REPTILES & AMPHIBIANS

A Possible Second Individual of the Arunachal Pitviper, *Trimeresurus* (*Himalayophis*) *arunachalensis* Captain, Deepak, Pandit, Bhatt, and Athreya 2019, from West Kameng District, Arunachal Pradesh, Northeast India

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At about 0040 h on 27 September 2024, while on a photographic tour, the first two authors saw a snake crossing a road in West Kameng District, Arunachal Pradesh, northeast India (Fig. 1). To prevent the snake from being run over by a vehicle, they stopped to move it off the road. As the snake had a unique color-pattern and was not immediately identifiable, they photographed it and recorded basic scalation data after moving it off the road.

The unidentified snake resembled the Arunachal Pitviper, *Trimeresurus* (*Himalayophis*) *arunachalensis*, described recently by Captain et al. (2019) in several respects (Fig. 2). Although it differed in the number of midbody dorsal scale rows (19 vs. 17) and dorsal color-pattern (vibrant green with distinct, irregular brown markings above vs. reddish-brown with faint darker brown markings above), it was remarkably similar in having a sharply defined canthus rostralis with the canthal ridge overhanging the loreal region, a snout that projected well beyond the lower jaw, and scalation — which matched or was close in numbers (Table 1) and shapes (Figs. 3–5) when compared to those of the holotype and only known specimen of *T.* (*H.*) *arunachalensis* (following the nomenclature of Mirza et al. 2023) — which coincidentally was collected from a nearby locality. We take a conservative view and follow the example of Boundy (2008) in considering this snake to be a possible second record of the Arunachal Pitviper — placing a strong emphasis on "possible."

Color pattern.—Upper surfaces of the head and body were vibrant green with an asymmetrical dark brown pattern consisting mostly of oblique bands with scalloped margins, with some of the bands connected along the dorsal midline (Fig. 2). Sides of the head and ventrolateral body were dark brown with scattered white markings along the outer edges of ventrals and the adjacent dorsal scale rows. Supralabials were dark brown with a few green and white markings (Fig. 3). The venter was a glossy reddish-brown densely speckled with fine dark blackish-brown specks and a few widely spaced, small white spots. Undersides of the head and tail were a darker blackish-brown.

Morphology.—Dorsal scales on the head, body, and tail were not glossy, whereas ventrals, subcaudals, and the rostral were glossy. Ventrals, although visible on the sides of body, were not angulate laterally. The head was distinctly broader than the neck, pupils vertical, and the snout broadly rounded when viewed from above. Distinct loreal pits were present between the nares and eyes. Scales on the dorsal surface of the head were smooth, flat, and not imbricate; those in the temporal region bore faint knob-like protuberances arranged

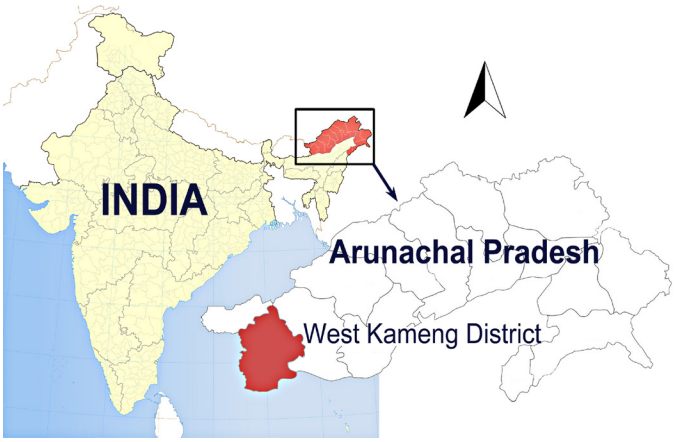

Figure 1. Map showing the locality in West Kameng District, Arunachal Pradesh, India, of the only known record of the Arunachal Pitviper (*Trimeresurus* [*Himalayophis*] *arunachalensis*) and the possible new record.

