

IV A NEW GENUS OF LIMBLESS SKINKS FROM AN ISLAND IN THE CHILKA LAKE

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The island of Barkuda is situated in the extreme north-eastern corner of the Madras Presidency. It is about three quarters of a mile long by half a mile broad and lies in the Chilka Lake a mile off the mainland. The water¹ round it is always brackish but varies in salinity with the seasons.

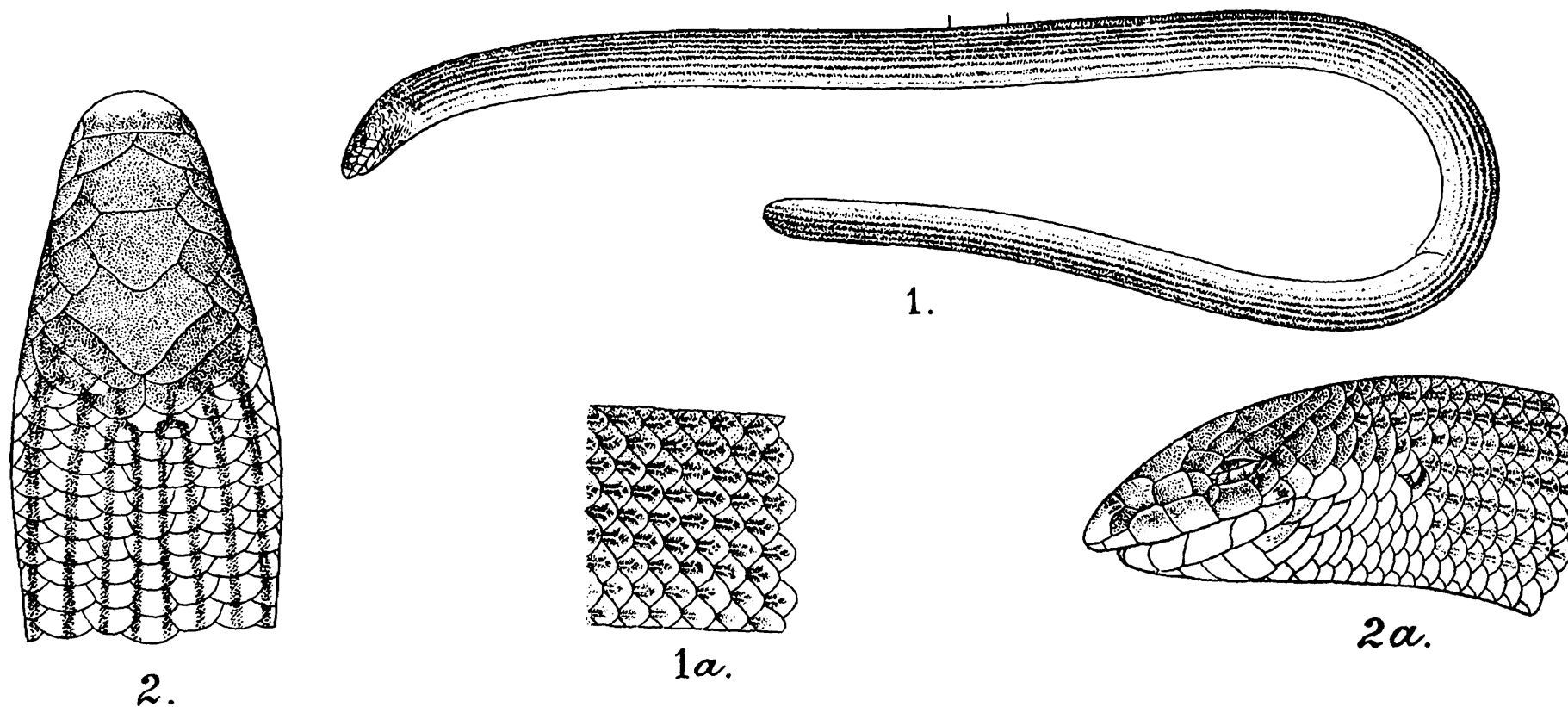
A stony laterite soil and a rainfall probably smaller than that of the neighbouring mainland and certainly never excessive do not encourage either a luxuriant growth of vegetation or the existence of a rich fauna, but the greater part of the island is covered with fairly dense jungle in which bushes and even large trees flourish in abundance. All these trees and shrubs have tough glossy leaves and a rather sombre foliage. The largest are figs of two species, the Banyan (*Ficus bengalensis*) and *Ficus rumphii*; the most abundant shrub is *Glycosmis pentaphila*, a common form in waste places in many parts of India. True xerophytic plants also occur, for example Cacti (*Cereus* and *Opuntia*), which have probably been introduced accidentally, and an indigenous tree-euphorbia (*Euphorbia nivula*). One of the few creepers, a vine with a curious segmented stem (*Vitis quadrangularis*), also belongs to this category.

