

A Naturalist's Guide to the

SNAKES OF SOUTH-EAST ASIA

including Myanmar, Thailand, Malaysia,
Singapore, Sumatra, Borneo, Java and Bali



Indraneil Das



JOHN BEAUFOY PUBLISHING

First published in the United Kingdom in 2012 by Beaufoy Books
11 Blenheim Court, 316 Woodstock Road, Oxford OX2 7NS, England
www.johnbeaufoy.com

10 9 8 7 6 5 4 3 2 1

Copyright © 2012 John Beaufoy Publishing Limited

Copyright in text © Indraneil Das

Copyright in photographs © [to come]

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the publishers.

ISBN [to come]

Edited, designed and typeset by D & N Publishing, Baydon, Wiltshire, UK

Printed and bound [to come]

Dedication

Nothing would have happened without the support of the folks at home: my wife, Genevieve V.A. Gee, and son, Rahul Das. To them, I dedicate this book.

Edited and designed by D & N Publishing, Baydon, Wiltshire, UK

Printed and bound in Malaysia by Times Offset (M) Sdn. Bhd.

▪ CONTENTS ▪

INTRODUCTION 4

SNAKE TOPOGRAPHY 4

DEALING WITH SNAKE BITES 6

ABOUT THIS BOOK 7

GLOSSARY 8

SPECIES ACCOUNTS AND PHOTOGRAPHS 11

CHECKLIST OF SOUTH-EAST ASIAN SNAKES 141

FURTHER READING 154

ACKNOWLEDGEMENTS 155

INDEX 157



INTRODUCTION

Snakes form one of the major components of vertebrate fauna of South-East Asia. They feature prominently in folklore, mythology and other belief systems of the indigenous people of the region, and are of ecological and conservation value, some species supporting significant (albeit often illegal) economic activities (primarily, the snake-skin trade, but also sale of meat and other body parts that purportedly have medicinal properties). They fascinate city-dwellers as much as they engage rural folks, but often suffer prejudices, perhaps borne out of fear, ignorance, and religious and other early teachings.

As at the end of 2011, a total of 426 species of snakes were recorded from the region. This guide describes and illustrates over half (237 species, or 56 per cent) of the snake fauna of South-East Asia (here including Myanmar, Thailand, Peninsular Malaysia and Singapore, and within the insular region, Sumatra, Borneo, Java and Bali, as well as the smaller islands and archipelago systems of the Greater Sundas). All other regions are termed extralimital in this work (although the natural distribution of species that spill over political boundaries of these countries may not necessarily be biologically extralimital).

The aim of this work is to permit rapid field identification of each species covered via descriptive text and one or more live photographs. In particular, details of colour and form are noted in the descriptions. A few species in this work have never been illustrated in a publication before, and for all I have made an effort to use previously unpublished images. In several species, accurate identification in the field is not possible without detailed scale counts or other morphological examination, for which users will have to refer to more technical works (see Further Reading, p. 000).

SNAKE TOPOGRAPHY

DEALING WITH SNAKE BITES

A number of snake species in South-East Asia can deliver bites that are life-threatening to humans. These highly venomous snakes are found in forests and fields, in coastal waters and also out in the open sea. Deaths from snake bites are generally caused by a relatively small group of snakes, most of which are adapted to human-modified environments or live in forest edges. In this section, I list precautionary measures for avoiding snake bites and for dealing with cases of snake envenomation, as relevant to the region.

The majority of South-East Asia's snakes are non-venomous, and the chances of getting bitten are more remote than those of being in a motor accident or drowning. It is important, nonetheless, to be able to identify the major venomous snake groups. Vipers (such as *Daboia*) and pit vipers (such as *Parias*, *Popeia*, *Trimeresurus* and *Tropidolaemus*) are relatively slow-moving snakes, with narrow necks and enlarged heads, whose fangs can be folded when not in use. Cobras (*Naja* and *Ophiophagus*) are large, heavy-bodied snakes, with the ability to raise a hood; they have short, fixed fangs. Coral snakes (*Calliophis* and *Sinomicrurus*) and kraits (*Bungarus*) are close relatives of cobras, but cannot raise their hoods. Finally, the sea snakes (including *Hydrophis*, *Kerilia*, *Kolpophis*, *Laticauda*, *Pelamis* and *Thalassophis*) are large, slender- or heavy-bodied snakes that are marine or at least coastal in distribution, with just a few (e.g. *Hydrophis sibauensis*) travelling far up tidal rivers. Only one genus of sea snake, *Laticauda* (containing two species in this region), comes ashore. All sea snakes have short, fixed fangs.

Many non-venomous snakes (particularly the kukri snakes and cat snakes) can inflict a painful bite, which while not immediately fatal may lead to bleeding and secondary infection. Needless to say, a bite from a large python can be dangerous, and these giant constricting snakes, especially the Reticulated Python, have been known to kill adult humans through constriction.

Below are a few do's and don'ts to follow when visiting places where venomous or unknown snakes have been sighted:

- Don't put your hand inside cracks or holes where a snake may be sheltering.
- Wear shoes that conceal the entire foot, especially in tall grass, where large vipers may be present.
- When moving in the dark, carry a reliable torch or wear a headtorch.
- To keep snakes away from human residences, ensure surroundings are free from litter, which attracts rats, and in turn, rodent-eating snakes.

Anti-venom sera used in treating snake bites are maintained at many hospitals, clinics and primary health centres in areas where such incidents are common (e.g. farms and oil-palm estates). In the event of a venomous snake bite, the patient needs to be kept calm and warm, and taken to a hospital as quickly as possible. The region around the bite should be immobilised with a stiff cloth bandage (not a tight tourniquet). Some description or photograph of the snake in question will help medical staff provide appropriate treatment, as the neurotoxic venom of cobras, kraits and coral snakes acts differently from the haemotoxic venom of vipers. It is not advisable to cut or suck a bite, as these actions are

likely to complicate the treatment as well as the subsequent healing process. Finally, remember that anti-venom serum is the only proven cure for a snake bite.

ABOUT THIS BOOK

This book deals with representative species of snakes the average visitor to, or resident of, South-East Asia is likely to encounter. A number of the species are, nonetheless, rare, and are perhaps being illustrated here for the first time in a printed work of this sort. The aim of the volume is to aid rapid field identification – useful for biodiversity surveys, necessary for conservation and management, or simply enjoyable for anyone interested in fauna. The cut-off date for the checklist in this work was 31 December 2011.

For each species covered, the heading provides the following details: a common English name (the majority of which are from published sources); the current scientific name; the maximum total length attained; and, where they exist, vernacular and 'book' names (names applied by herpetologists to particular species in published works, which may not necessarily be used by indigenous people of a certain region) in some of the local languages (including Chinese languages, Dusun, Iban, Bahasa Malaysia/Brunei/Indonesia, Kelabit, Sundanese and Thai). In the species descriptions, the following information is given: colours and morphological characters used to aid field identification; distributional range within the area covered by this work, and notes on occurrence in extralimital areas; and brief notes on habits and behaviour, including habitat associations, elevational range, diet and reproduction, when known. The conservation status of each species according to the 2011 IUCN Red List of Threatened Species, Red List Categories, Version 2011.2 (www.iucnredlist.org), is given in the Checklist of South-East Asian Snakes (p. 00).

Abbreviations

asl	above sea-level
c.	circa
cm	centimetre
E	east
IUCN	International Union for Conservation of Nature and Natural Resources
m	metre
mm	millimetre
N	north
S	south
W	west

GLOSSARY

Anal Relating to anus; scale covering anus.
Anal plate Terminal ventral scale or scute.
Annulus (pl. annuli) Ring-like structure or markings.
Anterior Toward front of body; opposite of posterior.
Arboreal Living in trees.
Autotomy Spontaneous or reflexive separation of a body part (typically, a tail).
Canthals Scales of canthal ridge.
Canthus (pl. canthi) Corner of eye.
Canthus rostralis Ridge extending from eye to tip of snout.
Caudal Toward, or relating to, tail.
Chevron V-shaped mark.
Cloaca Chamber into which intestinal, urinary and reproductive ducts discharge contents.
Clutch Entire compliment of eggs or neonates from a single female.
Concave Bent inwards, rounded.
Conical scales Cone-shaped scales.
Convex Bent outwards, rounded.
Crenate Having a scalloped edge.
Crenulate Minutely crenate.
Crests Ridges on head, composed of highly modified scales or skin.
Cryptic Camouflaged or hidden.
Cuneate Triangular scale lying between two labials.
Denticulate Tooth-like.
Dimorphism Difference in morphology between members of the same species.
Distal Further from centre of body.
Diurnal Active during the day.
Dorsal Toward upper surface of the body; scale in this area.
Dorsal crest Ridge of highly modified (often conical) scales along back.
Dorsum Back, or dorsal surface, of body.
Emarginate Indented.
Excrescence Outgrowth of skin.
Fang Recurved, elongate teeth on upper jaw, through which venom passes.
Frontal Scale located between eyes.
Furrow Well-defined groove.
Granular scales Small, convex, non-overlapping scales, typically with a pebbly appearance.
Gular Pertaining to, or located on, throat; also refers to scale on throat.
Gular crest Ridge of modified scales along ventral surface of throat and chin.
Gular fold Transverse fold of skin across throat.
Hood Expanded skin behind head, especially in cobras.
Imbricate With regularly arranged, overlapping edges, like tiles on a roof.
Infralabial Lower labial area; scale in this area.
Internasal Scale, or usually paired scales, surrounding nostrils.

