and 6, pls. i and i.  
 RANGE: From eastern Cape Province, north through Natal, Swaziland and Orange Free State into Transvaal.
- (6) *Typhlops boylei* FitzSimons. Boyle's Blind-Snake.  
*Typhlops boylei* FitzSimons, 1932, *Ann. Transv. Mus.* 15, p. 38, and 1935, *ibidem*, 16, p. 308 (Type locality: Gembok Pan, Ghansi dist., western Kalahari); FitzSimons, 1962, p. 69, f. 7.  
 RANGE: Western Kalahari into Damaraland, S.W. Africa.
- (7) *Typhlops schinzii* Boettger. Beaked Blind-Snake.  
*Typhlops (Onychocephalus) schinzii* Boettger, 1887, *Ber. Senck. Ges.* p. 154, pl. v, ff. 1 a-e and 2 (Type locality: between Aus and Keetmanshoop, Gt. Namaqualand; Noi Xas, Ghansi dist., western Kalahari); Boulenger, 1893, p. 47; FitzSimons, 1962, p. 70, f. 8, pl. iii.  
 RANGE: From Great Namaqualand and western Kalahari, south into Little Namaqualand and north-western Cape Province.
- (8) *Typhlops delalandii* Schlegel. Delalande's Blind-Snake or Pink Earth-Snake.  
*Typhlops lalandei* Schlegel, 1844, *Abbild. Amph.* p. 38, pl. 32, ff. 17-20 (Type locality: 'Cape of Good Hope'.)  
*T. delalandi*, Boulenger, 1893, p. 45; FitzSimons, 1962, p. 71, f. 9.  
 SYNONYMS: *Onychophis franklinii* and *fordii* Gray; *Typhlops smithii* Jan.  
 RANGE: From western half of Cape Province, north through Orange Free State, north-west Cape and Transvaal into south-western part of Rhodesia.
- (9) *Typhlops schlegelii schlegelii* Bianconi. Schlegel's or South-eastern Blind-Snake.  
*Typhlops schlegelii* Bianconi, 1850, *Spec. Zool. Mossamb.*, p. 13, pl. iii, f. 1 (Type locality: Inhambane, Mozambique); Boulenger, 1893, p. 44; FitzSimons, 1962, p. 73, f. 10, pls. ii, iv.  
 SYNONYMS: *Onychocephalus dinga*, *riparius* and *varius* Peters.  
 RANGE: Southern Mozambique (i.e. S. of Zambesi River) into northern Zululand, northern and eastern Transvaal and Swaziland.

(10) *Typhlops schlegelii mucruso* (Peters). Variable Blind-Snake.

*Onychocephalus mucruso* Peters (part.), 1854, *Monatsb. Akad. Wiss. Berlin*, p. 621 (Type locality: Macanga, Mozambique).

*Typhlops mucruso*, Boulenger, 1893, p. 46.

*T. schlegelii mucruso*, Loveridge, 1933, p. 216; FitzSimons, 1962, p. 75.

SYNONYMS: *Onychocephalus petersii* Bocage; *Typhlops humbo* and *hottentotus* Bocage; *T. mandensis* Stejneger; *T. latirostris* Sternfeld; *T. viridiflavus* Peracca.

RANGE: A north-eastern form extending from Kenya, south through Tanzania and Mozambique (north of the Zambesi River) and thence west through Malawi, Rhodesia and Zambia into Angola and northern parts of S.W. Africa.

Family: LEPTOTYPHLOPIDAE

Genus: *LEPTOTYPHLOPS* Fitzinger

Fitzinger, 1843, *Syst. Rept.*, p. 24 (Type species: *Typhlops nigricans* Schlegel).

*Key to the species*

- |  |                     |
|--|---------------------|
| 1. Supraocular present   | 2                   |
| — Supraocular absent; 1st or anterior upper labial absent; rostral very large and extending back to well beyond a line between posterior borders of the eyes   | <i>labialis</i>     |
| 2. Rostral separated from the supraocular on either side by the upper portion of the nasal   | 3                   |
| — Rostral in contact with supraocular on either side   | 4                   |
| 3. Rostral small and not extending backwards to a line between anterior borders of eyes; length of tail from 5½ to 10 times into total length; greyish-pink above and flesh colour below   | <i>longicauda</i>   |
| — Rostral of moderate size and extending back to a little beyond a line between anterior borders of eyes; length of tail from 8 to 15 times into total length; dark brown to black above and below   | <i>nigricans</i>    |
| 4. First or anterior upper labial present  | 5                   |
| — First or anterior upper labial absent; body very slender, its diameter being contained in total length 78–100 times; greyish to light brown above and below  | <i>occidentalis</i> |
| 5. Rostral of moderate size, not more than twice width of nasal and usually not extending back beyond a line between posterior borders of eyes   | 6                   |
| — Rostral very large, over twice width of nasal and extending back well beyond a line between the posterior borders of the eyes  | 7                   |
| 6. Body very slender, its diameter being contained from 75 to 110 times in total length; rostral about one-third width of head and barely reaching back to a line between anterior borders of eyes   | <i>gracilior</i>    |
| — Body moderately slender, its diameter being contained not more than 60 times in total length; rostral almost half width of head and reaching back almost to a line between posterior borders of eyes   | <i>conjuncta</i>    |
| 7. Snout not hooked in profile; rostral large, from a half to two-thirds width of head and extending back to as far as or a little beyond a line between posterior borders of eyes; nasal bordering the lip  | <i>scutifrons</i>   |
| — Snout strongly projecting and slightly hooked in profile; rostral very large, from two-thirds to three-quarters width of head and extending back to well beyond a line between posterior borders of eyes; nasal usually reaching lip only at a point | <i>distanti</i>     |



*List of the species*

- (1) *Leptotyphlops labialis* (Sternfeld). Damara Worm-Snake.  
*Glauconia labialis* Sternfeld, 1908, *Sitzb. Ges. naturf. Freunde*, p. 92 (Type locality: Outjo, S.W. Africa); Boulenger, 1910, p. 500.  
*Leptotyphlops labialis*, FitzSimons, 1962, p. 79, f. 12.  
 RANGE: Confined to the northern half of S.W. Africa, i.e. Damaraland northwards.
- (2) *Leptotyphlops longicauda* (Peters). Long-tailed Worm-Snake.  
*Stenostoma longicaudum* Peters, 1854, *Monatsb. Akad. Wiss. Berlin*, p. 621 and 1882, *Reise n. Mossamb.* 3, p. 102, pl. 15, f. 5 (Type locality: Tette, Mozambique).  
*Leptotyphlops longicauda*, Loveridge, 1953, p. 247; FitzSimons, 1962, p. 80, f. 13.  
 SYNONYM: *Glauconia brevisrostris* FitzSimons.  
 RANGE: Northern and eastern Transvaal, through Rhodesia to Kenya.
- (3) *Leptotyphlops nigricans* (Schlegel). Black Worm-Snake.  
*Typhlops nigricans* Schlegel, 1839, *Abbild. Amph.* p. 38, pl. xxxii, ff. 1-2 (Type locality: Cape of Good Hope).  
*Glauconia nigricans*, Boulenger, 1893, p. 67 and 1910, p. 499.  
*Leptotyphlops nigricans*, Fitzinger, 1843, p. 214; FitzSimons, 1962, p. 81, f. 14.  
 RANGE: From southern Cape Province, north into northern and eastern Transvaal.
- (4) *Leptotyphlops occidentalis* FitzSimons. Western Worm-Snake.  
*Leptotyphlops occidentalis* FitzSimons, 1962, *Ann. Transv. Mus.* 24, p. 239, f. 1 (Type locality: Keetmanshoop, S.W. Africa) and 1962, p. 82, f. 15, pl. 2.  
 RANGE: S.W. Africa, south into Richtersveld, Little Namaqualand.
- (5) *Leptotyphlops gracilior* (Boulenger). Slender Worm-Snake.  
*Glauconia gracilior* Boulenger, 1910, p. 524 (Type locality: Van Rhynsdorp, Robertson, Clanwilliam and Matjiesfontein).  
*Leptotyphlops gracilior*, FitzSimons, 1946, p. 355 and 1962, p. 84.  
 RANGE: Western Cape Province, inland from the coast.
- (6) *Leptotyphlops conjuncta* (Jan). Cape Worm-Snake.  
*Stenostoma conjunctum* Jan, 1861, *Arch. Zool. Anat. Phys.* 1, p. 189 and *Icon. Gen.* 2, pls. v and vi, f. 9 (Type locality: Cape of Good Hope).  
*Glauconia conjuncta*, Boulenger, 1893, p. 67 and 1910, p. 500.  
*Leptotyphlops conjuncta*, Loveridge, 1933, p. 224; FitzSimons, 1962, p. 84, ff. 11 and 16, pl. v.  
 SYNONYMS: *Stenostoma grouti* Cope; *Glauconia merkeri* Werner; *G. latirostris* Sternfeld.  
 RANGE: Eastern side of subcontinent, from eastern Cape Province to Kenya.
- (7) *Leptotyphlops scutifrons* (Peters). Peters' Worm-Snake.  
*Stenostoma scutifrons* Peters, 1854, *Monatsb. Ak. Wiss. Berlin*, p. 621 (Type locality: Sena, Mozambique).  
*Glauconia scutifrons*, Boulenger, 1893, p. 68 and 1910, p. 500.

*Leptotyphlops scutifrons*, FitzSimons, 1962, p. 86, f. 17, pl. vi.

SYNONYMS: *Glauconia boettgeri* Werner; *G. latifrons* Sternfeld; *G. okahandjana* Ahl.

RANGE: Throughout the northern half of southern Africa, south into northern O.F.S., Natal, Cape Province and S.W. Africa.

(8) *Leptotyphlops distanti* (Boulenger). Transvaal Worm-Snake.

*Glauconia distanti* Boulenger, 1892, in *Distant: A Naturalist in the Transvaal*, p. 175, ff. (Type locality: Pretoria, Transvaal) and 1910, p. 500.

*Leptotyphlops distanti*, Parker, 1936, p. 121; FitzSimons, 1962, p. 88, f. 18.

RANGE: Transvaal, east into Zululand and northern Natal and west into adjoining areas of Bechuanaland.

Family: PYTHONIDAE

Genus: *PYTHON* Daudin

Daudin, 1803, *Hist. Nat. Rept.* 5, p. 266 (Type species: *Coluber molurus* Linn.).

*Key to the species*

1. Top of head covered with symmetrical shields and small scales; first two upper and four to six lower labials pitted; scales in 71-93 rows at midbody; subcaudals 60-77 *sebae*
- Top of head covered with small scales only; first five upper labials deeply pitted and three or four lower labials (from the 9th or 10th backwards) shallowly pitted; scales in 57-61 rows at midbody; subcaudals 46-57. *anchietae*

*List of the species*

(1) *Python sebae* (Gmelin). Common African Python.

*Coluber sebae* Gmelin, 1789, *Syst. Nat.*, ed. 13, 1, part 3, p. 1118. (Type locality: 'America', in error for Africa.)

*Python sebae*, Boulenger, 1893, p. 86 and 1910, p. 500; FitzSimons, 1962, p. 92, ff. 19 and 20, pls. 3 and vii.

SYNONYMS: *Coluber speciosus* Bonnaterre; *Boa Hieroglyphica* Schneider; *Python houttuyni* Daudin; *P. natalensis* A. Smith; *P. jubalis* Pitman; *Heleionomus variegatus* Gray.

RANGE: The northern and eastern parts of Southern Africa, extending northwards throughout most of Africa to south of the Sahara.

(2) *Python anchietae* Bocage. Angola or Dwarf Python.

*Python anchietae* Bocage, 1887, *Jorn. Sci. Lisboa* 12, p. 87 (Type locality: Catumbella, Angola); Boulenger, 1893, p. 88; FitzSimons, 1962, p. 98.

RANGE: Southern Angola, southwards to Damaraland, S.W. Africa.

Family: COLUBRIDAE

*Key to the genera*

1. No enlarged, grooved poison fangs in the upper jaw; all teeth solid (subfam. Colubrinae—harmless, non-venomous snakes) 2
- A pair of enlarged, usually grooved, poison fangs set well back in the upper jaw below the eye (subfam. Boiginae—back-fanged and more or less venomous snakes) 13

2. Scales on back smooth (partly keeled only in *Prosymna jani*) 3  
 — Scales on back distinctly keeled 12
3. Nostril pierced between two nasal shields; tail moderate to long 4  
 — Nostril pierced in a single or semi-divided nasal shield; tail short 10
4. Anal entire; pupil of eye vertically subelliptic (occasionally subcircular to round in *Lycodonomorphus*) 5  
 — Anal divided; pupil round or horizontal 6
5. Scales with apical pits and in 21-35 rows at midbody; ventrals 186-237; frontal shield elongate; both maxillary and mandibular teeth much enlarged in front *BOAEDON* (House-Snakes)  
 — Scales without apical pits and in 19-25 rows at midbody; ventrals 170-198; frontal shield short and barely longer than broad; maxillary teeth smallest, and mandibular teeth largest, in front *LAMPHROPHIS* (House-Snakes)  
 — Scales with or without apical pits and in 19-25 rows at midbody; ventrals not exceeding 183 in number; frontal distinctly longer than broad; maxillary teeth more or less subequal in size, mandibular teeth longest in front *LYCODONOMORPHUS* (Water-Snakes)
6. Snout rather pointed, prominent and with vertical sides; internasal shield entering nostril; scales in 26-31 rows at midbody *PSEUDASPIS* (Mole-Snake)  
 — Snout more or less rounded; internasal not entering the nostril; scales not exceeding 21 rows at midbody 7
7. Scales in not more than 15 rows at midbody; eye proportionately large; habit slender and tail long, its length being contained 3 to 4 times in total length; usually bright green in life *PHILOTHAMNUS* (Green-Snakes)  
 — Scales in 17 to 21 (exceptionally 15) rows at midbody; eye of moderate size; habit moderately slender and length of tail contained 4 to 5 times in total length; never bright green in life 8
8. A single, subtriangular internasal; parietal in contact with, or narrowly separated from, 6th upper labial; tail short, its length being contained 4.8 to 6 times in total length; a broad, pale, dorsolateral stripe on either side above *LIMNOPHIS* (Striped Swamp-Snake)  
 — Two internasals; parietal well separated from 6th upper labial by anterior temporals; tail moderate to long, its length being contained 3.2 to 5 times in total length 9
9. Ventrals not exceeding 150; scales in 17 or 19 (exceptionally 15) rows at midbody; mandibular teeth smallest in front *NATRICITERES* (Marsh-Snakes)  
 — Ventrals exceeding 170; scales in 19 to 20 rows at mid-body; mandibular teeth largest in front *MEIZODON* (Semiornate-Snake)
10. Pupil of eye round; loreal shield normally absent (when present, much reduced in size); nasal shield single; rostral small *DUBERRIA* (Slug-eaters)  
 — Pupil of eye vertically elliptic to subelliptic; loreal shield present 11
11. Nostril pierced in a single, undivided nasal shield; snout rounded and only moderately depressed; rostral small; anterior maxillary teeth longest *LYCOPHIDION* (Wolf-Snakes)  
 — Nostril pierced in a semi-divided nasal; snout strongly depressed, projecting and with an angular, horizontal edge; rostral proportionately large; maxillary teeth very small, but enlarging slightly posteriorly *PROSYMNA* (Shovel-snout Snakes)

12. Scales in 15-19 rows at midbody and without apical pits; vertebral row of scales distinctly enlarged and bicarinate; loreal present; nostril very large and pierced between two nasal shields; teeth normal and distinct; habit stout to moderately stout  
*MEHELYA* (File-Snakes)
- Scales in 21-27 rows at midbody and with apical pits; vertebral row of scales not enlarged nor bicarinate; loreal absent; nostril moderate and pierced in a single, semi-divided nasal shield; teeth few in number and rudimentary (subfam. Dasypeltinae—Egg-eaters)  
*DASYPELTIS* (Egg-eaters)
13. Eye moderate to large; head more or less distinct from the neck; tail moderately long 14
- Eye small to very small; head not distinct from the neck; tail very short 25
14. Subcaudals single; parietals broken up into small scales; pupil vertically elliptic  
*PYTHONODIPSAS* (Western Keeled-Snake)
- Subcaudals paired; parietals entire 15
15. Pupil of eye vertically elliptic; head distinctly broader than neck 16
- Pupil of eye round or horizontal; head slightly, but not markedly broader than neck 18
16. Anal usually divided (entire only in *beetzii*); loreal separated from orbit by a preocular; maxillary teeth smallest in front; body and tail conspicuously banded with black  
*TELESCOPUS* (Tiger-Snakes)
- Anal entire; body and tail not conspicuously banded with black 17
17. Loreal entering the orbit; subcaudals over 70  
*CHAEMATORTUS* (Cross-barred Snake)
- Loreal separated from orbit by a preocular; subcaudals less than 70; temporal region deep blue to purplish black and upper lip red, yellow or white behind  
*CROTAPHOPELTIS* (Red-lipped Snake)
18. Eye large; pupil horizontal when fully dilated, but normally keyhole- or dumbbell-shaped when partly dilated in daylight; habit very slender; scales in 19 rows at mid-body  
*THELOTORNIS* (Bird-Snakes)
- Pupil of eye round; head short to moderately long; habit moderately slender 19
19. Scales keeled and in 19-21 rows at midbody; head very short and eye large  
*DISPHOLIDUS* (Boomslang)
- Scales smooth and in 11-19 rows at midbody; head of moderate length and eye of moderate size 20
20. Rostral large and projecting; snout pointed and beak-like  
*RHAMPHIOPHIS* (Beaked-Snakes)
- Rostral of normal size; snout rounded and not beak-like 21
21. Nostril pierced between at least two nasal shields 22
- Nostril pierced in a single, semi-divided nasal shield 24
22. Maxillary teeth interrupted below anterior part of eye by two much enlarged, 'fang-like' teeth; nostril pierced between two or three nasal shields  
*PSAMMOPHIS* (Sand- or Grass-Snakes)
- Maxillary teeth subequal in size and continued without interruption to the interspace separating them from the posterior pair of enlarged poison fangs 23
23. Nostril pierced between two nasal shields only; tail long and subcaudals exceeding 80 in number  
*DROMOPHIS* (Olive Swamp-Snake)
- Nostril pierced between two nasal shields and an internasal shield; tail short and subcaudals less than 80 in number  
*PSAMMOPHYLAX* (Skaapstekers)

