New species of snake discovered in Vietnam and China: Hebius vogeli

GA, UNITED STATES, April 2, 2026 /EINPresswire.com/ -- A new species of snake, Hebius vogeli, has been discovered along the Vietnam-China border. This taxonomic breakthrough stems from a comprehensive reassessment of the Hebius optatus species complex, integrating both molecular and morphological data. The species, which is geographically restricted to northern Vietnam and southern Guangxi in China, exhibits distinct traits, including a higher number of subcaudal scales and a bright coral-red venter. Genetic analysis revealed a significant divergence from H. optatus, with p-distances of 10.74%-11.73%. This discovery highlights the underestimated diversity within the Hebius genus, shedding light on the rich herpetofauna of Southeast Asia.


Photographs in life of Hebius optatus in China.

The Hebius genus, known for its elongated body and distinctive coloration, has long presented challenges in species identification due to intraspecific variation. The Hebius optatus species complex, including populations from Vietnam and southern China, was previously considered a single species. However, recent advancements in both molecular techniques and morphological studies have unveiled that what was once thought to be a single species actually includes multiple distinct lineages. The description of Hebius vogeli sp. nov. marks a significant development in the taxonomy of Southeast Asian snakes, providing new insights into the biodiversity of this complex region.

Based on these findings, there is a growing need for further taxonomic research in the Vietnam-China border region, where cryptic species diversity remains underexplored.

A team of researchers, led by Tan Van Nguyen and Jinlong Ren, published (DOI: 10.3724/ahr.2095-0357.2025.0026) their findings in Asian Herpetological Research in December 2025, describing Hebius vogeli sp. nov. This new species, identified through a combination of

morphological and molecular data, is found in northern Vietnam and the Guangxi Zhuang Autonomous Region in China. Phylogenetic analysis shows that it is closely related to H. optatus, but the species can be distinguished by several key traits, including its distinct ventral coloration and higher number of scales.

Hebius vogeli sp. nov. stands out within the Hebius genus due to several diagnostic characteristics that differentiate it from other members of the complex. Morphologically, it features a higher number of subcaudal scales and a greater total number of ventral and subcaudal scales compared to H. optatus. Furthermore, the new species possesses a bright coral-red venter, while H. optatus has a yellow venter. The new species is geographically confined to northern Vietnam and southern Guangxi, China, with the Pearl River acting as a potential biogeographic barrier that separates it from H. optatus. Molecular data, including cytochrome b sequences, revealed significant genetic divergence between the two species, supporting the recognition of H. vogeli as a distinct species. The description of H. vogeli sp. nov. expands the diversity of the Hebius genus, which previously included 52 species. The new species' discovery also underscores the ongoing need for more research in the biodiversity-rich borderlands of Vietnam and China.The researchers recommend excluding H. optatus from the herpetofauna of Vietnam due to the clear distinction between the populations in the region.

Dr. Gernot Vogel, an expert on Southeast Asian reptiles, commented on the significance of this discovery, saying, “Hebius vogeli sp. nov. adds valuable knowledge to the understanding of Southeast Asian biodiversity. It underscores the importance of integrative taxonomic studies that combine molecular and morphological data. This discovery not only highlights the rich and often overlooked diversity of the Hebius genus but also stresses the need for continued research in the border regions of Vietnam and China to better understand the herpetofaunal patterns and evolutionary history of the region.”

The discovery of Hebius vogeli sp. nov. has important implications for conservation and biodiversity monitoring in Southeast Asia. The species' restricted distribution in northern Vietnam and southern Guangxi makes it vulnerable to habitat loss and environmental changes. Conservationists and herpetologists are encouraged to use citizen science platforms such as iNaturalist and Facebook to enhance species documentation and public engagement. Additionally, the discovery highlights the need for more detailed population-level studies and surveys to monitor the health and distribution of this newly identified species. Furthermore, the findings contribute to our understanding of the evolutionary dynamics of the Hebius genus and its broader ecological role.

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