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Two new genera of the family Linyphiidae from Tuva, South Siberia, Russia (Arachnida Aranei Linyphiidae)

Два новых рода пауков семейства Linyphiidae из Тувы (Южная Сибирь, Россия) (Arachnida Aranei Linyphiidae)

A.V. Tanasevitch
А.В. Танасевич

All-Russian Institute of Nature Conservation, P.O. VILAR, Znamenskoye-Sadki, Moscow 113628 Russia.
Всероссийский научно-исследовательский институт охраны природы, ВИЛАР, Знаменское-Садки, Москва 113628 Россия.

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КЛЮЧЕВЫЕ СЛОВА: систематика, пауки, Linyphiidae, новые роды, новые виды, Тува, Южная Сибирь, Россия.

ABSTRACT. Two new monobasic genera, *Episolder* gen.n. (the type-species: *Episolder finitimus* sp.n.) and *Epigytholus* gen.n. (the type-species: *Epigytholus tuvensis* sp.n.), are described from Tuva, South Siberia.

РЕЗЮМЕ. Из Тувы описаны два новых для науки монотипических рода: *Episolder* gen.n. (типовой вид: *Episolder finitimus* sp.n.) и *Epigytholus* gen.n. (типовой вид: *Epigytholus tuvensis* sp.n.)

This paper is dedicated to the description of two new monobasic genera of the family Linyphiidae from Tuva Republic, Russia. Type material has been deposited in the collection of the Zoological Museum of the Moscow State University.

The following abbreviations have been accepted in the text and figures: Fe — femur, Ti — tibia, Mt — metatarsus, TmI — position of the metatarsal trichobothrium, MS — membrosclerum, SU — supratégulum, E — embolus, EM — embolic membrane, TA — terminal apophysis, L — lamella characteristica. The chaetotaxy is given in the following formula: Ti I: 2-1-1-0. This stands for: tibia I has two dorsal, one pro- and one retrolateral spine, ventral spines absent (the apical spines are herewith disregarded). The sequence of leg segments in measurement data is as follows: femur + patella + tibia + metatarsus + tarsus. All measurements are given hereinafter in mm. Scale is 0.1 mm, if not otherwise indicated.

Episolder gen. n.

Type-species: *Episolder finitimus* sp. n.

Etymology: The generic name refers to the seemingly merged parts of the epigyne.

Diagnosis: The new genus is easily recognizable by the capsule-like, monolith structure of the epigyne situated on a long base as well as by the shape of the ♂ paracymbium.

Description: Medium-sized micronetids: total length 2.50-2.80. Carapace pale brown, unmodified. Legs pale brown, without dark bands. Chaetotaxy. Fe I: 1-1(2)-0-0, II-IV: 0(1)-0-0-0; Ti I-II: 2-1-1-2, III-IV: 2-1-1-1; Mt I-IV: 1-0-0-0. TmI — 0.20-0.25. Palp: Tibia with a ventro-retrolateral outgrowth. Cymbium with a proximal oblong outgrowth. Paracymbium relatively large, its distal part well-sclerotized. Lamella characteristica long and narrow. Terminal apophysis complex, relatively large, with several branches. Embolus with a well-developed membrane. Epigyne capsule-like, situated on a long base. All sclerites of epigyne seemingly fused. Stretcher very small, pit reduced. Abdomen with a wide pale stripe dorsally often displaying a variable indistinct pattern.

Taxonomic remarks: By the structure of the embolic division, *Episolder* is a typical micronetid genus. By the shape of the embolus, the new genus is close to *Incestophantes* Tanasevitch, 1992. However, certain details of palp structure (e.g. the shape of the paracymbium), as well as the unique structure of the epigyne (cp. "*Wubanoides*" *kayacensis* Paik, 1965), warrant separation of *Episolder* as an independent genus.

Species included: Only the type-species.

Episolder finitimus sp. n.