Interstitial Skin between adjacent scales.
Iridescent Rainbow-like sheen on surface of very smooth scales.
Juvenile Young or sexually immature individual.
Keel Raised ridge down back, tail or scale.
Knob Rounded protuberance.
Labial Pertaining to lip; scale in the labial area.
Larynx Structure of muscle and cartilage at upper end of trachea.
Lateral Pertaining to side of body.
Loreal Scale on side of head, between nasals and pre-oculars.
Lumbar Pertaining to lower back.
Maxillary teeth Teeth on maxillary bones in upper jaws.
Medial Pertaining to midline of body.
Mental Single scale at anterior border of lower jaw.
Mental groove Deep sulcus on midline between chin shields.
Nare Nostril.
Nasal Scales on sides of head that contain opening of nares.
Nasal glands Glands in nostrils that secrete excess salt.
Notch Sharp V-shaped indentation.
Nuchal Relating to the back of the neck.
Nuchal venom gland Integumental glands in paravertebral region of neck of several species of snakes.
Ocellate With eye-like markings.
Occipital Toward back of head; scale in occipital area.
Occipital spines Spiny projections extending from occipital region of head.
Orbital Relating to eye socket.
Oviparity Reproduction through production of eggs that have membranes and/or shells.
Ovoviviparity Reproduction through production of live young that hatch from eggs within female oviducts.
Palatine Long bone that makes up a hard palate parallel to skull axis.
Papillae Small nipple-like projections.
Paravertebral stripe Stripe on one side of midline of dorsum.
Parietal Head scale behind frontal.
Parthenogenesis Form of asexual reproduction involving development of embryos without fertilisation.
Post-anal Enlarged scale behind cloaca.
Posterior Toward rear of body; opposite of anterior.
Post-labial Scale behind labial.
Post-mental Scale behind mental along line of chin.
Post-nasal Scale behind nasals and anterior to loreal.
Post-ocular Behind eye.
Pre-cloacal pore extension of femoral pore series onto body
Prefrontal Scale anterior to frontal.
Prehensile Able to grasp objects.

■ GLOSSARY ■

Pre-maxilla Pair of small cranial bones at tip of upper jaw.

Pre-ocular Anterior to eye.

Pterygoid Bone connecting palatine bones with point of suspension of lower jaw.

Reticulation Colour pattern resembling mesh of a net.

Rostral Scale at tip of snout, bordering mouth.

Rugose Wrinkly or warty.

Scalation Pattern of scales on body or on a specific part of body.

Scute Enlarged scale.

Serrated With a saw-like appearance.

Sexual dimorphism Condition in which males and females have distinctly different forms.

Snout-vent length Measurement between snout tip and vent.

Spatulate Shaped like a spatula, flat and rounded at the tip.

Spicule Tiny pointed structure.

Spinose Sharp, pointed shape like a thorn.

Spur Sharp, spinous appendage.

Squamation Scale arrangement.

Subcaudal Scales beneath tail.

Sub-fossorial Habit of living under a substrate, such as in leaf litter, under fallen objects, etc.

Sub-ocular Beneath eye.

Superciliary Small scale bordering orbit.

Supralabial Upper labial scale.

Supranasal Scales above nasal.

Supra-ocular Above eye; scale above eye.

Supra-orbital Narrow bone forming a ridge a ridge above orbit of eye.

Suture Seam or boundary between scales or scutes.

Temporal Scale behind post-ocular.

Total length Measurement between snout tip and tail tip.

Transverse Cross-wise or diagonal.

Tubercular scales Small knob-like scales.

Tympanum Eardrum.

Venom Substance capable of producing toxic reaction when introduced into tissue.

Venter Entire undersurface or abdomen.

Ventral Toward belly or underside; scale in this area.

Ventrum Underside of body.

Vertebrales Mid-dorsal row of scales.

■ WART SNAKES ■

ACROCHORDIDAE – WART SNAKES

This family includes three species worldwide, two of them in the region. They are recognisable in showing heavy bodies; loose, folded skin with rough, granular scales and bristle-tipped tubercles; valvular nostrils; eyes positioned on top of the head; and a flap for closing the lingual opening of mouth – all adaptations for a highly aquatic mode of life. They inhabit fresh waters and sea coasts, and are nocturnal, secreting themselves beneath fallen logs and other debris underwater, and emerging to hunt crabs, fish and other snakes at night. Large-growing species are harvested for their durable skins and also for their flesh, while at other localities they are killed by fishermen on account of their fish diet.

Wart Snake ■ *Acrochordus granulatus* 100cm

(Bahasa Malaysia: Ular Kadut. Bahasa Indonesia: Ular Air Tawar Kecil. Iban: Ular Paiie. Thai: Ngu Pai-ki-reu)

DESCRIPTION

Top of body is olive, blue or blackish grey, and is marked with distinct transverse cream bands, especially in juveniles, that may sometimes persist in adults. Body is stout but compressed; head is indistinct from neck, and covered with small juxtaposed scales; eyes are



tiny with a vertical pupil; mid-body scale is largest on vertebral region; tail is short and prehensile; a distinct fold of skin is present along middle of belly.

DISTRIBUTION Myanmar, Thailand, Peninsular Malaysia, Sumatra, Borneo, Java.

Extralimittally: from Indian sub-continent to South-East Asia, New Guinea and Australia.

HABITS AND HABITAT Coastal regions, such as estuaries, mangroves and sea coasts. Diet includes crabs, eels, burrowing gobies and other snakes. Ovoviviparous, producing 6–12 neonates (360–400mm)).



Elephant Trunk Snake ■ *Acrochordus javanicus* 200cm
(Bahasa Malaysia/Indonesia: Ular Belalai Gajah. Hakka Chinese: Nai She. Iban Ular Pai. Thai: Ngu Nguang-chang)

DESCRIPTION Top of body is greyish black, the head with darker lines; 2 diffuse longitudinal stripes and elongated dark blotches are present on flanks; belly is cream. Compared to its relative, the Wart Snake (above), body is extremely stout and slightly compressed; head is indistinct from neck; forehead scales are small and rough; eyes are small with a vertical pupil; dorsals are keeled; mid-body scale rows are largest around vertebrals; tail is short but prehensile.

DISTRIBUTION Thailand, Peninsular Malaysia, Singapore, Sumatra, Borneo, Java. Extralimittally: Cambodia, Vietnam.

HABITS AND HABITAT Freshwater wetlands, including peat swamps and black-water rivers, plus ditches and canals. Diet comprises fish, including eels and catfish. Ovoviviparous, producing 6–48 neonates (290–460mm)).

ANOMOCHILIDAE – GIANT BLIND SNAKES

This family of burrowing snakes is restricted to Sundaland, and is represented by three species, all with sub-cylindrical bodies. They lack a chin groove, and lack teeth on the pterygoid and palatine bones. Poorly known, they inhabit lowland and montane forests, and are at least superficially similar to the Asian pipesnakes (Cylindrophiiidae).

Kinabalu Giant Blind Snake ■ *Anomochilus monticola* 52.1cm
(Bahasa Malaysia/Bahasa Indonesia: Ular Tanah)

DESCRIPTION Top of body is blue-black, and lacks pale lateral lines and large pale blotches on either side of vertebral region; has a transverse yellow bar across snout; has a series of isolated pale yellow scales on flanks; belly is dark brown. Body is stout, being rounded in cross section; head is small and indistinct from neck; forehead is covered with large scales; eyes are small; tail is short and conical; dorsals are smooth, and slightly larger than ventrals at same level.

DISTRIBUTION Gunung Kinabalu, Sabah, Borneo.

HABITS AND HABITAT Sub-montane forests (1,450m asl). Edges of water bodies and in human-modified areas.

Diet includes arthropods. Reproductive habits are unknown.



PYTHONIDAE – PYTHONS

This family includes the largest snakes in the region, one species reaching 10m in total length. Famous in literature and legend, the pythons are swallowers of small and mid-sized mammalian prey, with at least two species reaching sizes large enough to subdue and swallow adult humans, although such instances are rare. Pythons show teeth on their pre-maxilla, and also have supra-orbital bones on the dorsal margin of orbit. In addition, they have rows of heat-sensing labial organs and vestigial pelvic and hind limb bones (visible as paired spurs on each side of the cloaca). All snakes in this family are egg-layers. Their global distribution covers the Old World tropics and subtropics, from Africa, through Asia and the archipelagos of Australasia, to Australia.

Reticulated Python ■ *Broghammerus reticulatus* >1,000cm

(Mandarin Chinese: Mang Seh. Hakka Chinese: Kim Seh. Bahasa Brunei: Ular Penalan. Bahasa Malaysia: Ular Sawa Batik, Ular Sawa Cindai. Bahasa Indonesia: Ular Sanca Batik, Ular Saab. Iban: Ular Sawah. Thai: Ngu Leuam)

DESCRIPTION Top of body is yellow or brown, with dark, rhomboidal markings; a black median line runs from snout to nape; an oblique line runs from posterior of eye to corner of mouth; belly is yellow with small brown spots. Body is relatively elongated and slender, except in large individuals; head is distinct from neck; some infralabials are equipped with pits; eyes are small with a vertical pupil; cloacal spurs are present in both sexes.

