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First record of *Lathys annulata* Bösenberg, Strand, 1906 (Aranei, Dictynidae) from Russia

Первая находка *Lathys annulata* Bösenberg, Strand, 1906 (Aranei, Dictynidae) в России

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Key words: spiders, *Lathys*, Primorskii Krai, new record.
Ключевые слова: пауки, *Lathys*, Приморье, фаунистические находки.

Abstract. *Lathys annulata* Bösenberg, Strand, 1906 (Aranei, Dictynidae) is firstly recorded for the fauna of Russia. Two males were collected in the Botanical Garden of Vladivostok in May 2023, representing the northernmost known distribution limit of the species. This record expands the known range of this species and provides new insights into its biogeography. Photographs of the habitus and male copulatory organs are provided.

Резюме. Впервые для территории Российской Федерации приводится *Lathys annulata* Bösenberg, Strand, 1906 (Aranei, Dictynidae). Два самца собраны в ботаническом саду г. Владивостока в мае 2023 г. Эта находка расширяет ареал вида и представляет собой его наиболее северную точку распространения. Приведены фотографии внешнего вида и копулятивных органов самца.

Introduction

To date, the genus *Lathys* Simon, 1885 comprises 50 species [WSC, 2025], all of which are restricted to the Holarctic. Seven species are known from Russia, namely: *L. alberta* Gertsch, 1946, *L. bin* Marusik, Logunov, 1991, *L. heterophthalma* Kulczyński, 1891, *L. humilis* (Blackwall, 1855), *L. lehtineni* Kovblyuk, Kastrygina, Omelko, 2014, *L. stigmatisata* (Menge, 1869) and *L. truncata* Danilov, 1994. Two species have been recorded in Primorskii Krai: *L. stigmatisata* (Menge, 1869) in the Lazovsky Reserve [Marusik, 2009 (as *L. taczanowskii*)] and *L. truncata* Danilov, 1994 at the Vostok Biostation of the Institute of Marine Biology [Mikhailov, Temereva, 2015].

Lathys annulata Bösenberg, Strand, 1906 was originally described based on a single female collected near Saga City (Kyushu Island, Saga Prefecture) [Bösenberg, Strand, 1906]. Lehtinen [1967] synonymized it with *L. humilis*, but Ono [2003] later reinstated it as a separate species. The male was subsequently described by Ono and Ogata [2009]. *Lathys novembris* Dönitz, Strand, 1906 was synonymized with *L. annulata* by Lehtinen [1967]. This species was originally described in the appendix to "Japanische Spinnen" [Bösenberg, Strand, 1906] and was long considered *nomen dubium* due to the unknown location of the type specimen [Ono, 2003]. The synonymization was based on descriptions and illustrations of both species.

Until now, *L. annulata* had only been recorded in Japan and South Korea [Bösenberg, Strand, 1906; Yaginuma, 1960; Ono, 2003; Ono, Ogata, 2009; Seo, 2015; Hidaka, 2022]. The present record from Primorskii Krai is the first for Russia and represents the northernmost point of the species known range.

Materials and methods

The specimens were collected by M.E. Sergeev and are deposited in the Department of Zoology and Ecology, Donetsk State University (DonSU). Photographs were taken using a USB digital camera Lens Mount attached to a Zeiss Primo Star microscope and an Olympus SZ51 stereoscopic microscope. All measurements are given in millimetres.

The map was generated using Simplemappr [Shorthouse, 2010].

The present work is registered in ZooBank (www.zoobank.org) under urn:lsid:zoobank.org:pub:442B748E-A339-4752-BA1C-B926AF58F2F4

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Results

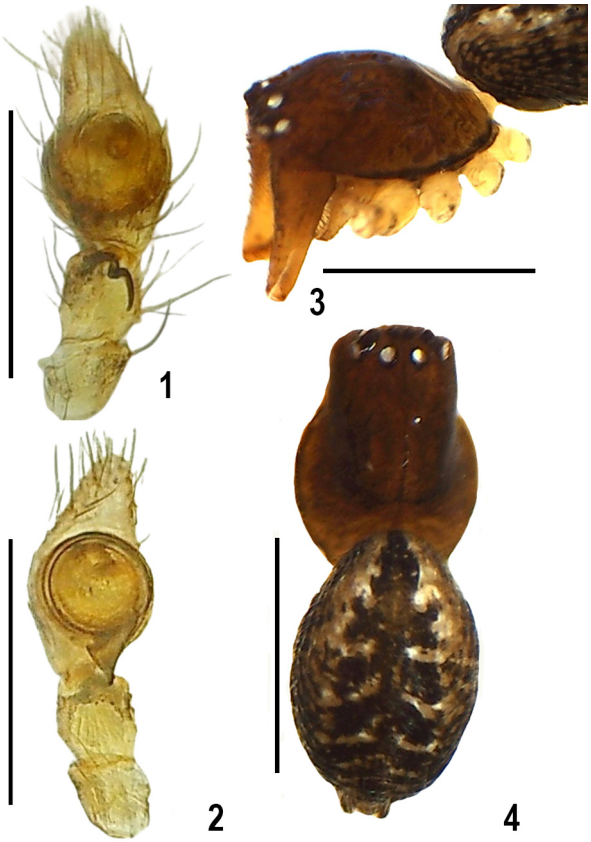
Dictynidae O. Pickard-Cambridge, 1871
Lathys Simon, 1885
Lathys annulata Bösenberg, Strand, 1906
Figs 1–5.