There is no cultivation on the island, but paths have been cut, a considerable area cleared for the erection of a bungalow and wells and a small pond dug. The only permanent human inhabitant is the keeper of the bungalow.

The fauna of the island is even less rich than that of the plains of India generally and many species that are abundant on the adjacent mainland are here very scarce or altogether absent. The only terrestrial mammals are the Chital (*Cervus axis*), of which a small herd has been introduced by the owner of the island for sporting purposes, a large reddish mongoose (probably *Mungos smithii* or a local race thereof) and a form of the common Black Rat (*Rattus rattus*), which is fairly abundant round the bungalow.

There are no small Passerine birds in the woods. Most of the larger species that occur are forms of very wide distribution. Among the land-birds perhaps the commonest are the Indian

¹ See Annandale and Kemp, *Mem. Ind. Mus.*, V, p. 10 (1915).



Barkudia insularis, gen. et sp. nov.

FIG. 1.—Lateral view of the type specimen ($\times 1\frac{1}{2}$).

„ 1a.—Lateral scales from near middle of body, further enlarged. The position of these scales is indicated in fig. 1 by two short vertical lines.

„ 2.—Head from above $\times 5$.

„ 2a.—The same from the right side.

House-Crow (*Corvus splendens*) and the Jungle-Crow (*C. macrorhynchus*). Both of these fly over from the mainland in large numbers every evening to roost on the island, and a few individuals of both also spend the day there when the fruit of the Banyan, to which they are very partial, is ripe. The common Green Pigeon (*Crocopus chlorogaster*) is also common, and flocks of the Grey Hornbill (*Lophoceros griseus*) are often to be seen or heard.

The most noteworthy features among the Arthropoda are the small number of species represented, the absence of large or conspicuous forms (except among the Lepidoptera and Odonata) and the large proportion of predaceous species.

Perhaps the most interesting element in the fauna is that associated with the fig-trees and in particular with the Banyan. Apart from the species that feed on its fruit and leaves, which do not seem to be numerous, these animals live mostly either in dead wood or in the earth. The great horizontal branches of the Banyan are supported on vertical trunks that originate from them in the form of aerial roots, so reach the soil and then grow stout and trunk-like. These supports frequently rot away and then the branches fall in ruins on the ground. The fauna of their dead wood is comparatively poor, entirely lacking the Lamellicorn beetles found in dead wood in damper districts, but includes interesting beetles of the family Tenebrionidae, and species of the orders Thysanura and Collembola, as well as a considerable number of wood lice. The main trunks of the Banyan and also those of Rumphius's Fig are strengthened at their base by stout buttresses that project in such a way as to form pockets or recesses filled with loose soil. In these pockets flourishes a fauna rich in burrowing forms, many of which are predaceous. It includes a number of trap-door spiders (Mygalomorphae), several Myriapoda (among the most interesting of which is perhaps the curious little Scolopendrid centipede *Pseudocryptops agharkari*, Gravely¹) and the only terrestrial earthworm² yet found on the island. It also includes the peculiar lizard which it is the main object of this paper to describe and two (*Typhlops acutus* and *T. diardi*) of the four snakes found upon the island.