DISTRIBUTION Myanmar; Thailand; Peninsular Malaysia; Singapore; Sumatra; Pulau Bangka; Pulau Belitung; Pulau Weh; Pulau Enggano; Pulau Nias; Mentawai, Natuna and Riau archipelagos; Borneo; Java; Bali. Extraliminally: Laos, Cambodia, Vietnam, Nicobar Islands, Ambon, Anambas Archipelago, Babi, Batjan, Banda Besar, Bankak, Boano, Buru, Butung, Flores, Halmahera, Haruku, Lang, Lombok, Obira, Saparua, Seram, Sula Archipelago, Sulawesi, Sumba, Sumbawa, Tanimbar, Ternate, Timor and Verlate, Basilan, Bohol, Calamian Islands, Cebu, Leyte, Luzon, Mindanao, Mindoro, Negros, Palawan, Panay, Polillo, Samar, Tawi-Tawi, Sulu Archipelago.

HABITS AND HABITAT Its natural habitat is forests, especially at the water's edge, where it waits in ambush for deer and pigs; may now also be common in cities and towns, where it inhabits sewers. Mostly found on the ground or in water, but can climb trees, and mostly active at night. Diet comprises warm-blooded animals, such mammals and birds, although lizards may also be eaten; occasional reports of attacks on humans. Oviparous, producing clutches of 14–124 eggs (90–93 × 58–62mm).



South-East Asian Rock Python ■ *Python bivittatus* 574cm

(Bahasa Malaysia: Ular Sawa. Bahasa Indonesia: Ular Sanca Kembang. Thai: Ngu Lam)

DESCRIPTION Top of body is dark brown or yellowish grey, with a series of 30–40 large, irregular squarish, black-edged, dark chocolate-grey patches on top and sides of body; has dark and dark grey dorsal and lateral spots; has a sub-ocular stripe; belly is grey with dark spots on outer scale rows. Body is thick and cylindrical; head is lance-shaped, and distinct from neck; sensory pits are present in rostral scale and on some supralabials and infralabials; spurs are small; tail is short and prehensile; cloacal spurs are present.

DISTRIBUTION Myanmar, Thailand, Java, possibly N Peninsular Malaysia. Extraliminally: Laos, Cambodia, Vietnam, E India, Bangladesh, Nepal, S China, Sulawesi, Sumbawa. Introduced to SE USA.

HABITS AND HABITAT Dry seasonal forests; sometimes found in towns and villages. Eats warm-blooded prey, such as monkeys, goats and calves. Oviparous, producing clutches of 30–58 eggs (120 × 60mm).



Bornean Short Python ■ *Python breitensteini* >200cm

(Bahasa Malaysia/Indonesia: Ular Sawa Darah. Iban: Ular Ripong)

DESCRIPTION Top of body is pale yellow or tan, with dark sub-rectangular blotches about as wide as body, becoming darker towards tail, or with a fully dark top that turns black posteriorly; scattered pale spots are present on vertebral region, and are more numerous at back of body, where they are elongate and form a vertebral stripe; flanks have smaller dark-edged grey spots or wavy bands that arise halfway up; forehead is pale yellow or grey, with a black stripe evident between internasals and occipital, fusing with dark pattern on neck; sides of head are darker than forehead, with dark flecks and a broad dark post-ocular stripe; a pale post-ocular stripe runs to angle of jaws; chin and belly are plain cream, sometimes with brown spots. Body is short and robust; head is elongate, flattened and distinct from neck; eyes are small with a vertical pupil; vertebral region is ridged; some infralabials have weak pits; tail is short; cloacal spurs are present.

DISTRIBUTION Borneo.

HABITS AND HABITAT Lowland rainforests, peat swamps and heath forests, up to sub-montane limits (<1,000m asl). Edges of rivers, swamps and marshes. Diet includes small mammals and birds. Oviparous, clutches comprising 12 eggs (size unknown).



Brongersma's Short Python ■ *Python brongersmai* 260cm
(Thai: Ngu Lam Pak Ped)

DESCRIPTION Top of body is red, reddish brown, charcoal-grey, pale grey or brown; an indistinct narrow, dark stripe is present along middle of forehead; supralabials are dark; a pale, narrow post-ocular stripe extends to angle of jaws; dorsal pattern comprises vertebral spots; dark blotches on flanks are rounded and set within paler areas; belly is anteriorly

cream and posteriorly dark, with grey smudges and blotches. Body is short and robust; head is elongate, flat and distinct from neck; vertebral region is ridged; tail is short; cloacal spurs are present.

DISTRIBUTION Thailand, Peninsular Malaysia, Singapore, Sumatra, Pulau Bangka, Mentawai Archipelago. Extralimitally: Laos, Cambodia, Vietnam.

HABITS AND HABITAT Lowland forests, at edges of streams (<1,330m asl). Diet includes small mammals and birds. Oviparous, laying clutches of 10–15 eggs (size unknown).



Sumatran Short Python ■ *Python curtus* >200cm
(Bahasa Indonesia: Ular Sawa)

DESCRIPTION Top of body is brownish grey, with a series of longitudinal dark, irregular sub-rectangular blotches, sometimes as broad as body; flanks have a longitudinal series of large blotches with black edges; sides of snout have dark stripes; post-ocular pattern comprises black triangular blotches, widening to 4–6 scales at angle of jaws and coalescing with anterior labial blotch of neck; has a pale post-ocular stripe with dark smudges; chin and belly are plain cream or white. Body is short and robust; head is elongate, flat and distinct from neck; vertebral region is ridged; tail is short; cloacal spurs are present.

DISTRIBUTION Sumatra.

HABITS AND HABITAT Lowland forests, up to sub-montane limits (c. 1,800m asl). Streams and forest floor. Diet comprises small mammals and possibly also birds. Oviparous, clutches comprising 10–12 eggs (size unknown).



COLUBRIDAE – 'TYPICAL' SNAKES

The majority of snakes in South-East Asia belong to this family, which until recently also included the water snakes, slug-eating snakes and several other groups, now reassigned. They can be told apart by their large forehead scales, solid (not grooved) maxillary teeth, laterally placed nostrils and well-developed ventral scales. They may be either oviparous or ovoviviparous, and are also found beyond South-East Asia, in temperate, subtropical and tropical parts of the world.



Speckle-headed Vine Snake ■ *Ahaetulla fasciolata* 169cm
(Iban: Ular Bunga Merisian. Thai: Ngu Kieo Hua Lai Kra)

DESCRIPTION Top of body is light brown, grey or pinkish tan, with numerous narrow, oblique, dark bands on anterior of body; forehead has elongated or curved dark markings; belly is dark grey. Body is slender; snout is long, ending in a curled rostral scale; eyes are large with a horizontal pupil; tail is long, with a prehensile tip; vertebrae are enlarged; dorsals are smooth.

DISTRIBUTION Thailand, Peninsular Malaysia, Singapore, Sumatra, Natuna and Riau archipelagos, Borneo.

HABITS AND HABITAT Forested and semi-urban habitats (<900m asl). Arboreal, in thick undergrowth and other low vegetation. Diet includes lizards and frogs. Ovoviviparous (numbers and size of neonates unknown).



River Vine Snake

■ *Ahaetulla fronticincta* 98cm

DESCRIPTION Top of body is either bright green or brownish yellow, with black and white interstitial skin, forming oblique lines; belly is pale green or olive; has a white streak along lower flanks; forehead is with or without black spots. Body is slender; snout is long; eyes are large with a horizontal pupil; tail is long, with a prehensile tip; dorsals are smooth.

DISTRIBUTION Myanmar.

HABITS AND HABITAT Edges of creek and river mouths, near mangroves. Arboreal, in thick undergrowth and other low vegetation. Diet comprises surface-feeding fish. Ovoviviparous, producing clutches of 7 neonates (size unknown).



Malayan Vine Snake ■ *Ahaetulla mycterizans* 92cm

(Bahasa Malaysia: Ular Cemeti Hijau. Thai: Ngu Kieo Hua Ching-chok)

DESCRIPTION Top of body is bright green, greyish green or brown; in green morph, belly is white with paired longitudinal green lines and, sometimes, a green line along middle.

Body is slender; snout is elongated; groove is present along snout; eyes are large with a horizontal pupil; tail is long, with a prehensile tip; dorsals are smooth.

DISTRIBUTION

Thailand, Peninsular Malaysia, Sumatra, Java.

HABITS AND HABITAT Lowland forests (<500m asl). Arboreal, in thick undergrowth and other low vegetation.

Diet comprises lizards and birds.

Reproductive habits are unstudied.



Indian Vine Snake ■ *Ahaetulla nasuta* 200cm

(Thai: Ngu Kieo Pak Nab)

DESCRIPTION Top of body is bright green or, less often, olive-brown, with a longitudinal yellowish line along outer margin of ventrals; belly is pale green; iris is yellow. Body is elongate and slender; snout is long, with a rostral appendage; a groove is present in front of eyes; supra-ocular is divided horizontally; eyes are large with a horizontal pupil; tail is long, with a prehensile tip; dorsals are smooth; anal is divided.

DISTRIBUTION Myanmar, Thailand. Extralimitally: India, Bangladesh, Bhutan, Nepal, Sri Lanka, Laos, Cambodia, Vietnam.

HABITS AND HABITAT Lightly forested habitats, including gardens, frequenting trees and bushes (<1,800m asl). Arboreal, in thick undergrowth and other low vegetation. Diet comprises tadpoles, lizards, birds and small mammals. Ovoviviparous, producing 3–23 neonates (200–440mm).



