

Herpetology of Pakistan

FIELD GUIDE SERIES

Colubridae

(non venomous)



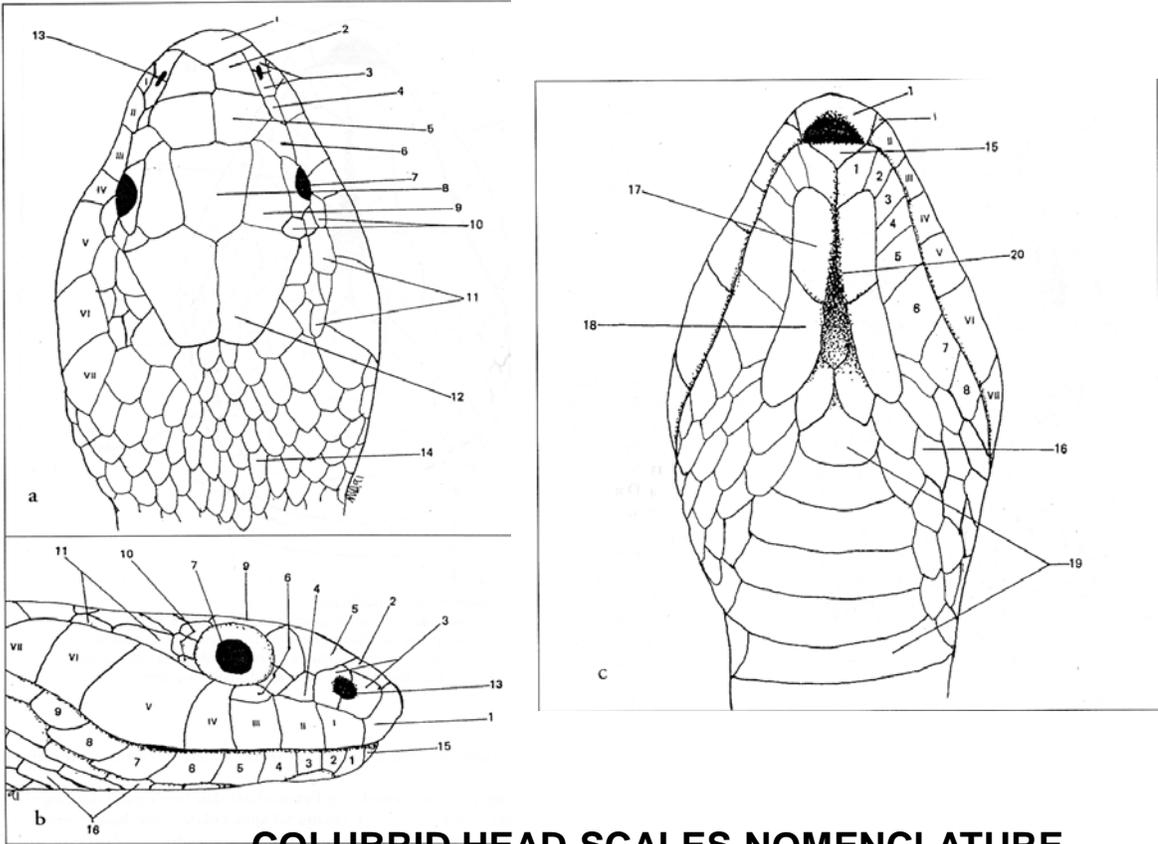
The idea, starting present e-series of Field Guides about Amphibians & Reptiles of Pakistan in pdf format, has been to help bring latest scientific information at a click away from students and interested persons. Since published material is almost financially inaccessible and even unavailable in libraries in Pakistan.

A document with scientific, common English and Urdu names of herp taxa (Pakistan J. Zool. Suppl. Ser., No.11, pp.1-12, 2012) is appended.

(Photo credit: Personal + www)

Muhammad Sharif Khan

Cover: *Psammophis schokari*



COLUBRID HEAD SCALES NOMENCLATURE

Legend

A. Head dorsal side: 1. rostral; 2. internasal; 3. nasal; 4. loreal; 5. prefrontal; 6. preocular; 7. eye; 8. frontal; 9. supraorbital; 10. postorbitals; 11. temporals; 12. parietal; 13. naris; 14. nuchals.
B. Head ventral side: 15. mental; 16. gulars; 17. anterior genials; 18. posterior genial; 19. ventrals; 20. mental groove.
C. Head lateral side: 4. loreal; 5. prefrontals; 6. preoculars; 8. frontal; 9. supraorbital; 10. postoculars; 11. temporals; 12. parietal; I-VII. supralabials; 1-9 Infralabials.

INTRODUCTION

Family Colubridae

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Description of species

Amphiesma platyceps (Blyth)

1. Supralabials 8, third to fifth in eye.
2. Midbody scale rows 19, 5-7 middorsal scale rows weakly keeled.
3. Ventrals in male 205-234, in female 191-216; subcaudals divided male 88-98, female 78-96, anal divided.

Snout-vent length 880-895 mm, tail 230-235 mm.

Color: Variable in coloration: olive brown dorsum, with small dark spots; rarely a dorsolateral series of white spots. Usually a pair of white dark-edged parallel lines on dorsum, or a black line from eye to gape. Labials white or yellow. Ventrum yellowish, bordered with bright red; tail and throat mottled with black.



Habitat: Recorded from Changla Gali, Pakistan. The known habitat of this snake is fast-flowing stream beds where it feeds on fishes, tadpoles, and frogs.

Range: From western to the eastern Siwalicks, between 1500 and 3000 m of elevation. In Pakistan known only from Changla Gali, western Khyber Pakhtunkhwa, Pakistan.

Amphiesma sieboldii (Günther)

1. Ventrals: male 191-207, female 168-190.
2. Subcaudals: male 97-111, female 81-110.

Typhlops99@outlook.com

Range: Recorded from Ghora Gali in alpine Punjab, Pakistan. It has been recorded from Assam in the Eastern Himalayas.

Taxonomic notes: Morphologically close to *Amphiesma platyceps*. Boulenger (1890) and Smith (1943) regard these two species synonymous. Malnate (1966) treats them as sibling species.

Amphiesma stolatum (Linnaeus)

1. Head elongate, distinct from neck.
 2. Supralabials 7, rarely 8; third and fourth touching eye; infralabials 10, rarely 9 or 11.
 3. Posterior genial longer than anterior, not in contact with each other.
 4. Scales at midbody 19, reduced to 17, at the level of vent; all scales keeled, except last row.
 5. Ventrals 143-150, subcaudals 64-73, divided; anal divided.
- Snout-vent length 490-497 mm, tail 85-90 mm.

Color: Body light olive brown, with a pair of dorsolateral light yellow stripes extending onto the tail. Anteriorly stripes tend to break into spots and dashes. Dark brown to black interstripe spots, more prominent anteriorly. Head bluish gray to olive. Frontal and parietals are edged with black. A V-shaped dark mark on neck. Dark bars in front, below and posterior to the eye. Ventrums white.



Habitat: Characteristic snake of open grassland, frequents mesic habitat with moderate vegetation. It is diurnal and common in tilled fields, barns, under heaps of reaped crops and fallen leaves, logs, heaps of debris, etc. It is a gentle snake which seldom bites, and proves to be a good pet.

Range: Most wide ranging snake in the Southeast Asia. It extends from the valley of the Mekong River in Laos, Thailand, north to southern China, then throughout India, Bangladesh, Myanmar, Sri Lanka, to the Indus valley in Pakistan. It does not cross west of the Indus River into Balochistan.

Argyrogena fasciolata (Shaw)

1. All scales smooth.
2. Nostrils between nasals and internasals.

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3. Supralabials 8, fourth and fifth touching eye; 9-10 lower labials.
4. Both genials of equal size, posterior narrower.
5. Midbody scales 23, reduced to 17 just anterior to vent.
6. Ventrals 212-234; subcaudals 82-94, divided; anal divided.

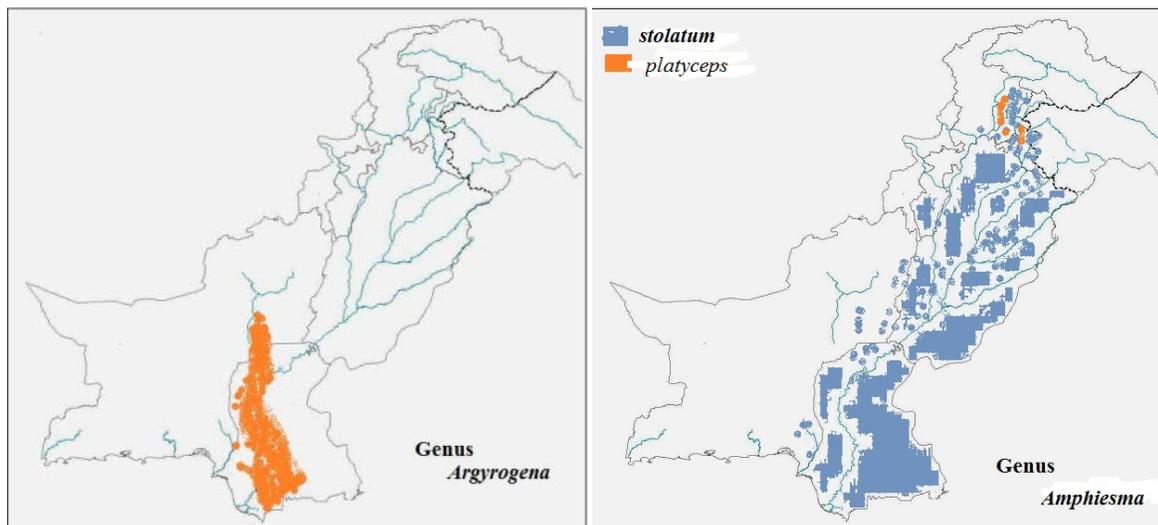
Snout-vent length 1100-1120 mm, tail 268-275 mm.