24. Mandibular teeth small and subequal in size; head not depressed and snout distinctly excavate on either side, just anterior to the eye; anal entire  
*AMPLORHINUS* (Reed Snake)
- Mandibular teeth much enlarged in front; head somewhat depressed and sides of snout not excavate; anal divided  
*HEMIRHAGERRHIS* (Mopani- or Bark-Snakes)
25. Subcaudals in pairs 26  
— Subcaudals single 30
26. Internasals absent; scales in 15 rows at midbody 27  
— Internasals present; scales in 17 or 19 (exceptionally 21) rows at midbody 28
27. A small preocular present; eye small, its diameter about equal to its distance from labial margin; head and neck black and three, well-marked, longitudinal, black stripes over back and tail  
*CHILORHINOPHIS* (Black-and-Yellow Burrowing Snakes)
- Preocular absent; eye minute, its diameter being much less than its distance from the labial margin; uniformly dark above  
*AMBLYODIPSAS* (White-lipped Snake)
28. Preocular present and large; prefrontals absent; snout strongly projecting, depressed and pointed; rostral very large and with an acute to subacute horizontal edge  
*XENOCALAMUS* (Quill-snouted Burrowing Snakes)
- Preocular absent; prefrontals present; snout not strongly depressed nor projecting; rostral of moderate size and with a rounded edge 29
29. Six upper labials; a single temporal, i.e. 0+1+0; a single pair of chin shields; 4th lower labial largest  
*CALAMELAPS* (Purple-glossed Snakes)
- Seven upper labials; two temporals, i.e. 0+1+1; two pairs of chin shields; 5th lower labial largest  
*CHORISTOCALAMUS* (Natal Purple-glossed Snake)
30. Scales in 23-27 rows at midbody; no preocular; habit moderately large and stout  
*MACRELAPS* (Natal Black-Snake)
- Scales in 15 rows at midbody; preocular present; fangs smooth or at most feebly grooved; habit small and moderately slender  
*APARALLACTUS* (Centipede-eaters)

## Subfamily: COLUBRINAE—Harmless Snakes

Genus: *BOAEDON* Duméril & Bibron

Duméril & Bibron, 1854, *Erpét. Gén.* 7, p. 357 (Type species: *Boaedon lineatum* D. & B.).

*Key to the species*

1. Scales in 21 or 23 rows at midbody; a double series of large dark spots or blotches over the back *guttatus*
- Scales in 27-33 rows at midbody; more or less uniformly brown above, but with two pale streaks on either side of the head and sometimes also the neck 2
2. Posterior chin shields invariably in good contact with one another mesially; usually two upper labials (exceptionally three) entering the orbit  
*fuliginosus fuliginosus*
- Posterior chin shields usually separated from one another mesially, or at least showing signs of such separation; usually three upper labials entering the orbit  
*fuliginosus mentalis*

*List of the species*

- (1)
- Boaedon guttatus*
- (A. Smith). Spotted House-Snake.

*Lycodon guttatus* A. Smith, 1843, *Ill. Zool. S. Afr., Rept.*, pl. xxiii (Type locality: 'Interior of South Africa, beyond Kurrichaine'. N.B. This locality unacceptable, more probably from either southern Cape or Natal).

*Boaedon guttatus*, Boulenger, 1893, p. 331 and 1910, p. 504.

*Boaedon guttatus*, FitzSimons, 1962, p. 116, f. 28, pl. xiii.

SYNONYM: *Alopecion annulifer* Dum. & Bibr.

RANGE: From southern Cape Province northwards, in the west, to Great Namaqualand and, in the east, to Natal and eastern Transvaal.

- (2)
- Boaedon fuliginosus fuliginosus*
- (Boie). Common or Brown House-Snake.

*Lycodon fuliginosus* Boie, 1827, *Isis* 20, col. 551 (Type locality: 'Java', in error for Africa).

*Boaedon fuliginosus fuliginosus*, Loveridge, 1957, p. 251; FitzSimons, 1962, p. 119, ff. 27, 29, pls. 5 and xiv.

SYNONYMS: *Lycodon unicolor* Schlegel (non Boie); *Boaedon lineatum* Duméril & Bibron; *B. quadrivittatum* Hallow-well; *B. quadrilineatum* A. Duméril; *B. maculatus* Parker; *Alopecion variegatum* Bocage; *Boodon bipraeocularis* Günther; *B. lineatus* var. *plutonis* Werner.

RANGE: Throughout Africa (excluding the forest regions), south of the Sahara; represented in S.W. Africa by the subspecies *mentalis*.

- (3)
- Boaedon fuliginosus mentalis*
- Günther. South West African House-Snake.

*Boaedon mentalis* Günther, 1888, *Ann. Mag. Nat. Hist.* (6) 1, p. 331, pl. xix, f. A (Type locality: Damaraland); Boulenger, 1893, p. 335 and 1910, p. 504.

*B. lineatus mentalis*, Bogert, 1940, p. 22; Mertens, 1955, p. 90.

*B. fuliginosus mentalis*, FitzSimons, 1962, p. 123.

SYNONYMS: *Boodon quadrilineatus* and *capensis* Peters; *B. geometricus* Fischer; *B. mentalis lineatus* Sternfeld.

RANGE: From the north-west Cape Province, northwards throughout South West Africa into southern Angola.

Genus: *LAMPROPHIS* Fitzinger

Fitzinger (part.), 1843, *Syst. Rept.*, p. 25 (Type species: *Coluber aurora* Linn.).

*Key to the species*

1. Scales in 19 rows at midbody; uniform brown above; upper lip, two outer scale rows on either side of body and belly, yellow *fuscus*
- Scales in 23 (rarely 21 or 25) rows at midbody 2
2. Internasals longer than prefrontals; loreal about as long as deep; lemon-yellow above, with dark brown spots *fiskii*
- Internasals shorter than prefrontals; loreal longer than deep 3
3. Internasals only slightly shorter than prefrontals; loreal a little longer than deep; usually a rich olive-green above, with a well-marked, beaded, bright yellow to orange-red vertebral stripe *aurora*
- Internasals much shorter than prefrontals; loreal elongate and at least twice as long as deep; uniform dark olive, slate to blackish above and below *inornatus*

*List of the species*

- (1) *Lamprophis fuscus* Boulenger. Yellow-bellied House-Snake.  
*Lamprophis fuscus* Boulenger, 1893, p. 322, pl. xx, f. 4 (Type locality: Cape of Good Hope) and 1910, p. 504; FitzSimons, 1962, p. 109, f. 23, pl. x.  
 RANGE: Southern Cape Province, from the Cape Peninsula to Albany district and thence into southern Natal.
- (2) *Lamprophis fiskii* Boulenger. Fisk's House-Snake.  
*Lamprophis fiskii* Boulenger, 1887, *Proc. Zool. Soc. Lond.* p. 398, pl. xxxiv (Type locality: Touws River, C.P.); 1893, p. 322 and 1910, p. 504; FitzSimons, 1962, p. 110, f. 24.  
 RANGE: Apparently confined to the western Cape Province and recorded only from Touws River and Worcester.
- (3) *Lamprophis aurora* (Linn.). Aurora House-Snake.  
*Coluber aurora* Linn., 1758, *Syst. Nat.* ed. 10, p. 219, and 1766, ed. 12, 1, p. 379 (Type locality: 'America' in error, obviously South Africa.)  
*Lamprophis aurora*, Boulenger, 1893, p. 321 and 1910, p. 504; FitzSimons, 1962, p. 112, f. 25, pl. xi.  
 RANGE: The southern Cape Province, from the Cape Peninsula east and north to southern Natal and through Basutoland and the Orange Free State to the Transvaal.
- (4) *Lamprophis inornatus* Duméril & Bibron. Black House-Snake.  
*Lamprophis inornatus* Duméril & Bibron, 1854, *Erp. Gen.* 7, p. 464 (Type locality: Cape of Good Hope); Boulenger, 1893, p. 321 and 1910, p. 504; FitzSimons, 1962, p. 114, f. 26, pls. 4 and xii.  
 SYNONYMS: *Boodon infernalis* Günther; *Pachyophis temporalis* Werner.  
 RANGE: From the western Cape Province, eastwards to northern Natal, and inland to the eastern and northern Transvaal.

Genus: *LYCODONOMORPHUS* Fitzinger

Fitzinger, 1843, *Syst. Rept.* p. 27 (Type species: *Coluber rufulus* Lichtenstein).

*Key to the species*

1. Pupil of eye round; loreal in contact with, or only narrowly separated from, the first upper labial; upper labials spotted; a well-marked, dark, median band or series of markings below, extending from throat to end of tail; average length of adults 3-3½ ft. *laevisimus*
- Pupil of eye subcircular to subelliptical; loreal well separated from the first upper labial; upper labials immaculate or at most edged with dusky below; no dark median band below, undersurface immaculate or more or less evenly darkened; average length of adults not exceeding 3 ft. 2
2. Tail short, its length being contained in total length more than 5½ times; subcaudals not exceeding 50; undersurface more or less darkened *whytii obscurirostris*
- Tail moderate, its length being contained in total length less than 5½ times; subcaudals over 50 in number; undersurface immaculate 3
3. Scales in 19 rows at midbody *rufulus rufulus*
- Scales in 21 rows at midbody *rufulus mlanjensis*

## List of the species

- (1) *Lycodonomorphus laevisissimus* (Günther). Black Water-Snake.  
*Natrix laevisissima* Günther, 1862, *Ann. Mag. Nat. Hist.* (3) 9, p. 124, pl. ix, f. 4 (Type locality: 'Probably from East Indies', N.B. Obviously in error, as species known only from South Africa.)  
*Neusterophis laevisissima* Günther, 1863, p. 16 fn.  
*Tropidonotus laevisissimus*, Boulenger, 1893, p. 226.  
*Lycodonomorphus laevisissimus*, Loveridge, 1953, p. 253; FitzSimons, 1962, p. 104, f. 21, pl. viii.  
 SYNONYMS: *Grayia lubrica* Sclater; *Hydralabes melanogaster* Werner.  
 RANGE: Restricted to South Africa, from the eastern Cape Province through Natal to the south-eastern Transvaal.
- (2) *Lycodonomorphus whytii obscuriventris* FitzSimons. Dusky-bellied Water-Snake.  
*Lycodonomorphus whytii obscuriventris* FitzSimons, 1963, *Koedoe* 7, p. 26, pl. and map (Type locality: Ngirivane, Kruger National Park, S. Africa).  
 RANGE: Eastern Transvaal.
- (3) *Lycodonomorphus rufulus rufulus* (Lichtenstein). Common Brown Water-Snake.  
*Coluber rufulus* Lichtenstein, 1823, *Verz. Dubl. Zool. Mus. Berlin*, p. 100 (Type locality: 'South Africa').  
*Coronella rufula*, Schlegel (part), 1837, p. 74, pl. ii, ff. 18-19.  
*Lamprophis rufulus*, A. Smith, 1847, pl. lviii.  
*Lycodonomorphus rufula*, Fitzinger, 1843, p. 27.  
*Alabes rufula*, Duméril & Bibron, 1854, p. 308.  
*Ablabophis rufulus*, Boulenger, 1893, p. 318 and 1910, p. 503.  
*Lycodonomorphus rufulus rufulus*, Loveridge, 1953, p. 252; FitzSimons, 1962, p. 106, f. 22, pl. ix.  
 SYNONYM: *Coronella leucopilus* A. Smith.  
 RANGE: From the western Cape Province, eastwards to the eastern Cape Province, and thence northwards, over the better-watered parts of Southern Africa, to the Zambesi River.
- (4) *Lycodonomorphus rufulus mlanjensis* Loveridge. Mlanje Water-Snake.  
*Lycodonomorphus rufulus mlanjensis* Loveridge, 1953, *Bull. Mus. Compar. Zool.* 110, p. 253 (Type locality: Ruo River, Mlanje Mtn., Nyasaland); FitzSimons, 1962, p. 108.  
 RANGE: From southern Malawi into the north-eastern corner of Rhodesia.

Genus: *PSEUDASPIS* Fitzinger

Fitzinger, 1843, *Syst. Rept.* p. 25 (Type species: *Coluber canus* Linn.).

*Pseudaspis cana* (Linn.). Mole-Snake.

*Coluber canus* Linn, 1758, *Syst. Nat.* ed. 10, 1, p. 22 and 1766, ed. 12, 1, p. 383 (Type locality: 'In Indiis', in error for Africa).

*Duberria cana*, Fitzinger, 1826, p. 55.

*Coronella cana*, Duméril & Bibron, 1854, p. 613.

*Pseudaspis cana*, Cope, 1864, p. 168; Boulenger, 1893, p. 373 and 1910, p. 506; FitzSimons, 1962, p. 162, f. 44, pls. 8, 9 and xxi.

SYNONYMS: *Coluber elegantissimus* Laurenti; *C. ocellatus* Gmelin; *Cadmus cuneiformis* Theobald; *Coronella phocarum* Günther; *Ophirhina anchietae* Bocage.



RANGE: Throughout Southern Africa, northwards to Kenya on the east and into Angola and southern Congo in the west.

Genus: *PHILOTHAMNUS* A. Smith

A. Smith, 1840, *Ill. Zool. S. Afr., Rept.*, fn. to text for pl. lix (Type species: *Dendrophis (Philothamnus) semivariiegatus* A. Smith).

*Key to the species*

1. Subcaudals sharply angular, distinctly keeled and notched like the ventrals; ventrals 164-217; subcaudals 116-164 *semivariiegatus semivariiegatus*
- Subcaudals rounded or subangular and only occasionally faintly notched 2
2. Usually nine upper labials, of which three (rarely two) enter the orbit; preocular usually in contact with the frontal 3
- Usually eight upper labials, of which two (rarely three) enter the orbit; preocular usually well separated from the frontal 4
3. No well-marked, dark-brown vertebral streak or band from the head to the end of tail; ventrals 150-183; subcaudals 87-127 *irregularis irregularis*
- A well marked, dark reddish-brown vertebral streak or band from the head to the end of tail; ventrals 150-166; subcaudals 85-106 *ornatus*
4. Rostral just visible from above; temporals 2+2 (rarely 1+1); ventrals distinctly keeled laterally; subcaudals 112-132; interstitial skin black *natalensis*
- Rostral distinctly visible from above; temporals 1+1 or 1+2; ventrals smooth or at most feebly keeled laterally; subcaudals 77-106; interstitial skin pale *hoplogaster*

*List of the species*

- (1) *Philothamnus semivariiegatus semivariiegatus* (A. Smith). Spotted Bush-Snake.

*Dendrophis (Philothamnus) semivariiegata* A. Smith, 1840, *Ill. Zool. S. Afr., Rept.*, pls. lix, lx and lxiv, ff. 1 a-b. (Type locality: 'Bushman Flat and country beyond Kurrichaine' i.e. Rustenburg, W. Transvaal).

*Ahaetulla semivariiegata*, Günther, 1863, p. 285.

*Philothamnus semivariiegatus*, Peters, 1869, p. 661; Boulenger, 1894, p. 99 and 1910, p. 508; FitzSimons, 1962, p. 140, f. 36, pls. 6 and xvii.

SYNONYMS: *Philothamnus punctatus* Peters; *Ahaetulla kirkii* Günther; *A. bocagi* Günther; *Dendrophis melanostigma* Jan; *Philothamnus smithii* Bocage; *Leptophis punctatus* Mocquard.

RANGE: Most of southern Africa (excluding the drier western regions) and north to the tropics in the west and Ethiopia and Sudan on the east.

- (2) *Philothamnus irregularis irregularis* (Leach). Northern Green-Snake.

*Coluber irregularis* Leach, 1819, in Bowdich, *Miss. Ashantee*, p. 494 (Type locality: Fantee, Gold Coast).

*Philothamnus irregularis*, Peters, 1877, pp. 615 and 620; FitzSimons, 1962, p. 144, f. 37.

*Chlorophis irregularis*, Boulenger, 1894, p. 196 and 1910, p. 508.