Family SCINCIDAE

Genus *Barkudia*, nov.

The palatine bones do not meet in the median line of the palate, which is toothless. The teeth are conical. The eye is very small and surrounded by relatively large scales; the lower eye-lid is scaly, the upper eye-lid not developed. The ear-opening

¹ *Rec. Ind. Mus.*, VII, pp. 416-417 (1912). Dr. Gravely tells me that specimens from Barkuda represent the race (*singbhumensis*) he described from Chota Nagpur.

² Stephenson, *Rec. Ind. Mus.*, XII, pp. 340-341, pl. xxxiii, figs. 32, 33 (1916). Three aquatic species are found on the shore (see Stephenson, *Mem. Ind. Mus.*, V, pt. i, pp. 139-146, pl. x (1915), and V, pt. 6 (*ined.*)).

is distinct but minute. The nostril is situated in a distinct nasal; it is remote from the first labial and separated from the rostral by a rounded tubercle. Three azygous shields exist on the top of the head; there are no praefrontals or frontoparietals. The body is elongate and snake-like, with no external trace of limbs.

Type-species.—*Barkudia insularis*, sp. nov.

The genus is closely allied to *Sepophis*, Beddome which was described from almost the same part of India but from hilly country, and to *Chalcidoseps*, Boulenger, only known from Ceylon. It differs from both in the position and structure of the nostril.

Barkudia insularis, sp. nov.

The head is small, somewhat flattened above, triangular, but with the snout bluntly rounded in front; the snout projects far beyond the lower jaw. The rostral is large, the portion seen from above being considerably longer than the suture between the supranasals; the frontonasal is somewhat longer than the rostral, bluntly pointed in front, transverse, heptagonal; the frontal is broader than long and angularly emarginate laterally by the second supraocular; the interparietal is broader than long, emarginate anteriorly, hexagonal, larger than either the frontonasal or the frontal. The rostral extends beneath the nasal to the first labial; four upper labials are present, the second being the largest and the third entering the orbit; there are two scales between the orbit and the supranasals, both considerably larger than the nasal. There are three supraoculars but no true superciliaries; a single relatively large scale intervenes between the second and third supraoculars and the orbit. A small subocular is present near the anterior margin of the orbit, and a larger praeocular above it; there are two postoculars. The ear-opening is situated some distance behind the gape and is provided with minute lobules.

There are twenty scales round the body. There are two enlarged praeanals with a narrow scale external to each on either side of the vent.

The total length of the head and body is about 30 times the greatest breadth of the latter. The tail is stout, tapering very little and bluntly rounded at the tip.

The *colour* of the body is yellowish-white, with fourteen fine dotted longitudinal black lines on the back and sides; the head is blackish above, marbled with yellow, the tip of the snout yellow. The ventral surface is unspotted.

Measurements.

Total length	..	..	..	164 mm.
Head	..	..	.	9 "
Body	..	..	..	96 "
Tail	..	..	..	59 "
Greatest vertical diameter of body	..	..	..	5 "

Habitat.—Barkuda Island, Chilka Lake, Ganjam district, Madras Presidency.

Type.—No. 18075, *Rept.*, Zoological Survey of India (Indian Museum).

The only specimen of this species as yet known was dug from loose earth among the roots of a Banyan-tree (*Ficus bengalensis*) by Dr. F. H. Gravely in July, 1916. The earth was dry at the time.

The following is a list of the other terrestrial reptiles¹ known to me from Barkuda :—

Lizards.

Hemidactylus frenatus.
Hemidactylus brookii.
Calotes versicolor major.
Varanus bengalensis.

Snakes.

Typhlops acutus.
Typhlops diardi.
Dendrelaphis tristis.
Bungarus caeruleus.

The only frog is *Rana cyanophlyctis*, which is abundant in the small artificial pool in the middle of the island.

¹ For an account of the aquatic species see *Mem. Ind. Mus.*, V, pp. 167-174 (1915).