Color: Body reddish to grayish brown. Lower sides of scales dark. Adults unicolor, indistinct light grayish crossbars on anterior part of body in juveniles, ventrum cream.



Habitat: Inhabits vast grasslands with moderately loose soil and bushes, infested with rodent burrows. A very alert, agile, and diurnal snake, moving swiftly through grass and bushes. Moderately bad tempered; when cornered it flattens its neck, hisses loudly, and attempts to bite furiously. It soon becomes a good pet, allowing moderate handling.

Range: From Bangladesh throughout India, Sri Lanka. In Pakistan it is known from Sindh and southern Punjab.



Boiga trigonata (Schneider)

1. Head triangular, flat, very distinct from neck.
 2. Eyes large, protruding, with vertically elliptical pupil.
 3. Body slender, laterally compressed.
 4. All scales smooth, with apical pits, 21, at midbody.
 5. Supralabials 8, third and fifth in eye; infralabials 10-11.
 6. Ventrals 212-239, subcaudals 76-92; anal not divided.
- Snout-vent length 990-995 mm, caudal 187-190 mm.

Color: Dorsum light brown, a median series of 35-50 irregular transverse oblique white bars margined with black, more distinct anteriorly, fading on tail. Head brownish, with distinct Y-shaped light mark. A postorbital dark bar to angle of mouth. Ventrums dirty white speckled with gray.



Habitat: Thick jungles, plantations, and grasslands with moderately thick bushes. It tolerates high temperatures; however it is common in mesic to humid habitat. It is typically arboreal and lives among branches of trees and bushes, hiding under bark or in holes in tree trunks.

Range: From Bangladesh throughout India, Sri Lanka, Kashmir, and Pakistan, exclusive of higher mountains and Balochistan highland.

Boiga melanocephala (Annandale)

Morphologically close to *Boiga trigonata* in pholidosis and habits, however, differs from it in body coloration, choice of habitat and in its range.

1. Supralabials 8-9, third to fifth in eye; 10-11 infralabials.
2. Rows of strong diagonally arranged dorsal scales at midbody 21.
3. Ventrals 222-238, 74-94 subcaudals; anal single.

Typhlops99@outlook.com

Snout-vent length 950-955 mm, tail 172-174 mm.

Color: Head top dark gray, with traces of Y-shaped light mark, labials and chin dark. Median dorsal crossbars without dark edges. Ventrums white without speckling.



Habitat: It inhabits desert fields with bushy vegetation and rocky areas with loose soil; it has occasionally been collected from low to moderately high bushes, trees in grassland, and gardens.

Range: From western Balochistan through eastern Iran, Saudi Arabia, north to southern Uzbekistan.

Coluber karelini karelini

1. Head long, distinctly wider than neck.
2. Nostrils bordered with nasals and internasals.
3. Two preoculars, upper more than twice the size of lower; 2-3 postoculars, rarely 1.
4. Supralabials 9, rarely 8, only fifth in contact with eye, a large postocular prevents sixth to coming into contact with eye; infralabials 9-10, rarely 11.
5. All scales smooth, 19 at midbody, reduced to 13 at vent.
6. Ventrals 196-209, subcaudals divided 93-97; anal divided.

Snout-vent length 510-512 mm, tail 140-143 mm.

Color: Dorsum pale gray to yellowish brown, with a vertebral series of 52-57 sooty crossbars (Figure 28B iii), with one or two series of alternating similarly colored smaller spots on sides, outermost row touches tips of ventrals. The pattern is very vivid on body, fades on tail. Head unicolor, a subocular and temporal vivid dark band, loreal and postocular region cream, ventrum milky white.



Habitat: Frequents plain deserts between elevations of 1500-3000 m in northwestern Balochistan. It lives in rodent and lizard burrows or under heaps of vegetation, logs, and stones. It is diurnal, moving about in sparse vegetation of grass and bushes.

Range: Recorded from Transcaspia to Kirghiz and southward to Iran and northern Balochistan, where it is recorded from Quetta and Pishin area. Specimens have also been collected from northwestern Punjab, from Sulaiman Range.

***Coluber karelini mintonorum* Mertens**

Only fifth supralabial in eye, Ventrals 192-220. Subcaudals 114-123.

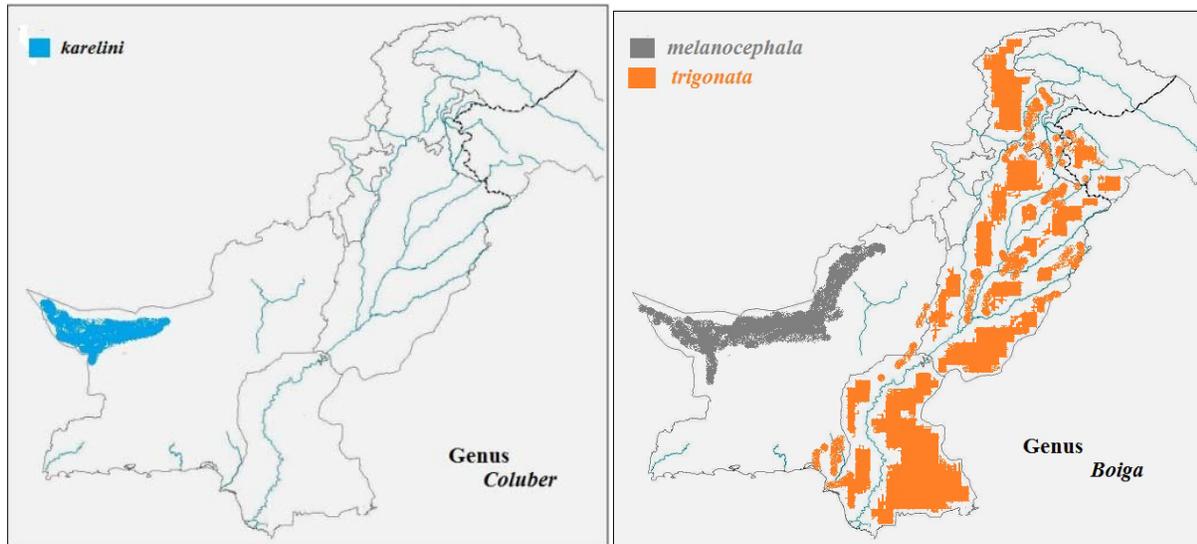
Snout-vent length 1190 mm, tail length 360 mm.

Color: Body with closely set diluted transverse bands, broader than interspaces. Scales in the bands with peripheral deposition of pigment.

Habitat: The snake is true racer, very agile on sand.

Taxonomic notes: Mertens (1969a) described a new taxon *Coluber karelini mintonorum* from Zangi-Nawar, 27 km southwest Nushki, District Chagai, Balochistan, with only fifth supralabial in eye, ventrals 192-220, subcaudals 114-123 and body dorsum with close set diluted transverse bands, broader than interspaces, and scales in the bands with peripheral deposition of pigment. Khan (1997a) regards *Coluber karelini mintonorum* conspecific with *Platyceps rhodorachis* and remarks "Often *Coluber rhodorachis* is confused with *Coluber karelini* due to occasional specimens of *rhodorachis* with one supralabial (5th) in orbit and dorsum with alternating light and dark cross bars. Gasperetti gives photographs of similar specimens (1988, Figure 29) from Afghanistan and Nushki (Balochistan). These specimens neither have dorsal vivid dark pattern nor orbitolabial and temporal stripes as in *Coluber karelini* from Quetta-Peshin, Balochistan". Merten's (1969) *Coluber karelini mintonorum* is a color variant of *Platyceps rhodorachis rhodorachis* and has also been collected from rocky areas in the Sulaiman Range, in the western Punjab, Pakistan (Khan 1997a).

Range: It is reported from sand desert in the Chagai area. The author collected two specimens from the Sulaiman Range, in western Punjab, Pakistan, in a rocky area.