SYNONYMS: *Dendrophis (Philothamnus) albo-variata* A. Smith; *D. chenonii* Reinhardt; *Ahaetulla (Leptophis) frenata* Muller; *A. shirana* Günther; *Philothamnus angolensis* Bocage; *Chlorophis vernayi* FitzSimons.

RANGE: Tropical Africa, from Senegal on the west to Sudan on the east, and southwards into the northern half of Southern Africa.

- (3) *Philothamnus ornatus* Bocage. Ornate Green-Snake.  
*Philothamnus ornatus* Bocage, 1872, *Jorn. Sci. Lisboa* 4, p. 80. (Type locality: Huilla, Angola); FitzSimons, 1962, p. 146.  
*Chlorophis ornatus*, Boulenger, 1894, p. 93.  
*Philothamnus irregularis ornatus*, Loveridge, 1951, pp. 4 and 8.  
 RANGE: From the south-western part of Zambia to Angola on the west and into the northern part of Rhodesia on the east.
- (4) *Philothamnus natalensis* (A. Smith). Natal Green Water-Snake.  
*Dendrophis (Philothamnus) natalensis* A. Smith, 1848, *Ill. Zool. S. Afr., Rept.*, pl. lxiv, ff. 1-2 (Type locality: 'Port Natal', i.e. Durban, Natal.)  
*Philothamnus natalensis*, Bocage, 1882, p. 18; FitzSimons, 1962, p. 150, f. 39.  
*Chlorophis natalensis*, Boulenger (part.), 1894, p. 94 and 1910, p. 501.  
 RANGE: From the eastern Cape Province, northwards through Natal and Zululand into southern Mozambique, and inland into the Transvaal as far west as Rustenburg, W. Transvaal.
- (5) *Philothamnus hoplogaster* (Günther). Eastern Green Water-Snake.  
*Ahaetulla hoplogaster* Günther, 1863, *Ann. Mag. Nat. Hist.* (3) 11, pp. 284 and 286 (Type locality: 'Port Natal', i.e. Durban).  
*Philothamnus hoplogaster*, Bocage, 1882, p. 17; FitzSimons, 1962, p. 147, f. 38, pls. 7 and xviii.  
*Chlorophis hoplogaster*, Boulenger (part.), 1894, p. 93, pl. v, f. 2 and 1910, p. 507.  
 SYNONYMS: *Philothamnus neglectus* Peters; *Chlorophis oldhami* Theobald.  
 RANGE: From the eastern Cape Province, northwards, on the eastern side of the continent, to East Africa, just south of the equator.

Genus: *LIMNOPHIS* Günther

Günther, 1865, *Ann. Mag. Nat. Hist.* (3) 15, p. 96 (Type species: *Limnophis bicolor* Günther).

*Limnophis bicolor* Günther. Striped Swamp-Snake.

*Limnophis bicolor* Günther, 1865, *Ann. Mag. Nat. Hist.* (3) 15, p. 96, pl. ii, f. C (Type locality: Duque de Bracança, Malanje Dist., Angola); FitzSimons, 1962, p. 137, f. 35.  
*Helicops bicolor*, Boulenger, 1893, p. 275.

RANGE: From Angola and Zambia to just within north-western border of Rhodesia.

Genus: *NATRICITERES* Loveridge

Loveridge, 1963, *Bull. Mus. Compar. Zool.* 110, p. 248 (Type species: *Coronella olivacea* Peters).

Key to the species

1. Scales in 19 (rarely 17 or 18) rows at midbody; average length of adults about 18 in. *olivacea olivacea*
- Scales in 17 (rarely 13, 15, 18 or 19) rows at midbody; average length of adults about 15 in. *olivacea uluguruensis*

List of the species

- (1) *Natriciteres olivacea olivacea* (Peters). Olive Marsh-Snake.  
*Coronella olivacea* Peters, 1854, *Monatsb. Akad. Wiss. Berlin*, p. 622 (Type locality: Tete, Mozambique).

- C. (Mizodon) olivacea*, Peters, 1877, p. 614.  
*Zacholus olivaceus*, Rochebrune, 1884, p. 156.  
*Tropidonotus olivaceus*, Boulenger, 1893, p. 227 and 1910, p. 502.  
*Natrix olivacea*, Schmidt, 1923, p. 58.  
*Neusterophis olivaceus olivaceus*, Bogert, 1940, pp. 5 and 55.  
*Natriciteres olivacea olivacea*, Loveridge, 1953, pp. 251 and 317; FitzSimons, 1962, p. 133, f. 34.  
 SYNONYMS: *Coronella (Meizodon) dumerilii* Günther; *Enicognathus punctatostratus* Jan; *Neusterophis atratus* Peters; *Grayia Giardi* Dollo.  
 RANGE: From the Sudan and Ghana in the north, southwards into Angola Rhodesia and Mozambique.

- (2) *Natriciteres olivacea uluguruensis* (Loveridge). Montane Marsh-Snake.  
*Natrix olivacea uluguruensis* Loveridge, 1935, *Bull. Mus. Compar. Zool.* 79, p. 7 (Type locality: Nyange, Uluguru Mtns., Tanganyika—now Tanzania).  
*Neusterophis olivaceus uluguruensis*, Bogert, 1940, p. 35.  
*Natriciteres olivacea uluguruensis*, Loveridge, 1953, pp. 252 and 318; FitzSimons, 1962, p. 136.  
 RANGE: From the highlands of Tanzania, south and south-east through Mozambique, Malawi and Zambia into Angola and Rhodesia.

Genus: *MEIZODON* Fischer

Fischer, 1856, *Abhand. Nat. Ver. Hamburg*, 3, p. 112. [Type species: *Meizodon regularis* Fisch. = *coronatus* (Schlegel)].

*Meizodon semiornata* (Peters). Southern Semi-ornate Snake.

*Coronella semiornata* Peters, 1854, *Monatsb. Akad. Wiss. Berlin*, p. 622 (Type locality: Tete, Mozambique); Boulenger, 1894, p. 195.

*Meizodon semiornata*, Bogert, 1940, p. 50; FitzSimons, 1962, p. 138.

SYNONYMS: *Zamensis fischeri* Peters; *Coronella inornata* Fischer; *C. plumbeiceps* Boettger; *C. scheffleri* Sternfeld.

RANGE: An eastern form extending from Kenya and Uganda, southward through Mozambique, Malawi and Zambia into Rhodesia.

Genus: *DUBERRIA* Fitzinger

Fitzinger (part.), 1826, *Neue Class. Rept.* pp. 29 and 55 (Type species: *Coluber arctiventris* Daudin = *C. duberria* Merrem = *C. lutrix* Linn.).

*Key to the species*

- |   |                          |
|---|--------------------------|
| 1. Ventrals 95-110; body variegated or spotted above  | <i>variegata</i>         |
| — Ventrals 118-151; body uniform above or with a continuous or broken-up vertebral and lateral line | 2                        |
| 2. Usually two postoculars; subcaudals 25-51; belly with a yellowish band along its middle          | <i>lutrix lutrix</i>     |
| — A single postocular; subcaudals 21-38; belly with dark reticulate markings                        | <i>lutrix rhodesiana</i> |

*List of the species*

- (1) *Duberria variegata* (Peters). Spotted Slug-eater.

*Homalosoma variegata* Peters, 1854, *Monatsb. Akad. Wiss. Berlin*, p. 622 (Type locality: Inhambane, Mozambique) and 1882, p. 107, pl. xvi, f. 1; Boulenger, 1894, p. 276 and 1910, p. 509.

*Duberria variegata*, FitzSimons, 1962, p. 166, f. 45, pl. xxii.

RANGE: Restricted to the eastern coastal region from Inhambane southwards into Zululand.

(2) *Duberria lutrix lutrix* (Linn.). Southern Slug-eater.

*Coluber lutrix* Linn, 1758, *Syst. Nat.* ed. 10, 1, p. 216 and 1766, ed. 12, 1, p. 375 (Type locality: 'In Indiis'. N.B. In error for South Africa).

*Homalosoma lutrix*, Duméril & Bibron, 1854, p. 110; Boulenger, 1894, p. 274 and 1910, p. 509.

*Duberria lutrix lutrix*, Loveridge, 1933, p. 242; FitzSimons, 1962, p. 167, f. 48, pl. xxiii.

SYNONYMS: *Coluber duberria* Merrem; *C. tetragonus* Latrielle; *C. arctiventris* Daudin; *C. erathon* Hermann; *Cyclophis catenatus* Theobald.

RANGE: Confined to South Africa, from the western Cape Province east and north into southern Mozambique and the Transvaal.

(3) *Duberria lutrix rhodesiana* Broadley. Rhodesian Slug-eater.

*Duberria lutrix rhodesiana* Broadley, 1958, *Occ. Pap. nat. Mus. S. Rhod.* 3 (B), p. 215 (Type locality: Chishawasha, nr. Salisbury, Rhodesia); FitzSimons, 1962, p. 169.

RANGE: Restricted to the northern and eastern highlands of Rhodesia.

Genus: *LYCOPHIDION* Fitzinger

Fitzinger, 1843, *Syst. Rept.* p. 27 (Type species: *Lycodon horstokii* Schlegel = *capensis* A. Smith).

*Key to the species*

1. Nostril pierced near the posterior border of a single nasal, which is followed by a much smaller postnasal; scales on body each with a single apical pit; ventrals 164-214; subcaudals 24-57 *capense capense*
- Nostril pierced in the middle of a single large nasal; no postnasal present; scales on body without apical pits; ventrals 146-157; subcaudals 20-30 *semiannule*

*List of the species*

(1) *Lycophidion capense capense* (A. Smith). Cape Wolf-Snake.

*Lycodon capensis* A. Smith, 1831, *S. Afr. Quart. Journ.* 1, p. 18 (Type locality: 'Beyond Kurrichaine, about 25° S. lat., i.e. Rustenburg dist., W. Transvaal).

*Lycophidion capense*, A. Duméril, 1859, p. 197; FitzSimons, 1962, p. 124, f. 30, pl. xv.

*Lycophidium capense*, Boulenger, 1887, p. 177, 1893, p. 339 and 1910, p. 505.

SYNONYM: *Lycophidium jacksoni* Boulenger.

RANGE: Throughout Southern Africa, northwards to the Congo, West Africa, Sudan and Ethiopia.

(2) *Lycophidion semiannule* Peters. Eastern Wolf-Snake.

*Lycophidium semiannulis* Peters, 1854, *Monatsb. Akad. Wiss. Berlin*, p. 622 (Type locality: Tete, Mozambique); Boulenger, 1893, p. 339 and 1910, p. 506.

*Lycophidion semiannulis* Peters, 1882, p. 135, pl. xvi, f. 2; FitzSimons, 1962, p. 127, f. 31.

RANGE: An eastern form extending from northern Mozambique (Tete and Lumbo) south into northern Zululand.

Genus: *PROSYMNA* Gray

Gray, 1849, *Cat. Snakes Brit. Mus.* p. 80 (Type species: *Calamaria meleagris* Reinhardt).

(Synonyms: *Ligonirostra* Cope; *Asthenophis* Boulenger; *Pseudoprosymna* Lindholm; *Stenorhabdium* Werner).

## Key to the species

- |   |                                |
|---|--------------------------------|
| 1. A pair of internasals; rostral with a sharp-cutting, horizontal edge   | 2                              |
| — A single, undivided, band-like internasal: rostral with an angular, horizontal edge   | 4                              |
| 2. Internasals widely separated from one another behind the rostral; ventrals 154-165 in males and 162-180 in females; usually with a pale broken vertebral stripe and a dark dorsolateral stripe on either side              | <i>bivittata</i>               |
| Internasals in good contact with one another behind the rostral or narrowly separated; ventrals 135-158 in males and 154-168 in females   | 3                              |
| 3. Internasals always in good contact with one another behind rostral; subcaudals 22-27 in males and 18-25 in females; usually with small dark spots or short streaks above, forming longitudinal lines                       | <i>sundevallii lineata</i>     |
| Internasals usually separated or at most in short contact with one another behind the rostral; subcaudals 26-34 in males and 21-26 in females; usually with a paired series of dark spots above and smaller ones on the sides | <i>sundevallii sundevallii</i> |
| 4. Scales on body for the most part keeled; ventrals 113-129  | <i>jani</i>                    |
| Scales smooth throughout  | 5                              |
| 5. Uniformly dark above or with each scale bearing a small pale spot; ventrals 127-162  | <i>ambigua stuhlmanni</i>      |
| — Pale above, with dark spots or markings   | 6                              |
| 6. Snout obtusely pointed; ventrals 156-188; a vertebral series of transverse, black spots or cross bars anteriorly   | <i>frontalis</i>               |
| — Snout bluntly rounded; ventrals 145-163; a double series of dark spots along back   | <i>angolensis</i>              |

## List of the species

- (1) *Prosymna bivittata* Werner. Twin-striped Shovel-snout.  
*Prosymna sundevallii* var. *bivittata* Werner, 1903, *Abhandl. Bayer. Akad. Wiss.* 22, p. 2, f. 381 (Type locality: 'Africa, south of the Orange River', i.e. Little Namaqualand); FitzSimons, 1962, p. 155.  
*P. bivittata*, Broadley, 1965, p. 3.  
 SYNONYM: *Prosymna sundevallii* var. *macrospila* Werner.  
 RANGE: South West Africa, eastwards across Bechuanaland, into south western Rhodesia and Transvaal.
- (2) *Prosymna sundevallii lineata* (Peters). Striped Shovel-snout.  
*Temnorhynchus lineatus* Peters, 1871, *Monatsb. Akad. Wiss. Berlin*, p. 568 (Type locality: Matlale, Gazaland, Mozambique).  
*Prosymna lineata*, Loveridge, 1954, p. 264; FitzSimons, 1962, p. 152.  
*P. sundevallii lineata*, Broadley, 1965, p. 5.  
 RANGE: From Mozambique, south into northern Zululand, and west into Rhodesia and northern and eastern Transvaal.
- (3) *Prosymna sundevallii sundevallii* (A. Smith). Sundeval's Shovel-snout.  
*Temnorhynchus sundevallii* A. Smith, 1849, *Ill. Zool. S. Afr., Rept.*, App., p. 17 (Type locality: 'Kaffirland, eastward of Cape Colony', i.e. Natal).

*Prosymna sundevallii*, Boulenger, 1894, p. 247 and 1910, p. 508.  
*P. sundevallii sundevallii*, FitzSimons, 1962, p. 153, f. 40, pl. xix; Broadley, 1965, p. 5.

SYNONYM: *Rhinostoma cupreus* Günther.

RANGE: Restricted to South Africa, from the western Cape Province east and north to Orange Free State, Basutoland, Natal and central Transvaal.

(4) *Prosymna jani* Bianconi. Keel-scaled Shovel-snout.

*Prosymna jani* Bianconi, 1862, *Mem. Accad. Sci. Bologna* (2) 1, p. 470 (Type locality: Inhambane, Mozambique); Boulenger, 1894, p. 249 and 1910, p. 509; FitzSimons, 1962, p. 156, f. 41.

RANGE: Confined to the eastern coastal areas from Inhambane (Mozambique) south into northern Zululand.

(5) *Prosymna frontalis* (Peters). South West African Shovel-snout.

*Temnorhynchus frontalis* Peters (part.), 1867, *Monatsb. Akad. Wiss. Berlin*, p. 236, pl., ff. 1-1 d (Type locality: Otjimbingue, S.W. Africa).

*Prosymna frontalis*, Boulenger, 1894, p. 248 and 1910, p. 508; FitzSimons, 1962, p. 159, f. 43, pl. xx.

SYNONYM: *Prosymna (Pseudoprosymna) bergeri* Lindholm.

RANGE: Throughout South West Africa and south into northern Little Namaqualand.

(6) *Prosymna angolensis* Boulenger. Angola Shovel-snout.

*Prosymna angolensis* Boulenger, 1915, *Proc. zool. Soc. Lond.*, p. 209. (Type locality: Huila, S. Angola); FitzSimons, 1962, p. 161.

RANGE: From southern Angola to just within the northern border of S.W. Africa.

(7) *Prosymna ambigua stuhlmanni* (Pfeffer). East African Shovel-snout.

*Ligonirostra stuhlmanni* Pfeffer, 1893, *Jahrb. Hamburg. Wiss. Anst.* 10, p. 78, pl. i, ff. 8-10 (Type locality: Usambara, Tanganyika).

*Prosymna ambigua* Boulenger, 1894, p. 248 and 1910, p. 509 (excl. Angola).  
*P. ambigua stuhlmanni*, Loveridge, 1936, p. 254; FitzSimons, 1962, p. 157, f. 42.

SYNONYMS: *Prosymna vassei* Mocquard; *P. variabilis* and *Stenorhabdium temporale* Werner; *P. transvaalensis* Hewitt).

RANGE: From the coastal regions of Kenya south, through Tanzania, Mozambique, Malawi and southern side of Rhodesia to eastern Transvaal and northern Zululand.

Genus: *MEHELYA* Csiki

Csiki, 1903, *Rovartani Lapok* 10, p. 198, fn. (Type species: *Heterolepis capensis* A. Smith).