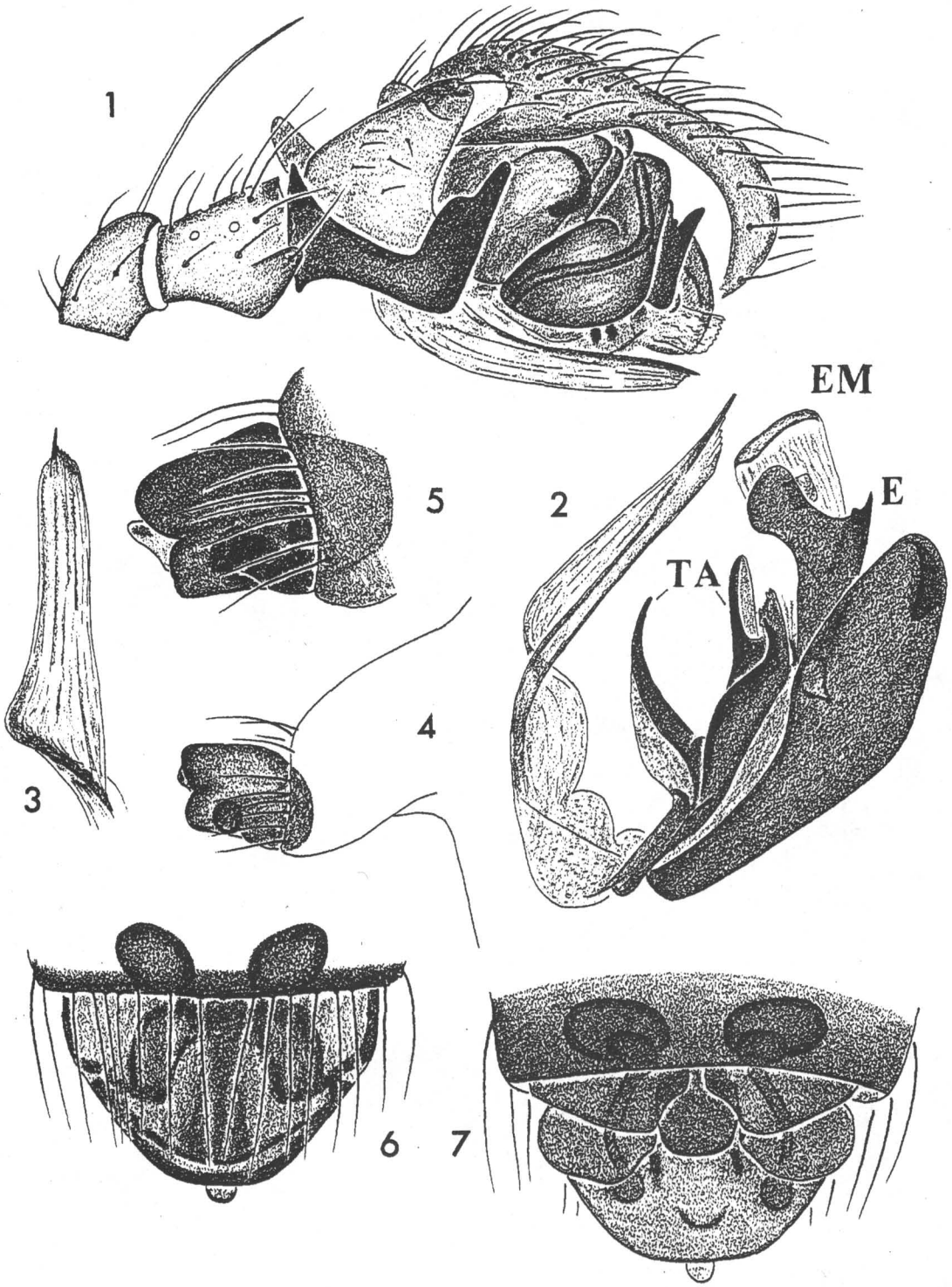
Figs 1-7.

MATERIAL. Holotype ♂, Russia, Tuva Republic, Tes-Khemsky Distr., 10 km NW of Kol-Ookhu, Western Tannu-Ola Mt. Ridge, 1,800 m, *Larix* forest, 9.VII.1989, leg. D. Logunov. — Paratypes: 1 ♂, 6 ♀♀, same locality, together with holotype, 9.VII.1989, leg. D. Logunov.

Etymology: The specific name can be translated from Latin as "frontier".