Enhydris pakistanica Mertens

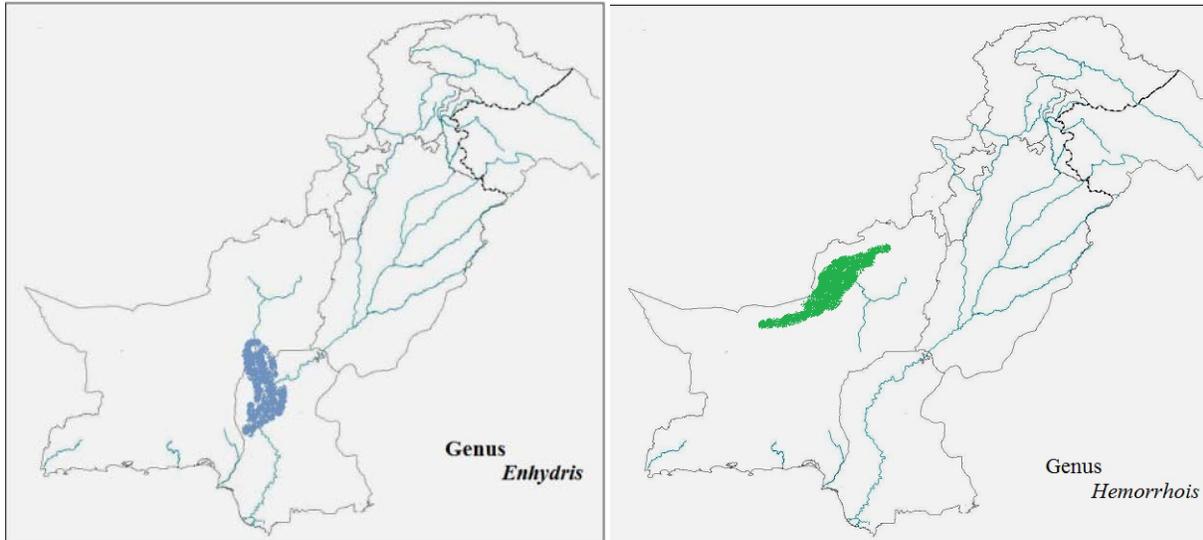
1. Body stout, cylindrical, skin loose, scales at midbody 27-31, smooth and glossy.
2. Head small, slightly distinct from neck.
3. A pair of internasals, 1 pre- and 2 postoculars.
4. Supralabials 8, fourth in eye, 11 infralabials.
5. Ventrals small, not extending to full breadth of body, 156-164; subcaudals 75-92; anal 2-3.
Snout-vent length 500-515 mm, tail 210-215 mm.

Color: Dorsum light olive brown, with 3 black stripes, median broadest. Ventrum and sides dirty white to yellowish. Head dark, chin and throat white clouded with brown.



Habitat: Frequents seepage pools along water channels. Ponds and ditches so formed are rich with emergent vegetation. This snake is almost entirely aquatic, not known to venture away from water.

Range: Reported only from the Indus Delta in lower Sindh, Pakistan.



Hemorrhhois ravergieri Ménétriés

1. Supralabials 9, fifth and sixth touching eye.
2. Anterior and posterior temporals both 3.
3. Scales at midbody 21, reduced to 15 just anterior of vent.
4. Ventrals 205-212, subcaudals 82-89.

Snout-vent length 990-995 mm, tail 195-198 mm.

Color: Dorsum light gray brown, with 61 olive vertebral transverse bars, alternating with lateral row of similarly colored spots, both tending to fuse at tail. Head with indistinct dark mottling, a dark bar from below eye to edge of mouth. Belly pale yellow to dirty white.



Habitat: Inhabits sparsely forested rocky hillsides at 2000-4000 m of elevation. Diurnal, it feeds on lizards, eggs, amphibians, and mice.

Range: Extends from Transcaucasia to Israel to western Mongolia. In Pakistan it is recorded from mountainous areas in northern Balochistan to Chitral.

Lycodon aulicus aulicus (Linnaeus)

1. Head depressed, snout spatulate, projecting beyond lower jaw.
2. Loreal elongated, in contact with internasals, not with eye.
3. Supralabials 10, third to fifth in contact with eye (Figure 26B).
4. Smooth shiny scales, at midbody in 17 rows.
5. Ventrals 171-214, laterally angulate, subcaudals 55-83, anal divided.

Snout-vent length 780-785 mm, tail 143-148 mm.

Color: Dark brown to grayish brown dorsum, with slight gloss. Light crossbars 10-20, expanding laterally, and enclosing triangular patches of original body color. Jet black slightly protruding eye, pupil invisible. Upper lip and ventrum white.



Habitat: Collected from under piles of broken bricks partially covered with soil and debris. It frequents bush forests with mesic to dry environs and often enters human habitations, hiding under household articles.

Range: Widely distributed throughout India, Sri Lanka, Nepal, Assam, and Myanmar. In Pakistan it has rather spotty Range, reported from different localities in Sindh, Lahore and Rabwah, District Jhang, Pakistan.

Lycodon striatus (Shaw)

1. Loreal in contact with internasals.
2. One pre- and 2 postoculars.
3. Supralabials 8-9, fourth and fifth in eye; infralabials 9-10.
4. Scales smooth in 17 midbody rows.
5. Ventrals 173-205; subcaudals 40-60.

Snout-vent length 400-405 mm, tail 90-95 mm.

Color: Dorsum light dull brown, with 15-23 white or yellow crossbars from nape to the base of tail, alternating with similarly colored spots or dashes. Nape dark, ventrum white.

Habitat: Collected from both cultivated land and open fields with sparse bushes in mesic habitat.



Range: It ranges from Chota Nagpur in the east throughout India and Sri Lanka. In Pakistan it is collected from different localities in Punjab, Sindh, Balochistan, and KHYBER PAKHTUNKHWA.

Extends westward to Transcaspia and Central Asia. In Pakistan its two races are distinguished as follows:

Lycodon striatus striatus (Shaw)

Dorsum black to light chocolate brown with 16-21 light crossbars.

1. Subcaudals 45-60.



Range: Mainly the Indus Valley and along the coastal strip.

Lycodon striatus bicolor (Nikolsky)

1. A distinct light band on nape.
2. Golden yellow (light in preserved specimens) transverse bars 35 or more, from nape to level of vent.
3. Subcaudals 50-70.

Range: it occupies northwestern part of the range of the species, extending into Pakistan from upland Balochistan and Waziristan, KHYBER PAKHTUNKHWA.

Lycodon travancoricus (Beddome)

1. Head distinct from neck.
 2. Loreal not in contact with internasals and eye.
 3. Supralabials 9, third to fifth in eye in eye.
 4. Scales smooth, 17 at midbody.
 5. Ventrals laterally angulate, 162-206; subcaudals 64-78, anal not divided.
- Snout-vent length 630 mm, tail 130 mm.

Color: Dark purplish dorsum, with a median row of 28-32 yellow crossbars from nape to level of vent. Bars bifurcate on sides enclosing triangular spots of body color. Ventrums white.



Habitat: Reported from the garden of Hyderabad College, Sindh. Nothing is known of its habitat and habit in Pakistan.

Range: From southern India. In Pakistan it has been reported once from Hyderabad, Sindh.

Lytorhynchus maynardi Alcock and Finn

1. Head long, slightly distinct from neck, snout sharply pointed.
2. Scales smooth, at midbody 19.
3. Rostral extends on top of head, separating internasals from each other almost completely (Figure 26A, Figure 26 I.i, ii).
4. Loreal present.
5. Eyes large, bordered by 7-8 circumocular scales, no supralabial in contact with eye, pupil round.
6. Supralabials normally 7, occasionally 6 or 8; infralabials 9-11.
7. Mental with a small anterior projection fitting into a notch at the base of rostral.
8. Ventrals 186-202, subcaudals 52-65.

Snout-vent length 200-205 mm, tail 56-60 mm.

Color: Dorsum pale orange to pinkish, with 35-47 black crossbars on body and 12-15 on tail. There is an alternating lateral series of dark spots. A characteristic elongated thick dark median stripe from frontal to nape. A dark postocular stripe. Ventrums white.



Habitat: This sand snake has been collected from fine windblown sand dunes. It burrows in sand with the help of its pointed snout, usually close to roots of bushes and other vegetation. It is nocturnal, feeding on small lizards and arthropods; the prey is constricted. It is bad tempered and does not easily allow handling; it coils defensively, setting its neck in an S-shaped loop, attacks rapidly, all the while vibrating its tail (Minton 1966).

It breeds from March to May; 2-4 elongated eggs are laid.

Range: This is a characteristic snake of windblown sand dune habitat of western Balochistan. It has been recorded from Nushki to eastern Iran in the west.

Typhlops paradoxus (Günther)

Morphologically close to the preceding species, differing from it in the following characters:

1. Snout less projecting (Figure 26A III.i, ii).
2. Supralabials 8, fifth touching eye; 10-11 infralabials.
3. Ventrals 169-185, subcaudals 40-53; anal divided.

Snout-vent length 360-375 mm, tail 63-67 mm.

Color: Dorsum brownish gray, with a median series of 40-52 brown to sooty blotches, as broad as or broader than interspaces, alternating with a lateral series of smaller spots. Head top with an elongated dark blotch and a dark postocular stripe, venter white.



Habitat: The nominal species frequents sand deserts with sparse vegetation of grass and bushes. Feeding on small lizards, young mice, and arthropods. When alarmed, it throws itself into a ball, hiding its head and vibrating its tail and does not attempt to bite. Sensing that it is out of danger, it quickly dives into sandy soil, making its way by its projecting snout.

It breeds from March to May; 2-4 elongated eggs are laid in burrows at roots of bushes or under a stone.

Range: This sand snake extends from the Thar Cholistan, deserts and Thal Deserts in northwestern Punjab, Pakistan (Khan, 1999e).

