

## NEW RECORD OF THE GREEN RAT SNAKE *Ptyas nigromarginata* (Blyth, 1854) (SQUAMATA: COLUBRIDAE) FROM SON LA PROVINCE, VIETNAM

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### SUMMARY

Green rat snake *Ptyas nigromarginata* (Blyth, 1854) was originally described from Northeastern India. The species is known in India, Nepal, Bangladesh, Myanmar, Bhutan, China, Thailand to Vietnam. In Vietnam, the Green rat snake *Ptyas nigromarginata* is a poorly known species with few records from Lao Cai, Lang Son, Hanoi and Kon Tum provinces. The species is diagnosed based on the following characters: Head elongate, distinct from neck; eyes large with round pupils; a single loreal; eight supralabials, fourth and fifth entering orbit; dorsal scale rows 18(16) - 16(14) - 14, four to six median scales keeled; ventral 190 - 209 cloacal divided; subcaudals 123 - 142, paired. During recent herpetological survey in the karst forest of Van Ho district, Son La province, Vietnam, a male specimen of the Green rat snake *Ptyas nigromarginata* (Blyth, 1854) was found and this is the first provincial record of the species from Son La province. The specimen of *Ptyas nigromarginata* from Son La province has 212 ventral scales *versus* 190 - 209 in the species description of Smith (1943). The specimen was collected at an elevation of 1112 m a.s.l. and it is in the altitudinal range of the species, between 500 and 2300 m. The preferred habitat of the species predominantly consists of temperate forests and montane forest or dense hill evergreen forest. While, the individual in this study is found in the karst forest nearby cultivation area. Further research on population status and threats to the species is urgently required to provide baseline data for conservation measures.

**Keywords:** Distribution, morphology, new record, *Ptyas nigromarginata*.

### 1. INTRODUCTION

*Ptyas nigromarginata* (Blyth, 1854) was originally described under the name *Coluber nigromarginatus* based on the holotype (Zoological Survey of India, ZSI 7343) collected from the vicinity of Darjeeling, northeastern India. The species is diagnosed based on the following characters: Head elongate, distinct from neck; eyes large with round pupils; a single loreal; eight supralabials, fourth and fifth entering orbit; dorsal scale rows 18(16)-16(14)-14, four to six median scales keeled; ventral 190 - 209 cloacal divided; subcaudals 123 - 142, paired (Smith, 1943). The species is known to occur from India, Nepal, Bangladesh, Myanmar, Bhutan, China, Thailand and Vietnam (Vogel & Hauser 2013). However, this species is a poorly known species with few records from Lao Cai, Lang Son, Hanoi and Kon Tum provinces (Nguyen et al., 2009).

During a recent herpetological survey, an adult male of *Ptyas nigromarginata* was found in the karst forest near Hua Tat village, Van Ho commune, Van Ho district, Son La province. Based on morphological examination of this specimen, we herein report the first record of *Ptyas nigromarginata* from Son La province.

### 2. RESEARCH METHODOLOGY

#### Sampling

Field surveys were conducted in the karst forest of Van Ho commune, Van Ho district, Son La province by Trang A Phan in April 2019. The specimen was anaesthetized with ethyl acetate, fixed in approximately 85% ethanol, and then transferred to 70% ethanol for permanent storage (Simmons, 2002). The specimen was subsequently deposited in the collection of the Vietnam National University of Forestry (VNUF), Hanoi, Vietnam.

#### Morphological characters

Identification of sex was performed by inspection of presence of hemipenes, that were everted before fixation. Measurements (in mm) were taken in the preservative specimen with a measuring tape. The number of ventral scales was counted according to Dowling (1951). The numbers of dorsal scale rows (DSR) are given at one head length behind head, at midbody, and at one head length before vent, respectively. Scallation was studied by using a binocular. Bilateral values were given as left / right. Measurements were abbreviated as snout-vent length (SVL) and tail length (TaL).

### 3. RESULTS

#### *Ptyas nigromarginata* (BLYTH, 1854)

#### Green Rat Snake / Rắn ráo xanh (Figs. 1&2)

Specimen examined (n = 1). One adult male, VNUF R.2019.14 (field number VH.14) was collected on 19 April 2019 by Trang A Phan in the karst forest (20<sup>o</sup>46.780"N, 104<sup>o</sup>47.335"E, at an elevation of 1112 m a.s.l.) of Hua Tat village, Van Ho commune, Van Ho district, Son La province, Vietnam.