Oriental Vine Snake ■ *Ahaetulla prasina* 197cm

(Bahasa Malaysia: Ular Pucuk. Bahasa Brunei: Ular Daun, Ular Kunyet. Bahasa Indonesia: Ular Pucuk. Iban: Ular Bungai, Puchok Pisang. Kelabit: Selangoi Bata. Sundanese: Oraj Gadung. Thai: Ngu Kieo Hua Ching-chok Pa)

DESCRIPTION Top of body is usually green, but may also be brown, yellow, dark grey or golden yellow, speckled with black; a yellow stripe runs along lower flanks; belly is light green or dark grey. Body is slender; snout is elongated, with a groove running along it; eyes are large with a horizontal pupil; tail is long, with a prehensile tip; dorsals are smooth; anal is divided.

DISTRIBUTION Myanmar; Thailand; Peninsular Malaysia; Singapore; Sumatra; Mentawai, Riau and Natuna archipelagos; Pulau Bangka; Pulau Belitung; Pulau Sibutu; Borneo; Java; Bali. Extralimitally: Bhutan, E India, Bangladesh, Laos, Cambodia, Vietnam, China, Sulu Archipelago.

HABITS AND HABITAT Edges of forests and gardens (<2,100m asl). Arboreal, in thick undergrowth and other low vegetation. Diet comprises lizards and birds. Ovoviviparous, producing 4–10 neonates (240–490mm).



Dice-like Trinket Snake ■ *Archelaphe bella* 80cm

DESCRIPTION Top of body is brown or greyish brown, with brown saddle-shaped blotches or with transverse or oblique cross-bars; forehead is pale yellow to yellowish brown, with black Y-shaped mark or lighter streak edged with black; labials are dark-edged; belly is yellow with irregular large black blotches on each ventral. Body is slender; head is indistinct from neck; snout is rounded; eyes are small with a vertical pupil; dorsals are smooth; tail is short; anal is divided.

DISTRIBUTION Myanmar. Extralimitally: Vietnam (reports from NE India are as yet unverified). **HABITS AND HABITAT** Sub-montane and montane forests (1,500–2,000m asl). Diet and reproductive biology are unstudied.



Iridescent Snake

■ *Blythia reticulata* 51.4cm

DESCRIPTION Top of body is olive to dark, and highly iridescent; scales are sometimes light-speckled or light-bordered; juveniles show a yellowish-cream collar and a gap on the dark vertebral line; ventrals are grey with a pale posterior edge. Body is slender and elongate; head is barely distinct from neck; eyes are



moderate in size with a rounded or vertical pupil; dorsals are smooth and glossy, and lack apical pits; tail is short, with an acute tip; anal is divided.

DISTRIBUTION Myanmar. Extralimitally: E India.

HABITS AND HABITAT Wet evergreen forests (<1,040m asl). Sub-fossorial, under fallen logs and litter. Diet includes earthworms and, probably, soil arthropods. Oviparous, clutches comprising 6 eggs (size unknown).

Green Cat Snake ■ *Boiga cyanea* 187cm

(Thai: Ngu Kieo Bon)

DESCRIPTION Top of body is emerald-green in adults, and reddish brown or olive with a green forehead in juveniles; interstitial skin is black; gular region is sky-blue; belly is greenish white or greenish yellow, plain or spotted with dark green; iris is brownish grey. Body is slender, elongate and laterally compressed; head is large and distinct from neck; eyes are large with a vertical pupil; vertebral region has a low ridge; vertebral scale rows are enlarged; scales are smooth, with apical pits; anal is entire.

DISTRIBUTION Myanmar, Thailand, Peninsular Malaysia. Extralimitally: Bangladesh, Bhutan, Nepal, E India, Nicobar Islands, S China, Laos, Cambodia, Vietnam.

HABITS AND HABITAT Forests and disturbed habitats (150–2,100m asl). Arboreal, on trees and in undergrowth. Diet comprises frogs, birds and their eggs, lizards, snakes and small mammals. Oviparous, laying clutches of 4–10 eggs (40–48 × 15–21mm).



Dog-toothed Cat Snake ■ *Boiga cynodon* 280cm

(Bahasa Malaysia: Ular Telor. Bahasa Indonesia: Ular Kucing Bergigi Panjang. Iban: Ular Blidah, Ular Kengkang Mas. Thai: Ngu Sae Hang-ma)

DESCRIPTION Top of body is brownish tan or yellowish brown, with dark brown or reddish-brown bands that darken posteriorly; juveniles are paler than adults; a dark post-ocular stripe is present. Body is slender, elongate and laterally compressed; head is distinct from neck; snout is short and rounded; eyes are large with a vertical pupil; vertebrals are distinctly enlarged; dorsals are smooth; anal is entire.

DISTRIBUTION Thailand, Peninsular Malaysia, Singapore, Sumatra, Pulau Nias, Pulau Belitung, Pulau Bangka, Mentawai Archipelago, Borneo, Java, Bali.

Extralimitally: Lesser Sunda Islands, Philippines.

HABITS AND HABITAT Lowland forests and forest edges, occasionally human settlements. Arboreal, on trees and in dense undergrowth. Diet includes lizards, birds and their eggs, and small mammals. Oviparous, laying 6–23 eggs (size unknown).



Mangrove Cat Snake ■ *Boiga dendrophila* 250cm

(Bahasa Malaysia/Indonesia: Ular Bakau, Ular Taliwangsa. Iban: Ular Bangkit, Ular Chinchin Mas. Sundanese: Oraj Taliwangsa. Thai: Ngu Plong-tong)

DESCRIPTION Top of body is black, with 35–45 narrow yellow transverse rings on body and 10 on tail; labials and gular region are yellow; belly is grey. Body is large, robust and compressed; head is distinct from neck; snout is short and rounded; eyes are large with a vertical pupil; dorsals are smooth; anal is entire.

DISTRIBUTION Thailand, Peninsular Malaysia, Singapore, Sumatra, Pulau Belitung and Batu Archipelago, Pulau Nias, Borneo, Java, Bali. Extralimitally: Cambodia, Vietnam, islands of the Philippines and central Indonesia.

HABITS AND HABITAT Mangroves and peat swamps, lowland mixed dipterocarp forests and edges of human settlements. Arboreal, on trees and in dense undergrowth. Diet comprises birds, and their eggs and nestlings, as well as frogs, lizards, other snakes, mouse deer and tree shrews. Oviparous, laying 4–15 eggs (45.5–51 × 24.5–25mm).



White-spotted Cat Snake ■ *Boiga drapiezii* 210cm

(Thai: Ngu Dong-ka Tong)

DESCRIPTION Top of body is variable, ranging from olive-grey to reddish brown; vertebral region is marked with paired pink spots anteriorly, these sometimes fused to form a line; pink or cream spots are also present on flanks; forehead has dark speckling. Body is relatively long and rather slender; head is distinct from neck; eye are large with a vertical pupil; vertebrals are enlarged; dorsals are smooth; anal is entire.



DISTRIBUTION Thailand, Peninsular Malaysia, Singapore, Sumatra, Pulau Bangka, Mentawai Archipelago, Borneo. Extralimitally: Vietnam, central islands of Indonesia and the Philippines.

HABITS AND HABITAT Lowland forests and mid-hills (<1,000m asl). Arboreal, on lower strata of trees and shrubs. Diet includes birds and their eggs, frogs, lizards and large insects. Oviparous, laying eggs (number and size unknown) in termite-infested wood.

Jasper Cat Snake ■ *Boiga jaspidea* 150cm

(Iban: Ular Banjang. Thai: Ngu Kra)

DESCRIPTION Top of body is brown, reddish brown or grey-brown, with paired rows of dark spots or bars on flanks and a greyish-red vertebral stripe. Body is slender and laterally compressed; head is large, distinct from neck; eyes are large with a vertical pupil; vertebrals are enlarged; dorsals are smooth; anal is enlarged.

DISTRIBUTION Thailand, Peninsular Malaysia, Singapore, Sumatra, Pulau Nias, Mentawai Archipelago, Pulau Bangka, Borneo, Java. Extralimitally: Vietnam.

HABITS AND HABITAT Lowland forests and peat swamps (<1,524m asl). Arboreal, on trees and in dense undergrowth. Diet includes lizards, small mammals, birds and their eggs, and other snakes. Oviparous, laying 6 eggs (38–39 × 18–19mm) in nests of tree-dwelling termites.



Many-spotted Cat Snake ■ *Boiga multomaculata* 187cm

(Bahasa Indonesia: Ular Kucing Loreng. Thai: Ngu Me-ta-ngao Rang-nok)

DESCRIPTION Top of body is grey-brown; 2 black-edged brown lines run from snout to back of head; a series of irregular brown blotches is present on dorsum, plus smaller brown marks on flanks; belly is greyish brown with small brown spots. Body is slender and laterally compressed; head is large and distinct from neck; eyes are large with a vertical pupil; dorsals are smooth; anal is entire.

DISTRIBUTION Myanmar, Thailand. Extralimittally: E India, Bangladesh, E China, Laos, Cambodia, Vietnam.

HABITS AND HABITAT Lowlands and sub-montane forests (<1,500m asl). Arboreal, in short trees, bushes and bamboo groves. Diet includes birds and lizards. Oviparous, laying clutches of 4–8 eggs (26–32 × 11–12mm).



Black-headed Cat Snake ■ *Boiga nigriceps* 200cm

(Iban: Ular Banjang. Thai: Ngu Tong-fi)

DESCRIPTION Top of body is straw-brown, olive-brown or reddish brown; forehead is often darker, as is tail; labials are cream or yellow; belly is cream, darkening posteriorly. Body is robust and laterally compressed; head is large and distinct from neck; eyes are large with a vertical pupil; dorsals are smooth; anal is entire. **DISTRIBUTION** Thailand, Peninsular Malaysia, Sumatra, Pulau Nias, Pulau Simeulue, Borneo, Java, Mentawai Archipelago.