Lytorhynchus ridgewayi Boulenger

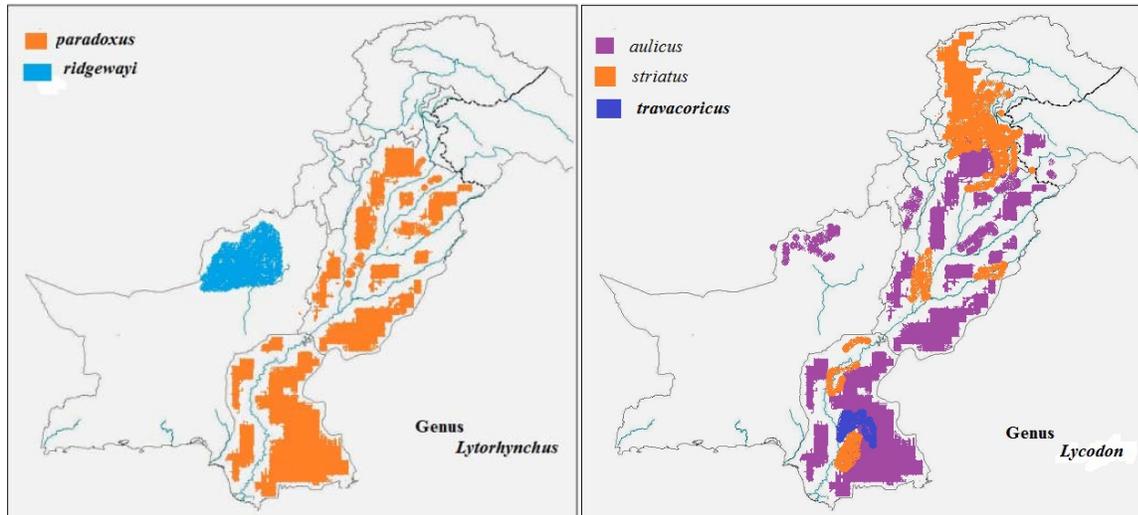
1. Snout long, sharply pointed.
 2. Rostral extends onto head, almost completely separating internasals from each other (Figure 26A Iii, ii).
 3. A circumocular ring of 7-8 scales.
 4. Supralabials 7-8, none in contact with eye.
 5. Ventrals 170-190, subcaudals 40-55.
- Snout-vent length 505-510 mm, tail 80-87 mm.

Color: Pale gray to light brown dorsum, with a median series of 40-49 blotches, which are anteriorly black to dark brown and posteriorly light brown with dark edges. A pair of lateral series of light brown spots. Head top with dark anchor-shaped mark, arms of which extend through eye to the angle of mouth. Ventrums of body white.

Habitat: This little snake is characteristic of gravel fields with scrubby vegetation. It avoids open fields of windblown sand dunes, and keeps close to roots of vegetation. It is nocturnal and feeds on small lizards and arthropods; the prey is constricted and violently shaken before engulfing. When disturbed, its first reaction is to dive into soft soil; if on hard soil, it throws itself in coils hiding its head between the coils (Minton, 1966).

It breeds from March to July, 2-4 elongated eggs are laid in a recess in hard soil among roots of vegetation (Andrushko and Mikkau 1964).

Range: This species extends to Transcaspiya, central Iran, Afghanistan, and in Pakistan it is reported from western Balochistan up to an elevation of 2000 m.



Natrix tessellata (Laurenti)

Morphologically close to *Xenochrophis piscator*, however it differs from it as follows:

1. Internasals as long as or longer than broad, triangular, truncate in front.
2. Preoculars 2, rarely 1 or 3, with or without a subocular.
3. Supralabials 8, rarely 7.
4. Dorsal strongly keeled, in 19 midbody rows.
5. Ventrals 160-198, subcaudals 45-87.

Snout-vent length 760-768 mm, tail 150-156 mm.

Color: Dorsum light green, olive gray, to almost black, with rows of small square alternating darker spots. Ventrals white, yellow, or orange-red. An inverted V-shaped dark mark on nape.



Habitat: Inhabits water bodies, feeding on fishes and amphibians.

Range: This snake is widely distributed in central and southeastern Europe to Western Asia, as far as Turkey, across southwestern Asia to Pakistan. It has been reported from Iraq, Syria, and Jordan to the Nile Delta in Egypt.

Oligodon arnensis arnensis (Shaw)

1. Head indistinct, snout blunt.
2. Rostral large, extends well on top of head, almost separating internasals (Figure 26D).
3. Loreal may be present or absent.
4. One preocular, 2-3 postoculars.
5. Supralabials 7, third and fourth touching eye; 7 or 8 lower labials.
6. Anterior genial about three times longer than posterior.
7. Body scales smooth glossy, 17 at midbody.
8. Ventrals 175-195, subcaudals 48-57; anal divided.

Snout-vent length 640-643 mm, tail 98-102 mm.

Color: Dorsum reddish to dark brown, with 32-42 black crossbars, narrowly edged with white. Nape with a pair of V-shaped marks, extending backward. Ventrums white.



Habitat: The brown kukri snake has been collected from mesic to semidesert habitat with bushy to dense forests. It lives in caves, crevices, and tree holes. It is common in hot weather, and is especially quite active at noon; otherwise, it is nocturnal, with a it has special liking for eggs, which it pierces with its specially enlarged posterior pair of upper teeth, the "Kukri" (dagger). The contents of the broken egg are sucked in, and the eggshell is disgorged (Minton and J. A. Anderson 1963; pers. obs.). The snake does not attempt to bite on handling.

It breeds from April to July; 3-8 hard-shelled eggs are laid which are glued to each other in a bunch. Juveniles are seen from June to September (Minton and J. A. Anderson 1963).

Range: The barred kukri snake extends to East Bengal, central Nepal, central and peninsular India, and Sri Lanka. In Pakistan it has been reported from Sindh, throughout Punjab and southern KHYBER PAKHTUNKHWA.

Oligodon taeniolatus taeniolatus (Jerdon)

1. Loreal present (Figure 26C).
2. Scales at midbody in 15 rows.
3. Ventrals 190-218, subcaudals 29-58.

Snout-vent length 580-590 mm, tail 89-73 mm

Color: Dorsum khaki to brown, with 36-47 narrow irregular dark brown bands edged with white. A narrow vertebral and lateral dark brown stripe. Nape with W-shaped dark collar. A dark band across head at level of eyes. Ventrums white.



Habitat: This snake has been collected from flat clay deserts, oases, and suburban gardens to elevations of about 200 m. It lives in crevices and holes in the earth, under stones and rocks, or in brick walls. It hides under piles of wood and trash in gardens. It is nocturnal; in hot weather it moves about just after sunset until dawn. When cornered it flattens against the substratum and puts its tail in a spiral.

This snake feeds primarily on the eggs of lizards and snakes, even its own eggs. Larger eggs are punctured with the help of posterior dagger-shaped enlarged teeth which are brought into play by lateral kinking movements of the head and neck. The punctured egg is either collapsed so that its swallowing is facilitated, or the snake gains entry to consume its contents by thrusting its head into it. Smaller eggs are engulfed whole (Minton and J.A. Anderson 1963). Except for small lizards and arthropods, no other animal is taken. It breeds from March to August; 4-8 hard-shelled eggs glued in a bunch are laid in some secluded place.

Range: The streaked kukri snake has been recorded from Bihar, throughout India and Sri Lanka. In Pakistan it has been recorded throughout the plains from Rawalpindi to Las Bela, at low altitudes (Khan 1993a).

Platyceps rhodorachis (Jan)

1. Body slender, head distinct.
 2. Supralabials 9, rarely 8, fifth and sixth in eye; infralabials 9 or 10, rarely 11.
 3. Ventrals 206-220, subcaudals 125-140.
- Snout-vent length 947-1055 mm, tail 164-170 mm.

Color: Dorsum pale to dark gray, with brownish short median cross bars formed of 4 rows of alternating roundish spots, posteriorly unicolor (Figure 28B i). Head brownish, with lighter pre- and postoculars. Ventrums white, with dark speckling on lateral sides.



Habitat: The cliff racer prefers stony highland, with sparse grass and bushes, and extends from sea level to 350-3000 m of elevation. It inhabits holes and narrow crevices among rocks, or burrows of rodents and lizards.

Range: Wide range in the west, from Turkmenistan, Syria, Iraq, Iran, Saudi Arabia, and extends to Somalia. In Pakistan it is recorded from Balochistan, and is common around Karachi (Minton 1966). However, it does not extend in plains of Punjab.

Platyceps rhodorachis ladacensis (J. Anderson)

1. A typical *rhodorachis* with a red middorsal line.

Taxonomic notes: Unaware of Jan's (1865) description, Anderson (1871) described *Zamenis ladacensis* from Ladakh, Baltistan. Later, he (1895) compared *rhodorachis* with *ladacensis* and found them identical. Despite proven conspecificity, a *rhodorachis* with a pinkish red median dorsal (Nikolsky, 1916), drab, light orange to vermilion (Minton 1966), red (Mertens, 1969a) vertebral line is regarded as *ladacensis*. The "colored vertebral line" is discernible only in a living snake; it is soon lost upon preservation and the identity of taxa is confused. It is why the validity of *ladacensis*, as a separate taxon, has always been questioned (Kramer and Schnurrenberger 1963; Leviton and Anderson 1961; Kral 1969; Ataev 1985; Mertens 1969a). *Platyceps rhodorachis ladacensis* is an alpine race; it has never been collected from Punjab highland. It appears to be simply a color variant, however, I recognize **it** as a subspecies until more material is available from its type locality.



Range: Minton (pers. comm. 1998) records the uniform gray form of *rhodorachis*, with orange or red vertebral stripe, as common in Quetta (Balochistan) and Peshawar (Khyber Pakhtunkhwa).

Platyceps rhodorachis kashmirensis (M. S. Khan and A. Q. Khan)

Infralabials almost always 10 in number.

1. Dorsals almost always reduced to 13 at vent.

2. Supralabials 9, fifth, sixth in eye, rarely fourth and fifth.

3. Single preocular and presubocular, 2 postoculars.

4. Posterior genials are separated by a patch of 5-8 granular intergenial scales, which are sometime arranged in a double row.

Ventrals 210-239 mm, subcaudals 119-135.

