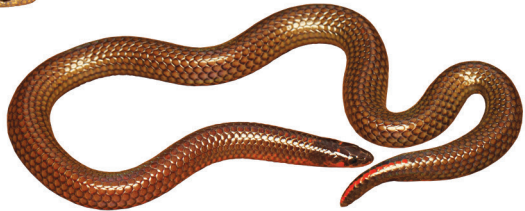
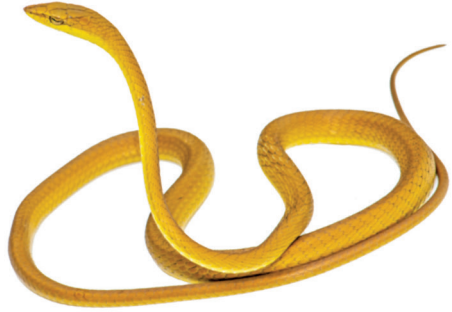


SNAKES AND LIZARDS OF THE SKY ISLANDS OF THE WESTERN GHATS



DEEPAK V, SURYA NARAYANAN, SANDEEP DAS, RAJKUMAR KP,
SAUNAK PAL, JASON D GERARD & DAVID J GOWER



Craspedocephalus macrolepis

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Front cover images: *Microauris aurantolabium* (top left), *Ahaetulla dispar* (top right), *Craspedocephalus macrolepis* (middle), *Dravidogecko janakiae* (bottom left) & *Plectrurus perroteti* (bottom right).

Back cover image: Grassland mosaic view in Eravikulam National Park, Kerala.



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FOREWORD

From Herps to Theory : A Foreword to the Work on the Sky Island Reptile Fauna of the Western Ghats

The great Sanskrit epic, Mahabharata, the earliest part of which was composed perhaps as early as 400 B.C.E., makes mention of the Sahyadris, the mountain range running along the west coast of India. It is here that the virtuous Pandavas took refuge during their 13-year exile.

The contemporary name for these hills, the Western Ghats, derives from the step-like formation of these mountains and their geological connection to the Deccan plains, which lies to the east. Indeed, the hill ranges represent the eroded edges of the plateau, caused by the separation of the Indian plate from Madagascar, during the Late Cretaceous. And famously today, the range is recognized as a global biodiversity hotspot.

Although keen observers, as evident from their philosophical writings, but not great recorders of natural history, ancient Indian scholars left behind sparse records of their knowledge of biodiversity. The little that exists is contained in the religio-medical works, especially on the use of wild and cultivated plants. For the earliest records of the fauna of the Western Ghats, we must turn to Western science, which leave behind records of early investigations on the fauna of these hill ranges. Nonetheless, no mention of either the herpetofauna or the range itself can be found at the dawn of species discovery at the time of Carolus Linnaeus, the father of binomial nomenclature, nor are covered in *Illustrations in Indian Zoology*,

the first major work on the vertebrates of the South Asian region, published between 1830–1832, as a joint project of Major-General Thomas Hardwicke and John Gray of the British Museum (Natural History) in London.

The earliest herpetofaunal species to be described from the Western Ghats were named by curators of the said museum in London and the one in Paris, based on collections made by Europeans, initially the French, but then chiefly, British, who were ‘in the field’, as explorers, army-men and planters. These include the French botanist, Jean-Baptiste-Louis-Claude-Théodore Leschenault, naturalist to King Louis XVII and Charles X; Jean-Jacques Dussumier, trader-shipowner in the French mercantile marine, who collected specimens at ports of call, including “Côte du Malabar”; Colonel Richard Henry Beddome, herpetologist (with an emphasis on snakes) and botanist, of the Indian Army; and Thomas Claverhill Jerdon, Surgeon, East India Company, Madras Regiment.

European contributors provided the inspiration for early Indian researchers at the time of independence, and after a long hiatus, a slow resurgence of work was evident starting from the period of the country’s independence, spearheaded by the Bombay Natural History Society, the Madras Government Museum, the Madras Snake Park, the Madras Crocodile Bank, the Zoological Survey of India, and several local universities.

These lead to early surveys and species descriptions, basic activities including mapping and characterizing the biota. Two important names from the period are Jivanayakam Cyril Daniel and Romulus Earl Whitaker, who have done more to promote the science of herpetology than arguably anyone from this period.

What we are witnessing today is a healthy resurgence of biodiversity science like never before. The new generation of biologists are a more inspired lot, deriving their enthusiasm from each other and drawn from visiting researchers, have access to the latest technologies and ideas and experiences overseas and not to be left unmentioned, the social media. Their contributions have been profound, equally to empirical data as well as to theory.

With this background, I would congratulate the authors of this guide to the wonderful reptile fauna of the Sky Island landscape of the southern Western Ghats. One can hope it reaches every inhabitant of the region, particularly, the curious and the inquisitive, to take pride in the natural resource and eventually, compel the taking up of arms for its protection.

Indraneil Das

Kuching, Sarawak

April 2022



Sandeep Das

Sandeep Das is an EDGE Fellow of the Zoological Society of London, working towards the research and conservation of *Nasikabatrachus sahyadrensis* in the Western Ghats. He is interested in the taxonomy and biology

of amphibians and reptiles of the Western Ghats. Sandeep has been working on herpetofauna in the Kerala part of the Western Ghats since 2010. He is a trustee of Aranyakam Nature Foundation



Rajkumar KP

Rajkumar is a herpetologist who is currently pursuing a Ph.D. on herpetofaunal diversity in the marshy grassland ecosystems in Periyar Tiger Reserve and on the status, distribution, activity pattern and vocalization of the

Endangered Travancore Bush Frog (*Raorchestes travancoricus*). He is also an EDGE Fellow working on the ecology of the Galaxy Frog (*Melanobatrachus indicus*) in the Western Ghats as part of the EDGE (Evolutionarily Distinct and Globally Endangered) of existence programme. He is an executive member of Aranyakam Nature Foundation.



Saunak Pal

Saunak is a scientist at the Bombay Natural History Society, Mumbai. He is primarily interested in the systematics and biogeography of endemic reptiles, especially agamid and gekkonid lizards of the

Western Ghats. Saunak has been involved in various studies across the Western Ghats, trying to understand the factors that influence the diversification of amphibians and reptiles, patterns of distribution, and causes of endemism. Currently, he is involved in curating the herpetofauna specimens as well as digitization of the collections at BNHS. He is also involved in various biodiversity mapping and conservation projects across the country. Saunak's collaborative studies in the Western Ghats have led to the discovery of over 30 new species of reptiles along with recognition of two new genera of agamid lizards and a new genus of snake.



Jason D Gerard

Jason is an independent researcher with a Masters in Wildlife biology. Jason has a keen interest in herpetology and has been part of various conservation activities focused on reptiles since 2013. He has surveyed many parts of Tamil Nadu

(Kodaikanal and Meghamalai) regions for reptiles.



David J Gower

Dave conducts collections based research on the systematic and evolutionary biology of amphibians and reptiles, working at the Natural History Museum, London. His main taxa of interest and expertise are caecilians, snakes (especially

fossorial and aquatic species), and Triassic archosauromorphs. He has been interested in and contributing to the understanding of South Asian herpetology since his first visit to the region in 1998.