*Key to the species*

1. Scales in 19 rows at midbody; three upper labials entering the orbit; ventrals over 250 *vernayi*
- Scales in 15 (rarely 17) rows at midbody; two upper labials entering the orbit; ventrals less than 230 2
2. Secondary keels on body scales all strongly developed; ventrals 195-224; subcaudals 44-58; a pale vertebral stripe *capensis capensis*
- Secondary keels on body scales reduced to two short ones apically; ventrals 171-181; subcaudals 55-77; no pale vertebral stripe present *nyassae*

*List of the species*

- (1) *Mehelya vernayi* Bogert. Angola File-Snake.  
*Mehelya vernayi* Bogert, 1940, *Bull. Amer. Mus. Nat. Hist.* 77, p. 28, ff. 1 and 2 (Type locality: Hanha, Angola); FitzSimons, 1962, p. 128, f. 32.  
 RANGE: From southern Angola into Damaraland.
- (2) *Mehelya capensis capensis* (A. Smith). Cape File-Snake.  
*Heterolepis capensis* A. Smith, 1847, *Ill. Zool. S. Afr., Rept.*, pl. lv (Type locality: 'Eastern districts of Cape Colony').  
*Simocephalus capensis*, Boulenger, 1893, p. 345 and 1910, p. 506.  
*Mehelya (Simocephalus) capensis*, Lönnberg, 1910, p. 3.  
*M. capensis capensis*, FitzSimons, 1962, p. 130, f. 35, pl. xvi.  
 SYNONYM: *Heterolepis guenzii* Peters.  
 RANGE: From Transvaal and Natal, north through Rhodesia, Mozambique, Malawi to Tanzania.
- (3) *Mehelya nyassae* (Günther). Nyassa File-Snake.  
*Simocephalus nyassae* Günther, 1888, *Ann. Mag. Nat. Hist.* (6) 1, p. 328 (Type locality: Lake Nyasa, Nyasaland); Boulenger, 1893, p. 347, pl. xxiii, f. 2 and 1910, p. 506.  
*Heterolepis nyassae*, Bocage, p. 91.  
*Mehelya (Simocephalus) nyassae*, Lönnberg, 1910, p. 3.  
*M. nyassae*, FitzSimons, 1962, p. 132.  
 SYNONYM: *Gonionotophis degrijsi* Werner.  
 RANGE: From eastern Congo and Kenya, south through Malawi, Mozambique, Zambia and Rhodesia into northern Transvaal and Natal.

## Subfamily: DASYPELTINAE

Genus: *DASYPELTIS* Wagler

Wagler, 1830, *Syst. Amph.*, p. 178 (Type species: *Coluber scaber* Linn.).  
 (Synonyms: *Analcis* Wagler; *Rachiodon* Jourdan; *Deirodon* Owen; *Dirodon* Agassiz).

*Key to the species*

1. Lateral rows of scales only slightly reduced in size and with keels not or but feebly serrated; subcaudals 69-92; uniformly yellowish to reddish-brown above and pale below *inornata*
- Three or four rows of lateral scales strongly reduced in size and with keels distinctly serrated; usually with darker markings, or at least indications of same, above 2
2. Subcaudals 71-109, i.e. 82-109 in males and 71-80 in females; ground colour above pinkish to reddish-brown, with darker markings *medici medici*
- Subcaudals not exceeding 71; ground colour above grey to olive-brown, with darker greyish-brown to blackish markings 3
3. Dorsal row of dark spots or markings squarish to rhomboidal in shape; length of tail into total length 5.3 to 6.8 times in males *scabra scabra*
- Dorsal row of dark spots or markings more or less hour glass-shaped; length of tail into total length over 7 times in males *scabra loveridgei*

*List of the species*

- (1) *Dasyveltis inornata* A. Smith. Southern Brown Egg-Eater.  
*Dasyveltis inornatus* A. Smith, 1849, *Ill. Zool. S. Afr., Rept.*, pl. lxxiii (Type locality: 'South-eastern districts of the Cape Colony, and also in Kaffirland', i.e. Natal); FitzSimons, 1962, p. 174, pl. xxiv.  
*D. scabra* var. F. Boulenger, 1894, p. 356.  
 SYNONYM: *Rhachiodon scaber* var. *unicolor* Jan.  
 RANGE: From the eastern Cape Province, northwards into Natal and southern Zululand, and inland into Swaziland and south-eastern Transvaal.
- (2) *Dasyveltis medici medici* (Bianconi). East African Egg-Eater.  
*Dipsas medici* Bianconi, 1859, *Mem. Accad. Sci. Bologna* 10, p. 501, pl. xxvi (Type locality: Mozambique).  
*Dasyveltis scaber* var. *medici*, Peters, 1882, p. 120.  
*D. scabra* var. C. Boulenger, 1894, p. 356.  
*D. medici medici*, Gans, 1957, p. 3; FitzSimons, 1962, p. 165.  
 SYNONYMS: *Dasyveltis scaber* var. *fasciolatus* Peters; *D. elongata* Mocquard  
 RANGE: The coastal regions from southern Kenya, southwards to southern Zululand.
- (3) *Dasyveltis scabra scabra* (Linn.). Common Egg-Eater.  
*Coluber scaber* Linn. 1758, *Syst. Nat.* ed. 10, 1, p. 223 and 1766, ed. 12, 1, p. 384 (Type locality: 'In Indiis'. N.B. Obviously in error for Africa).  
*Rhachiodon scaber*, Jourdan, 1833, *Le Temps*, 13 June.  
*Tropidonotus scaber*, Schlegel, 1837, p. 328, pl. xii, ff. 12 and 13.  
*Deirodon scaber*, Owen, 1845, p. 220.  
*Dasyveltis scaber*, Günther, 1858, p. 142; Boulenger, 1894, p. 354 and 1910, p. 509; FitzSimons, 1962, p. 176, ff. 47 and 48, pls. 11 and xxv.  
 SYNONYMS: *Anodon typus* A. Smith; *Dipsas carinatus* Hallowell; *Rhachiodon abyssinus* A. Duméril; *Dasyveltis lineolatus* Peters.  
 RANGE: Throughout Southern Africa (excluding S.W. Africa), north to southern Sudan, Ethiopia, Somalia and southern Arabia on the east, and Ghana on the west.
- (4) *Dasyveltis scabra loveridgei* Mertens. South West African Egg-Eater.  
*Dasyveltis scabra loveridgei* Mertens, 1954, p. 213 and 1955, p. 104, pl. xvi, f. 74 (Type locality: Farm 'Finkenstein', nr. Windhoek, S.W. Africa); FitzSimons, 1962, p. 179.  
 RANGE: The central highland regions of S.W. Africa.

## Subfamily: BOIGINAE

Back-fanged Snakes (Opisthoglypha), for the most part only slightly poisonous, except for the Boomslang (*Dispholidus*) and the Bird-Snake (*Thelotornis*), which are highly poisonous.

Genus: *PYTHONODIPSAS* Günther

Günther, 1868, *Ann. Mag. Nat. Hist.* (4) 1, p. 425 (Type species: *Pythonodipsas carinata* Günther).



*Pythonodipsas carinata* Günther. Western Keeled Snake.

*Pythonodipsas carinata* Günther, 1868, *Ann. Mag. Nat. Hist.* (4) 1, p. 426, pl. xix, f. K (Type locality: 'Zambesi'); Boulenger, 1896, p. 45 and 1910, p. 510; FitzSimons, 1962, p. 181, f. 49, pl. xxvii.

RANGE: From Damaraland, S.W. Africa, northwards into southern Angola and southern part of Zambia.

Genus: *TELESCOPUS* Wagler

Wagler, 1830, *Nat. Syst. Amphib.* p. 182 (Type species: *Coluber*, as figured on pl. v, ff. 11-13 in Savigny's Supplement to Geoffroy, 1812, *Descr. Egypte.*).

(Synonyms: *Trigonophis* Eichwald; *Ailurophis* Bonaparte; *Aelurophis*; Agassiz *Migiurtinophis* Scortecchi).

*Key to the species*

- |   |                                    |
|---|------------------------------------|
| 1. Scales in 19 rows at midbody; anal plate divided   | 2                                  |
| — Scales in 21 rows at midbody; anal plate entire; ventrals 202-220; sub-caudals 44-51            | <i>beetzii</i>                     |
| 2. Black transverse spots or crossbands on back and tail usually not exceeding 52 in total number | <i>semiannulatus semiannulatus</i> |
| — Dark transverse spots or crossbands on back and tail 52 or more, i.e. 52-75                     | <i>semiannulatus polystictus</i>   |

*List of the species*

- (1) *Telescopus beetzii* (Barbour). Namib Tiger-Snake.  
*Tarbophis beetzii* Barbour, 1922, *Proc. biol. Soc. Wash.* 35, p. 230 (Type locality: Kolmanskop, Gt. Namaqualand).  
*Telescopus beetzii*, Mertens, 1955, p. 102, pl. xvi, f. 70; FitzSimons, 1962, p. 183.  
 RANGE: Great Namaqualand, S.W. Africa.
- (2) *Telescopus semiannulatus semiannulatus* A. Smith. Common or Eastern Tiger-Snake.  
*Telescopus semiannulatus* A. Smith, 1849, *Ill. Zool. S. Afr., Rept.*, pl. lxxii (Type locality: None given, but by inference, South Africa); FitzSimons, 1962, p. 184, f. 50, pl. xxvii.  
*Leptodira semiannulata*, Günther, 1872, p. 31.  
*Crotaphopeltis semiannulatus*, Bocage, 1895, p. 122.  
*Tarbophis semiannulatus*, Boulenger, 1896, p. 51 and 1910, p. 510.  
*T. semiannulatus* var. *meridionalis* Werner, 1898, p. 144.  
 RANGE: From Kenya and the Congo in the north, southwards to Natal, Transvaal, northern Cape Province, Kalahari and northern parts (sandveld) of South West Africa.
- (3) *Telescopus semiannulatus polystictus* Mertens. Damara Tiger-Snake.  
*Telescopus semiannulatus polystictus* Mertens, 1954, *Zool. Anz.* 152, p. 215 (Type locality: Gammans, nr Windhoek, S.W. Africa) and 1955, p. 102, pl. xvi, f. 71; FitzSimons, 1962, p. 186.  
 RANGE: The highland regions of central and southern Damaraland, S.W. Africa.

Genus: *CHAMAETORTUS* Günther

Günther, 1864, *Proc. zool. Soc. Lond.* p. 310 (Type species: *Chamaetortus aulicus* Günther).

*Chamaetortus aulicus aulicus* Günther. Cross-barred Snake.

*Chamaetortus aulicus* Günther, 1864, *Proc. Zool. Soc. Lond.* p. 310, pl. xxvi, f. 2 (Type locality: 'Zambesi'); FitzSimons, 1962, p. 191, f. 52, pl. xxix.

RANGE: From Kenya, southwards through Tanzania and Mozambique into the north-eastern corner of the Transvaal.

Genus: *CROTAPHOPELTIS* Fitzinger

Fitzinger, 1843, *Syst. Rept.*, p. 27 (Type species: *Coronella rufescens* Schlegel = *hotamboeia* Laurenti).

(Synonyms: *Sibon* Cope; *Dipsoglyphophis* Barbour & Amaral).

*Crotaphopeltis hotamboeia hotamboeia* (Laurenti). Red-lipped Snake.

*Coronella hotamboeia* Laurenti, 1768, *Syn. Rept.*, p. 85 (Type locality: 'India orientali', i.e. Africa).

*Leptodira hotamboeia*, Boulenger, 1896, p. 89.

*Leptodeira hotamboeia*, Schmidt, 1923, p. 107.

*Crotaphopeltis hotamboeia*, Barbour & Amaral, 1927, p. 26; FitzSimons, 1962, p. 187, f. 51, pls. 12 and xxviii.

SYNONYMS: *Coronella virginica* Laurenti; *Coluber rufescens* Gmelin; *Coluber bicolor* Leach; *Ophis heterurus* Duvernoy; *Dipsas hippocrepis* Reinhardt; *Dipsas inornatus* A. Smith; *Oxyropus melanocrotaphos* Cope; *Tarbophis barnumbrowni* Bogert.

RANGE: Throughout tropical Africa (excluding rain forest areas) and south over the eastern half of Africa to the western Cape Province, but absent from the dry, western half of Southern Africa.

Genus: *THELOTORNIS* A. Smith

A. Smith, 1849, *Ill. Zool. S. Africa, Rept.*, App., p. 19 (Type species: *Thelotornis capensis* A. Smith).

*Key to the species*

1. Ventrals 146-164; head irregularly speckled above or some specks aggregated to form a more or less Y-shaped marking on the crown; a dark-edged streak or band on the side of the head *kirtlandii capensis*
- Ventrals 163-176; head immaculate above, except for a speckled Y-shaped design on crown of head; streak or band on side of head heavily dark-edged on temporal region, giving thus a conspicuously chain-like effect *kirtlandii oatesii*

*List of the species*

- (1) *Thelotornis kirtlandii capensis* A. Smith. Southern Vine-Twig- or Bird-Snake.

*Thelotornis capensis* A. Smith, 1849, *Ill. Zool. S. Afr. Rept.*, App., p. 19 (Type locality: 'Kaffirland and the country towards Port Natal', i.e. Durban, Natal).

*T. kirtlandii* Boulenger, 1896, p. 185 and 1910, p. 515.

*T. capensis capensis*, Laurent, 1956, pp. 230 and 378, pl. 35.

*T. kirtlandii capensis*, FitzSimons, 1962, p. 201, f. 35, pls. 17-19 and xxiii.

SYNONYM: *Thelotornis kirtlandii* var. *mossambicana* Bocage.

RANGE: From southern Tanzania in the north, southwards through Mozambique and Rhodesia (excluding the north-central and north-western parts) to southern Natal and Transvaal, and westwards into the northern half of South West Africa and southern Angola.

- (2) *Thelotornis kirtlandii oatesii* (Günther). Oates' Vine-Twig- or Bird-Snake.  
*Dryiophis oatesii* Günther, 1881, in Oates, *Matabeleland and the Victoria Falls*, App., p. 330, col. pl. D (Type locality: 'Matabeleland').  
*Thelotornis kirtlandii oatesii*, Loveridge (part.), 1944, p. 154; FitzSimons, 1962, p. 205.  
*T. capensis oatesii*, Laurent, 1955, pp. 231 and 318, f. 35.  
 RANGE: From south-western Tanzania, south through Malawi into north-west Rhodesia and north-east Bechuanaland.

Genus: *DISPHOLIDUS* Duvernoy

Duvernoy, 1832, *Ann. Sci. Nat. Paris* 26, p. 150 (Type species: *Dispholidus lalandii* Duvernoy = *Bucephalus typus* A. Smith).

(Synonyms: *Bucephalus* A. Smith; *Dryomedusa* Fitzinger).

*Dispholidus typus* (A. Smith). Boomslang.

*Bucephalus typus* A. Smith, 1829, *Zool. Journ.* 4, p. 441 (Type locality: 'Old Latakoo', i.e. Lattakoo or Lithako, approx. 27° S., 24° E., i.e. between Kuruman and Taung., N.W. Cape Province).

*Dispholidus typus*, Boulenger, 1896, p. 187, f. 14 and 1910, p. 515; Fitz-Simons, 1962, p. 196, f. 35, pls. 14-16 and xxi-xxii.

SYNONYMS: *Bucephalus bellii*, *capensis*, *gutturalis*, *jardini* and *viridis* A. Smith; *Dispholidus lalandii* Duvernoy; *Dendrophis colubrina* Schlegel and *D. pseudodipsas* Bianconi; *Thrasops jacksonii mossambicus* Mertens.

RANGE: From tropical Africa (south of about 15° N. latitude) to the southern tip of the continent, but excluding the dry western part of South Africa.

Genus: *RHAMPHIOPHIS* Peters

Peters, 1854, *Monatsb. Akad. Wiss. Berlin*, p. 624 (Type species: *Rhamphiophis rostratus* Peters).

Key to the species

1. Snout strongly hooked in profile; two to four (usually three) preoculars; tail long, its length going from 3½ to 4 times into total length; subcaudals 87-118; usually more or less uniformly coloured above, but with a dark streak on either side of head *oxyrhynchus rostratus*
- Snout not or but slightly hooked in profile; one or two preoculars; tail short, its length going 6½-9 times into total length; subcaudals 28-45; a series of dark spots or blotches above *multimaculatus*

List of the species

- (1) *Rhamphiophis oxyrhynchus rostratus* Peters. Eastern Brown Beaked-Snake.  
*Rhamphiophis rostratus* Peters, 1854, *Monatsb. Akad. Wiss. Berlin*, p. 624 (Type locality: Tete: Mesuril and Quitangomba, Mozambique).  
*R. oxyrhynchus* Boulenger, 1896, p. 146 (part.).  
*R. oxyrhynchus rostratus*, Loveridge, 1942, p. 290; FitzSimons, 1962, p. 215, f. 58, pl. xxxvii.  
 SYNONYMS: *Rhagerrhis unguiculata* Günther; *Coelopeltis porrectus* Jan.

RANGE: From southern Sudan, Ethiopia and Somalia in the north, southwards through Kenya, Tanzania, south-eastern Congo, Malawi, Mozambique, Zambia and Rhodesia to the eastern Transvaal.