HABITS AND HABITAT Lowland forests (<800m asl). Arboreal, on trees and in undergrowth. Diet includes birds and other snakes. Oviparous, producing 3 eggs (48 × 17mm).



Tawny Cat Snake

■ *Boiga ochracea* 110cm

DESCRIPTION Top of body is reddish brown, ochre or coral-red, plain or with a poorly defined dark transverse line; a dark post-ocular streak extends to angle of jaws; labials are yellow or cream; belly is yellow anteriorly, light grey posteriorly. Body is slender; head is large and distinct from neck; eyes are large with a vertical pupil; dorsals are smooth with apical pits; vertebral scale row is greatly enlarged; subcaudals are paired; anal is entire.

DISTRIBUTION Myanmar, Thailand. Extralimittally: Bangladesh, Bhutan, E India, Nepal. **HABITS AND HABITAT** Forested mid-hills and sub-montane limits, as well as parks and gardens (350–1,400m asl). Arboreal, on bushes and in other undergrowth. Diet comprises birds and their eggs, mammals and lizards. Oviparous (number and size of eggs unknown).



Assamese Cat Snake ■ *Boiga quincunciata* 155cm

DESCRIPTION Top of body is yellow or greyish brown, finely speckled with dark brown; a vertebral series of dark brown or black spots or blotches is present, each marking 5–8 scales wide, and the scales are edged with white; flanks are speckled or spotted with brown; nape has 3 longitudinal stripes; forehead is brown, with white-edged black frontal and parietal scales; a black post-ocular stripe runs to angle of jaws; belly is yellowish white, intensively speckled with brown. Body is slender and elongate; head is distinct from neck; eyes are large with a vertical pupil; dorsals are smooth; vertebrals are enlarged. **DISTRIBUTION** Myanmar.

Extralimittally: E India. **HABITS AND HABITAT** Wet evergreen forests. Arboreal, on undergrowth, especially bamboo. Diet and reproductive habits are unstudied.



■ 'TYPICAL' SNAKES ■



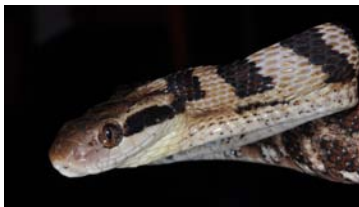
Thai Cat Snake ■ *Boiga siamensis* 170cm
(Thai: Ngu Sae Hang-ma Tao)

DESCRIPTION Top of body is light brown, with 87–98 V-shaped dark brown bands, more distinct anteriorly; posteriorly, bands are bar-shaped with little posterior extension; scales are flecked with white, those comprising dark bands light at posterior tips; flanks have alternating dark and light spots; belly is light brown; forehead is mid-brown; dark streak runs from posterior margin of eye to beyond last supralabial; 2 black stripes extend on either side of vertebral row to 1st dark band and are continuous with it; belly is yellowish brown or greyish brown. Body is slender, elongated and laterally

compressed; head is distinct from neck; eyes are large with a vertical pupil; dorsals are smooth; anal is entire.

DISTRIBUTION Myanmar, Thailand.
Extralimitally: E India, Bangladesh, Laos, Cambodia, Vietnam.

HABITS AND HABITAT Lowland and sub-montane evergreen forests (<1,780m asl). Arboreal, on trees as high as c. 6m. Diet comprises small rodents, and birds and their eggs. Reproductive habits are unstudied.



Bicoloured Reed Snake ■ *Calamaria bicolor* 45cm

DESCRIPTION Top of body is blue-black or dark brown, unpatterned or with dark cross-bands; forehead is dark brown, sometimes with 2 oblique dark bands crossing yellow labials; belly is typically plain yellow or spotted with black. Body is slender and cylindrical; head

is short and indistinct from neck; nasals point forward; eyes are small with a rounded pupil; tail is thick, tapering from base; dorsals are smooth; anal is entire.

DISTRIBUTION Borneo, Java.

HABITS AND HABITAT Forests in mid-hills (<1,200m asl). Terrestrial. Diet and reproductive habits are unstudied.



■ 'TYPICAL' SNAKES ■



Bornean Reed Snake ■ *Calamaria borneensis* 37.4cm

DESCRIPTION Top of body is greyish brown, each scale pale with dark reticulation; scattered dark spots or stripes on scales on mid-dorsum; 1st scale row is yellow, sometimes with dark cross-bars; head is greyish brown with indistinct dark spots; has 1–3 yellow caudal rings; belly has a dark stripe along ventral edges, or a chequered pattern of yellow and black. Body is slender and cylindrical; head is short and indistinct from neck; eyes are small with a rounded pupil; tail is short; dorsals are smooth; anal is entire.

DISTRIBUTION Borneo.

HABITS AND HABITAT Lowlands and sub-montane regions. Diet and reproductive biology are unstudied.

Grabowsky's Reed Snake ■ *Calamaria grabowskyi* 47cm

DESCRIPTION Top of body is dark brown, each scale with a darker network; scattered dark brown or yellow spots are present on back; lateral bands are composed of elongated dark spots; labials are yellow; belly is plain yellow or with varying amounts of dark pigmentation; subcaudals are yellow with a dark median band. Body is slender and cylindrical; head is short and slightly distinct from neck; eyes are small with a rounded pupil; tail is long, tapering to a blunt tip; dorsals are smooth; anal is entire.

DISTRIBUTION Borneo.

HABITS AND HABITAT Sub-montane forests (1,000–1,400m asl). In leaf litter. Diet and reproductive biology are unstudied.



■ 'TYPICAL' SNAKES ■

Lined Reed Snake

■ *Calamaria griswoldi* 49cm

DESCRIPTION Top of body is dark brown, with blackish-brown and yellow stripes; forehead is dark brown; lower portions of supralabials are yellow; an oblique pale bar extends from parietals to gular region; ventrals are plain yellow; subcaudals are yellow with an indistinct medial zigzag mark. Body is slender and cylindrical; head is short and indistinct from neck; eyes are small with a rounded pupil; tail is short, tapering to a sharp point; dorsals are smooth; anal is entire.

DISTRIBUTION Borneo.

HABITS AND HABITAT Sub-montane forests (1,200–1,800m asl). In leaf litter. Diet and reproductive habits are unstudied.



Low's Reed Snake ■ *Calamaria lovii* 32cm

DESCRIPTION Top of body is dark brown with yellow spots or, sometimes, narrow, light stripes; has a complete yellow ring around vent; forehead is dark brown with indistinct light markings; belly is cream anteriorly; posterior ventrals are dark brown or yellow with irregular squarish black blotches; subcaudals are paired. Body is slender and cylindrical; head is short and indistinct from neck; eyes are small with a rounded pupil; tail is short and thick, tapering abruptly; dorsals are smooth; anal is entire.

DISTRIBUTION Thailand, Peninsular Malaysia, Borneo, Java. Extralimittally: Vietnam.

HABITS AND HABITAT Forested lowlands and mid-hills (<c. 750m asl). Terrestrial, in leaf litter. Diet and reproductive habits are unstudied.



■ 'TYPICAL' SNAKES ■

Variable Reed Snake ■ *Calamaria lumbricoidea* 64cm

(Thai: Ngu Pong-oa Lak Lai)

DESCRIPTION Top of body is black with narrow cream or yellow rings; forehead is red or pink in juveniles, turning dark or even black in older snakes; belly is yellow with black ventral scales that form bands. Body is moderately robust and cylindrical; head is short, indistinct from neck; eye small with a rounded pupil; tail is short and thick, tapering abruptly to a narrow point; dorsals are smooth; anal is entire.

DISTRIBUTION Thailand, Peninsular Malaysia, Singapore, Sumatra, Pulau Nias, Mentawai Archipelago, Borneo, Java. Extralimittally: Mindanao, Basilan, Leyte.

HABITS AND HABITAT Lowland and sub-montane forests and gardens (<1,676m asl). Terrestrial, in leaf litter. Diet comprises earthworms and insect larvae. Reproductive habits are unstudied.



Red-headed Reed Snake ■ *Calamaria schlegeli* 45cm

(Bahasa Indonesia: Ular Cuvier. Thai: Ngu Pong-oa Hua Daeng)

DESCRIPTION Top of body is dark brown or black; belly is plain yellow, with a red or orange (ssp. *schlegeli*) or dark brown (ssp. *cuvier*) forehead. Body is slender and cylindrical; head is short and indistinct from neck; nasal is as large as eye; eyes are small with a

rounded pupil; tail is long and tapering; dorsals are smooth; anal is entire.

DISTRIBUTION Thailand, Peninsular Malaysia, Singapore, Sumatra, Borneo, Java, Bali.

HABITS AND HABITAT Lowland forests. In leaf litter. Diet comprises frogs and slugs. Oviparous (number and size of eggs unknown).



Schmidt's Reed Snake ■ *Calamaria schmidti* 28cm

DESCRIPTION Top of body is plain blackish grey, with green and blue iridescence, scales pale-margined; belly is light grey or yellow, darkening posteriorly to purple. Body is slender and cylindrical; head is short and indistinct from neck; eyes are small with a rounded pupil; tail is short with a blunt point; dorsals are smooth; anal is entire.

DISTRIBUTION Borneo.

HABITS AND HABITAT Montane forests, (1,370–1,570m asl). Active near streams. Diet includes earthworms. Reproductive habits are unstudied.