Snout-vent length 385-660, tail 190-228 mm.

Color: Head and anterior half of the body dark without light spotting, except a pre- and postorbital bar. On the side of neck a series of 2-4 roundish dark spots with white ocelli. Posterior half of the body lighter with irregular dark dashes formed by the black pigment deposited between scales. Ventrums dark, pigment especially deposited between ventrals.

Habitat: It lives in submountainous stony habitats with hard reddish soil, cut into ravines and gullies. Alpine vegetation consists of grasses, pine trees, and hedges.

The snake was collected from under stones and slabs. It forages around, feeding mostly on skinks and other lizards. It usually climbs in trees and thatched roofs to feed on eggs and nestlings.

Range: Southern Azad Kashmir, Mirpur, Bhimbar, Dulliah Jattan, Kotli, Goi Madan, Aram Bari, Palandri, Punch, Bagh, and Muzaffarabad.

Platyceps ventromaculatus ventromaculatus (Gray and Hardwicke)

1. Body moderately robust, cylindrical with even taper.

2. Supralabials 9, rarely 8, fifth and sixth touching eye; infralabials 9 or 10, rarely 11.

3. Ventrals 195-213, subcaudals 97-115.

Snout-vent length 1090-1100 mm, tail 205-212 mm.

Color: Sandy white or light reddish brown, with a median series of 57-76 crossbars formed of gray scales edged with black (Figure 28B ii), alternating with one or two lateral series of spots, the outermost touching tips of ventrals. Dorsal pattern fades out in posterior one-third of body. Head with symmetrical dark mottling on top. Ventrums glistening white.

**Two races in Pakistan:**

Platyceps ventromaculatus bengalensis (M. S. Khan and A. Q. Khan)

Supralabials 9, fifth to sixth in eye, 10-11 infralabials. Ventrals 220-230, 69-70 subcaudals. A median dorsal row of 60+, 1-2 scale thick dark cross bands, much narrower than interspaces, replaced on tail by irregular narrow transverse streaks formed by approximation of dark edges of adjacent scales. Distinct orbitolabial and temporal stripes.

A rare snake.

Platyceps ventromaculatus indusai (M. S. Khan and A. Q. Khan)

Supralabials 8-9, fifth (rare) usually fifth to sixth in eye. Preoculars 2, 2-3 postoculars (rarely 1). Ventrals 195-220, subcaudals 82-119.

Dorsum grayish white to pale sandy. Head with indistinct dark mottling. Body with a median row of 3-4 scale thick 50-70 rhombs or saddles, broader than interspaces, alternating with two lateral rows of spots, outermost row of smaller spots usually touching ventrals. A 2-4 scale thick nuchal streak always flanked by large temporal blotch, which obscures oculotemporal streak. The sooty pigment is confined to scale's periphery.



Habitat: Frequents grasslands, forests with alluvial soil and moderate scrubby vegetation, except humid areas along water courses. Primarily terrestrial, climbs into low bushes and roofs of thatched houses for eggs and nestlings.

Range: Widely distributed in the Indo-Gangetic plains, below 200 m. Extends westward to Uzbekistan and Israel.

Psammophis condanarus condanarus (Merrem)

1. Head long, narrow, distinct from neck, snout blunt, eyes large.
 2. Loreal scale elongate, twice long as high.
 3. One pre- and 2 postoculars, preocular not in contact with frontal.
 4. Nasal incompletely divided.
 5. Supralabials 8-9, fourth and fifth in eye; infralabials 11.
 6. Midbody scales 17.
 7. Ventrals 165-179, subcaudals 83-93; anal divided.
- Snout-vent length 800-825 mm, tail 254-258 mm.

Color: Dorsum pale olive to yellowish. A pair of dark brown stripes on fifth and sixth scale rows does not extend to head. Reddish brown stripes on 1-3 scale rows, extends on head passing through eye and snout. Lateral interstripe space cream to straw yellow. Supralabials greenish, green color extends posteriorly as a band on lateral tips of ventrals, ventrum medially cream, margined with a narrow reddish brown stripe.

Habitat: Frequents mesic habitat with long grass and sparse bushes. Diurnal, very agile, and moves very fast. In danger, it freezes and its light color makes it inconspicuous in dry yellow grass in daylight. Climbs into bushes and smaller trees.

Range: Known from western Bengal, Orissa to Bombay, Sindh, and Punjab. Pakistan records are from Jacobabad, Lahore, and the Indus Delta. In the western Himalayas it is one of the commonest snakes at altitudes between 1000 and 2000 m.

Psammophis leithii leithii

1. Preorbital contacts frontal.
2. Temporals 1 + 2.
3. Supralabials 8-9, fourth and fourth in eye; infralabials 9-10.
4. Nasal divided (Figure 27B).
5. Posterior genial a little longer than anterior.
6. Ventrals 164-187, subcaudals 104-109; anal not divided.

Snout-vent length 770-778 mm, tail 225-230 mm.

Color: Ground color yellowish, darker on sides. A pair of dark to brown stripes starting from internasals and continuing along body occupying fifth to seventh scale rows becomes wider at midbody and fusing on tail. The dark lateral color of body forms a stripe, confined on first and second scale row, lateral tips of ventrals white, central part lemon yellow. Head top with median dark, longitudinal stripe, another stripe through eyes. Labials cream with reddish brown mottling, reddish brown spots on neck.

Habitat: Frequents desert grassland with scrubby vegetation near marshy areas in lower Sindh. It extends into clay deserts along the sea coast. Habitats of all the three ribbon snakes of Pakistan overlap in the deserts of Pakistan.

Range: Ranging from the United Provinces of India, Poona to Waziristan and southeastern Balochistan, in the west. In Pakistan it is recorded from Azad Kashmir, the Thar, Cholistan, and Thal Deserts to Kalat District in Balochistan, below 800 m of elevation. It is fairly common in Indus delta.

Psammophis lineolatus lineolatus (Brandt)

1. Preocular touching frontal.
2. Temporals 2 + 2 or 3.
3. Supralabials 9, fourth to sixth touching eye; 9 infralabials.
4. Midbody scale rows 15.
5. Nasal divided.
6. Ventrals 174-190, subcaudals 70-90; anal divided.

Snout-vent length 875-900 mm, tail 190-194 mm.

Color: Dorsum light grayish buff, a pair of dark stripes from eye running along the length of body. At midbody a medium brown stripe, with several black-tipped scales. Head with a median dark stripe. Labials cream, with reddish brown mottling. Central part of belly lemon yellow, with median stippling and a dark line at lateral tips of ventrals.



Habitat: This snake inhabits scrublands in sandy deserts or close to foot hills. Near Quetta it is recorded at 1500-2100 m (Minton 1966).

Food consists mainly of sand lizards and arthropods. It is diurnal, oviparous; 8-10 eggs are laid from March to July, under stones or burrows of rodents and lizards.

Range: It is a central Asian species extending from Transcaspia to northern Iran, east to Mongolia and northwest China. In Pakistan it has been recorded around Quetta, Balochistan.

Psammophis schokari schokari (Forskål)

1. Anterior end of frontal just touching preorbital.
2. Temporals 2 + 2 or 3.
3. Supralabials 9, fifth and sixth in eye; 10 to 11 infralabials.
4. Both genials equal in size and in contact with each other.
5. Midbody scale rows 17.
6. Ventrals 173-186, subcaudals 118-130; anal divided.

Snout-vent length 1285-1290 mm, tail 460-465 mm.

Color: Color of this snake is very variable: dorsum light olive, chestnut, dark brown, or gray. Head top with symmetrical dark markings; a dark stripe from snout through eye; labials white, flecked and spotted black; central part of belly usually bluish gray, occasionally reddish or almost black.



Habitat: This snake inhabits sand deserts with sparse grass and occasional bushes. It lives in lizard or rodent burrows at the roots of bushes or under rocks. It climbs in branches of bushes to bask in the sun, or to avoid heat during the hottest hours.

It is a diurnal, alert, speedy, and very agile snake, and to capture one uninjured is difficult. It feeds on various species of sand lizards and rodents. It breeds from March to July; 4-10 eggs are laid in burrows.

Range: Geographical range of *P. schokari* is continuous across northern Africa through Somalia, through southwestern Asia to Soviet Central Asia, Balochistan, and Sindh (Marx 1988). It extends in Cholistan and Thal Deserts of Punjab, Pakistan (Khan 1987).

Pseudocyclophis persicus (J. Anderson)

1. Head long slightly distinct from neck, body slender.
2. Loreal scale generally absent, if present very small.
3. Eyes small, round pupil, not distinct in life.
4. Single pre- and postocular.
5. Supralabials, third and fourth in eye; 7-8 infralabials (Figure 27C).
6. Dorsals smooth, 13-17 at midbody, with apical pits.
7. Ventrals 206-238, subcaudals 75-99.

Snout-vent length 380-390 mm, tail 107-110 mm.

