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The first record of *Hebius vibakari* (Colubridae: Natricinae) in Pogranichny District, Primorsky Krai

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Abstract. *Hebius vibakari* (Boie, 1826) is a poorly studied snake species native to the Russian Far East. In early August 2024, an adult specimen of this elusive species was found and photographed by the present author in the Studenaya River valley, near the village of Dukhovskoe. The snake was found hiding beneath a flat stone on the river bank. This report is the first confirmed record of the Japanese keelback from Pogranichny District, which contributes to our understanding of *Hebius vibakari* distribution in Primorsky Krai.

Keywords: *Hebius vibakari*, Japanese keelback, Primorsky Krai, first record, snake

Первая находка японского ужа *Hebius vibakari* (Colubridae: Natricinae) в Пограничном округе, Приморский край

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Аннотация. Японский уж *Hebius vibakari* (Boie, 1826) — малоизученный вид змей, встречающийся на российском Дальнем Востоке. В начале августа 2024 г. взрослая особь данного вида была отмечена в долине р. Студёная в окрестностях села Духовское. Змея была обнаружена под небольшим плоским камнем на берегу реки и сфотографирована. Данное наблюдение является первой зарегистрированной находкой *Hebius vibakari* на территории Пограничного округа и дополняет наше представление о распространении вида в Приморском крае.

Ключевые слова: *Hebius vibakari*, японский уж, Приморский край, первая находка, Пограничный округ

The Japanese keelback, *Hebius vibakari*, is a small, non-venomous snake found in Japan, China, the Korean Peninsula, and the Russian Far East (Dunaev, Orlova 2017). Due to its secretive nature, this snake is considered to be one of the least studied snake species in Russia. Within its Russian range, Japanese keelbacks inhabit river valleys covered with broadleaf and mixed forests, as well as coastal areas (Kharin 2011; Adnagulov 2020). The snakes found on the Asian mainland have often been classified as *Hebius vibakari ruthveni* (Van Denburg, 1932), though recent studies question the validity of this subspecies based on both morphological and molecular evidence (Gao et al. 2024).

Historically, the majority of observations of *H. vibakari* have been concentrated in the southern regions of Primorsky Krai, owing to more intensive herpetological research in these areas (Emelianov 1929; Korotkov 1985). In contrast, the western part of Primorsky Krai, particularly Pogranichny District, has remained understudied, with no comprehensive data available on local snake populations or their distribution. To the best of my knowledge, the present report is the first confirmed record of *H. vibakari* from this area.

Fig. 1. *A, B* — the discovery site of *H. vibakari* along the Studenaya River near Dukhovskoe; *B* — adult *H. vibakari* observed on 4 August 2024

Рис. 1. *A, B* — место находки японского ужа: р. Студёная близ с. Духовское; *B* — взрослая особь *H. vibakari*, обнаруженная 04.08.2024

