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**A NEW SPECIES OF THE GENUS *BIFURCIA* (ARANEI: LINYPHIIDAE)  
FROM PRIMORSKY KRAI, RUSSIA**

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**Summary.** *Bifurcia dersuuzalai* sp. n. (Linyphiidae: Micronetinae) is described based on both sexes from the Primorsky krai (Maritime Province), Russia. The new species is similar to the Far Eastern *B. maritima* (Tanasevitch, 2010) and *B. oligerae* Marusik, Omelko et Koponen, 2016 but differs from both in the structure of the copulatory organs.

**Key words:** biodiversity, spiders, taxonomy, new species, description, Sikhote-Alin mountain range, Russian Far East.

**А. А. Фомичев, М. М. Омелько. Новый вид рода *Bifurcia* (Aranei: Linyphiidae) из Приморского края, Россия // Дальневосточный энтомолог. 2021. N 435. С. 20-24.**

**Резюме.** Из Приморского края России по обоим полам описан новый для науки вид пауков-линифиид (Linyphiidae: Micronetinae) – *Bifurcia dersuuzalai* sp. n. Новый вид близок к дальневосточным *B. maritima* (Tanasevitch, 2010) и *B. oligerae* Marusik, Omelko et Koponen, 2016, но отличается от обоих строением копулятивных органов.

**INTRODUCTION**

*Bifurcia* Saaristo, Tu et Li, 2006 is a relatively small genus of Micronetinae with eight species, most which are known from China (WSC, 2021). Three species were described in the recent years from the south of the Russian Far East (Tanasevitch, 2010; Marusik *et al.*, 2016). This genus is relatively well-studied due to the regional surveys of both Chinese and Russian species (Zhai & Zhu, 2007; Tanasevitch, 2010; Quan & Chen, 2012; Marusik *et al.*, 2016). The Far Eastern representatives of *Bifurcia* primarily inhabit screes and have very limited ranges (Marusik *et al.*, 2016). While examining recently collected spiders from the Primorsky krai (Maritime Province) of the Russian Far East, we found *Bifurcia* specimens that belong to an undescribed species similar to *B. maritima* (Tanasevitch, 2010) and *B. oligerae* Marusik, Omelko et Koponen, 2016. The goal of this paper is to provide a detailed description and diagnosis of this new species.

Specimens were photographed by means of an Olympus DP74 camera attached to an Olympus SZX16 stereomicroscope at the Altai State University, Barnaul, Russia. Photographs were taken in dishes with white cotton at the bottom, filled with alcohol. Digital images were montaged by using Helicon Focus software. All measurements are in millimeters (mm). Length of leg segments were measured on the dorsal side. Leg measurements are shown as: femur, patella, tibia, metatarsus, tarsus (total length). Data about spination of legs based on examination of one side of the body. The terminology follows Marusik *et al.* (2016). The types of a new species are deposited in the Institute of Systematics and Ecology of Animals SB RAS, Novosibirsk, Russia (ISEA).

Abbreviations used in the text and figures: **Leg segments:** Fe – femur, Mt – metatarsus, Pa – patella, Ti – tibia. **Spination:** d – dorsal, p – prolateral, r – retrolateral, v – ventral. **Copulatory organs:** *Do* – dorsal outgrowth of the paracymbium, *Ds* – expanded distal part of the scape, *Fl* – finger-like anterior extension of paracymbium, *Lp* – lateral pockets, *Pa* – paracymbium, *Pm* – posterior median plate, *Pp* – posterior projection, *Ps* – proximal part of the scape, *Vo* – ventral outgrowth of the paracymbium. **Chelicerae:** *Sr* – stridulatory ridges.