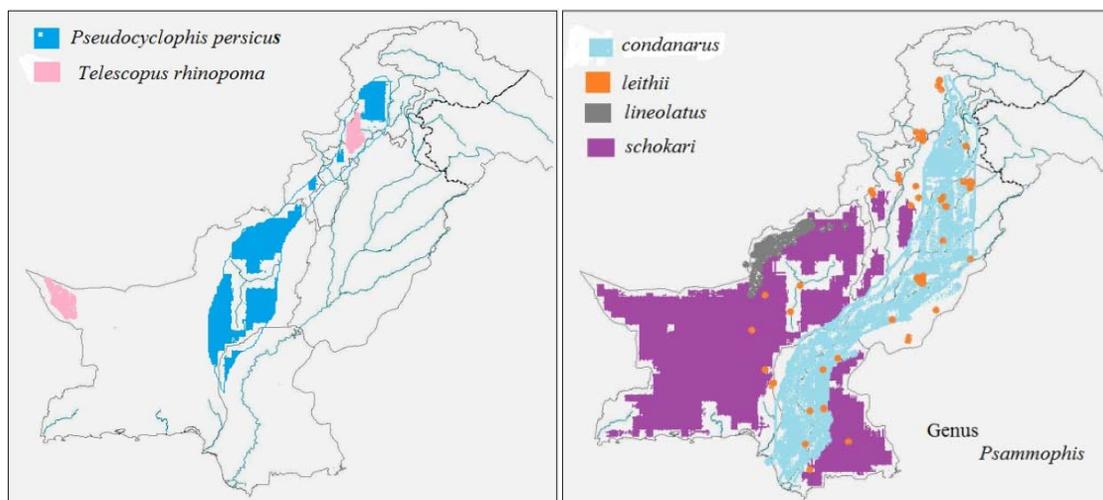
Color: Dorsum light brown, scales at base dark. Sometimes unicolor or with a neural series of 50-65 narrow transverse dark bars which become broader and fainter posteriorly. Head uniformly gray to dark from snout to nape, with a postorbital light transverse band, another crossing tips of parietals, ventrum cream.



Habitat: The dwarf racer frequents rocky and hilly terrain with xeric to mesic environments with scrubby to forest vegetation. It is very agile retreats into crevices among rocks, and is nocturnal. It is found usually hiding under stones and rocks during the day.

Food includes small lizards, while arthropods are frequently taken. It breeds from April to June; 4-8 oblong eggs are laid in crevices.

Range: The dwarf racer has been reported from Turkmenistan, Iraq, and Iran. In Pakistan it is reported from Balochistan, western Sindh to Swat in the north.



***Ptyas mucosus mucosus* (Linnaeus)**

1. Large snake with elongated head, distinct from neck, snout blunt.
2. Loreal concave, loreal 2-4, usually 3.
3. Preoculars 2 and 2-3 postoculars (Figure 27A).
4. Nostril between nasals and first supralabial; internasals shorter than prefrontals.
5. Supralabials 8, fourth and fifth touching eye, 9 or 10 infralabials.

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6. Temporals 2 + 2.
 7. Median rows of dorsals distinctly keeled, 17 rarely 19 at midbody.
 8. Ventrals 190-197, subcaudals 110-117, anal divided.
- Snout-vent length 2250-2260 mm, tail 550-560 mm.

Color: Dorsum gray to dark olive brown. Edges of most of the scales of body light, dark, or yellowish. Labials and scales of lateral sides of body dark-edged. Belly yellowish white, free edges of ventrals and subcaudals dark.



Habitat: The dhaman snake frequents damp and marshy situations along water courses, grasslands, cultivated land, gardens, mango groves, forests, mesic hilly environs, etc. It is attracted into human settlements by the rodent population. It often invades houses and lives in rodent holes. Its loud and resonant hiss is sufficient to chill the hearts of inhabitants. Due to its large size and dorsal body color, it is generally mistaken for *Naja naja*. It is a good swimmer, and climbs into branches of trees and roofs of thatched houses, attracted to bird's nests. Occasionally its presence is indicated by flocks of calling birds. It is a diurnal, alert, and active large snake; when on the prowl, it moves about in search of food. When cornered, its first priority is to slip away, however, if cornered it coils its body and hisses loudly, lunging furiously emitting a loud growling hiss (Abdulali 1935). Its bite is painful but nonvenomous.

Wall (1906) describes its feeding habits, "The dhaman is very catholic in its taste, devouring almost anything that chance brings within its reach, but it displays a very marked partiality to a batrachian diet, doubtless because toads, and more especially frogs, are extremely plentiful, easily captured, and too defenseless to offer much resistance. The possibility of taste influencing its selection may be dismissed, since flesh, however toothsome, must fail to impart its relish when clothed in feathers, fur, or integuments". Diet of the dhaman consists mainly of lizards, birds, eggs, rodents, and frogs. Wall (1906) includes a young soft-shell turtle (*Aspideretes*) in its diet. Its voracity is recorded by the same author by quoting examples of a specimen who that have consumed 18-22 full sized *Euphlyctis cyanophlyctis*. The snake is known to press the

struggling prey against the ground with its body while devouring it (Wall 1906). It is known to be cannibalistic and ophiophagus.

It is not killed by the local peoples because it is known to exterminate rats from village houses and barns. In Punjab and Sindh it hibernates from December to February.

The dhaman breeds from March through August. During August and September 8-16 oblong eggs (50 x 40 mm) are laid in burrows, or under some protected shelter which gets sufficiently warmed by the sun to keep the eggs at an optimum temperature. Juveniles hatch between September and December, and are very secretive and alert (Daniel 1983).

Range: The range of dhaman is quite extensive in Southeast Asia; from Java, Sumatra, Viet Nam, and China, it extends throughout India, the Andaman Islands, Sri Lanka, Pakistan, Iran, and Afghanistan. It particularly avoids deserts throughout its range. It is common at moderate elevations of 200 m; however, it has been recorded about 1600 m of elevation near Quetta (Minton pers. comm. 1983).

Sibynophis sagittarius (Cantor)

(Golden snake: *Sunahra saamp*)

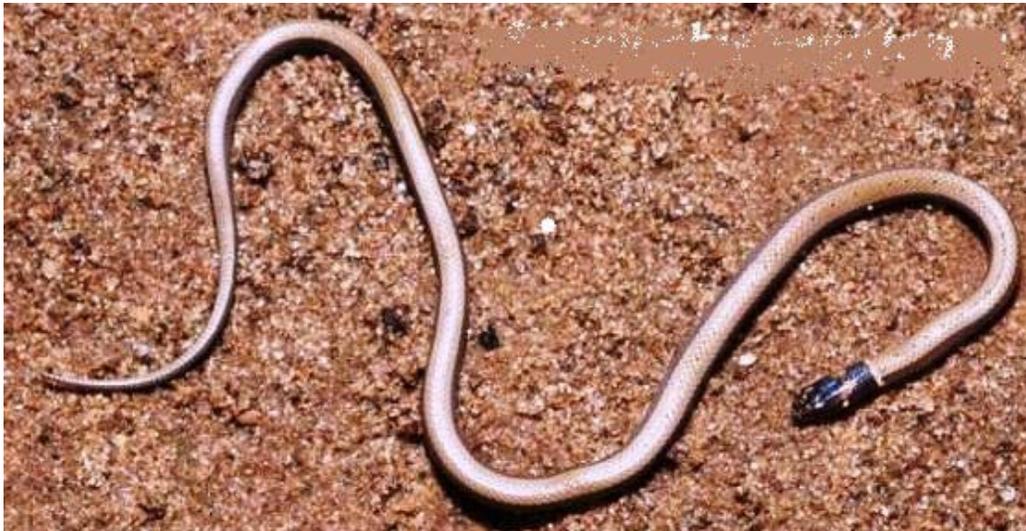
Supralabials 7-8, third and fourth or third to fifth in eye.

Single anterior temporal touching fifth, sixth, and seventh supralabial.

Ventrals 197-238; subcaudals 54-70.

Total length 350 mm, tail 93-112 mm.

Color: Dorsum light brown. A vertebral series of black dots. Head and nape dark brown or black, with a large elongated oval yellow patch on each side of the back of the head. Snout variegated with yellow. Ventrum yellow, a dark dot on the outer edge of ventrals.



Habitat: The only specimen of this snake was recorded from Dulliah Jattan, southern Azad Kashmir, from under a rocky slab.

The terrain is stony with hard soil. Vegetation is sparse of grasses, with occasional low bushes.

Range: Western Himalayas; Ganges basin, lower Bengal (Mahendra, 1984). It has recently been recorded from southern Azad Kashmir (A. Q. Khan and M. S. Khan 1996).

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Spalerosophis arenarius (Boulenger)

1. Prefrontal broken into 3-6, usually 4 scales, arranged in a transverse series.
2. Snout pointed, rostral extends well on top of snout separating internasals from each other, more than length of suture between them.
3. Loreal 2, one behind other.
4. Scales in circumocular ring 6-8.
5. Supralabials 9-11, infralabials 10-12.
6. Scales keeled, 25 rows at midbody.
7. Ventrals 226-257, subcaudals 71-86, anal not divided.

Snout-vent length 930-935 mm, tail 175-180 mm.

Color: Dorsum grayish to reddish brown, with seven series of alternating reddish spots of various sizes, those of median series largest, 54-72 from nape to the base of tail, where they tend to fuse in longitudinal stripes. Ventrums glossy white.



Habitat: This snake frequents sandy country with scrubby vegetation. It is nocturnal and feeds on various sand lizards, birds, field mice, and eggs. When cornered it hisses loudly and attacks. Wounds inflicted by it are painful.

It climbs into low bushes to feed on eggs and nestlings. It breeds from March to June, 8-10 elongated eggs are laid in some protected place having optimum temperature and humidity.

Range: Apart from Cholistan and the Thar Deserts, it has recently been reported from Dera Ghazi Khan and the Thal Desert in northwestern Punjab, Pakistan (Khan 1999a).

