

ASTHENODIPSAS LAEVIS (REPTILIA: SQUAMATA: PAREATIDAE), A SNAKE RECORD FOR SINGAPORE THAT WAS ALMOST FORGOTTEN

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INTRODUCTION

Thirty years ago, on an unrecorded date in 1978, a brown snake was found at the end of Mandai Lake Road, within the compound of the Singapore Zoo, in a drain by the former laboratory that was located next to the present Night Safari entrance complex. It had appeared listless and died soon after capture.

The snake was identified as *Asthenodipsas laevis* (Boie), the smooth slug-snake. It is the first record of this species in Singapore, and also the 2nd species of the family Pareatidae to be known from here (Baker & Lim, 2008: 156–170). Although it was photographed and preserved, the specimen was misplaced and is now lost. This record would have been forgotten if I had not retrieved it from my notebooks recently.

SPECIMEN DETAILS

From old photographs of the specimen (Figs. 1, 2), the head appears blunt and distinct from the neck, and the tail appears to be relatively short, at approximately 10% of the snake's total length. The body was brown above with irregular and broken black bars. These bars were distributed along the lower sides of the body, and some reached onto the ventrals which were whitish (Fig. 1). On the underside of its head, the chin shields overlap with one another, and are brownish with light edges (Fig 2.). The snake had six upper labials, paired caudal scales but no preocular scale. Its anal scale was entire and blotched with black. The specimen was 44 cm in total length.

Other diagnostic characteristics of this species include having smooth dorsal scales, with those along the midline of the back enlarged; 15 dorsal scale rows; 148–178 ventral scales; 34–69 subcaudal scales; a single (loreal) shield between the nasal scale and the eye (therefore no preocular). It attains a maximum total length of about 60 cm (Tweedie, 1983: 38; Stuebing & Inger, 1999: 86, 87, as *Pareas laevis*).



Fig. 1. Specimen of *Asthenodipsas laevis* found off Mandai Lake Road in 1978. Scanned from a print of a photograph.



Fig. 2. Underside of head of the specimen found off Mandai Lake Road in 1978, showing the unique arrangement of chin shields on members of the family Pareatidae. Scanned from a print of a photograph.

Members of the family Pareatidae (formerly Pareinae, a subfamily of the Colubridae) are unique among Southeast Asian snakes in having large scales overlapping on their chins (Fig. 2) rather than having them separated by a straight groove. These snakes are known to feed mainly on terrestrial molluscs (Stuebing & Inger, 1999: 86).

DISCUSSION

According to David & Vogel (1996: 137 as *Internatus laevis*), Stuebing & Inger (1999: 86, 87 as *Pareas laevis*) and Das (2006: 21), the smooth slug snake inhabits tropical wet forests in the lowlands and tropical wet montane forests up to 1,150 m. It is apparently nocturnal, crawling on the forest floor or low vegetation, searching for slugs and snails to eat, and hiding under dead leaves in the day. Its reproductive biology is virtually unknown.

This species is distributed in Peninsular Malaysia, Sumatra, Borneo and Java, as well as from Banka Island, the Natuna Islands and the Mentawai Archipelago, as well as from Thailand and Laos (Iskandar & Colijn, 2002: 111). It appears to be rare in Peninsular Malaysia with records from the northern states and Selangor (Tweedie, 1983: 38 as *Pareas laevis*).

The smooth slug snake has not been reported again from Singapore since the first observation in 1978. One may suspect that the specimen could have been introduced. However, the Singapore Zoo has never imported this species for its collection, nor was it commercially available then and now. The locality where it was found was isolated and adjacent to forests. It was likely that the snake could have strayed from the surrounding forest. Since Singapore lies in the middle of the geographic range of *Asthenodipsas laevis* and forest habitat is available, it is reasonable to assume that the species occurs here naturally.

The other member of the Pareatidae known from Singapore is the white-spotted slug-snake, *Pareas margaritophorus* (Jan) (Baker & Lim, 2008: 112). It differs from the smooth slug-snake in having a distinct orange collar and white spots on its dorsum. This species has been recorded in Singapore only since 2000, from scrub and agricultural areas mostly at Khatib Bongsu and the Lim Chu Kang area (Baker & Lim, 2008: 112). It is distributed in Southern China, and Indochina to northern Peninsular Malaysia, and does not occur on the Sunda Islands (Iskandar & Colijn, 2001: 112). Lee & Koh (2005: 340) who first recorded this species in Singapore, expressed doubt that it was artificially introduced as the species was not commercially traded. However, it could have been transported as stowaways in plants imported from Malaysia, not unlike how the rainbow mud-snake, *Enhydris enhydris* may have arrived (Lim & D'Rozario, 2009). Its natural habitat, the drier monsoon forests of the North, may explain the species' preference for more exposed areas, such as scrubland, in Singapore.

ACKNOWLEDGEMENTS

I would like to thank the Singapore Zoo for the opportunity to make this find and to share it with posterity, and to Kelvin Lim of the Raffles Museum of Biodiversity Research, National University of Singapore, for help with background reference work.

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