(2) *Rhamphiophis multimaculatus* (A. Smith). Western or Spotted Beaked-Snake.

*Coronella multimaculata* A. Smith, 1847, *Ill. Zool. S. Afr., Rept.*, pl. lxi  
(Type locality: 'Bushman Country, near the Orange River', i.e. Bushmanland).

*Dipsina multimaculata*, Jan. 1862, p. 313.

*Rhagerrihis multimaculata*, Boulenger, 1887, p. 176.

*Rhamphiophis multimaculatus*, Boulenger, 1896, p. 144 and 1910, p. 512;  
FitzSimons, 1962, p. 217, f. 59, pls. 21 and xxxviii.

RANGE: Throughout South West Africa, south to Little Namaqualand and eastwards across the Karroo to about 27° E. long.

Genus: *PSAMMOPHIS* Boie

Boie, 1825, in *Isis* 19, col. 982 (Type species: *Coluber sibilans* Linn.).

(Synonyms: *Taphrometopon* Brandt; *Chorisodon* Duméril & Bibron; *Monodiastema* Bibron; *Phayrea* Theobald; *Amphiophis* Bocage; *Mike* Werner).

Key to the species

- |   |                                  |
|---|----------------------------------|
| 1. Scales in 17 (rarely 19) rows at midbody   | 2                                |
| Scales in 15 (rarely 17) or less rows at midbody  | 7                                |
| 2. Subcaudals in less than 130 pairs  | 3                                |
| — Subcaudals in more than 130 pairs; usually nine upper labials, of which 5th and 6th enter the orbit; two preoculars, the upper not in contact with frontal  | <i>trigrammus</i>                |
| 3. Upper labials usually eight in number, with two entering the orbit; no distinct dark streak on either side of belly, but longitudinal series of spots may be present   | 4                                |
| — Upper labials usually nine in number, with three entering the orbit; a well-marked, dark continuous line or streak along either side of belly; ventrals 159-174; subcaudals 109-127   | <i>subtaeniatus subtaeniatus</i> |
| 4. Anal divided (very rarely entire); a single preocular  | 5                                |
| — Anal entire (very rarely divided); normally two preoculars, the upper being in contact with the frontal   | <i>notostictus</i>               |
| 5. Preocular usually in good contact with the frontal; normally three nasals, the upper posterior with a strong, backwardly directed prolongation; habit slender; throat spotted and a well-marked, dark-edged, pale stripe along either side of body | 6                                |
| — Preocular usually separated from the frontal; normally only two nasals, the posterior without any definite backward prolongation; habit fairly stout; throat spotted or unspotted and a pale lateral stripe present or absent (at least in adults)  | <i>sibilans sibilans</i>         |
| 6. Longitudinal pale lines or streaks on back of head and on sides of neck  | <i>sibilans trinasalis</i>       |
| — Transverse pale bars on back of head and sides of neck  | <i>sibilans leightoni</i>        |
| 7. Scales in 15 rows at midbody   | 8                                |
| — Scales in 11 rows at midbody; subcaudals 57-82  | <i>angolensis</i>                |
| 8. Upper labials usually seven, of which 3rd and 4th enter the orbit; preocular in good contact with frontal; ventrals 153-177; subcaudals 97-109   | <i>jallae</i>                    |

- Upper labials usually eight, of which 4th and 5th enter the orbit; pre-ocular not reaching the frontal; ventrals 136-158; subcaudals 62-86; a dark cross mark on nape *crucifer*

*List of the species*

- (1) *Psammophis trigrammus* Günther. Western Sand-Snake.  
*Psammophis trigrammus* Günther, 1865, *Ann. Mag. Nat. Hist.* (3) 15, p. 95, pl. ii, f. E (Type locality: Rio Sao Nicalao, Mossamedes Bay, Angola); Boulenger, 1896, p. 159 and 1910, p. 513; FitzSimons, 1962, p. 221, f. 60.  
 RANGE: From southern Angola into Damaraland, S.W. Africa.
- (2) *Psammophis subtaeniatus subtaeniatus* Peters. Southern Stripe-bellied Sand- or Grass-Snake.  
*Psammophis sibilans* var. *subtaeniata* Peters, 1882, *Reise n. Mossamb.* 3, p. 121 (Type locality: Boror and Tete, Mozambique).  
*P. subtaeniatus*, Boulenger (part.), 1895, p. 538; FitzSimons, 1962, p. 223, pls. 22 and xxxix.  
 SYNONYMS: *Psammophis bocagii* Boulenger; *P. transvaalensis* Gough.  
 RANGE: From the eastern and northern Transvaal, northern parts of Bechuanaland and South West Africa, north to the Zambesi River and into Angola.
- (3) *Psammophis notostictus* Peters. Dapple-backed Sand-Snake.  
*Psammophis moniliger notostictus* Peters, 1867, *Monatsb. Akad. Wiss. Berlin*, p. 237 (Type locality: Otjimbingue, S.W. Africa).  
*P. notostictus*, Boulenger, 1896, p. 156 and 1910, p. 513; FitzSimons, 1962, p. 225, pl. xl.  
 SYNONYM: *Psammophis sibilans* var. *stenocephalus* Bocage.  
 RANGE: Throughout South West Africa, extending northwards into southern Angola and southwards into the western Cape Province and Karoo.
- (4) *Psammophis sibilans sibilans* (Linn.). Olive or Hissing Sand- or Grass-Snake.  
*Coluber sibilans* Linn. (part.), 1758, *Syst. Nat.*, ed. 10, 1, p. 222 and 1766, ed. 12, 1, p. 383 (Type locality: 'Asia'. In error for Africa).  
*Natrix sibilans*, Merrem, 1820, p. 114.  
*Psammophis sibilans*, Boie, 1827, col. 547; Boulenger, 1896, p. 161 and 1910, p. 514; FitzSimons, 1962, p. 227, f. 61, pls. 23 and xli.  
 SYNONYMS: *Coluber Gemmatus* Shaw; *C. moniliger* Daudin; *C. auritus* Geoffroy; *Psammophis irregularis* Fischer; *P. brevirostris* Peters; *P. sibilans* var. *mossambica* and *tettensis* Peters; *P. sibilans* var. *intermedius* Fischer; *P. sibilans* var. *leopardinus* Bocage; *P. thomasi* Gough.  
 RANGE: Widespread throughout tropical Africa (excluding the rain forest and desert regions) and extending south into the northern parts of S.W. Africa, Bechuanaland, Transvaal and Natal, and reaching its furthest south about Port St Johns, Pondoland.
- (5) *Psammophis sibilans trinasalis* Werner. Fork-marked Sand or Grass-Snake.  
*Psammophis sibilans trinasalis* Werner, 1902, *Verh. Zool. Bot. Ges. Wien* 52, p. 340 (Type locality: Windhoek, S.W. Africa); FitzSimons, 1962, p. 231, f. 62, pls. 24 and xlii.  
*P. leightoni trinasalis*, Mertens, 1955, p. 96.  
 SYNONYMS: *Psammophis moniliger* var. *furcatus* Peters; *P. sibilans* var. *furcatus* Fischer; *P. furcatus* Boulenger.

RANGE: Throughout South West Africa from north to south, and eastwards across the north-west Cape Province and the Kalahari into the western Orange Free State and Transvaal.

- (6) *Psammophis sibilans leightoni* Boulenger. Western Cape Sand- or Grass-Snake.

*Psammophis leightoni* Boulenger, 1902, *Proc. zool. Soc. Lond.* 1, p. 126, pl. xii (Type locality: Eerste Rivier Station, Cape Province).

*P. sibilans leightoni*, Loveridge, 1940, p. 49; FitzSimons 1962, p. 234.

RANGE: Restricted to the western Cape Province and Little Namaqualand.

- (7) *Psammophis angolensis* (Bocage). Angola or Pygmy Sand-Snake.

*Amphiophis angolensis* Bocage, 1872, *Jorn. Sci. Lisboa* 4, p. 82 (Type locality: Dondo, Cuamza River, Angola).

*Dromophis angolensis*, Boettger, 1888, p. 55.

*Psammophis angolensis*, Boulenger, 1896, p. 170 and 1910, p. 514; FitzSimons, 1962, p. 237, f. 62, pl. xliii.

SYNONYM: *Alabes homeyeri* Peters.

RANGE: From Angola, east through Congo, Zambia and Malawi to Tanzania, and south through Rhodesia and Mozambique into the Transvaal.

- (8) *Psammophis jallae* Peracca. Jalla's Sand-Snake.

*Psammophis jallae* Peracca, 1896, *Boll. Mus. Zool. Anat. comp. Torino*, 11, 255, pp. 2 ff. (Type locality: Between Kazungula and Bulawayo); Boulenger, 1910, p. 514; FitzSimons, 1962, p. 237, f. 62, pl. xliii.

SYNONYMS: *Psammophis ansorgii* Boulenger; *P. rohani* Angel; *P. longirostris* FitzSimons.

RANGE: From southern Congo, through Angola into northern part of South West Africa and Kalahari, western half of Rhodesia and north-western Transvaal.

- (9) *Psammophis crucifer* (Daudin). Cross-marked Grass-Snake.

*Coluber crucifer* Daudin, 1803, *Hist. Nat. Rept.* 7, p. 189 (Type locality: 'Indes orientales'. In error for South Africa.)

*Psammophis crucifer*, Boie, 1827, cols. 525 and 547; Boulenger, 1896, p. 189 and 1910, p. 514; FitzSimons, 1962, p. 239, f. 64, pl. xliv.

*Saurophis crucifer* Fisk, 1883, p. 32.

RANGE: Restricted to Southern Africa, extending along the coastal and adjoining areas from Little Namaqualand to Natal, inland to eastern Orange Free State, Basutoland, southern and eastern Transvaal; also recorded from eastern highlands of Rhodesia.

#### Genus: *DROMOPHIS* Peters

Peters, 1869, *Monatsb. Akad. Wiss. Berlin*, p. 447 (Type species: *Dendrophis praeornata* Schlegel).

- (1) *Dromophis lineatus* (Duméril & Bibron). Olive Swamp-Snake.

*Dryophylax lineatus* Duméril & Bibron, 1854, *Erpét. Gén.* 7, p. 1124 (Type locality: White Nile, Sudan).

*Philodryas lineatus*, Jan, 1863, p. 83.

*Dromophis lineatus*, Boulenger, 1895, p. 33 and 1896, p. 146; FitzSimons, 1962, p. 219.

SYNONYMS: *Psammophis sibilans tumbensis* Schenkel; *P. brevirostris temporalis* Werner.

RANGE: Tropical Africa, excluding the rain-forest, from the Sudan and Portuguese Guinea in the north, southwards through Central Africa and Zambia into north-western Rhodesia.

Genus: *PSAMMOPHYLAX*\* Fitzinger

Fitzinger, 1843, *Syst. Rept.* p. 26 (Type species: *Coluber rhombeatus* Linn.)  
(Synonym: *Trimerorhinus* A. Smith).

*Key to the species*

1. Eye of moderate size, its diameter equal to its distance from the nostril; colour markings above consist of series of dark spots, which may sometimes coalesce to form longitudinal bands over the greater part of the body, but are always discernible on sides of neck; underparts usually spotted or blotched in varying degree *rhombeatus*
- Eye small, its diameter being less than its distance from the nostril; colour markings above consist of three, well-defined, dark longitudinal bands; underparts immaculate *tritaeniatus tritaeniatus*

*List of the species*

- (1) *Psammophylax rhombeatus* (Linn.). Spotted Skaapstekker.

*Coluber rhombeatus* Linn., 1766, ed. 12, 1, p. 380 (Type locality: 'In Indiis'.  
In error for South Africa).

*Coronella rhombeata*, Boie, 1827, p. 539.

*Coelopeltis rhombeata*, Wagler, 1833, pl. xxxii.

*Trimerorhinus rhombeatus*, A. Smith, 1847, pl. lvi; Boulenger, 1896, p. 138  
and 1910, p. 511.

*Dipsas rhombeatus*, Duméril & Bibron, 1854, p. 1154.

*Psammophylax rhombeatus*, Günther, 1858, p. 31; FitzSimons, 1962, p. 210,  
f. 57, pl. xxxv.

*Cerastes rhombeatus*, Fejérváry, 1923, p. 172.

SYNONYMS: *Coronella tigrina* Laurenti; *Coluber tigrinus* Gmelin; *Psammophylax ocellatus* Bocage; *Psammophis longimentalis* Roux.

RANGE: Confined to South Africa and extending east and north, from the western Cape Province, through the Orange Free State and Natal, to the Transvaal.

- (2) *Psammophylax tritaeniatus tritaeniatus* (Günther). Striped Skaapstekker.

*Rhagerrhis tritaeniatus* Günther, 1868, *Ann. Mag. Nat. Hist.* (4) 1, p. 423,  
pl. xix, f. H. (Type locality: South-east Africa).

*Coronella tritaeniata* Günther, 1881, p. 329, pl. C.

*Psammophylax tritaeniatus*, Peters, 1869, p. 661 and 1882, p. 119; Fitz-  
Simons, 1962, p. 213, pl. xxxvi.

*Trimerorhinus tritaeniatus*, Boulenger (part), 1896, p. 139 and 1910, p. 512.

*Cerastes tritaeniatus tritaeniatus*, Mertens, 1930, p. 14.

SYNONYM: *Psammophylax variabilis* Günther.

RANGE: Extending from southern Tanzania and Angola, southwards through Rhodesia and Transvaal to the northern Cape Province, Orange Free State and southern Natal (in the east) and into Damaraland (in the west).

\* Although the correct name for this genus should be *Cerastes* Laurenti, the latter's close association with the Horned Vipers of North Africa in medical and popular literature raises so much confusion that the next available name of *Psammophylax* has now been generally adopted.

Genus: *AMPLORHINUS* A. Smith

A. Smith, 1847, *Ill. Zool. S. Afr., Rept.*, p. opp. pl. lvii (Type species: *Amplorhinus multimaculatus* A. Smith).

(Synonym: *Tachynemis* Peters, 1882).

*Amplorhinus multimaculatus* A. Smith. Cape Reed-Snake.

*Amplorhinus multimaculatus* A. Smith, 1847, *Ill. Zool. S. Afr., Rept.*, pl. lvii (Type locality: Cape Colony, South Africa); Boulenger, 1896, p. 124 and 1910, p. 511; FitzSimons, 1962, p. 193, f. 53, pls. 13 and xxx.

*Coronella multimaculata*, Günther, 1858, p. 38.

*Psammophylax multimaculata*, Jan, 1863, p. 310.

SYNONYM: *Dipsas smithii* Duméril & Bibron.

RANGE: From the western Cape Province, east and north through Basutoland and Natal, into the eastern Transvaal along the Drakensberg escarpment. Found also in the north-eastern highlands of Rhodesia.

Genus: *HEMIRHAGERRHIS* Boettger

Boettger, 1893, *Zool. Anzeiger* 16, p. 119 (Type species: *Hemirhagerrhis kelleri* Boettger).

*Key to the species*

1. Ventrals 156–183; subcaudals 68–98; length of tail about 4 times into total length; dark spots above connected by a dark vertebral band  
*nototaenia nototaenia*
- Ventrals 154–177; subcaudals 52–75; length of tail from 5 to 5½ times into total length; dark spots above larger and not united by a dark vertebral band or stripe  
*nototaenia viperinus*

*List of the species*

- (1) *Hemirhagerrhis nototaenia nototaenia* (Günther). Eastern Bark-Snake.  
*Coronella nototaenia* Günther, 1864, *Proc. zool. Soc. Lond.* p. 309, pl. xxvi, f. 1 (Type locality: 'Rios de Sena, Zambesi', i.e. Sena, Mozambique).  
*Amphiophis nototaenia*, Boulenger, 1891, p. 307.  
*Amplorhinus nototaenia*, Boulenger, 1895, p. 537 and 1896 (part), p. 125.  
*Hemirhagerrhis nototaenia*, Stejneger, 1893, p. 729; FitzSimons, 1962, p. 206, f. 56, pl. xxxiv.  
SYNONYMS: *Alabes hildebrandtii* Peters; *Amplorhinus güntheri* Mocquard.  
RANGE: From southern Sudan and Somalia, south through the eastern half of the continent to Mozambique, Rhodesia, northern Bechuanaland and northern and eastern Transvaal.
- (2) *Hemirhagerrhis nototaenia viperinus* (Bocage). Western Bark-Snake.  
*Psammophylax viperinus* Bocage, 1873, *Jorn. Sci. Lisboa* 4, p. 222 (Type locality: 'Dombe', Benguela), i.e. Dombe Grande, Benguela, Angola).  
*Hemirhagerrhis nototaenia viperinus* Bogert, 1940, p. 75, ff. 12 A, 13 and 15 E; FitzSimons, 1962, p. 208.  
RANGE: From southern Angola to Damaraland, S.W. Africa.

Genus: *CHILORHINOPHIS* Werner

Werner, 1907, *Sitzb. Akad. Wiss. Wien* 116 (1), p. 1881 (Type species: *Chilorhinophis butleri* Werner).