Spalerosophis diadema (Schlegel)

1. Loreal two, one behind other.
2. Circumocular ring of 8-10 scales.

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3. Prefrontal segmented in 5-8 scales, arranged in two transverse series (Figure25, D).
4. Supralabials 10-13, infralabials 11-14.
5. Dorsals keeled, in 27-31 rows at midbody.
6. Ventrals 232-254, subcaudals 96-114, anal not divided.

Snout-vent length 1220-1230 mm, tail 328-232 mm.

Color: Color varies with age: young snakes are thin-bodied with a median row of dark brown large rhomboidal blotches on body, and an alternating lateral series of similar smaller spots. There is a dark bar between eyes, and an oblique stripe from behind the eye to the angle of mouth. Older specimens are thick-bodied, yellow dorsum with scattered dark brown or sooty black spots, usually confined to individual scales. Head either blood red with tinge of black or entirely sooty black. Ventrum deep red, visible through ivory white ventrals. A transitory color phase is observed in subadults. Melanistic adults are not uncommon (Mertens 1969a).



Spalerosophis

articeps (phase)



diadema (phase)



Habitat: This large snake inhabits forests along water courses, and open fields with scrubby vegetation and moderately hard soil. In rocky area it lives in crevices in loose rock. It is the usual snake frequenting old uninhabited buildings with untended natural vegetation. It is often seen in groves, barns, and suburban gardens where it is attracted by rats, mice, and nesting birds. While in inhabited houses, it lives in rat holes and often climbs in roofs to feed on birds and their nestlings. It is a bad tempered snake; when cornered it hisses loudly and strikes repeatedly, biting savagely and inflicting a painful nasty bite.

It is nocturnal, however it is occasionally active during the day also. Its natural diet consists of frogs, rats, birds, eggs, and lizards.

It breeds from March to September; 3-12 eggs are laid in more than one clutch, each of 2-6 eggs measuring 68-78 x 16-28 mm.

Range: The diadem snake has been recorded from sea level to 2000 m, in Gilgit, northern Pakistan; however, it is widely distributed throughout India, Bangladesh, and northern Sri Lanka. In Pakistan it has been recorded from throughout Khyber Pakhtunkhwa, Punjab, Sindh, and Balochistan.

Spalerosophis diadema “*atriceps*” phase



Taxonomic notes: Differs from *Spalerosophis diadema* in dorsal color and pattern which is highly variable. Dorsum is straw yellow to orange or dusky pink, with irregular black flecks and blotches, head black or red, mottled with red or black, shading to dark red on nape and temples. Belly peach to pink, immaculate or mottled with dark gray, chin and throat white (Minton 1966). However, Mertens (1969) has shown that *Spalerosophis diadema* changes its color and pattern to *atriceps* (Plate 142A) phase, as it grows old.

Spalerosophis schirazianus (Jan)

1. Scales in ocular ring 8-10.
 2. Prefrontals 6-9.
 3. Dorsals smooth or with traces of keels, 25 or 27 at midbody.
 4. Ventrals 231-244, subcaudals 78-79; anal not divided.
- Snout-vent length 975-980 mm, tail 195 mm.

Color: Dorsum pale gray, yellowish khaki. A median series of 50-54 light olive to dark gray blotches. Head marking like young *S. diadema*. Ventrums white.



Habitat: The Persian diadem snake frequents flat clay deserts with sparse vegetation. However, it extends into fruit groves hiding under fallen trees, leaf litter, in crevices and holes in the soil. It usually occupies burrows of lizards and field rats. It is primarily a nocturnal species; however, it is occasionally seen active during the day.

Food includes birds, eggs, lizards, and field rats. The snake climbs in low bushes in search of prey.

It breeds from March to August; 4-12 elongated eggs are laid in some protected place with optimum temperature and humidity.

Range: It has wider range in the west, from Transcaspia to the Zagros Mountains in southern Iran and Tajikistan. In Pakistan it is at its easternmost Range range and has been recorded from western Balochistan and Las Bela (Khan, 1987).

Telescopus rhinopoma (Blanford)

Desert cat snake: *Regasthani billi-chishm saamp*

1874 *Dipsas rhinopoma* Blanford, Ann. Mag. Nat. Hist. London 13:34.

Type locality: Kirman, southern Iran.

Diagnosis:

1. Triangular head, distinct from neck, snout flat, broad.
 2. Body cylindrical, slender.
 3. Eyes large with vertical pupil.
 4. Nostril small, in partially divided nasal, loreal elongate touching eye, single preocular in contact with frontal.
 5. Anterior temporals 3, posterior temporals 3-4.
 6. Supralabials 8-9, fourth to sixth in eye; 12 infralabials.
 7. Dorsals smooth, oblique with apical pits, 23 at midbody reduced to 17 at vent, middorsals broader than laterals.
 8. Ventrals 247-280, subcaudals 77-99, anal entire.
- Snout-vent length 830-840 mm, caudal length 160 mm.

Color: Head sandy, with dark Y-shaped mark, stem of which with dark nuchal color. Body dorsum pale grayish, with a middorsal series of large dark brown squarish blotches, broader than interspaces, posteriorly median row of blotches may divide in 2 rows of spots. A lateral alternating series of smaller poorly defined spots. Ventrums dark brown.

Habitat: A rare snake, it is nocturnal, taken from arid rocky hills at an elevation of 700 m. Related species of desert cat snake feed almost entirely on lizards (Minton 1966), and birds (Böhme, 1977).

Range: South-central Iran to Waziristan. Kacha Thana, Balochistan (Wall 1914); Miranshah, Tochi Valley, Waziristan, Khyber Pakhtunkhwa. A specimen BMNH 94.210.4.4. from Sind is in the British Museum, London (Minton 1966). Böhme (1977, Fig. 1) puts Sind in comas showing it in the northwestern Balochistan.

Xenochrophis cerasogaster cerasogaster (Cantor)

Red-belly marsh snake: *Surakh dhoobi saamp*

1. Head long, narrow, distinct from neck.
2. A pair of anterior and 3 posterior temporals (Figure 28A).
3. Supralabials 8-9, fourth touches eye; infralabials 9-11.
4. Scales at midbody 19, weakly keeled, last 3-4 rows smooth.
5. Ventrals males 140-149, females 144-158; subcaudals paired, males 63-78, females 63-71, anal divided.

Total length males 577-668 mm, females 924-973 mm.

Color: Dorsum dark brown, olive, or russet, with a dull faint dorsolateral stripe. A bright yellow stripe along outermost scale row and lateral tips of ventrals, extending on to the lips and temporal region. Ventrums posteriorly purplish black, anteriorly becoming gray, heavily marbled with red. Chin and throat white, with red mottling.

Habitat: This water snake avoids main water bodies, and confines itself to shallow quieter, side pools with much emergent vegetation. It often rests on the edge of the water body or on Lily pads. It is met with from late June to late November (Minton 1966).

It is diurnal, shy, quite active in water, and moves about in emergent marginal vegetation in search of fish, which is its main dietary item. It also feeds on shrimps and other water creatures including tadpoles and frogs. When alarmed it slips into deep water. It has a moderate temperament and rarely bites upon handling.

It breeds from March to July; it is ovoviviparous and 20-25 eggs, average size 22 x 12 mm, are laid in early April in shallow holes in moist banks of ponds. They hatch during June and July (Malnate and Minton 1965).

Range: The red-belly water snake ranges widely in the Indo-Gangetic plains, from Assam through Bangladesh, to the Indus Delta. Northward it extends up to Nepal. In Pakistan it is known only from lower Sindh (Khan 1999e).

Xenochrophis piscator piscator (Schneider)

Checkered keelback: *Chittra dhoobi saamp*

1. Head slightly flattened, distinct from neck.
2. Supralabials 8-10, fourth and fifth in eye; 9-10 infralabials (Figure 28C).
3. Anterior genial tuberculated in adult male.

4. Ventrals 135-152, subcaudals 62-78.

Snout-vent length 930-940 mm, tail 175-180 mm.

Color: Dorsum light green-gray or light reddish brown, with 5 rows of blackish blotches, smaller than interspaces, often fused with each other to form a reticulation, more marked in anterior half of body, the pattern fades posteriorly. A pair of dark post-oculo-supralabial bars. Ventrum white or cream.



Habitat: The checkered keel back is more common in large ponds with thick emergent vegetation; it confines itself mainly to side pools, avoiding the main stream. In winter when most of the water bodies are dry, the helpless snakes are killed in large numbers by people and other animals like mongoose and kites in large numbers. Water-visiting birds are said to take a high toll on young snakes. The snakes that have survived attack usually have broken tails, which are common in this species (Auffenberg 1980b).

The water snake is strong and active, moving briskly on land and in water. It is reported to move in jumps on land (Wall 1907b). It is known to be bad tempered; when cornered it rears up and flattens its body ready to bite. It strikes with great determination and rapidity. It bites viciously, holding on with such tenacity that it is difficult to dislodge. It leaves nasty wounds. During winter it is diurnal, while in summer it becomes crepuscular and nocturnal. It is often seen swimming close to the upper warmer layers of pond in winter and basks on dry ground.

It feeds on fishes, frogs, and tadpoles (Minton 1966; Auffenberg 1980b). The prey is ambushed, with the large teeth of the snake playing an important role in retaining a firm hold on slippery prey and subduing it.

The water snake breeds from February to May; 50-80 eggs are laid in adhering clusters in holes away from water. Eggs measure 27-31 x 15-18 mm in dimension.