Short-tailed Reed Snake ■ *Calamaria virgulata* 37cm

DESCRIPTION Top of body is dark brown; dorsal scales have a light network, with or without dark longitudinal stripes; a yellow nuchal collar is sometimes present; forehead is dark brown; supralabials are yellow; belly is cream or brownish black, with dark pigments on lateral edges of ventrals; subcaudals have dark edges and a dark median stripe. Body is slender and

cylindrical; head is short and indistinct from neck; eyes are small with a rounded pupil; tail is thick and tapering; dorsals are smooth; anal is entire.

DISTRIBUTION

Sumatra, Borneo, Java. Extralimitally: Sulu Archipelago, Mindanao, Palawan, Sulawesi.

HABITS AND HABITAT Sub-montane forests.

In leaf litter. Diet is unknown. Oviparous, producing 3 eggs (26–30 × 8–8.5mm).



Ornate Flying Snake ■ *Chrysopelea ornata* 140cm

(Bahasa Malaysia: Ular Pokok Emas. Bahasa Indonesia: Ular Petola, Ular Jelotong. Thai: Ngu Kieo Lai Dok-mak)

DESCRIPTION Top of body is greenish yellow or pale green; forehead is black, with yellow and black cross-bars; scales have a dark streak, forming longitudinal black stripes; belly is pale green, marked with a series of black spots on each side. Body is slender; head is depressed and distinct from neck; eyes are large with a rounded pupil; tail is long and slender; ventrals show pronounced lateral keels; dorsals are either smooth or feebly keeled, and bear apical pits; anal is divided.

DISTRIBUTION Myanmar, Thailand, Peninsular Malaysia. Extralimitally: India, Bangladesh, Nepal, Sri Lanka, Laos, Cambodia, Vietnam.

HABITS AND HABITAT Lowland forests and secondary vegetation; often enters houses. Arboreal, making long glides between trees. Diet comprises lizards, bats, rodents, birds and snakes. Oviparous, producing 6–20 eggs (26–38 × 13–18mm).



Garden Flying Snake ■ *Chrysopelea paradisi* 150cm

(Bahasa Malaysia: Ular Petola. Bahasa Indonesia: Ular Pohon Paradise. Thai: Ngu Kieo Ron)

DESCRIPTION Top of body is black, centre of each scale with a green spot; vertebral region of some individuals has a row of 3–4 pink or red spots; forehead has yellow bands; belly is green with black edges. Body is slender; head is depressed and distinct from neck; eyes are large with a rounded pupil; tail is long and slender; ventrals have pronounced lateral keels; dorsals are smooth or weakly keeled; anal is divided.

DISTRIBUTION Myanmar, Thailand, Peninsular Malaysia, Singapore, Sumatra, Mentawai Archipelago, Borneo, Java. Extralimitally: Andaman Archipelago, Sulawesi, islands of the Philippines.

HABITS AND HABITAT Lowland to sub-montane forests (<1,524m asl). Arboreal; can make extended leaps. Diet includes lizards, and perhaps bats and small birds. Oviparous, producing 5–8 eggs (size unknown).



Twin-barred Flying Snake ■ *Chrysopelea pelias* 74cm
(Bahasa Malaysia: Ular Pokok Belang. Thai: Ngu Dog-mak Daeng)

DESCRIPTION Top of body is red or orange with yellow or cream cross-bars, these edged with black bars; forehead has 3 red cross-bars; belly is pale. Body is slender; head is depressed and distinct from neck; eyes are large with a rounded pupil; tail is long and slender; ventrals have pronounced lateral keels; dorsals are smooth or weakly keeled, and have apical pits; anal is divided.

DISTRIBUTION Myanmar; Thailand; Peninsular Malaysia; Singapore; Sumatra; Pulau Bangka; Mentawai, Natuna and Riau archipelagos; Borneo; Java.



HABITS AND HABITAT Open forests and plantations; sometimes in human habitations around forest edges (<600m asl). Arboreal; can make extended leaps. Diet comprises lizards. Breeding habits are unstudied.

Philippine Trinket Snake ■ *Coelognathus erythrus* 167cm

DESCRIPTION Top of body is brown to olive; a narrow, dark post-ocular stripe runs to angle of jaws; posterior third of body is darker; tail is reddish brown; belly is plain cream or white; iris is golden brown. Body is slender; head is elongate and distinct from neck; eyes are large with a rounded pupil; tail is long and slender; dorsals are keeled.

DISTRIBUTION Borneo. Extraliminally: Palawan, Sulu Archipelago, Sulawesi, Mindanao, Samar, Leyte, Negros, Mindoro, Luzon and other Philippines islands.

HABITS AND HABITAT Lowlands to mid-hills, including forest edges and cultivated areas (<850m asl). Terrestrial. Diet comprises small rodents, birds and lizards. Oviparous, clutches comprising 6–10 eggs (size unknown).



Yellow-striped Trinket Snake ■ *Coelognathus flavolineatus* 180cm
(Bahasa Malaysia: Ular Laju Ekor Hitam, Ular Sawa. Bahasa Indonesia: Sawa Angin; Ular Babi. Thai: Ngu Tang-ma-prao Dam)

DESCRIPTION Top of body is brownish grey or brownish olive; a dark post-ocular stripe runs to above back of mouth and another along nape; several short, dark stripes or elongated blotches are present on dorsum and flanks; belly is pale yellow anteriorly, some ventrals with dark grey edges; tail is darker posteriorly; subcaudals are dark grey or black. Body is slender; head is nearly distinct from neck; snout is long; eyes are large with a rounded pupil; tail is long and slender; dorsals are keeled; anal is entire.

DISTRIBUTION Myanmar, Thailand, Peninsular Malaysia, Singapore, Sumatra, Pulau Nias, Mentawai and Riau archipelagos, Pulau Weh, Pulau Bangka, Pulau Belitung, Borneo, Java. Extraliminally: Cambodia, Vietnam, Andaman Islands, Sulawesi.

HABITS AND HABITAT Forested lowlands, parks and gardens (<900m asl). Terrestrial but can climb. Diet comprises rodents, birds, frogs and lizards. Oviparous, laying clutches of 5–12 eggs (51–62 × 23–25.5mm).



Copper-head Trinket Snake ■ *Coelognathus radiatus* 230cm

(Bahasa Malaysia: Ular Rusuk Kerbau. Bahasa Indonesia: Ular Racer Berkepala Tembaga. Mandarin Chinese: Sangianjing She. Thai: Ngu Tang-ma-prao Lai Keet)

DESCRIPTION Top of body is greyish brown or yellowish brown, with 4 (2 broad, 2 narrow) black stripes along anterior of body; a cream stripe runs along upper 2 stripes; lower stripes are narrower and typically broken up; forehead is coppery brown, with 3 black lines radiating from eyes; belly is grey to yellowish grey; iris is golden yellow; tongue is dark brown to violet. Body is slender; head is slightly distinct from neck; eyes are large with a rounded pupil; tail is long and slender; dorsals are smooth anteriorly and on flanks, weakly keeled posteriorly; anal is entire.

DISTRIBUTION Myanmar, Thailand, Peninsular Malaysia, Singapore, Sumatra, Pulau Bangka, Borneo, Java. Extraliminally: India, Bangladesh, Bhutan, Nepal, China, Cambodia, Laos, Vietnam.

HABITS AND HABITAT Open grasslands and light forests from lowland plains to sub-montane limits (<1,400m asl). Diet comprises frogs, birds and rats. Oviparous, clutches comprising 5–23 eggs (40–53 × 20–26mm).



Stripe-tailed Bronzeback Tree Snake ■ *Dendrelaphis caudolineatus* 152cm

(Bahasa Malaysia/Indonesia: Ular Padang. Iban: Ular Bendera. Thai: Ngu Sai-man Lang Lai)

DESCRIPTION Top of body is olive-brown; a pale green stripe runs along lower sides of body, and is edged dorsally by a narrow black stripe and ventrally by a broad black stripe, these stripes most distinct on tail; belly is pale green. Body is slender; head is distinct from neck; snout is bluntly rounded; tail is long; eyes are large with a rounded pupil; dorsals are smooth; ventrals and subcaudals have sharp keels on outer edges; anal is divided.

DISTRIBUTION Myanmar; Thailand; Peninsular Malaysia; Singapore; Sumatra; Pulau Babi; Pulau Bangka; Batu, Natuna, Mentawai and Riau archipelagos; Pulau Belitung, Pulau Nias; Borneo. Extraliminally: Laos, Palawan, Luzon, Camiguin and Sulu archipelagos.

HABITS AND HABITAT Lowland and sub-montane forests, and parks and gardens (<1,524m asl). Arboreal. Diet includes frogs and lizards. Oviparous, clutches comprising 5–8 eggs (12 × 48mm).



Blue Bronzeback Tree Snake ■ *Dendrelaphis cyanochloris* 143cm

(Bahasa Malaysia: Ular Tembaga Wall. Thai: Ngu Sai-man Fa Kieo)

DESCRIPTION Top of body is olive, the scales edged with black, and with a broad black temporal stripe extending to beyond level of neck, where it breaks up into spots; during threat display, blue interstitial skin is exposed, the resulting effect being blue with brown-barred neck and body; all dorsals, except 1st row, have black anterior and lower edges; there is no pale ventro-lateral stripe; belly is yellow. Body is slender; head is distinct from neck; eyes are small with a rounded pupil; vertebrals are enlarged; dorsals are smooth; anal is divided.