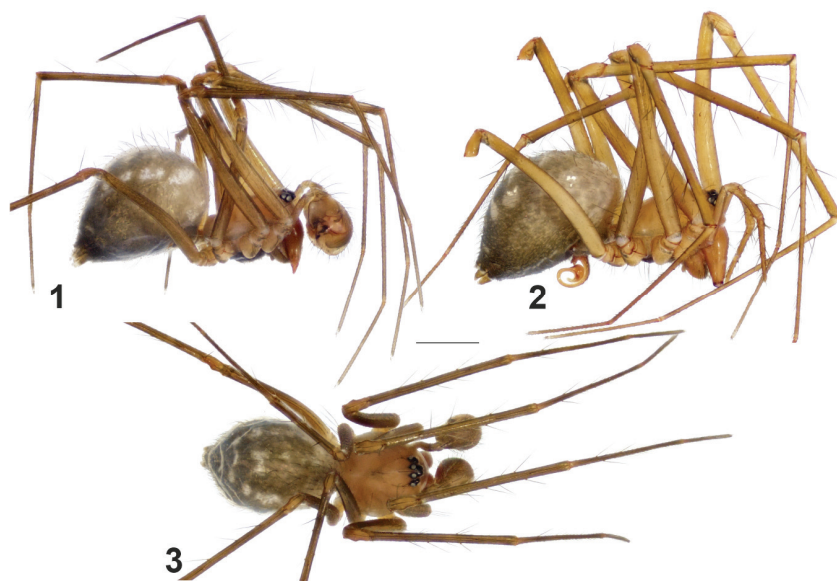
### TAXONOMY

#### *Bifurcia dersuzalai* Fomichev et Omelko, sp. n.

<http://zoobank.org/NomenclaturalActs/574437BE-9193-4703-B33B-F636484BECBF>

Figs 1–13

TYPE MATERIAL. Holotype – ♀ (ISEA 001.8672), **Russia:** Primorsky krai, Sikhote-Alin Mts, Alekseevsky Mt. Range, Olkhovaya Mt., 43°20.432'N, 133°39.441'E, scree, 1460–1600 m, 3.VII 2019, leg. A.A. Fomichev. Paratype: ♂ (ISEA 001.8673), together with the holotype.



Figs 1–3. Habitus of *Bifurcia dersuzalai* sp. n., male (1, 3) and female (2). 1–2 – lateral view; 3 – dorsal view. Scale = 1 mm.

DESCRIPTION. Female (holotype). Total length 3.68. Carapace: 1.65 long, 1.25 wide. Carapace, maxillae and all limbs yellow. Sternum and labium yellow grey. Abdomen dorsally dirty white in the anterior part, grey in the posterior part, bearing four light transverse stripes. Venter of the abdomen grey. Spinnerets grey. Stridulatory ridges (*Sr*) well visible. Chelicera with 3 teeth on promargin. Measurements of legs: I: 3.05, 0.5, 3.1, 3.03, 1.63 (11.31). II: 2.88, 0.5, 2.8, 2.78, 1.48 (10.44). III: 2.4, 0.45, 2.05, 3.08, 1.03 (9.01). IV: 3.03, 0.43, –, –, – (?). Leg spination: I: Fe p1; Pa d1; Ti d2 p2 r2 v4; Mt d2 p2 r1 v1. II: Pa d1; Ti d2 p2 r2 v4; Mt d2 p1 r1. III: Pa d1; Ti d2 p2 r2 v1; Mt d1 p1 r1. IV: Fe 0; Pa 0; metatarsus and tarsus are lost. Epigyne as in Figs 10–13. Scape very long, as long as postgastral part of abdomen, twisted on one full turn; distal part of the scape twice as thick as proximal part (*Ps*); posterior projection long, bent dorsally, its length is 1/3 of the length of expanded distal part of the scape; lateral pockets (*Lp*) deep; posterior median plate (*Pm*) ellipsoidal.



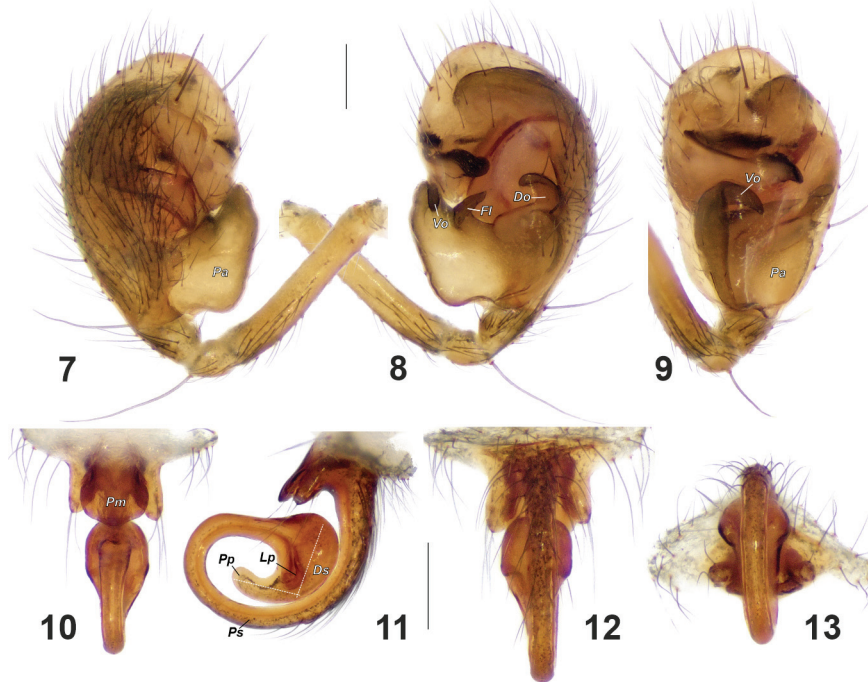
Figs 4–6. Cephalic part of *Bifurcia dersuuzalai* sp. n., male (5–6) and female (4). 4–5 – lateral view; 6 – anterior view. Abbreviations: *Sr* – stridulatory ridges. Scale = 0.2 mm.