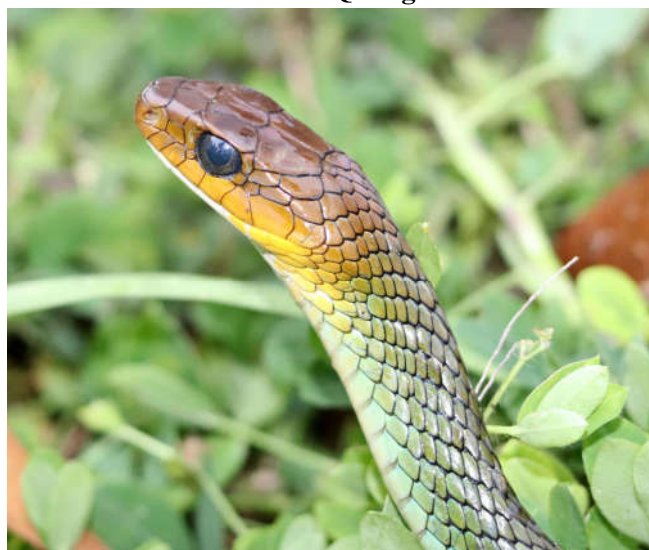
*Morphological characters.* SVL 1630.4 mm, TaL 610.2 mm; body elongated; head distinct from neck; eye large, with a round pupil; rostral broader high; internasals as broad as long, not in contact with loreal; internasal shorter than prefrontal, one frontal; parietal longer than wide; nasal divided; loreal 1/1, small, not touching orbit; preocular 1/1; subocular 1/1; postoculars 2/2; anterior temporals 2/2, posterior temporals 2/2;

supralabials 8/8, fourth to fifth entering orbit; infralabials 10/10, first to fifth bordering chin shields; dorsal scale rows 16-14-14, 4 median rows keeled, outer dorsal scales enlarged; ventrals 212; cloacal divided; subcaudals 128, divided (Determination after Smith, 1943).

*Coloration in life.* The upper part of the head is light brown with cream throat. The eyes are blackish-brown with round, black pupils. The dorsal body is brownish green, scales black-edged. There is a golden yellow patch on the throat and neck at the back of the jaw. The posterior part of the body and the tail has two pairs of black stripes with pale grey in between. Ventral surface of body and tail greenish cream.



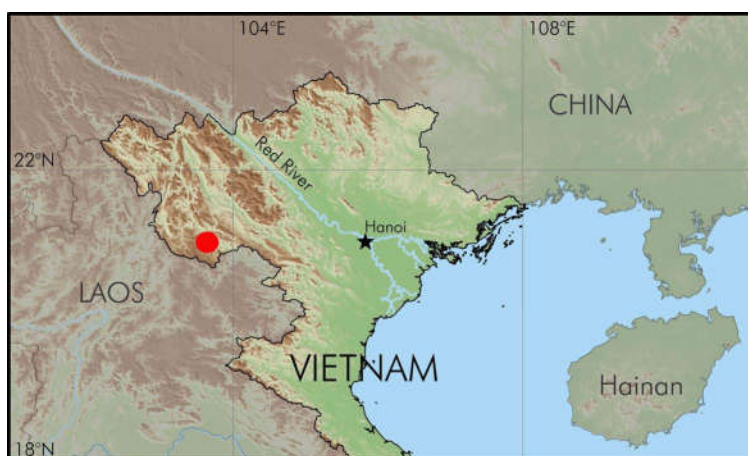
**Figure 1. Dorsal view of *Ptyas nigromarginata* from Son La province  
Photo: Luu Quang Vinh**



**Figure 2. Lateral view of the head and neck of *Ptyas nigromarginata* from Son La province  
Photo: Luu Quang Vinh**

*Distribution.* In Vietnam, this species is known to occur in Lao Cai, Lang Son, Ha Noi and Kon Tum provinces (Nguyen et al., 2009). This is the first recorded of the species in Son

La province. Elsewhere, this species recorded from India, Nepal, Bangladesh, Myanmar, Bhutan, Thailand and China (Vogel & Hauser 2013).