DISTRIBUTION Myanmar, Thailand, Peninsular Malaysia. Extraliminally: Bangladesh, Bhutan, India, Laos.

HABITS AND HABITAT Lowland forests and agricultural areas. Arboreal. Diet comprises lizards, birds and, possibly, frogs. Oviparous, clutches comprising 3–5 eggs (size unknown).



Beautiful Bronzeback Tree Snake ■ *Dendrelaphis formosus* 147cm

DESCRIPTION Top of body is blue; a black post-ocular stripe runs from rostral, across temporal region and onto neck; 3 dark lateral stripes are present on posterior third of body; dorsals are dark-edged; no light ventro-lateral stripe is present; subcaudals have a black medial point. Body is slender; head is wide behind snout and distinct from neck; eyes are large with a rounded pupil; vertebrals are enlarged; tail is slender; anal is divided.



DISTRIBUTION Thailand, Peninsular Malaysia, Sumatra, Mentawai Archipelago, Pulau Bangka, Pulau Belitung, Borneo, Java.

HABITS AND HABITAT Lowland forests and open areas. Arboreal. Diet comprises frogs and lizards. Oviparous, clutches comprising 6–8 eggs (31–42.5 × 11.5–13mm).

Haas's Bronzeback Tree Snake ■ *Dendrelaphis haasi* 94.5cm

DESCRIPTION Top of body is olive-brown; a narrow post-ocular stripe covers ventral part of lower temporals and ends at back of jaws or extends onto neck; oblique black bars are present on sides of neck; a pale ventro-lateral stripe is present but is not bordered by black lines; belly is light yellow or green. Body is slender; head is distinct from neck; eyes are small with a rounded pupil; tail is long; vertebrals are greatly enlarged, being larger than 1st row of dorsals; dorsals are smooth; anal is divided.

DISTRIBUTION Peninsular Malaysia, Sumatra, Pulau Nias, Pulau Belitung, Mentawai Archipelago, Borneo, Java.

HABITS AND HABITAT Lowland forests. Diet and reproductive habits are unstudied.



Kopstein's Bronzeback Tree Snake ■ *Dendrelaphis kopsteini* 142.5cm
(Bahasa Brunei: Ular Kasau)

DESCRIPTION Top of body is bronze-brown; a black post-ocular stripe runs across lower half of temporal region to end of jaws; vertebrals have a broad black posterior margin; interstitial skin on anterior of body is brick-red; belly is grey. Body is slender; head is distinct from neck; 2 supralabials touch orbit of eye; eyes are moderate in size with a rounded pupil; vertebrals are larger than lowest dorsal row; anal is divided.

DISTRIBUTION Thailand, Peninsular Malaysia, Singapore, Sumatra, Mentawai Archipelago, Borneo.

HABITS AND HABITAT Lowland dipterocarp forests (<700m asl). Arboreal, living in shrubs and on low tree branches. Diet includes geckos. Oviparous, clutches comprising 8 eggs (size unknown).



Painted Bronzeback Tree Snake ■ *Dendrelaphis pictus* 125cm
(Bahasa Malaysia: Ular Lidi. Bahasa Indonesia: Ular Tampar Jawa; Ular Tali. Iban: Ular Meresian. Thai: Ngu Sai-man Pra Inthra)

DESCRIPTION Top of body is bronze-brown or brownish olive; a black-edged yellow or cream ventro-lateral stripe runs along flanks; forehead is brown with a black post-ocular stripe that covers more than half temporal region and extends to neck; a blue or greenish-blue neck patch is displayed snake is when excited. Body is slender; head is distinct from neck; eyes are large with a rounded pupil; vertebrals are smaller than or equal to 1st row of dorsals; dorsals are smooth; anal is divided.

DISTRIBUTION Thailand, Peninsular Malaysia, Singapore, Sumatra, Pulau Belitung, Mentawai Archipelago, Borneo, Java, Bali. Extralimitally: China, Laos, Cambodia, Vietnam, Philippines.
HABITS AND HABITAT Lowland and sub-montane forests; also parks, gardens, plantations and human habitation (<1,524m asl). Arboreal. Diet comprises frogs and lizards. Oviparous, clutches comprising 3–8 eggs (22–38.5 × 8.5–11mm).



Northwestern Painted Bronzeback Tree Snake ■ *Dendrelaphis proarchos* 121cm

DESCRIPTION Top of body is dark brown; a yellow ventro-lateral stripe, edged with 1–2 black lines, runs along flanks; forehead is brown with a black post-ocular stripe that covers most of temporal region and extends to neck; a blue neck patch is displayed when snake is excited. Body is slender; head is distinct from neck; eyes are large with a rounded pupil; vertebrals are smaller than or equal to 1st row of dorsals; dorsals are smooth; anal is entire or divided.

DISTRIBUTION Myanmar. Extralimitally: E India, Bangladesh, Laos, Vietnam.

HABITS AND HABITAT Lowland forests. Arboreal. Diet includes frogs and lizards.

Oviparous, clutches comprising 7–8 eggs (12 × 41mm).



Striated Bronzeback Tree Snake ■ *Dendrelaphis striatus* 102cm
(Thai: Ngu Sai-man Lai Chieng)

DESCRIPTION Top of body is bronze-brown; labials and gular region are yellow; a narrow, dark stripe runs between nostril to orbit; a dark post-ocular stripe covers temporal region and extends onto neck; neck is yellow when inflated; black oblique bars are present on sides of body. Body is slender; head is distinct from neck; snout is short and rounded; eyes are moderate in size with a rounded pupil; vertebrals are slightly enlarged; dorsals are smooth; anal is divided.

DISTRIBUTION Thailand, Peninsular Malaysia, Sumatra, Borneo.

HABITS AND HABITAT Lowland forests. Arboreal. Diet and reproductive habits are unstudied.



Mountain Bronzeback Tree Snake ■ *Dendrelaphis subocularis* 88cm
(Thai: Ngu Sai-man Kled Tai Ta Yai)

DESCRIPTION Top of body is bronze-brown, the scales with black edges; lower flanks beyond scale row 2 are bright cream or greenish white; head and neck are olive-green; a dark post-ocular stripe extends to sides of neck, breaking up thereafter into bars; gulars are sometimes yellow. Body is slender; head is distinct from neck; snout is rounded; eyes are small with a rounded pupil; dorsals are smooth; vertebrals are weakly enlarged; anal is divided.

DISTRIBUTION Myanmar, Thailand. Extralimitally: S China, Laos, Cambodia, Vietnam.

HABITS AND HABITAT Mid-hill forests (altitude unknown). Arboreal. Diet and reproductive habits are unstudied.



Indian Bronzeback Tree Snake ■ *Dendrelaphis tristis* 150cm

DESCRIPTION Top of body is plain bronzy brown or sometimes purplish brown; vertebrals on neck and forebody are yellow; a buff flank stripe runs from neck to vent; a pale blue patch on neck between scales is displayed when snake is excited; belly is pale grey, green or yellow; iris is golden. Body is slender; head is distinct from neck; eyes are large with a

rounded pupil; tail is about a third snout-vent length; dorsals are smooth, with apical pits; anal is divided.

DISTRIBUTION Myanmar. Extralimitally: India, Pakistan, Bangladesh, Sri Lanka, Nepal.

HABITS AND HABITAT Forest edges and around human habitation (<2,000m asl). Arboreal but may forage on land. Diet comprises frogs, lizards, bird eggs and insects. Oviparous, laying 6 eggs (29–39 × 10–12mm).



Half-banded Bridled Snake ■ *Dryocalamus subannulatus* 60cm
(Thai: Ngu Plong-chanuan Malayu)

DESCRIPTION Top of body is tan or light brown, with large brown transverse spots; on flanks, smaller spots are present; 2 dark post-ocular streaks are present; belly is plain yellow. Body is slender and compressed; head is depressed and distinct from neck; eyes are large with a vertical pupil; dorsals are smooth; anal is entire.

DISTRIBUTION Thailand, Peninsular Malaysia, Singapore, Sumatra, Mentawai and Riau archipelagos, Borneo. Extralimitally: Palawan. **HABITS AND HABITAT** Lowland forests and disturbed areas (altitude unknown). Terrestrial and arboreal. Diet comprises small vertebrates. Reproductive biology is unstudied.

Three-banded Bridled Snake ■ *Dryocalamus tristrigatus* 65cm

DESCRIPTION Top of body is dark brown with 3 white stripes; forehead shields are white-edged; supralabials are white; belly is cream. Body is slender and compressed; head is depressed and distinct from neck; eyes are large with a vertical pupil; dorsals are smooth; anal is entire. **DISTRIBUTION** Borneo, Natuna Archipelago. Extralimitally: Balabac, Palawan.

HABITS AND HABITAT Lowland forests, on rocky biotopes and trees (altitude unknown). Diet includes lizards. Breeding habits are unstudied.





Keel-bellied Whip Snake

■ *Dryophiops rubescens* 75cm
(Thai: Ngu Tao)

DESCRIPTION Top of body is reddish brown with small black spots; forehead has dark streaks; a dark post-ocular streak is present; labials have dark spots; belly is yellow or olive. Body is slender and compressed; head is distinct from neck; eyes are large with a horizontal pupil; tail is long and slender; dorsals are smooth; anal is divided.

DISTRIBUTION Thailand, Peninsular Malaysia, Singapore, Sumatra, Mentawai and Natuna archipelagos, Borneo, Java. Extraliminally: Cambodia.