Male (paratype, non-molted specimen). Total length 3.35. Carapace: 1.45 long, 1.25 wide. Carapace and maxillae yellow. Chelicerae light brown. Sternum and labium brown grey. Palps and legs dirty yellow. Abdomen cream-grey, darker ventrally, dorsally bears three longitudinal rows of white spots. Spinnerets yellow-grey. Stridulatory ridges (*Sr*) well visible. Chelicera with 3 teeth on promargin. Measurements of legs: I: 2.48, 0.43, 2.4, 2.3, 1.43 (9.04). II: 2.33, 0.43, 2.15, 2.08, 1.25 (8.24). III: 1.88, 0.38, 1.55, 1.55, 0.9 (6.26). IV: 2.38, 0.4, 2.1, 2.05, 1.13 (8.06). Leg spination: I: Fe p1; Pa d1; Ti d2 p2 r2 v5; Mt d1 p1 r2. II: Pa d1; Ti d2 p2 r2 v4; Mt d1 p1 r1. III: Pa d1; Ti d2 p1 r1; Mt d1 p1 r1. IV: Pa d1; Ti d2 p1 r2; Mt d1 p1 r1. Male palp as in Figs 7–9. Paracymbium wide, 3.5 times wider than tibia; dorsal outgrowth (*Do*) massive, hooked; finger-like anterior extension (*Fl*) nearly straight, bent dorsally; ventral outgrowth (*Vo*) bent retrolaterally. Embolic division underdeveloped in non-molted specimen.

DIAGNOSIS. The new species is closely related to *B. maritima* and *B. oligerae*, which are also known from the Russian Far East. All three species have scape longer than high with expanded distal part (*Ds*). Female of *B. dersuuzalai* sp. n. can be distinguished from both sibling species by the distal part of the scape almost as long as high vs. longer than high (length/height ratio 0.8 in the new species and 2.0–2.9 in sibling species). Besides, the new

species can be separated from *B. oligerae* and *B. maritima* by the posterior projection of the scape (*Pp*) located almost at right angle (see dotted lines at Fig.11) to the expanded distal part of the scape (vs. posterior projection and expanded distal part being stretched in a straight line) (cf. Fig 11 and figs 11, 14 in Marusik et al., 2016). The male of the new species differs from all congeners with the exception of *B. maritima* by the hook-shaped dorsal outgrowth (*Do*) of the paracymbium (*Pa*) (vs. straight). The male of *B. dersuuzalai* sp. n. can be separated from that of *B. maritima* by the finger-like anterior extension of the paracymbium (*Fl*) shifted ventrally (vs. located midway between dorsal and ventral (*Vo*) outgrowths of the paracymbium) (cf. Fig. 8 and fig. 1 in Tanasevitch, 2010).

DISTRIBUTION. Known only from the type locality.



Figs 7–13. Male palp (7–9) and epigyne (10–13) of *Bifurcia dersuuzalai* sp. n. 7 – pro-lateral view; 8 – retrolateral view; 9, 12 – ventral view; 10 – dorsal view; 11 – lateral view; 13 – posterior view. Scale = 0.2 mm. Abbreviations: *Do* – dorsal outgrowth of the paracymbium, *Ds* – expanded distal part of the scape, *Fl* – finger-like anterior extension of paracymbium, *Lp* – lateral pockets, *Pa* – paracymbium, *Pm* – posterior median plate, *Pp* – posterior projection, *Ps* – proximal part of the scape, *Vo* – ventral outgrowth of the paracymbium.

COMMENTS. The female was selected as the holotype primarily because it is more clearly differentiated from its congeners. Another reason is that the male specimen is non-molted, with underdeveloped sclerites of the palp.

ETYMOLOGY. The specific name is a patronym in honour of Dersu Uzala (1849–1908), an indigenous tribesman of the Russian Far East (a member of the Nanai people), hunter, guide and participant of expeditions of Vladimir K. Arsenyev, a prominent Russian traveler.

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## REFERENCES

- Marusik, Y.M., Omelko, M.M. & Koponen, S. 2016. Two new *Bifurcia* species (Aranei: Linyphiidae: Micronetinae) from Far East Russia. *Arthropoda Selecta*, 25(1): 77–83. DOI: <https://doi.org/10.15298/arthscl.25.1.08>
- Quan, D. & Chen, J. 2012. A new species of the genus *Bifurcia* (Araneae: Linyphiidae) from China. *Acta Arachnologica Sinica*, 21(2): 65–67.
- Tanasevitch, A.V. 2010. A new species of *Arcuphantes* from the Russian Far East, with notes on the genera *Fusciphantes* and *Bifurcia* (Arachnida: Aranei: Linyphiidae). *Arthropoda Selecta*, 19(4): 269–272. DOI: <https://doi.org/10.15298/arthscl.19.4.08>
- World Spider Catalog. 2021. *World Spider Catalog. Version 22.0*. Natural History Museum Bern, online at <http://wsc.nmbe.ch> (Accessed April 2021). DOI: <https://doi.org/10.24436/2>
- Zhai, H. & Zhu, M.S. 2007. Two new species of the genus *Bifurcia* (Araneae: Linyphiidae) from China. *Acta Arachnologica*, 56(2): 73–76.

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