(Synonym: *Apostolepis* (not Cope) Boulenger; *Parkerophis* Barbour & Amaral).



*Chilorhinophis gerardi gerardi* (Boulenger). Gerard's Black-and-Yellow Burrowing Snake.

*Apostolepis Gerardi* Boulenger, 1913, *Rev. Zool. Afr.* 3, p. 103, f. (Type locality: Kikondja, Katanga, Congo).

*Parkerophis gerardi*, Barbour & Amaral (part), 1927, p. 25.

*Chilorhinophis gerardi*, Loveridge (part), 1933, p. 262; FitzSimons, 1962, p. 263, f. 80.

RANGE: From the Katanga district of the Congo, south into the northern part of Rhodesia.

#### Genus: *AMBLYODIPSAS* Peters

Peters, 1856, *Monatsb. Akad. Wiss. Berlin*, p. 592 (Type species: *Calamaria microphthalmalma* Bianconi).

*Amblyodipsas microphthalmalma* (Bianconi). Eastern White-lipped Snake.

*Calamaria microphthalmalma* Bianconi, 1850, *Spec. Zool. Mossamb.* p. 94, pl. xii, f. 1 (Type locality: Inhambane, Mozambique).

*Amblyodipsas microphthalmalma*, Peters, 1856, p. 592; Boulenger, 1896, p. 244 and 1910, p. 513; FitzSimons, 1962, p. 248, f. 69, pl. xlvii.

RANGE: Southern half of Mozambique into northern Zululand and adjoining areas of the eastern Transvaal.

#### Genus: *XENOCALAMUS* Günther

Günther, 1868, *Ann. Mag. Nat. Hist.* (4) 1, p. 414 (Type species: *Xenocalamus bicolor* Günther).

#### Key to the species

1. Five upper labials, of which 2nd and 3rd enter the orbit; nasal entire or semi-divided; palatine bearing three or four small teeth; ventrals 184-195; subcaudals 30-31 *transvaalensis*
- Five or six upper labials, of which 3rd only, or 3rd and 4th enter the orbit; nasal divided; palatine without teeth 2
2. No supraocular; 2 postoculars; ventrals 247-282 (♂♂ 247-268, ♀♀ 270-282); subcaudals 23-36 (♂♂ over 30, ♀♀ under 30) *mehowii inornatus*
- A small supraocular and a single postocular present 3
3. Five upper labials, of which 3rd only enters the orbit; ventrals 190-217; subcaudals 23-31 *bicolor australis*
- Six upper labials, of which 3rd and 4th enter the orbit 4
4. Snout very strongly depressed and rostral with a sharp horizontal edge; head and body slender, with head at least twice as long as broad and diameter of body over 60 times into length from tip of snout to vent 5
- Snout not so strongly depressed and rostral with a more rounded horizontal edge; head and body not so markedly slender, with head less than twice as long as broad and diameter of body under 60 times into total length 6
5. Frontal from  $1\frac{1}{2}$  to  $1\frac{3}{4}$  times as long as broad; ventrals 201-220; subcaudals 24-29; dark colour above extending over 11-13 scale rows *bicolor bicolor*
- Frontal from  $1\frac{2}{3}$  to  $1\frac{1}{2}$  times as long as broad; ventrals 225-246; subcaudals 26-27; dark colour above usually restricted to a vertebral band three scale rows wide (exceptionally five or seven) *bicolor lineatus*
6. Parietal suture less than length of scale immediately behind; snout obtusely pointed; dark colouring above uniform or at most only partially broken up by indefinite, pale cross stripes or bars 7

- Parietal suture longer than scale immediately behind; snout more or less acutely pointed; ventrals 216; subcaudals 32; dark colouring above limited to a double series of spots *bicolor maculatus*
7. Head a little broader than the neck; diameter of body just slightly under 60 times into length from tip of snout to vent; scales over middle of back distinctly longer than broad; ventrals 206-240; subcaudals 21-32 *bicolor pernasutus*
- Head a little narrower than neck; diameter of body about 36 times into length from tip of snout to vent; scales over middle of back as broad as long; ventrals 198; subcaudals 29 *bicolor concavo-rostralis*

*List of the species*

- (1) *Xenocalamus transvaalensis* Methuen. Transvaal Quill-snouted Burrowing Snake.  
*Xenocalamus transvaalensis* Methuen, 1919, *Proc. zool. Soc. Lond.* p. 350, f. 1 B (Type locality: 'Near Ingelel', i.e. N'Jelele River, within 25 miles of Limpopo River, N. Transvaal); FitzSimons, 1946, p. 385, ff. 7 and 8 and 1962, p. 250, f. 70.  
 RANGE: Northern Transvaal and adjoining southern Mozambique and Rhodesia.
- (2) *Xenocalamus mechowii inornatus* Witte & Laurent. Western Quill-snouted Burrowing Snake.  
*Xenocalamus mechowii inornatus* Witte & Laurent, 1947, *Mem. Mus. Hist. nat. Belg.* (2) 29, pp. 45 and 51, ff. 40-42 (Type locality: South West Africa); FitzSimons, 1962, p. 252, f. 71, pl. xlviii.  
 RANGE: North-western Damaraland, Okavango and Ovamboland (S.W. Africa), eastwards into western part of Rhodesia.
- (3) *Xenocalamus bicolor australis* FitzSimons. Southern Quill-snouted Burrowing Snake.  
*Xenocalamus bicolor australis* FitzSimons, 1946, *Ann. Transv. Mus.* 20, p. 386, ff. 9-11 (Type locality: Farm 'Rechuit', Waterberg district, Transvaal) and 1962, p. 253, f. 72.  
 RANGE: Waterberg district, Transvaal.
- (4) *Xenocalamus bicolor bicolor* Günther. Northern Quill-snouted Burrowing Snake.  
*Xenocalamus bicolor* Günther, 1868, *Ann. Mag. Nat. Hist.* (4) 1, p. 415, pl. xix, f. A (Type locality: 'Zambesi').  
*X. bicolor bicolor*, FitzSimons, 1946, p. 388 and 1962, p. 254, f. 73.  
 RANGE: From the Zambesi, south through Rhodesia to northern Transvaal.
- (5) *Xenocalamus bicolor lineatus* Roux. Striped Quill-snouted Burrowing Snake.  
*Xenocalamus lineatus* Roux, 1907, *Rev. Suisse Zool.* 15, p. 79 (Type locality: Rikatla, Mozambique).  
*X. bicolor lineatus*, FitzSimons, 1946, p. 388, ff. 12-14 and 1962, p. 255, f. 74, pl. xlv.  
 RANGE: Apparently restricted to the southern part of Mozambique.
- (6) *Xenocalamus bicolor maculatus* FitzSimons. Spotted Quill-snouted Burrowing Snake.  
*Xenocalamus bicolor maculatus* FitzSimons, 1932, *Ann. Transv. Mus.* 15, p. 39 and 1935, *ibidem* 18, p. 322, ff. 6 and 7 (Type locality: Kuke Pan,

eastern Kalahari, Bechuanaland Protectorate); 1946, p. 384 and 1962, p. 256, f. 75.

RANGE: Known only from the Kalahari, Bechuanaland.

- (7) *Xenocalamus bicolor pernasutus* (Werner). Damara Quill-snouted Burrowing Snake.

*Micaëla pernasutus* Werner, 1915, *Beitr. K. Land- u. Süßwasserfauna Deutsch S.W. Afrikas, Rept. u. Amph.* p. 358, pl. vii, f. 2 (Type locality: Farm 'Otjituezu', nr Neudamm, Windhoek dist., S.W. Africa).

*Xenocalamus bicolor pernasutus*, FitzSimons, 1946, p. 389, ff. 15-17 and 1962, p. 257, f. 76, pl. 1.

RANGE: Damaraland, S.W. Africa.

- (8) *Xenocalamus bicolor concavo-rostralis* Hoffman. Hoffman's Quill-snouted Burrowing Snake.

*Xenocalamus bicolor concavo-rostralis* Hoffman, 1940, *Soöl. Nav. nas. Mus. Bloemfontein* 1, p. 111, ff. 1-2 (Type locality: Farm 'Kelley's View', nr Bloemfontein, O.F.S.); FitzSimons, 1946, p. 391, ff. 18-20 and 1962, p. 258, f. 77.

RANGE: Known only from the type locality.

#### Genus: *CALAMELAPS* Günther

Günther, 1866, *Ann. Mag. Nat. Hist.* (3) 18, p. 26 (Type species: *Calamaria unicolor* Reinhardt).

(Synonym: *Rhinocalamus* Günther).

#### Key to the species

1. Scales in 19 or 21 rows at midbody; six upper labials, of which the 3rd and 4th enter the orbit and 5th is in contact with the parietal; uniformly dark above and below *unicolor miolepis*
- Scales in 15 rows at midbody; five upper labials, of which 2nd and 3rd enter the orbit and 4th is in contact with the parietal; at least partly pale below 2
2. Third upper labial in short contact with the parietal; 3rd lower labial well separated from its fellow mesially; dark above over seven to nine scale rows and usually darkly infuscated below *ventrimaculatus ventrimaculatus*
- Third upper labial narrowly separated from the parietal; 3rd lower labial in contact with, or only narrowly separated from, its fellow mesially; dark above over three to five scale rows, but uniformly pale below *ventrimaculatus websteri*

#### List of the species

- (1) *Calamelaps unicolor miolepis* Günther. Eastern Purple-Glossed Snake.

*Calamelaps miolepis* Günther, 1888, *Ann. Mag. Nat. Hist.* (6) 1, p. 323 (Type locality: Cape Maclear, Nyasaland).

*C. unicolor miolepis*, Witte & Laurent, 1947, p. 31; FitzSimons, 1962, p. 242, f. 65, pl. xlvi.

SYNONYMS: *Calamelaps warreni* and *mellandi* Boulenger.

RANGE: From south-western Tanzania, south through Malawi, Zambia, Rhodesia and Mozambique into Natal and Transvaal.

- (2) *Calamelaps ventrimaculatus ventrimaculatus* (Roux). Spotted Purple-glossed Snake.

*Rhinocalamus ventrimaculatus* Roux, 1907, *Rev. Suisse Zool.* 15, p. 78, ff. 1-2 (Type locality: Barotseland, N. Rhodesia).

*Calamelaps ventrimaculatus*, Witte & Laurent, 1947, p. 37, ff. 1-3; Fitz-Simons, 1962, p. 245, f. 66, pl. xlv.

SYNONYM: *Calamelaps pellegrini* Angel.

RANGE: From Barotseland south into northern Bechuanaland and western parts of Rhodesia.

- (3) *Calamelaps ventrimaculatus websteri* FitzSimons & Brain. Webster's Purple-glossed Snake.

*Calamelaps ventrimaculatus websteri* FitzSimons & Brain, 1958, *Occ. Pap. nat. Mus. S. Rhod.* 3 (B), p. 202, f. 1 (Type locality: Sawmills, Rhodesia); FitzSimons, 1962, p. 246, f. 67.

RANGE: Western part of Rhodesia and also Damaraland, S.W. Africa.

Genus: *CHORISTOCALAMUS* Witte & Laurent

Witte & Laurent, 1947, *Mem. Mus. d'Hist. Nat. Belg.* (2) 29, p. 16. (Type species: *Choristodon concolor* A. Smith).

*Choristocalamus concolor* (A. Smith). Natal Purple-glossed Snake.

*Choristodon concolor* A. Smith, 1849, *Ill. Zool. S. Afr., Rept., App.*, p. 18 (Type locality: 'Kaffirland to the eastward of Cape Colony', i.e. Natal).

*Calamelaps concolor*, Boulenger, 1896, p. 246 and 1910, p. 516.

*Choristodolamus concolor*, Witte & Laurent, 1947, p. 17; FitzSimons, 1962, p. 247, f. 68.

SYNONYM: *Calamelaps mironi* Mocquard.

RANGE: Natal and northern Transvaal (Woodbush area).

Genus: *MACRELAPS* Boulenger

Boulenger, 1896, *Cat. Snakes* 3, p. 255 (Type species: *Uriechis microlepidotus* Günther).

*Macrelaps microlepidotus* (Günther). Natal Black Snake.

*Uriechis microlepidotus* Günther, 1860, *Ann. Mag. Nat. Hist.* (3) 5, p. 168, pl. ix (Type locality: 'D'Urban, Port Natal', i.e. Durban, Natal).

*Macrelaps microlepidotus*, Boulenger, 1896, p. 255 and 1910, p. 516; Fitz-Simons, 1962, p. 261, ff. 78 and 79, pl. li.

SYNONYM: *Atractaspis natalensis* Peters.

RANGE: From Zululand, south through Natal into the eastern Cape Province as far as East London.

Genus: *APARALLACTUS* A. Smith

A. Smith, 1849, *Ill. Zool. S. Afr., Rept., App.* p. 15 (Type species: *Aparallactus capensis* A. Smith).

*Key to the species*

1. First lower labial in contact with its fellow behind the mental; reticulated with pale brown above and white below, or uniformly black above and dark below *lunulatus lunulatus*
- First lower labial separated from its fellow behind the mental 2
2. Nasal usually divided; upper surfaces dark steel blue to blackish throughout, or with two narrow, pale collars on nape; underparts dark *guentheri*
- Nasal usually undivided; head black, back and tail brownish to grey above; underparts white 3
3. Ventrals 129-172; subcaudals 33-58 *capensis capensis*
- Ventrals 174-191; subcaudals 44-63 *capensis bocagii*

*List of the species*

- (1) *Aparallactus lunulatus lunulatus* (Peters). Plumbeus Centipede-Eater.  
*Uriechis lunulatus* Peters, 1854, *Monatsb. Akad. Wiss. Berlin*, p. 623 (Type locality: Tete, Mozambique).  
*Aparallactus lunulatus*, Boulenger, 1895, p. 172 and 1896, p. 258; FitzSimons, 1962, p. 265, f. 81.  
 RANGE: From the Sudan and Congo, south through Uganda, Tanzania, Malawi, Zambia and Rhodesia into north-eastern Transvaal and southern Mozambique.
- (2) *Aparallactus guentheri* Boulenger. Black Centipede-Eater.  
*Aparallactus guentheri* Boulenger (part.), 1888, *Ann. Mag. Nat. Hist.* (6) 16, p. 172 (Type locality: Lake Nyasa and Shire Highlands, Nyasaland—now Malawi; Zanzibar); 1896, p. 259, pl. xi, f. 2 and 1910, p. 516; FitzSimons, 1962, p. 267.  
*Uriechis guentheri*, Bocage, 1897, p. 201.  
 SYNONYM: *Aparallactus uluguruensis* Barbour & Loveridge.  
 RANGE: From coastal districts of Kenya, south through Tanzania and Malawi into north-eastern Rhodesia and southern Mozambique.
- (3) *Aparallactus capensis capensis* A. Smith. Cape Black-headed Snake or Centipede-eater.  
*Aparallactus capensis* A. Smith, 1849, *Ill. Zool. S. Afr. Rept.*, App., p. 16 (Type locality: 'Kaffirland, to the eastward of Cape Colony', i.e. Natal); Boulenger, 1896, p. 259 and 1910, p. 516; FitzSimons, 1962, p. 267, f. 82, pl. xxxviii.  
*Elapomorphus capensis* A. Smith, 1849, p. 16.  
*Uriechis capensis* A. Smith, 1849, p. 16.  
 SYNONYMS: *Cercocalamus collaris* Günther; *Aparallactus punctatolineatus* Boulenger.  
 RANGE: The eastern half of Southern Africa, north to Tanzania.
- (4) *Aparallactus capensis bocagii* Boulenger. Angola Centipede-Eater.  
*Aparallactus bocagii* Boulenger, 1895, *Ann. Mag. Nat. Hist.* (6) 16, p. 173 (Type locality: Angola) and 1896, p. 259; FitzSimons, 1962, p. 270.  
*Uriechis bocagii*, Bocage, 1897, p. 201.  
 SYNONYM: *Aparallactus lübberti* Sternfeld.  
 RANGE: Angola and south-eastern Congo, south into the northern part of S.W. Africa and Bechuanaland, and perhaps the western part of Rhodesia.

## Family: HYDROPHIIDAE

Genus: *PELAMIS* Daudin

Daudin (part), 1803, *Hist. Nat. Gen. Rept.* p. 361 (Type species: *Anguis platura* Linn.).

*Pelamis platurus* (Linn.). Common Yellow and Black Sea-Snake.

*Anguis platura* Linn., 1766, *Syst. Nat.*, ed. 12, 1, p. 391 (Type locality: not recorded.)

*Pelamis platurus*, Stoliczka, 1872, p. 92; FitzSimons, 1862, p. 315, f. 95, pl. lxxvii.

*Hydrus platurus*, Boulenger, 1896, p. 267 and 1910, p. 517.

SYNONYMS: *Hydrus bicolor* Schneider; *Pelamis schneideri* and *Ophinctes luteus* Rafinesque; *Hydrophis pelamis* Schlegel; *Pelamis ornata* Gray.

RANGE: In the tropics from the Indo-Australian region, eastwards across the Pacific Ocean, to the west coast of Central America, and west across the Indian Ocean to the eastern and southern coasts of Africa.