HABITS AND HABITAT Lowland forests and forest edges (<300m asl). Arboreal, on shrubs and low branches of trees. Diet comprises lizards. Oviparous, clutches comprising 2–3 eggs (numbers unknown).

Mandarin Trinket Snake ■ *Euprepiophis mandarinus* 170cm

(Mandarin Chinese: Gaosha She)

DESCRIPTION Top of body is grey to greyish brown, dorsals with brownish-red centres; dorsum and tail have large, rounded yellow blotches, edged with black and yellow; forehead has a dark V-shaped pattern; belly is cream, sometimes with large black blotches. Body is robust; head is short and slightly distinct from neck; snout is obtuse; tail is short and stout; eyes are small with a rounded pupil; dorsals are smooth; anal is divided.

DISTRIBUTION Myanmar. Extraliminally: Vietnam, E India, China, possibly Laos.

HABITS AND HABITAT Plains to montane regions, in open forests with rocky substrate, scrubland and agricultural fields (500–3,000m asl). Terrestrial, near water. Diet comprises mice and shrews. Oviparous, clutch comprising 2–10 eggs (50–57 × 23–27mm).



Orange-bellied Snake ■ *Gongylosoma baliodeirum* 45cm

(Bahasa Indonesia: Ular Tanah Bertotol-totol. Kelabit: Depong. Thai: Ngu Sai-tong Lai Taeb)

DESCRIPTION Top of body is dark brown to reddish brown, with paired rows of cream spots; upper labials are edged with dark grey; belly is yellowish cream, sometimes with fine dark spots. Body is slender and cylindrical; head is slightly wider than neck; nasals are divided; eyes are small with a rounded pupil; dorsals are smooth; anal is divided.

DISTRIBUTION Thailand, Peninsular Malaysia, Singapore, Sumatra, Pulau Nias, Natuna Archipelago, Borneo, Java. **HABITS AND HABITAT** Lowland to sub-montane forests (<1,525m asl). Terrestrial. Diet comprises spiders, other arthropods and lizards. Oviparous, clutches comprising 2–3 eggs (22–24 × 7.5mm).



Pulau Tioman Ground Snake ■ *Gongylosoma mukutense* 42.9cm

DESCRIPTION Top of body is brick-red anteriorly, fading to brown-grey posteriorly; forehead is brown; supralabials are white, edged with black; nuchal band is confluent with vertebral stripe; a white post-ocular patch is present; remnants of 5 thin white stripes are visible anteriorly; belly is cream. Body is slender; head is wider than neck; snout is short and rounded; eyes are large with a rounded pupil; tail is long; dorsals are smooth; anal is divided.

DISTRIBUTION Pulau Tioman, Peninsular Malaysia. **HABITS AND HABITAT** Coastal forests (10m asl). Terrestrial. Diet and reproductive habits are unstudied.



Royal Tree Snake ■ *Gonyophis margaritatus* 200cm

DESCRIPTION Top of body is bright green, each scale edged with black; 5 orangish-red bands are present on posterior of body and tail; a black post-ocular stripe is present;

forehead has black streaks; belly is yellowish pink. Body is robust, elongate and compressed; head is distinct from neck; snout is elongate and squarish; eyes are large with a rounded pupil; tail is long and tapering; dorsals are smooth; anal is divided.

DISTRIBUTION Peninsular Malaysia, Singapore, Borneo.

HABITS AND HABITAT Lowland forests (<700m asl). Arboreal. Diet and reproductive habits are unstudied.



Red-tailed Racer ■ *Gonyosoma oxycephalum* 240cm

(Bahasa Malaysia: Ular Laju Ekor Merah, Ular Pucuk, Ular Selenseng. Bahasa Indonesia: Ular Bangka Laut, Ular Hidjau, Ular Racer Berekor Merah. Iban: Ular Mati Iko, Ular Mati Elok. Thai: Ngu Kieo Kab-mak)

DESCRIPTION In adults, top of body is emerald-green or light green, with a light green throat and a black stripe from nostril to above level of upper jaw; tail tip is yellowish brown or reddish orange; belly is yellow; tongue is bluish black. Juveniles are olive-brown with narrow white bars towards posterior. Body is slender, elongate and compressed; head is distinct from neck; snout is elongate and squarish; eyes are large with a rounded pupil; tail is long and tapering; dorsals are smooth or weakly keeled; anal is divided.

DISTRIBUTION Myanmar; Thailand; Singapore; Sumatra; Pulau Nias; Pulau Bangka; Pulau Belitung; Riau, Mentawai and Natuna archipelagos; Borneo; Java. Extraliminally: Laos, Cambodia, Vietnam, Andaman Islands, Lombok, Sulawesi, Balabac, Bohol, Bongao, Dinagat, Lubang, Luzon, Mindoro, Negros, Palawan.

HABITS AND HABITAT Lowland tropical and subtropical forests, including mangrove swamps, plantations and gardens (<750m asl). Arboreal and terrestrial. Diet comprises rodents and birds. Oviparous, clutches comprising 5–12 eggs (65mm diameter).



Stripe-necked Snake

■ *Liopeltis frenatus* 76cm

DESCRIPTION Top of body is olive, scales edged with black (sometimes also with white), forming longitudinal stripes on anterior half of body; a broad black post-ocular stripe extends to neck; supralabials and belly are cream; tongue is orange. Body is slender and cylindrical; head is distinct from neck; snout does not project; eyes are large with a rounded pupil; dorsals are smooth; tail is long; anal is divided.

DISTRIBUTION Myanmar. Extraliminally: Laos, Vietnam, E India.

HABITS AND HABITAT Subtropical and montane forests (600–1,830m asl). Terrestrial. Diet probably includes frogs. Oviparous, laying clutches of 4–5 eggs (25–28 × 7–9mm).



Stoliczka's Ringneck ■ *Liopeltis stoliczkae* 60cm

DESCRIPTION Top of body is brown or greyish brown, with a broad black stripe on sides of head, extending to anterior body and fading thereafter; has a grey stripe on outer margins of ventrals; belly is pale grey. Body is slender and cylindrical; head is distinct from neck and depressed; snout is projecting, being twice as long as diameter of orbit; eyes are large with a rounded pupil; tail is long and slender; dorsals are smooth; anal is divided.

DISTRIBUTION Myanmar.

Extraliminally: Laos, Cambodia, E India.

HABITS AND HABITAT Evergreen and deciduous forested mid-hills (<700m asl). Arboreal, on bamboo. Diet and reproductive habits are unstudied.





Tricoloured Ringneck ■ *Liopeltis tricolor* 56cm (Thai: Ngu Sai-tong Malayu)

DESCRIPTION Top of body is yellowish olive; a dark post-ocular streak extends beyond neck; belly is yellowish cream, with an olive streak on sides of each scale. Body is slender; head is indistinct from neck; snout is long; eyes are large with a rounded pupil; tail is long; dorsals are smooth; anal is divided.

DISTRIBUTION Thailand, Peninsular Malaysia, Singapore, Sumatra, Mentawai Archipelago, Borneo, Java. Extralimitally: Vietnam, Palawan.

HABITS AND HABITAT Lowland forests (altitude unknown). Arboreal, on small trees and other low vegetation. Diet comprises insects and spiders. Reproductive biology is unstudied.

Dusky Wolf Snake ■ *Lycodon albofuscus* 207cm

(Thai: Ngu Plong-chanuan Borneo)

DESCRIPTION In adults, top of body is plain dark brown or brownish black; supralabials are yellow; belly is plain cream or yellow. Juveniles have 30–40 narrow white or yellow bands on dorsum. Body is slender and sub-cylindrical; head is wider than neck; snout is short, blunt and depressed; eyes are small with a vertical pupil; tail is long; dorsals are keeled; anal is divided.

DISTRIBUTION Thailand, Peninsular Malaysia, Sumatra, Pulau Nias and Borneo.



HABITS AND HABITAT Open lowland forests and forest edges, usually with streams (<500m asl). Terrestrial, with some arboreal activities. Diet comprises lizards and frogs. Reproductive habits are unstudied.

Indian Wolf Snake

■ *Lycodon aulicus* 80cm

DESCRIPTION Top of body is brown or greyish-brown, with 12–19 white cross-bars, that are sometimes speckled with brown, expanding laterally to enclose triangular patches; belly is cream coloured or yellowish-white. Body is slender and sub-cylindrical; head is flattened; snout projects beyond lower jaw; eyes are small with a vertical pupil; tail is long; dorsals are smooth; anal is divided.

DISTRIBUTION Myanmar. Extralimitally: India, Bangladesh, Nepal, Sri Lanka, possibly Maldive Archipelago.

HABITS AND HABITAT Lowlands, sometimes inside human habitation (<500m asl). Arboreal. Diet comprises geckos, snakes and rodents. Oviparous, producing 3–11 eggs (diameter 25–32mm).



Butler's Wolf Snake ■ *Lycodon butleri* 100cm

(Thai: Ngu Plong-chanuan Malayu)

DESCRIPTION In adults, top of body is dark bluish grey or blackish brown, suffused with dark pigments; belly is cream with dark brown cross-bars, these most distinct at mid-body. In juveniles, top of body has 40–50 irregular cross-bars. Body is slender and sub-cylindrical; head is flattened; eyes are small with a vertical pupil; tail is long; dorsals are weakly keeled; anal is entire.

DISTRIBUTION Peninsular Malaysia.

HABITS AND HABITAT Montane forests and adjacent human habitations (1,220–2,031m asl). Arboreal. Diet comprises geckos. Reproductive habits are unstudied.