Reptiles & Amphibians ISSN 2332-4961
https://doi.org/10.17161/randa.v32i1.24067

Figure 2. Comparison of the dorsum of the unidentified green and brown pitviper from West Kameng District, Arunachal Pradesh, India (left), and that of the Arunachal Pitviper (*Trimeresurus* [*Himalayophis*] *arunachalensis*) (right) in life. Photographs by Girish Choure (left) and Rohan Pandit (right).

Table 1. Comparison of scalation data showing similarities and differences between the green and brown pitviper from West Kameng District, Arunachal Pradesh, India, and *Trimeresurus* (*Himalayophis*) *arunachalensis*.

	Dorsal scale rows	Ventrals	Subcaudals (paired)	Cloacal scale	Supralabials	Scales between supraoculars
Green and brown pitviper from West Kameng	19:19:15	139	56	1	7	5–6
Trimeresurus (*Himalayophis*) *arunachalensis*	19:17:15	145	51	1	7	6

Figure 3. Comparison of left lateral aspect of the head of the unidentified green and brown pitviper from West Kameng District, Arunachal Pradesh, India (left), and the holotype and only known specimen of the Arunachal Pitviper (*Trimeresurus* [*Himalayophis*] *arunachalensis*) (right). Photographs by Girish Choure (left) and Ashok Captain (right).

in a line near the posterior edges of the scales. Dorsal scales were in 19:19:15 rows, keeled (including the outermost scale row at midbody). Ventrals numbered 139; the cloacal was not divided (i.e., single); paired subcaudals numbered 56 (terminal scute not included). Nostrils were within undivided nasal scales, loreal scales were squarish, the upper larger than the lower; both bordered anteriorly on each side by the nasals, below by the first supralabials, posteriorly by the second supralabials or lacunals, and above by scales of the canthus rostralis. The canthal ridges extended from the upper margins of the nasals, along the lower edges of the scales immediately posterior to them, and then along the entire lengths

Figure 4. Comparison of the dorsal aspect of the head of the unidentified green and brown pitviper from West Kameng District, Arunachal Pradesh, India (left), and the holotype of Arunachal Pitviper (*Trimeresurus* [*Himalayophis*] *arunachalensis*) in life (right). Photographs by Girish Choure (left) and Rohan Pandit (right).

of the lower margins of the middle preoculars. Supralabials numbered seven on each side; the first completely separated from the nasals; the second forming the anterior borders of the loreal pits; the third and largest separated from the eyes by single curved scales equivalent to postoculars and suboculars, and touching the lower scales bordering the pits. Six scales lie between the supraoculars (Fig. 4). Infralabials numbered eight on each side and anterior genials were broader than posterior genials. Measurements taken on a live snake are approximate and the tail ratio is merely indicative: Snout-vent length 410 mm, tail length 160 mm, total length 570 mm, and tail ratio 0.2807.

As no specimen was collected, we refrain from formally referring this individual to *Trimeresurus* (*Himalayophis*) *arunachalensis*. However, based on the similarities between the two snakes, we postulate that *T.* (*H.*) *arunachalensis* is polychromatic, as is *T.* (*H.*) *tibetanus* (Tillack et al. 2003). Efforts are underway to obtain collection permits and procure specimens to confirm or refute our suspicion that the Arunachal Pitviper exhibits polychromatism.

Acknowledgements

We thank Vikas Kumar, Josh Harwood, and Dawn Cook for assistance in the field, and Rohan Pandit for the generous use of his images.

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Figure 5. The pronounced snout, overhanging canthus rostralis, and ventral aspect of the forebody of the unidentified green and brown pitviper from West Kameng District, Arunachal Pradesh, India (left), and the holotype and only known specimen of the Arunachal Pitviper (*Trimeresurus* [*Himalayophis*] *arunachalensis*) (right) in life. Photographs by Girish Choure (left) and Rohan Pandit (right). Image of Arunachal Pitviper (*Trimeresurus* [*Himalayophis*] *arunachalensis*) has been laterally inverted for ease of comparison.