Range: This snake has wide Range in Southeast Asia, from Borneo, Taiwan, throughout India, westward to the Indus Delta. It is quite common in all major drainage systems in the upper and lower Indus Valley.

Xenochrophis sanctijohannis Boulenger

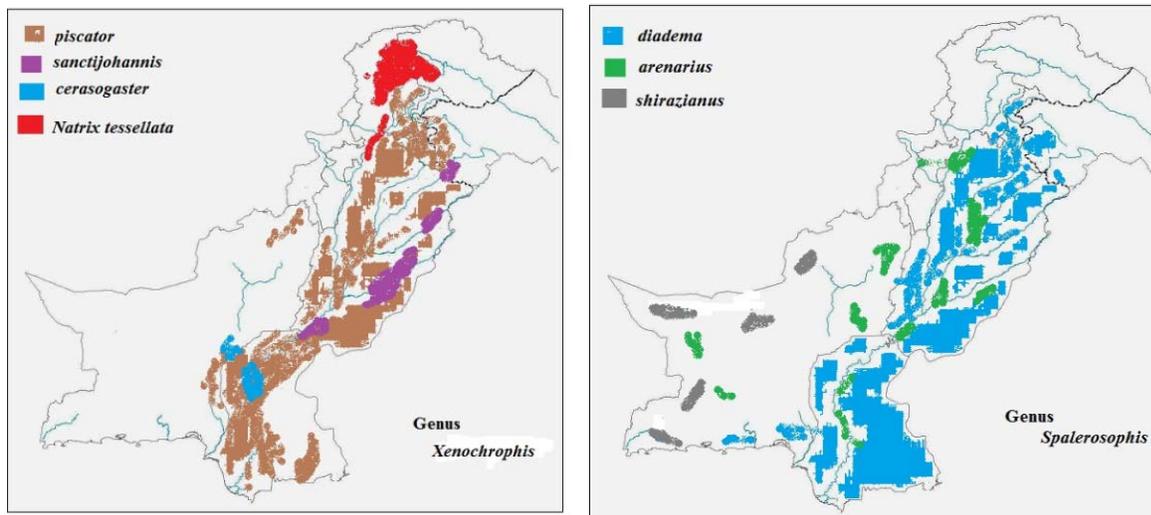
1. A single (fourth) supralabial touching eye.
2. Single pre- and 3 postoculars.
3. Dorsals feebly keeled, outer 4 rows smooth.
4. Ventrals 149-159, subcaudals 85-92.
5. Postoculosupralabial stripes absent, or very feebly indicated.

Snout-vent length 830-835 mm, tail 273-275 mm.

Color: Dorsum yellowish green without pattern or slight indication of spots on anterior half of body.

Habitat: This water snake was first recorded from a fast-flowing stream in Kashmir; recently it has been collected from irrigation channels from the Sutlej River, in Cholistan, southern Punjab.

Range: Primarily a highland water snake, it is washed down the Sutlej River and finds its way into irrigation channels in areas surrounding Bahawalnagar and Bahawalpur, southern Punjab, Pakistan.



APPENDIX

Scientific, common English and Urdu names

Family COLUBRIDAE

Amphiesma platyceps (Blyth, 1854)
Amphiesma sieboldii (Günther, 1860)
Amphiesma stolatum (Linnaeus, 1758)
Argyrogena fasciolata (Shaw, 1802)
Boiga melanocephala (Annandale, 1904)
Boiga trigonata (Schneider, 1802)
Coluber k. karelini Brandt, 1838
Coluber k. mintonorum Mertens, 1969
Enhydriis pakistanica Mertens, 1959
Hemorrhhois ravergieri (Ménétriés, 1832)
Lycodon a. aulicus (Linnaeus, 1758)
Lycodon striatus bicolor (Nikolski, 1903)
Lycodon s. striatus (Shaw, 1802)
Lycodon travancoricus (Beddome, 1870)
Lytorhynchus maynardi Alcock & Finn, 1896
Lytorhynchus paradoxus (Günther, 1875)
Lytorhynchus ridgewayi Boulenger, 1887
Natrix tessellata (Laurenti, 1768)
Oligodon arnensis (Shaw, 1802)
Oligodon taeniolatus (Jerdon, 1853)
Platyceps rhodorachis kashmirensis (M.S. Khan & A.Q.Khan, 2000)
Platyceps rhodorachis ladacensis (J. Anderson, 1871)
Platyceps rhodorachis rhodorachis (Jan, 1865)
Platyceps ventromaculatus bengalensis (M.S.Khan & A.Q.Khan, 2000)
Platyceps ventromaculatus indusai (M.S.Khan & A.Q.Khan, 2000)
Platyceps ventromaculatus ventromaculatus (Gray & Hardwicke, 1834)
Psammophis condanarus condanarus (Merrem, 1820)
Psammophis leithii leithii Günther, 1869
Psammophis lineolatus lineolatus (Brandt, 1838)

Psammophis schokari schokari (Forskål, 1775)
Pseudocyclophis persicus (J. Anderson, 1872)
Ptyas mucosus (Linnaeus, 1758)
Sibynophis sagittarius (Cantor, 1839)

Coluber

Spotted Keel-back:
Himalayan Keel-back
Striped Keel-back
Banded Racer
Dark-head Cat Snake
Brown Cat Snake
Banded Desert Racer
Minton's Cliff Racer
Sindh Ditch Snake
Mountain Racer
Common Wolf Snake
Golden Wolf Snake
Spotted Wolf Snake
Southern Wolf Snake
Western Awl Head Snake
Sindh Awl Head Snake
Afghan Awl Head Snake
Blotched Water Snake
Russet Kukri Snake
Streaked Kukri Snake:

Kashmir Cliff Racer

Ladakh Racer
Cliff Racer

Bengal Racer

Sindh Racer

Indus Valley Racer:

Indo-Burmese Sand Snake
Pakistan Ribbon Snake
Steppe Ribbon Snake
Saharo-Sindhian Ribbon Snake
Iran Dwarf Racer:
Rat Snake
Golden Snake

Koluber

Chitra Khar-pusht
Uttri Khar-pusht
Patta dar Khar-pusht
Patta dar Taiz-rau
Siah sar billi-chisham Saamp
Bhoora Billi-chisham Saamp
Patta-Dar koluber Saamp
Minton ka Pahari saamp
Sindhi Jheel saamp
Pahari Koluber
wolf-saamp
Sunahra wolf-saamp
Chitra wolf-saamp
Dakhni wolf-saamp
Dakhni Crotia-sar samp
Sindhi crotia-sar samp
Afghan crotia-sar
Chitra dhobi-snake
Bhoora kukri saamp
Dahari-dar kukri saamp

Kashmir koluber

Ladak koluber
Chattani koluber

Bengali koluber

Sindhi koluber

Maidani koluber

Burma teer-mar
Sindhi teer-mar
Dhari-dar teer-mar

Saharai teer-mar
Irani podna taiz-rau saamp
Dahaman
Sunahra saamp

کو لوپر

چترا خار پشت سانپ
اُتری خار پشت سانپ
پٹی دارخار پشت سانپ
پٹیدار تیز روسانپ
سیاہ سر بلی چشم سانپ
بھورا بلی چشم سانپ
پٹیدار کو لو بر سانپ
منٹن کا پہاری سانپ
سندھ وادی جھیل سانپ
پہاڑی کو لو بر سانپ
ولف سانپ
سنہرا ولف سانپ
چترا ولف سانپ
دکھنی ولف سانپ
دکھنی کروشیا سر سانپ
سندھی کرو شیا سر سانپ
افغانی کرو شیا سر سانپ
چترا دھوبی سانپ
بھورا ککری سانپ
دھاری دار ککری سانپ

کشمیری کو لو بر سانپ

لداخ کو لو بر سانپ
چٹانی کو لو بر سانپ

بنگال کو لو بر سانپ

سندھ کولوبر سانپ

میدانی کولوبر سانپ

برمی تیر مار
سندھی تیر مار
پٹہ دار تیر مار

صحرائی تیر مار
ایرانی تیز رو سانپ
دھامن سانپ
سنہرا سانپ

<i>Spalerosophis arenarius</i> (Boulenger, 1890)	Red-spotted Diadem Snake	<i>Ragistani dabba saamp</i>	ریگستانی ڈبہ سانپ
<i>Spalerosophis diadema diadema</i> (Schlegel, 1837)	Royal Snake, Diadem Snake	<i>Surakh dabba saamp</i>	سرخ ڈبہ سانپ
<i>Spalerosophis diadema atriceps</i> (Fisher, 1885)	Variiegated Diadem Snake	<i>Chatkabra samp</i>	چتکبرہ سانپ
<i>Spalerosophis schirazianus</i> (Jan, 1865)	Persian Diadem Snake:	<i>Irani dabba saamp</i>	ایرانی ڈبہ سانپ
<i>Telescopus rhinopoma</i> (Blanford, 1874)	Desert Cat Snake	<i>Regasthani billi saamp</i>	ریگستانی بلی سانپ
<i>Xenochrophis cerasogaster cerasogaster</i> (Cantor, 1839)	Red-belly Marsh Snake	<i>Surakh dhoobi saamp</i>	سرخ پیٹ دھوبی سانپ
<i>Xenochrophis piscator piscator</i> (Schneider, 1799)	Checkered Keelback:	<i>Chittra dhoobi saamp</i>	چترا دھو بی سانپ
<i>Xenochrophis sanctijohannis</i> (Boulenger, 1890)	Olive Water Snake	<i>Zatooni dhoobi saamp</i>	زیتونی دھوبی سانپ

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