## Family: ELAPIDAE

*Key to the genera*

1. Head short, and snout broader than long; subcaudals less than 90 2  
— Head narrow and elongate, and snout not broader than long; subcaudals over 90; scales in 19–25 rows at midbody; habit long and slender DENDROASPIS (Mambas)
2. Internasal not bordering nostril; scales in 13 or 15 rows at midbody; head small and not broader than neck 3  
— Internasal bordering nostril; scales in 17 or more rows at midbody; head moderate to large and usually broader than neck 4
3. Nostril pierced between two nasal shields; eye small; scales in 13 rows at midbody ELAPSOIDEA (Garter-Snakes)  
— Nostril pierced in a single nasal shield; eye minute; scales in 15 rows at midbody ELAPS (Dwarf Garter-Snakes)
4. Rostral of moderate size and rounded; neck capable of being flattened and expanded to form a broad 'hood' 5  
— Rostral very large, detached at the sides and shieldlike; neck can be flattened, but does not form a broad 'hood'; scales on body smooth or keeled posteriorly ASPIDELAPS (Coral and Shieldnose Snakes)
5. Scales smooth throughout and without apical pits; body moderately depressed; subcaudals more than 50 NAYA (Cobras)  
— Scales strongly keeled throughout and with apical pits; body distinctly depressed; subcaudals less than 50 HEMACHATUS (Rinkals)

Genus: *DENDROASPIS* Schlegel

Schlegel, 1848, *Versl. Zool. Genootschap Amsterdam*, p. 5 (Type species: *Elops jamesoni* Traill.).

(Synonyms: *Dinophis* Hallowell; *Dendroechis* Fischer).

*Key to the species*

1. Scales usually in 23 rows at midbody; ventrals 242–282; inside of mouth blackish; adults olive-brown to dark brown or gun-metal, but never bright green polylepis polylepis  
— Scales usually in 19 rows at midbody; ventrals 201–232; inside of mouth white to bluish-white; adults always bright green and habit much more slender angusticeps

*List of the species*

- (1) *Dendroaspis polylepis polylepis* (Günther). Black Mamba.

*Dendroaspis polylepis* Günther, 1864, *Proc. zool. Soc. Lond.*, p. 310 and 1865, p. 98, pl. iii, f. D (Type locality: Zambesi River, Mozambique).

*D. angusticeps* Boulenger (part.), 1896, p. 437 and 1910, p. 520.

*Dendroaspis polylepis polylepis*, FitzSimons, 1946, p. 393 and 1962, p. 307, f. 93, pls. 33 and lxvi.

SYNONYMS: *Dendroaspis mamba* Gough.

RANGE: From southern Kenya, southwards through the Congo into Angola, northern half of South West Africa and Bechuanaland on the west, and Tanzania, Malawi, Zambia, Rhodesia, Mozambique, Transvaal and Pondoland on the east.

(2) *Dendroaspis angusticeps* (A. Smith). Green Mamba.

*Naia angusticeps* A. Smith, 1849, *Ill. Zool. S. Afr., Rept.*, pl. lxx (Type locality: 'Natal, and in the country to the eastward, towards Delagoa Bay').

*Chloroechis angusticeps*, Peters, 1854, p. 625.

*Dendraspis angusticeps*, Günther (part.), 1858, p. 236; Boulenger, 1896, p. 437 and 1910, p. 520.

*Dendroaspis angusticeps*, Hewitt (part.), 1937, p. 71; FitzSimons, 1962, p. 132, f. 94, frontisp.

SYNONYMS: *Dendraspis intermedius* Günther, and *sjöstedti* Lönnberg.

RANGE: Confined to the eastern side of Africa from Kenya in the north, southwards through Tanzania, Mozambique, Malawi, Zambia and Rhodesia into Natal and Pondoland.

Genus: *ELAPSOIDEA* Bocage

Bocage, 1866, *Jorn. Sci. Lisboa* 1, p. 50 and 1866, p. 70 (Type species: *Elapsoidea güntneri* Bocage).

(Synonym: *Elapechis* Boulenger).

## Key to the species

1. Ventrals 155-184, but seldom less than 163 2
- Ventrals 138-169, but seldom more than 163; young with dark and pale crossbands, the former distinctly broader than the latter; adults uniformly dark above or sometimes with traces of the pale crossbands persisting as narrow crossbars *sundevallii decosteri*
2. Young with dark and light crossbands of equal width, or latter a little wider than the former; in adults the light crossbands persist in varying degree *sundevallii sundevallii*
- Young similar in markings to typical *sundevallii*, but adults uniformly dark above. *sundevallii fitzsimonsi*

## List of the species\*

(1) *Elapsoidea sundevallii decosteri* Boulenger. De Coster's Garter-Snake.

*Elapsoidea decosteri* Boulenger, 1888, *Ann. Mag. Nat. Hist.* (6) 2, p. 141 (Type locality: Delagoa Bay); FitzSimons, 1962, p. 279, pl. lv.

*Elapechis decosteri* Boulenger, 1896, p. 360 and 1910, p. 519.

SYNONYM: *Elapsoidea boulengeri* Boettger.

RANGE: From Zululand and Transvaal, northwards into Zambia, Malawi and Mozambique.

(2) *Elapsoidea sundevallii sundevallii* (A. Smith). Sundeval's Garter-Snake.

*Elaps sundevallii* A. Smith, 1848, *Ill. Zool. S. Afr., Rept.*, pl. lxxvi (Type locality: 'South Africa to the eastward of Cape Colony', i.e. Natal).

*Elapechis sundevallii*, Boulenger, 1896, p. 360 and 1910, p. 519.

*Elapsoidea sundevallii*, Hewitt, 1937, p. 78; FitzSimons, 1962, p. 281, pl. liv.

RANGE: Confined to Natal and south-eastern corner of Transvaal.

- \*(3a) *Elapsoidea sundevallii semiannulata* Bocage, 1882, *Jorn. Sci. Lisboa* 8, p. 303. Mainly characterized by its consistently low ventral count of 138-153, has recently been found in Damaraland, S.W. Africa.

- (3) *Elapsoidea sundevallii fitzsimonsi* Loveridge. Kalahari Garter-Snake.  
*Elapsoidea sundevallii fitzsimonsi* Loveridge, 1944, *Bull. Mus. Compar. Zool.* 95, p. 229 (Type locality: Gomodimo Pan, Central Kalahari); Fitz-Simons, 1962, p. 281, f. 85.  
 RANGE: Kalahari sandveld and into northern part of S.W. Africa and north-western Transvaal.

Genus: *ELAPS* Schneider

Schneider (part), 1801, *Hist. Amph.* 2, p. 289 (Type species: *Coluber lacteus* Linn.).

(Synonyms: *Homoroselaps* Jan; *Homorelaps* Boulenger).

*Key to the species*

1. Ventrals 160–215; habit moderately stout; variously marked with red or yellow on a black ground *lacteus*  
 — Ventrals 215–240; habit very slender; black above, with a single, well-defined yellow vertebral stripe from tip of snout to end of tail *dorsalis*

*List of the species*

- (1) *Elaps lacteus* (Linn.). Spotted Dwarf Garter-Snake.  
*Coluber lacteus* Linn., 1758, *Syst. Nat.*, ed. 10, 1, p. 220 and 1766, ed. 12, 1, p. 381 (Type locality: 'In Indiis', i.e. South Africa).  
*Cerastes lacteus*, Laurenti, 1768, p. 83.  
*Elaps lacteus*, Schneider, 1801, p. 293; FitzSimons, 1962, p. 283, f. 86, pl. lvi.  
*Vipera lactea*, Latreille, 1802, p. 29.  
*Aspidelaps lacteus*, Steindachner, 1867, p. 78.  
*Poecilophis lacteus*, Peters, 1870, p. 114.  
*Homorelaps lacteus*, Boulenger, 1896, p. 409 and 1910, p. 520.  
 SYNONYMS: *Coluber domicella* Linn., *C. guineensis* Bonnaterre, *C. siamensis* Donndorff, *C. hygeiae* Shaw, *C. iphisa* Daudin; *Elaps punctatus* A. Smith and *E. bipunctiger* Duméril & Bibron.  
 RANGE: The coastal areas of Cape Province, from Little Namaqualand on the west to Natal on the east, and inland over the eastern half of the Transvaal and Orange Free State.
- (2) *Elaps dorsalis* A. Smith. Striped Dwarf Garter-Snake.  
*Elaps dorsalis* A. Smith, 1849, *Ill. Zool. S. Afr., Rept., App.*, p. 21 (Type locality: 'Kaffirland and the country towards Port Natal'); FitzSimons, 1962, p. 286, pls. 27 and lvii.  
*Poecilophis dorsalis*, Günther, 1859, p. 88.  
*Homorelaps dorsalis*, Boulenger, 1896, p. 410 and 1910, p. 520.  
 RANGE: From the Orange Free State and northern Natal to Transvaal.

Genus: *ASPIDELAPS* A. Smith

A. Smith, 1849, *Ill. Zool. S. Afr., Rept., App.*, p. 21 (Type species: *Natrix lubrica* Laurenti).

(Synonym: *Cyrtophis* A. Smith).

*Key to the species*

1. Internasals in contact with one another behind the rostral; 3rd and 4th upper labials entering the orbit; scales smooth throughout



- Internasals completely separated from one another by the large rostral shield; 4th upper labial only entering the orbit; scales keeled, at least over the posterior half of the body; ventrals 115-125 *scutatus*
- 2. Ventrals 142-168 (average 152, exceptionally exceeding 160); subcaudals 20-28 (average 23); length of tail 9.2-10.2 times into total length; conspicuously banded or barred alternately with red and black *lubricus lubricus*
- Ventrals 149-172 (average 158); subcaudals 28-36 (average 31); length of tail 7.3-9.6 times into total length; dirty white to greyish above, with blackish crossbands above less well marked *lubricus infuscatus*

*List of the species*

(1) *Aspidelaps scutatus* (A. Smith). Shield-nose Snake.

*Cyrtophis scutatus* A. Smith, 1849, *Ill. Zool. S. Afr., Rept., App.*, p. 22 (Type locality: 'Kaffirland and the country towards Natal'. N.B. Doubtful, probably from further north, i.e. Mozambique).

*Aspidelaps scutatus*, Jan, 1863, p. 118; Boulenger, 1896, p. 391 and 1910, p. 519; FitzSimons, 1962, p. 273, f. 83, pls. 26 and lii.

*A. scutatus bachrani* Mertens, 1954, p. 217 and 1955, p. 107, pl. xvii, f. 76 and pl. xxiv, f. 147.

SYNONYM: *Naja fula-fula* Bianconi.

RANGE: From southern Mozambique, westwards across the subcontinent through northern half of Transvaal, south-western Rhodesia, northern Kalahari and South West Africa, approximately north of latitude 25° S.

(2) *Aspidelaps lubricus lubricus* (Laurenti). Cape Coral-Snake.

*Natrix lubrica* Laurenti, 1768, *Synop. Rept.*, p. 80 (Type locality: 'Cape of Good Hope').

*Elaps lubricus*, Merrem, 1820, p. 143.

*Naja lubrica*, Schlegel, 1837, p. 484, pl. xvii, ff. 14 and 15.

*Aspidelaps lubricus*, A. Smith, 1849, p. 21; Boulenger, 1896, p. 390 and 1910, p. 518; FitzSimons, 1962, p. 276, pl. liii.

SYNONYMS: *Coluber latonis* Daudin; *Naja somersetta* A. Smith.

RANGE: Cape Province, east to the Great Fish River, and north to the Orange River.

(3) *Aspidelaps lubricus infuscatus* Mertens. Western Coral-Snake.

*Aspidelaps lubricus infuscatus* Mertens, 1954, *Zool. Anzeiger* 152, p. 215 and 1955, p. 106, pl. xxiv, f. 146 (Type locality: Farm 'Finkenstein', 12 miles east of Windhoek, S.W. Africa); FitzSimons, 1962, p. 277, f. 84.

RANGE: Throughout South West Africa, from Great Namaqualand in the south to Kaokoveld in the north.

Genus: *NAJA* Laurenti

Laurenti, 1768, *Synop. Rept.*, p. 90 [Type species: *Coluber naja* Linn. = *Naja naja* (Linn.)].

(Synonyms: *Naja* -Merrem; *Uraeus* Wagler; *Tomyris* Eichwald).

*Key to the species*

- 1. Suboculars completely separating the upper labials from the orbit 2
- Suboculars not completely separating the upper labials from the orbit, the 3rd or 3rd and 4th upper labials entering the orbit 3

2. A single anterior temporal shield; scales in 21-23 rows across neck and 19 or 21 at midbody *haje haje*
- Two anterior temporal shields; scales in 17 rows across neck and at midbody *haje anchietae*
3. Sixth upper labial largest and in contact with the postoculars; usually a single preocular 4
- Sixth upper labial not the largest and not in contact with the postoculars, but third upper labial deepest; usually two preoculars 5
4. Rostral about as broad as deep; internasals as long as the prefrontals; posterior chin shields separated mesially by ordinary scales; 23 scales across neck *nivea*
- Rostral much broader than deep; internasals shorter than the prefrontals; posterior chin shields in contact with one another anteriorly; 23-29 scales across neck *melanoleuca subfulva*
5. Ventrals 176-228; subcaudals 55-68; olive or brown above, uniform or scales black-edged and interstitial skin also black, or uniform dark olive-brown to blackish above, but never uniformly black below *nigricollis nigricollis*
- Ventrals 223-232; subcaudals 67-73; uniformly black above and below *nigricollis woodi*
- Ventrals 198-209; subcaudals 60-73; ground colour pale above, with numerous black crossbands which completely encircle the body and tail *nigricollis nigricinctus*

*List of the species*

(1) *Naja haje haje* (Linn.). Egyptian Cobra.

*Coluber haje* Linn., 1758, *Syst. Nat.*, ed. 10, 1, p. 225 and 1766, ed. 12, 1, p. 387 (Type locality: Lower Egypt).

*Vipera haje*, Daudin, 1803, p. 41.

*Naja haje*, Merrem, 1820, p. 148; FitzSimons, 1962, p. 293, ff. 88 and 89, pls. 31, lix and lx.

*Uraeus haje*, Wagler, 1830, p. 173.

*Naia hate*, Boulenger, 1887, p. 127, 1896, p. 374 and 1910, p. 517.

SYNONYMS: *Cerastes candidus* Laurenti; *Coluber candidissimus* Lacépède;

*Naja intermixta* Duméril & Bibron.

RANGE: From North Africa, including all the countries bounding the Sahara, southwards throughout the eastern half of the continent to Natal, Transvaal and eastern edge of Bechuanaland.

(2) *Naja haje anchietae* Bocage. Angola Cobra.

*Naja anchietae* Bocage, 1879, *Jorn. Sci. Lisboa* 7, pp. 89 and 98 (Type locality: Caconda, Angola).

*Naia anchietae*, Boulenger, 1896, p. 387 and 1910, p. 517.

*Naja haje anchietae*, Bogert, 1940, p. 90; FitzSimons, 1962, p. 296.

RANGE: From Angola, east into Zambia and the Congo, south and south-east into northern parts of South West Africa, northern Bechuanaland and western Rhodesia.

(3) *Naja nivea* (Linn.). Yellow or Cape Cobra.

*Coluber niveus* Linn., 1758, *Syst. Nat.*, ed. 10, 1, p. 223 and 1766, ed. 12, 1, p. 384 (Type locality: 'In Africa', i.e. South Africa).

*Naja nivea*, Boie, 1827, p. 557; FitzSimons, 1962, p. 297, f. 90, pls. lxi-lxii.

SYNONYMS: *Vipera (Echidna) flava* Merrem; *Naja nigra* and *gutturalis* A. Smith; *N. haje* var. *capensis* Jan; *Naia flava* Boulenger.

RANGE: South Africa (west of about 28° E. longitude) and extending from the Cape Province northwards through western Basutoland, Orange Free State and south-western Transvaal, into southern Kalahari and South West Africa, as far north as the Tropic of Capricorn.

- (4) *Naja melanoleuca subfulva* Laurent. Savannah Black-and-white-lipped Cobra.  
*Naja melanoleuca subfulva* Laurent, 1955, *Rev. Zool. Bot. afr.* 51, p. 132  
 (Type locality: Kabare, Kivu).  
 RANGE: Savannah forest from central and East Africa (Kenya) southwards into Zululand.
- (5) *Naja nigrocollis nigricollis* Reinhardt. Black-necked Spitting Cobra.  
*Naja nigricollis* Reinhardt, 1843, *Danske Vidensk. Selsk. Skrift.* 10, p. 296,  
 pl. iii, ff. 5 and 7 (Type locality: Guinea, West Africa); FitzSimons,  
 1962, p. 302, f. 92, pl. lxx.  
*Naja nigricollis*, Boulenger, 1896, p. 378 and 1910, p. 518.  
 RANGE: Throughout the savannah regions of Africa, south of the Sahara  
 and reaching its furthest range south in the Transvaal and Natal.
- (6) *Naja nigricollis woodi* Pringle. Western Black Spitting Cobra.  
*Naja nigricollis woodi* Pringle, 1955, *Ann. Natal Mus.* 13, p. 253 (Type  
 locality: Near Citrusdal, Cape Province); FitzSimons, 1962, p. 305.  
 RANGE: From the western Cape Province (Citrusdal district) northwards  
 into the southern half of Damaraland, S.W. Africa.
- (7) *Naja nigricollis nigricincta* Bogert. Western Barred Spitting Cobra.  
*Naja nigricollis nigricinctus* Bogert, 1940, *Bull. Amer. Mus. Nat. Hist.* 77,  
 p. 89, pl. 1, f. 1 (Type locality: Munhino, S.W. Angola); FitzSimons,  
 1962, p. 306.  
 SYNONYM: *Merremia haemachates* Werner.  
 RANGE: From south-western Angola, south into Damaraland (S.W.  
 Africa).

