REPTILES & AMPHIBIANS

Whither *Dendrelaphis* in western India? A Critique of Recent Papers by Vaishnav and Ghadi (2025) and Puranik et al. (2025)

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The growing accessibility of writing tools, including generative AI and templates (Altmäe et al. 2023; Misra and Chandwar 2023; Khalifa and Albadawy 2024), along with the increased availability of online journals, has made scientific publishing easier than ever (Goel 2021). While the intention to enhance access to science by broadening the dissemination of scientific knowledge is honorable and timely (Holbrook 2019; Dessimoz and Thomas 2024), it has a flipside in the proliferation of poorly substantiated work (Lissack and Meagher 2024). For zoological research to progress reliably, manuscripts must meet high standards of methodological rigor and validation. However, manuscripts sometimes fall short of these standards, not out of negligence, but often because authors lack access to specialized training or critical feedback. When these gaps are not addressed during the publishing process, the scientific record can be compromised by the unintentional dissemination of unreliable information. The pervasive pressure to publish contributes to a high volume of submissions, which in turn places significant stress on the peer-review ecosystem. When leading experts are unavailable due to their own workloads, journals may have to rely on a broader pool of reviewers, sometimes including those with less specialized knowledge. This dynamic can lead to inconsistencies in review quality, raising important questions about how to maintain the integrity and reliability of scientific literature.

Perhaps the preceding issues were among those that led to the publication of two problematic recent articles in the pages of this journal by Vaishnav and Ghadi (2025) and Puranik et al. (2025) on snakes of the genus *Dendrelaphis* Boulenger 1890 (commonly known as Bronzebacks) in Maharashtra, western India. The exchange between authors, editors, and reviewers apparently and unfortunately produced subpar products in a journal that has made many excellent contributions over the years. That publishing delays rooted in unexpectedly high submission rates were announced on the journal's website in late August 2025 is perhaps telling. Given the editorial load, that an apparent oversight on the part of authors resulted in different versions of their very names also is unhelpful. The authors of the first paper we critique are

Figure 1. Two juvenile *Dendrelaphis proarchos* rescued recently from Surat district, Gujarat, India (left and center). The third individual (right) is a hatchling with an umbilical scar still visible. Photographs by Mehul N. Thakur.

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listed as Mohandas, K.V., and Dnyaneshwar, L.G. on the article's webpage, but appear only with their first names in the PDF file of the actual document. While we do not intend to denigrate the efforts of fellow snake rescuers or researchers, in the interest of scientific integrity, we seek to correct the misconceptions about *Dendrelaphis* produced by both articles so that a proper understanding of Bronzeback distribution in western India is restored.

Vaishnav and Ghadi (2025).—These authors (hereafter VG) reported two snakes they identified as *Dendrelaphis* cf. *proarchos* from the Thane Area (2022: 19.1842, 72.9533; 2023: 19.1891, 72.9676). They included a photograph of one of the snakes, but did not provide any supporting data for their species-level identification. In the figure caption, VG mentioned that the snake had a "slender, elongated body and uniform dorsal coloration," a "bright red tongue," and a "distinct postocular stripe extending well beyond the angle of the jaw," but these characteristics alone are not diagnostic at the species level for Indian *Dendrelaphis*. Additional morphological data, such as scale counts, or molecular data, are generally necessary for unequivocal species-level identification in this genus. This is one area where, after thorough peer-review, additional information should have been requested.

In any comparisons of Indian *Dendrelaphis*, one would expect *D. tristis* (Daudin 1803), the most commonly encountered Bronzeback, to feature prominently. However, in their introduction, VG made no mention of the most common species but highlighted the difficulty in distinguishing the Northeast Indian *D. proarchos* (Wall 1909) and *D. pictus* (Gmelin 1789), which is a bit odd when the main focus ought to be on western Indian records. The authors subsequently did not work through a series of species comparisons, as one might expect, but linked their western Indian discovery to a study of Northeast Indian *Dendrelaphis* (Biakzuala et al. 2022). In addition, VG cited a comprehensive study of *D. proarchos* from Surat, Gujarat, a western Indian location (Parmar et al. 2024a), in which "stray" *D. proarchos* had been identified with a high degree of confidence using detailed morphological and molecular data sets, but instead of using the valuable and pertinent information therein (at least the specific information about the position and extent of the black postocular stripe), which could have led to a definitive identification as *D. proarchos*, the authors decided to report their two snakes as representatives of a previously undocumented population, *D.* cf. *proarchos*.

The map presented by VG shows populations of *D. proarchos* in Northeast India and three records the authors considered as questionably identified. One of these records is the one from Surat, Gujarat, which Parmar et al. (2024a) had unequivocally identified as *D. proarchos*. Furthermore, VG omitted from the map records of itinerant *D. proarchos* found associated with gardens and plant nurseries in Madhya Pradesh (Sharma and Verma 2023) and Rajasthan (Sharma et al. 2023), both cited by Parmar et al. (2024a), which could have been used to infer that intermittent transport of these snakes from Northeast India via the ornamental plant trade could be ongoing.