**Figure 3. Map showing the new distribution record of *Ptyas nigromarginata* (red circle) in Son La province, Northern Vietnam**

*Ecological notes.* The individual was collected at 20:00h, on the ground while sitting, at an elevation of about 1112 a.s.l. The

surrounding habitat was secondary karst forest, mixed by hardwoods and shrubs (Fig. 3).



**Figure 4. The habitat *Ptyas nigromarginata* in Son La province  
Photo: Trang A Phanh**

#### 4. DISCUSSION

The specimen of *Ptyas nigromarginata* from Son La province has more ventral scales (212 versus 190 - 209 in the description by Smith, 1943). The minor morphological deviation can be explained by individual variation. The specimen was collected at an elevation of 1112 m a.s.l. and it is in the altitudinal range of the species, between 500 and 2300 m (Vogel & Hauser 2013). The preferred habitat of the species predominantly consists of temperate forests (often with conifers) and montane forest or dense hill evergreen forest (Vogel & Hauser 2013). While, the individual in this study is found in the karst forest nearby cultivation area. Further studies on population status and threats are crucially needed to contribute baseline data for conservation measures.

#### 5. CONCLUSION

The Green rat snake *Ptyas nigromarginata* is known to occur in Lao Cai, Lang Son, Hanoi and Kon Tum provinces, Vietnam. During recent herpetological survey in the karst forest of Van Ho district, Son La province, Vietnam, the Green rat snake *Ptyas nigromarginata* was reported for

the first time from Son La province.

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### GHI NHẬN MỚI LOÀI RẮN RÁO XANH *Ptyas nigromarginata* (Blyth, 1854) (SQUAMATA: COLUBRIDAE) TẠI TỈNH SƠN LA, VIỆT NAM

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#### TÓM TẮT

Rắn ráo xanh *Ptyas nigromarginata* (Blyth) đã được mô tả lần đầu vào năm 1854 dựa trên mẫu chuẩn được thu ở vùng Đông Bắc Ấn Độ. Loài này hiện tại phân bố ở Ấn Độ, Nepal, Bangladesh, Myanmar, Bhutan, Trung Quốc, Thái Lan và Việt Nam. Ở Việt Nam, rắn ráo xanh *Ptyas nigromarginata* rất hiếm gặp và chỉ được ghi nhận ở bốn tỉnh bao gồm Lào Cai, Lạng Sơn, Hà Nội và Kon Tum. Rắn ráo xanh được nhận biết bởi các đặc điểm: Đầu thuôn dài, phân biệt với cổ; mắt lớn, đồng tử tròn; tám má đơn; tám tấm môi trên, tám thứ tư và thứ năm tiếp giáp mắt; bốn hoặc sáu hàng vảy dọc sống lưng có gờ nổi rõ; 16 hàng vảy giữa thân; vảy bụng tròn; vảy hậu môn chia hai; 123 - 137 hàng vảy dưới đuôi, kép. Trong quá trình điều tra gần đây về các loài bò sát và ếch nhái ở rừng trên núi đá vôi thuộc xã Vân Hồ, huyện Vân Hồ, tỉnh Sơn La, một cá thể đực của loài rắn ráo xanh đã được phát hiện và đây là ghi nhận đầu tiên về sự có mặt của loài này tại tỉnh Sơn La. Mẫu vật thu được từ tỉnh Sơn La có số vảy bụng là 212 trong khi mô tả của Smith (1943) về đặc điểm này là 190 - 209. Mẫu vật đã được thu ở độ cao 1112 m so với mực nước biển. Sinh cảnh ưa thích của loài được ghi nhận chủ yếu ở rừng ôn đới và rừng trên núi cao hoặc rừng thường xanh rậm rạp, trong khi mẫu vật từ nghiên cứu này được thu ở rừng thứ sinh trên núi đá vôi gần khu vực canh tác của người dân địa phương. Các nghiên cứu về tình trạng quần thể và các mối đe dọa tới loài là thực sự cần thiết nhằm cung cấp các dữ liệu cơ bản cho các biện pháp bảo tồn.

**Từ khóa:** Ghi nhận mới, hình thái, phân bố, *Ptyas nigromarginata*.

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