Genus: *HEMACHATUS* Flemming

Flemming, 1822, *Philos. Zool.*, p. 295 (Type species: *Coluber haemachata* Lacépède).

(Synonyms: *Sepedon* Merrem; *Sepedonophis* H.M. Smith).

*Hemachatus haemachatus* (Lacépède). Rinkals.

*Vipere haemachate* Lacépède, 1788, *Hist. Nat. Quad. Ovip. Serp.* 2, p. 115,  
 pl. iii, f. 2 (Type locality: 'Japon...et Perse.' N.B. Obviously in error  
 for South Africa).

*Coluber haemachata* Lacépède, 1789, p. 120.

*Sepedon haemachates*, Merrem, 1820, p. 146; Boulenger, 1896, p. 389 and  
 1910, p. 518.

*Naja haemachates*, Schlegel, 1837, p. 481, pl. xvii, ff. 10 and 11.

*Aspidelaps haemachates*, Jan, 1863, p. 118.

*Hemachatus haemachatus*, Stejneger, 1936, p. 114; FitzSimons, 1962, p. 287,  
 f. 87, pls. 20-30 and lxiii.

SYNONYM: *Naja capensis* A. Smith.

RANGE: From the southern Cape Province, eastwards through Pondoland  
 to Natal and northwards through Orange Free State, Basutoland and  
 western Swaziland into southern half of Transvaal. Also recently found to  
 occur in the Inyanga District, Rhodesia.

## Family: VIPERIDAE

*Key to the genera*

1. Head moderate to small, not or but slightly broader than neck and covered above with large symmetrical shields (as in typical Colubridae); pupil round; oviparous 2
- Head large, much broader than neck and covered above with small keeled scales; pupil vertical; viviparous 3
2. Loreal shield absent; eye minute; body slender; ventrals over 200; subcaudals single; uniformly shiny dark brown to blackish above  
*ATRACTASPIS* (Mole-Vipers)
- Loreal shield present; eye of moderate size; body moderately stout; ventrals less than 160; subcaudals for the most part paired; normally with a dorsal pattern of rhomboidal or V-shaped dark markings  
*CAUSUS* (Night-Adders)
3. Nasal in contact with rostral or separated therefrom by a naso-rostral shield; canthus rostralis well-marked; a large supraorbital shield present; postfrontal bone small *VIPERA* (Vipers)
- Nasal separated from the rostral by small scales; canthus rostralis inconspicuous; no enlarged supraorbital shield present; postfrontal bone very large *BITIS* (Adders)

Genus: *ATRACTASPIS* A. Smith

A. Smith, 1849, *Ill. Zool. S. Afr., Rept.*, pl. lxxi, fn. (Type species: *Atractaspis bibronii* A. Smith).

*Atractaspis bibronii bibronii* A. Smith. Southern Mole-Viper or Burrowing Adder.

*Atractaspis bibronii* A. Smith, l.c., pl. lxxi (Type locality; Eastern Districts of the Cape Colony); Boulenger, 1896, p. 515 and 1910, p. 523; Fitz-Simons, 1962, p. 319, ff. 96 and 97, pls. 34 and lxviii.

*A. intermedius* var. *bibronii*, Boettger, 1887, p. 165.

SYNONYMS: *Atractaspis inornatus* A. Smith, *A. duerdeni* Gough.

RANGE: Extending from Angola and the Zambesi River in the north, southwards to Great Namaqualand, Kalahari, Transvaal and Natal.

Genus: *CAUSUS* Wagler

Wagler, 1830, *Nat. Syst. Amph.*, p. 172 (Type species: *Sepedon rhombeata* Lichtenstein).

*Key to the species*

1. Snout obtuse and not up-turned; ventrals 120–155 *rhombeatus*
- Snout pointed and up-turned at the tip; ventrals 113–125 *defilippii*

*List of the species*

(1) *Causus rhombeatus* (Lichtenstein). Common Night-Adder.

*Sepedon rhombeata* Lichtenstein, 1823, *Verz. Doubl. Mus. Zool. Berlin*, p. 106 (Type locality: not given; but probably Southern Africa).

*Causus rhombeatus* Wagler, 1830, p. 173; Boulenger, 1896, p. 467 and 1910, p. 521; Fitz-Simons, 1962, p. 324, f. 98, pls. 35, 36 and lxix.

*Aspidelaps rhombeatus*, Jan, 1859, p. 511.

SYNONYMS: *Naja V-nigrum* Boie; *Vipera V-nigrum* Cuvier; *Distichurus maculatus* Hallowell.

RANGE: The eastern half of South Africa, northwards through Mozambique, Zambia, Rhodesia and Angola, to West Africa, Sudan and Somalia.

(2) *Causus defilippii* (Jan). Snouted Night-Adder.

*Heterodon De Filippii* Jan, 1862, *Arch. Zool. Anat. Fisiol.* 2, p. 225 (Type locality: Africa).

*Causus defilippii*, Mocquard, 1892, p. 64; Boulenger, 1896, p. 469 and 1910, p. 521; FitzSimons, 1962, p. 318, f. 99, pl. lxx.

SYNONYM: *Causus rostralis* Günther.

RANGE: The eastern half of Africa, from Tanzania in the north, southwards through Mozambique, Malawi, Zambia and Rhodesia into the Transvaal and Natal.

Genus: *VIPERA* Laurenti

Laurenti (part.), 1768, *Syn. Rept.*, p. 99 (Type species: *Coluber aspis* Linn.). (Synonyms: *Berus* Oken; *Pelias* Merrem; *Chersea* Flemming; *Rhinaaspis* Bonaparte; *Daboia* Gray; *Rhinechis* and *Chersophis* Fitzinger; *Echmidnoides* Mauduyt; *Mesocoronis*, *Teleovipera*, *Acridophaga*, *Mesovipera*, *Macrovipera*, *Mesohoronis*, *Latastea*, *Tzarevsoya* and *Latasteopara* Reuss).

*Vipera superciliaris* Peters. Lowland or Swamp Viper.

*Vipera superciliaris* Peters, 1854, *Monatsb. Akad. Wiss. Berlin*, p. 625 and 1882, *Reise n. Mossamb.* 3, p. 144, pl. xxi (Type locality: mainland opposite Querimba, northern Mozambique); Boulenger, 1896, p. 491; FitzSimons, 1962, p. 331, f. 100.

RANGE: Apparently confined to the lowland regions of southern Tanzania, and extending southwards to the Zambezi estuary and just beyond in northern Mozambique, and up the Shire River to the northern end of Lake Tanganyika.

Genus: *BITIS* Gray

Gray, 1842, *Zool. Miscell.*, p. 69 (Type species: *Cobra lachesis* Laurenti). (Synonyms: *Cobra*\* Laurenti; *Calechidna* Tschudi).

Key to the species

- |   |   |
|---|---|
| 1. Nostrils directed upwards and outwards   | 2 |
| — Nostrils directed vertically upwards; scales in 21-41 rows at midbody   |   |
| <i>arietans arietans</i>  |   |
| 2. No enlarged, raised, horn-like scales on snout; two to three rows of scales between the nasal and rostral shields; scales in 19-33 rows at midbody; small adders not exceeding 2 ft. in length               | 3 |
| — A pair of enlarged, raised, horn-like scales on snout between the supranasals; 4-5 scales between nasal and rostral shields; scales in 33-41 rows at midbody; a large adder greatly exceeding 2 ft. in length |   |
| <i>gabonica gabonica</i>  |   |
| 3. Supraorbital region of head not raised   | 4 |
| — Supraorbital region of head distinctly raised   | 6 |
| 4. Outermost row of dorsal scales more or less keeled; head somewhat elongate; 11-16 scales between the orbits and 1-2 scales between latter and upper labials; subcaudals smooth                               | 5 |

\* The name *Cobra*, although ante-dating the name *Bitis*, was suppressed in favour of the latter in 1945, by the International Commission for Zoological Nomenclature, to avoid creating confusion with the cobras (Genus *Naja*).

- Outermost row of dorsals smooth; head not elongated; 6–9 scales between the orbits and 2–4 between latter and upper labials; subcaudals usually keeled distally *peringueyi*
- 5. Scales over back of head distinctly elongated; marked above with sub-triangular to semicircular, pale-edged, black spots *atropos atropos*
- Scales over back of head not markedly elongate; more or less uniform brown in colour above *atropos unicolor*
- 6. No supraorbital 'horns' present 7
- One or more supraorbital 'horns' present 9
- 7. Head moderate and subtriangular; eye moderate and surrounded by not less than 12 scales; ventrals not less than 124; average length of adults over 12 in. 8
- Head small, foreshortened and snout rounded; eye small and surrounded by 10–12 scales; ventrals not exceeding 123; average length of adults about 9 in. *paucisquamatus*
- 8. Eye separated from upper labials by a series of four scales; subcaudals smooth in both sexes; more or less uniform brown above or with faint traces of darker spots or sometimes with markings similar to typical *cornuta* *inornata*
- Eye larger and seldom separated from upper labials by more than 2–3 series of scales; subcaudals keeled, at least in females; above with a double series of semicircular black spots proximally, passing to hourglass-shaped markings distally *cornuta albanica*
- 9. Usually with several, i.e. from two to seven, semi-upright, supraorbital 'horns' *cornuta cornuta*
- Usually with only a single, semi-upright to upright supraorbital 'horn' present *caudalis*

#### *List of the species*

(1) *Bitis arietans arietans* (Merrem). Common African Puff-Adder.

*Vipera (Echidna) arietans* Merrem, 1820, *Vers. Syst. Amphib.*, p. 152 (Type locality: Cape of Good Hope).

*Clotho arietans*, Gray, 1842, p. 69.

*Bitis arietans*, Boulenger, 1896, p. 493 and 1910, p. 522; FitzSimons, 1962, p. 344, ff. 101 and 102, pl. lxxi.

SYNONYMS: *Cobra lachesis*\* and *C. clotho* Laurenti; *C(oluber) Bitin* Bonnatte; *Coluber intumescens* Donndorf; *Vipera severa* Sonnini & Latreille (part); *V. inflata* Burchell; *V. brachyura* Cuvier; *Clotho lateristriga* Gray.

RANGE: Throughout Africa, from southern Morocco east to Arabia, and south to the Cape Province, excluding only thickly forested regions and extreme deserts (cf. Sahara, etc.).

(2) *Bitis gabonica gabonica* (Duméril & Bibron). Gaboon Adder.

*Echidna gabonica* Duméril & Bibron, 1854, *Erp. Gen.* 7, 1428, pl. lxxx B (Type locality: Gabon, French Congo).

*Bitis gabonica*, Boulenger (part.), 1896, p. 499; FitzSimons, 1962, p. 339, f. 103, pls. 37, 38 and lxxii.

*Cobra gabonica*, Mertens, 1937, p. 16.

\* Although taxonomically the correct specific name for the Puff-Adder should be *lachesis*, the latter's association generically with the Tropical American Pit-Vipers renders its application to the Common African Puff-Adder both inappropriate and confusing. As the name *arietans*, for this species, has been generally accepted for the past 100 years, its continued use would appear to be more practical and realistic.

RANGE: Throughout the tropical forested regions in the north, from at least Togoland in the west, eastwards to the southern Sudan and Uganda, and south into Angola, Zambia, Tanzania and Mozambique (including the eastern fringe of Rhodesia) to as far south as northern Zululand.

- (3) *Bitis peringueyi* (Boulenger). Peringuey's Desert or Side-winding Adder.  
*Vipera peringueyi* Boulenger, 1888, *Ann. Mag. Nat. Hist.* (6) 2, p. 141 (Type locality: 'Ten miles east of Walfisch Bay, S.W. Africa').  
*Bitis peringueyi* Boulenger, 1896, p. 495 and 1910, p. 522; FitzSimons, 1962, p. 342, pls. 39-43.  
*Cobra peringueyi*, Mertens, 1937, p. 16.  
 RANGE: Restricted to the Namib Desert, from Great Namaqualand in the south to southern Angola in the north.
- (4) *Bitis atropos atropos* (Linn.). Common Bergadder.  
*Coluber atropos* Linn., 1758, *Syst. Nat.*, ed. 10, 1, p. 216 and 1766, ed. 12, 1, p. 275 (Type locality: 'Habitat in America'. Obviously in error, almost certainly from Cape of Good Hope).  
*Cobra atropos*, Laurenti, 1768, p. 104.  
*Vipera atropos*, Latreille, 1802, p. 334.  
*Clotho atropos*, Gray, 1842, p. 25.  
*Echidna atropos*, Duméril & Bibron, 1854, p. 1432.  
*Bitis atropos*, Boulenger, 1896, p. 495 and 1910, p. 522; FitzSimons, 1962, p. 343, f. 104, pl. lxxiii.  
 SYNONYMS: *Vipera montana* A. Smith; *Echidna ocellata* and *Calechidna ocellata* Tschudi).  
 RANGE: From western Cape Province (Cape Peninsula) eastwards to the eastern Cape Province, and north along the Drakensberg escarpment to the north-eastern Transvaal. Recorded also from the Chimanimani Mountains and Inyanga, north-eastern Rhodesia.
- (5) *Bitis atropos unicolor* FitzSimons. Highveld Bergadder.  
*Bitis atropos unicolor* FitzSimons, 1959, *Ann. Transv. Mus.* 23, p. 409 (Type locality: Witpoort, nr Belfast, Transvaal) and 1962, p. 345.  
 RANGE: Restricted to the south-eastern Transvaal Highveld (Belfast and adjoining districts).
- (6) *Bitis paucisquamatus* Mertens. Namaqua Dwarf-Adder.  
*Bitis caudalis paucisquamatus* Mertens, 1954, *Zool. Anz.* 152, p. 218 (Type locality: Little Namaqualand); FitzSimons, 1962, p. 346.  
 RANGE: Restricted to the coastal areas just south of the Orange River, Little Namaqualand.
- (7) *Bitis inornata* (A. Smith). Cape Puff-Adder.  
*Echidna inornata* A. Smith, 1838, *Ill. Zool. S. Afr. Rept.*, pl. iv (Type locality: Sneeuwbergen, nr Graaff-Reinet, Cape Province).  
*Vipera inornata*, Strauch, 1869, p. 97.  
*Bitis inornata*, Boulenger, 1896, p. 296 and 1910, p. 523; FitzSimons, 1962, p. 346.  
 SYNONYMS: *Vipera* (*Echidna*) *atropoides* A. Smith; *Clotho atropos* (part) Gray.  
 RANGE: Restricted to the mountainous parts of the eastern Cape Province.
- (8) *Bitis cornuta albanica* Hewitt. Eastern Hornsman Adder.  
*Bitis cornuta albanica* Hewitt, 1937, *Guide Vert. Fauna E. Cape Prov. S. Afr.* 2, p. 76, pl. xxi, f. 3 (Type locality: The Dene, Port Elizabeth; Addo;

Braakloof, Springvale and Kleinkloof, Grahamstown district); Fitz-Simons, 1962, p. 347.

RANGE: The Little Karroo, from Matjiesfontein in the west to Albany district in the east.

(9) *Bitis cornuta cornuta* (Daudin). Western Hornsman Adder.

*Vipera cornuta* Daudin, 1803, *Rept.* 6, p. 188 (Type locality: Cape of Good Hope).

*Cerastes cornuta*, Gray, 1842, p. 70.

*Clotho cornuta*, Gray, 1849, p. 27.

*Bitis cornuta*, Boulenger, 1896, p. 497 and 1910, p. 523; FitzSimons, 1962, p. 348, f. 105.

*Cobra cornuta*, Mertens, 1937, p. 16.

SYNONYMS: *Vipera armata* A. Smith, *V. lophophris* Cuvier.

RANGE: From the western Cape Province, northwards through Little and Great Namaqualand to southern Damaraland (south of latitude 22° S.).

(10) *Bitis caudalis* (A. Smith). Horned-Adder.

*Vipera (Cerastes) caudalis* A. Smith, 1839, *Ill. Zool. S. Afr., Rept.*, pl. vi (Type locality: 'Sandy districts north of Cape Colony', i.e. South West Africa).

*Bitis caudalis*, Boulenger, 1896, p. 498 and 1910, p. 523; FitzSimons, 1962, p. 349, f. 106, pl. lxxiv.

*Cobra caudalis*, Mertens, 1937, p. 16.

SYNONYM: *Vipera schneideri* Boettger.

RANGE: Throughout South West Africa, north into southern Angola, south into Little Namaqualand, south-east across the northern Cape Province to the Little Karroo and east across the Kalahari into the northern Transvaal and south-western part of Rhodesia.

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