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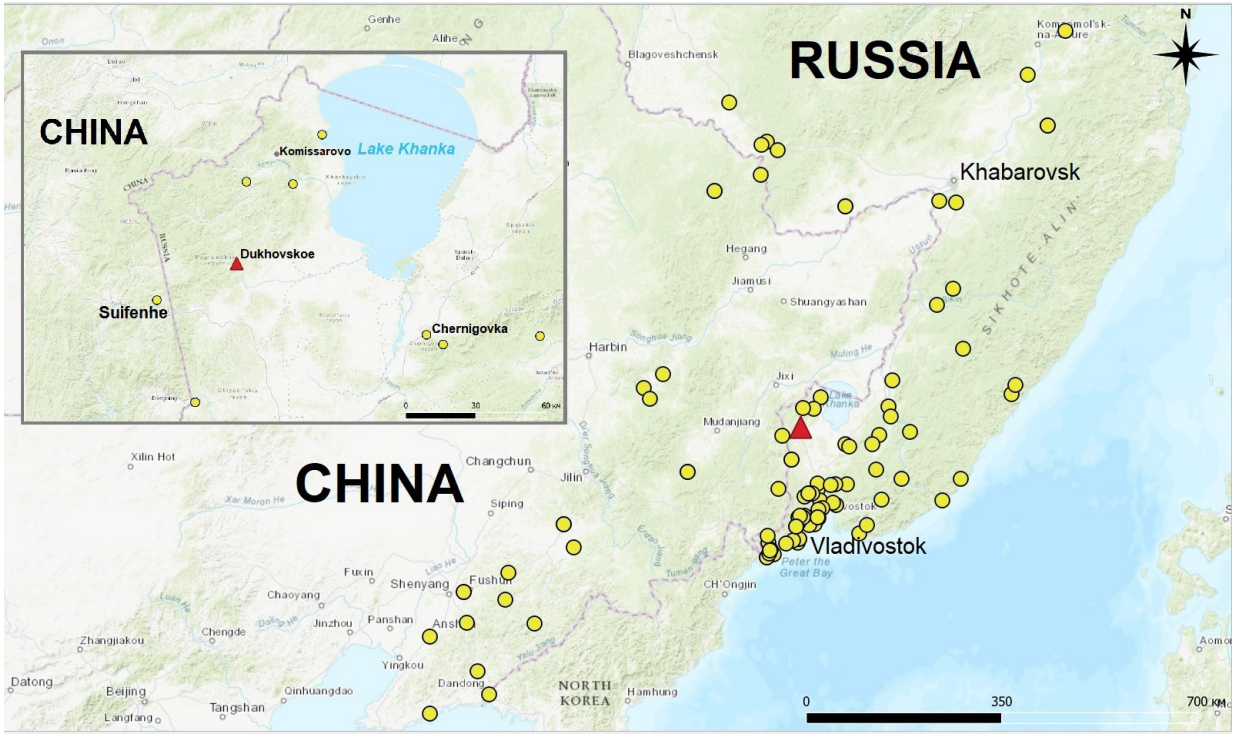

Fig. 2. Known localities of *H. vibakari* in the Russian Far East and northeastern provinces of China. Yellow circles indicate previously documented observation sites based on literature (Emelianov 1929; Zhao et al. 2004; Zhao 2008; Kharin 2011; Maslova et al. 2018; Adnagulov 2020) and the author's findings. The red triangle marks the location of the current observation

Рис. 2. Места находок японского ужа на территории российского Дальнего Востока и северо-восточного Китая. Желтыми кругами отмечены места находок вида на основе литературных источников (Emelianov 1929; Zhao et al. 2004; Zhao 2008; Kharin 2011; Maslova et al. 2018; Adnagulov 2020) и данных автора. Красным треугольником обозначено место находки *Hebius vibakari*, описанное в данной статье

On 4 August 2024, one *H. vibakari* was discovered on the bank of the Studenaya River (44°35'20.7"N, 131°32'33.3"E), near the village of Dukhovskoe, in Pogranichny District (Fig. 1: A). An adult specimen of approximately 45 cm in total length was found beneath a flat stone not far from a bridge crossing the river. Upon disturbance, the snake immediately attempted to flee into the nearby vegetation but was captured and relocated to the shoulder of a gravel road near the bridge. After photographing the specimen (Fig. 1: B), it was released back to its original location.

As mentioned before, this observation is the first confirmed record of *H. vibakari* from Pogranichny District. Prior to this discovery, the closest known records of the species were from Khankaysky District, which borders Pogranichny District to the east. The first known sighting of an adult *H. vibakari* occurred along the shores of Lake Khanka near Novokachalinsk in the mid-2000s (Maslova et al. 2018). Subsequently, two adult snakes were found by the author in a rock quarry in 2016 and 2017 (Maslova et al. 2018; personal observation). Additional sightings have occurred along the bank of the Komissarovka River, near Dvoryanka, in 2019 and 2024 (personal observations; Fig. 2).