Among a few other, minor issues, one of the rescue records described by VG came from an autorickshaw, a non-natural habitat, yet the authors presented it as part of their argument that a naturally occurring population was present in the area. To conclude their discussion, VG emphasized that this type of snake was "previously undocumented in western peninsular India," a clear error considering that Surat, Gujarat, also is in western India. Lastly, the title lists the species name as *D.* cf. *proarchos* in combination with a taxon authority. However, Wall (1909) is the author of the nomen *D. proarchos*, not *D.* cf. *proarchos*, and therefore listing any taxon authority with a cf. (or aff.) is incorrect.

The conclusion by VG that a naturally occurring Bronzeback population similar to *D. proarchos* exists in western India is contradicted by the existing evidence that *D. proarchos* has been imported with some frequency in plant shipments. Reviewers with the relevant knowledge would ideally have pointed out this contradiction and questioned the lack of identifying characteristics in the text and of any sightings in neighboring districts. For example, the nearby Dangs forest is a place where a naturally occurring Bronzeback population would surely be detected (as was *D. chairecacos* Boie 1827; Parmar et al. 2024b). Instead, a documented human-mediated population has been incorrectly classified as naturally occurring, which could disrupt snake conservation work in the region. With the benefit of the doubt, perhaps VG were unable to exhaustively research and review the available literature before submitting their manuscript, but that is where peer-review must help. We recognize that peer-review, as a human endeavor, is inherently fallible, and the challenges of securing comprehensive reviews are familiar to all editors. Yet, this fallibility is precisely why a collective vigilance is required to mitigate the risk of unintentionally perpetuating misinformation.

Puranik et al. (2025)—These authors reported two "atypical" *Dendrelaphis* from Mumbai, one from Kanjurmarg (2021: 19.1296, 72.9333) and the other from Vikhroli (2022: 19.1125, 72.9325). Morphological comparisons with *D. tristis*, *D. girii* Vogel and van Rooijen 2011, *D. ashoki* Vogel and van Rooijen 2011, and *D. bifrenalis* (Boulenger 1890) led Puranik et al. to conclude that their two snakes could not belong to any of those species. They cited their small sample size and a lack of "sophisticated tools and methods" (Puranik et al. 2025) as reasons for their inability to provide a definitive identification for the snakes.

The authors or reviewers should have realized that one of the selections for comparisons was chosen suboptimally.

Whereas *D. girii* and *D. ashoki* are Western Ghats endemics and *D. tristis* is widespread in India, *D. bifrenalis* is recognized as occurring only in Sri Lanka and southern India, and its earlier presence in the Western Ghats was based on an error (Vogel and van Rooijen 2011; Aengals et al. 2022). On the other hand, the authors omitted two species that had been documented in regional proximity to their records: Parmar et al. (2024a) showed that *D. proarchos* occurs in the region, and *D. chairecacos* is known at least as far as Maharashtra (Karthik and Dutta 2020) and farther north into Gujarat (Parmar et al. 2024b). Inclusion of these species would have led to a definitive identification because *D. proarchos* is the only species occurring in the region with a single cloacal scale.

Whither *Dendrelaphis* in western India?—Six species of *Dendrelaphis* currently are confirmed for western India (*D. ashoki*, *D. chairecacos*, *D. girii*, *D. grandoculis* (Boulenger 1890), *D. proarchos*, *D. tristis*), of which the first four appear to be Western Ghats endemics (Vogel and van Rooijen 2011; Chandramouli and Ganesh 2012; Parmar et al. 2024b). Given that the four snakes obtained by VG and Puranik et al. were rescued in population centers, we believe this should have flagged the need for extra care in a country where flora and fauna are moved with regularity for many purposes (e.g., Parmar and Kaiser 2022; Prakash et al. 2022; Parmar et al. 2024a). Consequently, for discoveries of "new" snake populations, human-mediated translocations should be a key consideration. In the case of *D. proarchos*, the discovery of juveniles in Gujarat in October 2025 (Fig. 1) either indicates that the number of stowaways from Northeast India has reached a level where reproduction can successfully occur (and perhaps a population can be sustained in the long-term) or that gravid females were brought across in plant transports.

The contributions of citizen scientists, such as snake rescuers, are vital for reporting rare faunal observations. To translate these valuable reports into formal scientific publications, however, requires integrating them with the broader context of existing literature — a specialized skill that often benefits from academic training and resources. This is not to discourage publication by dedicated non-academic individuals, but to highlight pathways to success. We encourage potential authors to conduct thorough literature reviews and, importantly, to seek mentorship from academic colleagues specializing in the taxon. Journal editorial teams can also be valuable allies for guidance on aligning a manuscript with scholarly standards. Comprehensive engagement by all involved, which for short reports like these is not too onerous, should in the future help avoid the problems encountered in these two papers. The peer-review system is not error-proof, and deliberate deceit could still allow circumvention of proper processes (e.g., Kaiser 2025), but an earnest, concerted effort by journals and authors should be able to uncover the relevant literature and keep science on the right track.

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