Material. **Russia,** ***Primorskii Krai:*** Vladivostok, botanical garden, black pine forest on the slopes of a hill, branches shaking on the screen, 19.V.2023 — 1♂; idem, 30.V.2023 — 1♂ (DonSU).

Distribution. Russia: Primorskii Krai, Japan (except for Iwate, Miyagi, Toyama, and Ehime Prefectures) [Hidaka, 2022], South Korea (Hansando Island) [Seo, 2015] (Fig. 5).

Description. Body length ranges from 1.93 to 2.53 mm. The cephalothorax (length: 0.87–1.20 mm, width: 0.83–0.93 mm) is brownish with black veins and dots. The chelicerae are yellowish with black veins and dots, becoming lighter toward the apex. The cheliceral claws are long and sharply taper distally. The length of the basal claw of the chelicerae varies from 0.58 to 0.98 mm, while the length of the claw varies from 0.38 to 0.65 mm. The anterior surface of the chelicerae bears a longitudinal row of 7–8 tubercles, each w ith a long bristle. The eyes are surrounded by a narrow black border.

The sternum (length: 0.55–0.63 mm, width: 0.50–0.60 mm) is brownish with black veins. The palps are yellow, except for the yellow-brown cymbium. Palp measurements: femur — 0.40–0.53 mm, patella — 0.15 mm, tibia — 0.13–0.15 mm. The maxillae and coxae are yellowish. The legs are yellowish with dark rings. The leg measurements are presented in Table 1.



Figs 1–4. External appearance and details of morphology of *Lathys annulata* male: palp (1, 2) and habitus (3, 4). 1 — ventral view; 2, 4 — dorsal view; 3 — lateral view. Scale bars 1 mm.

Рис. 1–4. Внешний вид и детали строения самца *Lathys annulata:* пальпус (1, 2) и габитус (3, 4). 1 — вентрально; 2, 4 — дорзально; 3 — латерально. Масштаб: 1 мм.

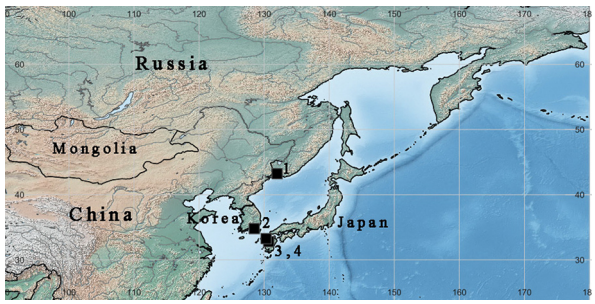


Fig. 5. Distribution map of *Lathys annulata.* Designations: 1 — Vladivostok, our data, 2 — Hansando Island [Seo, 2015], 3 — Kumamoto City [Hidaka, 2022], 4 — Saga City [Bösenberg, Strand, 1906].

Рис. 5. Карта распространения *Lathys annulata.* Обозначения: 1 — Владивосток, наши данные, 2 — о. Хансандо [Seo, 2015], 3 — город Кумамото [Hidaka, 2022], 4 — город Сага [Bösenberg, Strand, 1906].

The abdomen (length: 1.05–1.33 mm, width: 0.63–0.90 mm) is grayish dorsally, with a black pattern and white spots, and grayish-yellow ventrally.

Comparison. Based on the description of a male from South Korea [Seo, 2015], specimens from Primorye appear slightly smaller. However, other morphological characteristics do not significantly differ from those of Japanese and Korean specimens.

Habitat. Data on the species' habitat preferences are scarce. In South Korea, it was found in grass near a trail [Seo, 2015], while in Japan, most specimens were collected from trees [Yaginuma, 1960]. We encountered this species in the tree crowns of a black pine forest on the slopes of a hill.

Phenology. All known records, including our findings, were made in spring, from mid-April to mid-May [Seo, 2015; Hidaka, 2022].

Conclusion

The registration of two *Lathys annulata* males in the Vladivostok Botanical Garden is the first record of this species in Russia and the northernmost point of its known range. This finding brings the number of *Lathys* species recorded in Russia from seven to eight and in Primorye to three. Further studies are needed to assess the species' ecological preferences and potential range expansion.

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Table 1. Measurements of the legs of males *L. annulata* from Primorskii Krai
Таблица 1. Промеры ног самцов *L. annulata* из Приморского Края

	Coxa	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Leg I							
1st specimen	0.35	1.13	0.33	1.03	0.95	0.55	4.33
2nd specimen	0.25	0.95	0.25	0.88	0.83	0.45	3.60
Leg II							
1st specimen	0.28	1.13	0.38	1.03	0.90	0.58	4.28
2nd specimen	0.23	0.75	0.25	0.63	0.55	0.48	2.88
Leg III							
1st specimen	0.25	0.78	0.25	0.50	0.50	0.20	2.48
2nd specimen	0.15	0.63	0.23	0.38	0.50	0.35	2.23
Leg IV							
1st specimen	0.25	0.80	0.30	0.63	0.58	0.53	3.08
2nd specimen	0.20	0.70	0.25	0.58	0.53	0.38	2.63

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