The distances between the current site of observation in Pogranichny District and these earlier findings is 65 km, 41.5 km, and 35 km, respectively. In three out of four cases observed by the author in Khankaysky District, *H. vibakari* was found in forested areas, typically sheltering beneath rocks, logs, or construction debris. In the present case, the specimen was similarly found beneath a stone near a riparian forest.

Given the secretive nature of this species and the frequency of recent findings, I hypothesize that *H. vibakari* may be more widely distributed across forested areas not only in Pogranichny District but throughout the entire Primorsky Krai. Further research is required to expand our knowledge of the species' distribution and ecological requirements.

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References

Adnagulov, E. V. (2020) Osobennosti rasprostraneniya yaponskogo uzha *Hebius vibakari* (H. Boie, 1826) (Colubridae: Natricinae) v rossijskoj chasti areala [The distribution of *Hebius vibakari* (H. Boie, 1826) (Colubridae: Natricinae) in its Russian range]. *Amurskij zoologicheskij zhurnal — Amurian Zoological Journal*, vol. 12, no. 4, pp. 524–539. https://doi.org/10.33910/2686-9519-2020-12-4-524-539 (In Russian)

Dunaev, E. A., Orlova, V. F. (2017) *Zemnovodnye i presmykayushchiesya Rossii: atlas-opredelitel' [Amphibians and reptiles of Russia: Key atlas]*. 2nd ed. Moscow: Fiton XXI Publ., 328 p. (In Russian)

Emelianov, A. A. (1929) *Zmei Dal'nego Vostoka [Snakes of the Far Eastern District]*. Vladivostok: Vladivostok Branch of the State Russian Geographical Society Publ., 208 p. (Zapiski Vladivostokskogo otdeleniya gosudarstvennogo Russkogo geograficheskogo obshchestva (Obshchestva izucheniya Amurskogo kraya) [Notes from the Vladivostok Department of the State Russian Geographical Society (Society for the study of the Amur Region)]. Vol. 3 (20). Iss. 1). (In Russian)

Gao, Z.-Y., Huang, J.-J., Ding, L. et al. (2024) Taxonomic re-evaluation of the subspecies of *Hebius vibakari* (Boie, 1826) (Reptilia: Serpentes: Natricidae), with new evidence from central and northern China. *Zootaxa*, vol. 5474, no. 5, pp. 503–521. https://doi.org/10.11646/zootaxa.5474.5.3 (In English)

Kharin, V. E. (2011) Annotirovannyj katalog amfibij i reptilij (Amphibia, Reptilia) Dal'nevostochnogo morskogo biosfernogo zapovednika [Annotated catalogue of amphibians and reptiles (Amphibia, Reptilia) of the Far-Eastern Marine Biosphere Reserve FEB RAS]. *Biota i sreda zapovednikov Dal'nego Vostoka — Biodiversity and Environment of Far East Reserves*, no. 1, pp. 30–48. (In Russian)

Korotkov, Yu. M. (1985) *Nazemnye presmykayushchiesya Dal'nego Vostoka SSSR [Terrestrial reptiles of the Far East of the USSR]*. Vladivostok: "Dal'nevostochnoe knizhnoe izdatel'stvo" Publ., 136 p. (In Russian)

Maslova, I. V., Portnyagina, E. Yu., Sokolova, D. A. et al. (2018) O rasprostranenii redkikh i ischezayushchikh amfibij i reptilij Primorskogo kraya (Dal'nij Vostok, Rossiya) [Distribution of rare and endangered amphibians and reptiles in Primorsky Krai (Far East, Russia)]. *Nature Conservation Research. Zapovednaya nauka — Nature Conservation Research*, vol. 3, suppl. 1, pp. 61–72. https://doi.org/10.24189/ncr.2018.052 (In English)

Zhao, E. M., Zhao, H., Zhou, Z. Y. (2004) Herpetodiversity of northeastern China and their distribution. *Sichuan Journal of Zoology*, vol. 23, no. 3, pp. 165–168. (In Chinese)

Zhao, W. G. (2008) *The amphibia and reptilia fauna of Heilongjiang, China*. Beijing: Science Press, 249 p. (In Chinese)

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