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Record of *Lycodon zawi (Squamata: Colubridae)* in Tripura and its range extension in northeast India: an Indo-Burma biodiversity hotspots of the world

Abstract

Lycodon zawi is reported from Tripura state, northeast India for the first time with a range extension of ~200km and 86km east from the nearest Indian locality Tinkopani RF in Upper Assam and Pachunga college campus in Mizoram, respectively. The species also showed ca. 586km northern most distribution from the type locality in Myanmar.

Keywords: *Lycodon zawi*, range extension, Jampuihills, Tripura

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Introduction

The family *Colubridae* is the largest snake family found worldwide, containing approximately 70 percent of all described snake species of the world.[1] The genus *Lycodon* Boie, 1826 is one of the most widespread and species rich colubrid snakes genera comprising of 39 described species and ranks 8th among other colubrid snake genera in the world.[2] However, in Asia, it is the most specious genera.[3] In India, the genera *Lycodon* represents fifteen species,[4–5] and particularly from northeast India 7 species was recorded under this genus.[6–7] Species of this genus are small to medium in size, crepuscular to nocturnal, ground dwellers having good climbing ability and feeds mainly on lizards, frogs and snakes.[6,8–9]

In the past two decades, 14 new species have been described under the genera *Lycodon* from the mainland of Southeast Asian countries viz., Myanmar, Thailand, Laos, Vietnam, Cambodia, Philippines, Peninsular Malaysia and India.[4,6,10–18] Prior to this study, only two species of the genera *Lycodon* namely *L. zara* (Shaw, 1802) and *L. aulicus* (Linnaeus, 1758) was recorded from Tripura, northeast India.[19–20]

During faunastic survey in North Tripura district on 31st March 2012, I came across a road killed specimen of Colubrid snake at Vangmoon, Jampuihills (23°58'22.12"N 92°16'46.59"E, elevation 671m; Figure 1). The specimen was photographed and necessary morphological measurements were taken. Later the specimen was identified as *Lycodon zawi* Slowinski, Pawar, Win, Thin, Gyi, Oo & Tun, 2001 with the help of field guide[7,21] and validated by similarity of characters using standard literature.[6] The Zaw's Wolf Snake, *L. zawi* is easily identifiable by its colour pattern from closely related species. This apparently forest-restricted wolf snake has a smooth-scaled with flattened head, distinctive patterns of narrow white bands on a brown-black to black body, and lacks a collar band that is found in many of its congeners, like *L. aulicus* (L., 1788), *L. fasciatus* (Anderson, 1879) and *L. laoensis* Gunther, 1864 (Figure 1).[6,8,22] The snake is endemic to Southeast Asia. To this date, the species is known to occur in Assam (Garbhanga Reserved Forest and Tinkopani Reserve Forest), Mizoram (Ngengpui Wildlife Sanctuary, Kaifung and Pachunga College Campus), and Meghalaya (Nongkhyllem Wildlife Sanctuary, Balpakram Tiger Reserve) of northeast India, and in Sagaing Division and Rakhine State, northern Myanmar[6,8] and Lawachara National Park of neighboring country Bangladesh.[3,23] However, the most earliest recorded specimens of this species was deposited in the collection of Zoological survey of India, Kolkata having the specimen number ZSI 4685 was registered as *L. aulicus* collected from Hailakandi district of Assam (District headquarter location: 24.682780° N, 92.564284° E) on 31st March 1880 by C. H. Dreyer.[8]

Figure 1 Map showing the locations from where *Lycodon zawi* have been recorded: white dot indicates earlier records and red dot indicate new locality record form Tripura, northeast India.

In Tripura, the road killed specimen of the species was observed close to the degraded semi-evergreen mixed moist forests of Vangmoon, Jampuihills, North Tripura. The dominant vegetation of the habitats consists of *Saraca asoca* (Roxb.) Wilde, *Duabanga grandiflora* (Roxb. ex DC.) Walpers, *Baccaurea sapida* Muell. Arg., *Mangifera sylvatica* Roxb., *Mitragyna rotundifolia* (Roxb.) O. Kuntze trees along with under storey herbs, shrubs, epiphytes, orchids and patchily distributed bamboos and banana species of several kinds.[24] The Zaw's Wolf Snake foraged along streams in evergreen forest below 500m elevation and feeds on skinks and geckos, which are abundant along streams.[6]

The present locality record extends the known distribution of *L. zawi* in northeast India, extending its distribution approximately 52km east from the nearest Indian locality Pachunga College Campus in Aizwal, Mizoram, and 67km southwest from the nearest locality of neighboring country Lawchara National Park, Bangladesh. The species also showed approximately 738km northern most distribution from the type locality in Myanmar (Figure 2). Evidently, the present distribution range of this species suggests the occurrence of the species in other northeastern states (Arunachal Pradesh, Nagaland and Manipur) and other localities of countries which situated to the foot hills of Eastern Himalayas below 1000m elevation.

Figure 2 Road killed specimen of *Lycodon zawi* in Vangmoon. Jampuihills, North Tripura. Photo credit: Joydeb Majumder.

The species is listed as Least Concern in Red List of threatened reptilian species.[25] In Tripura, the possible threats of this species might be road killing as evident in this study and continuous loss of tropical semi-evergreen forest by the ethnic tribes for their age-old method of indigenous slash-and-burn cultivation which is earlier suggested by Majumder et al.,[8] for other vertebrates of the state.

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Conflict of interest

There is no conflict of interest to declare regarding the publication of this paper.

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