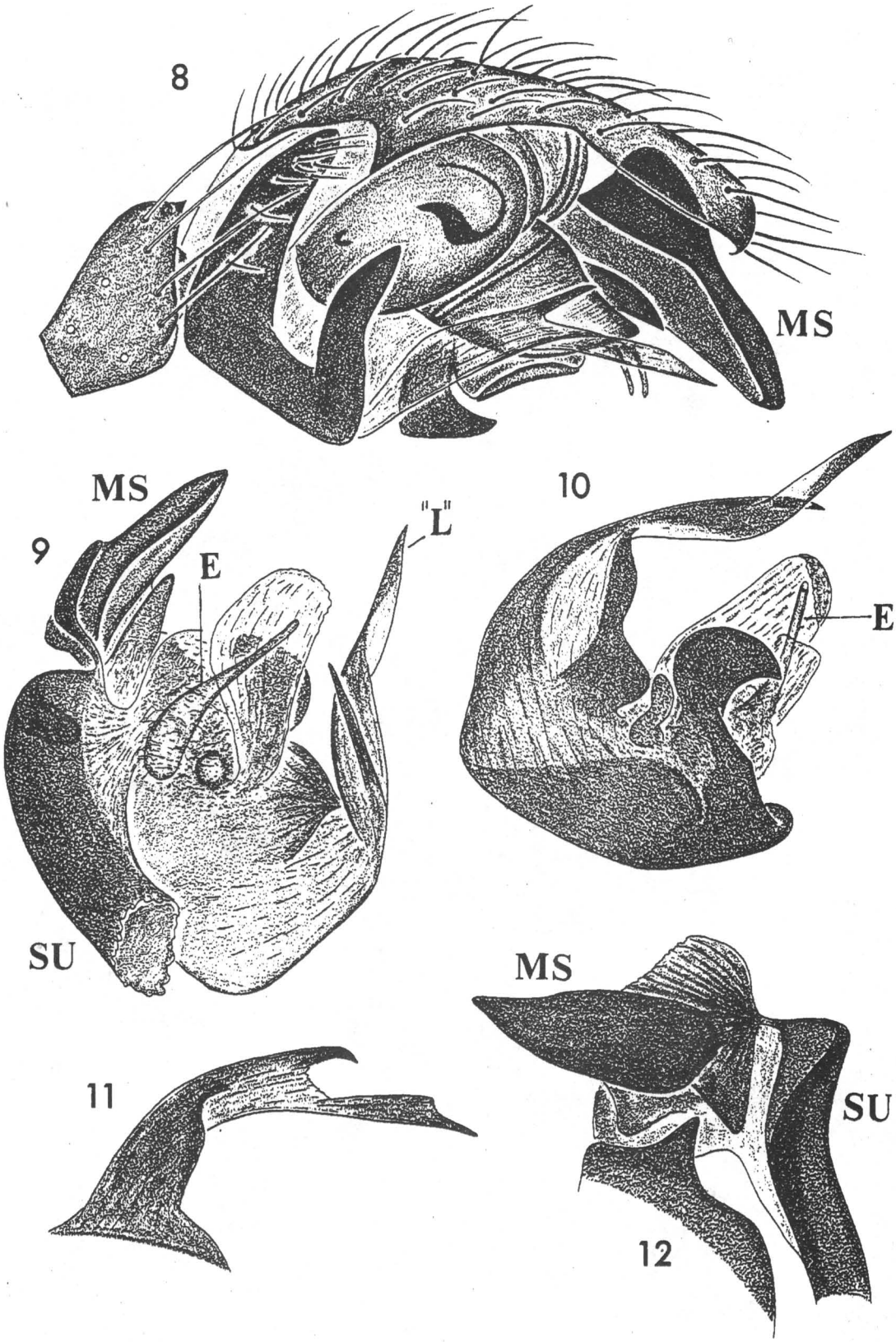
Diagnosis: The new species is easily distinguishable by the capsule-like, monolith structure of the epigyne situated on a long base, and by the shape of the ♂ paracymbium and lamella characteristica.

Description: Male. Total length 2.65. Carapace 1.25 long, 0.88 wide, pale brown, with obscure radial stripes. Leg pale brown, without dark bands. Leg I 5.26 long (1.30 + 0.35 + 1.38 + 1.38 + 0.85), IV — 4.98 long (1.35 + 0.30 + 1.30 + 1.28 + 0.75). Chaetotaxy. Fe I: 1-1(2)-0-0, II-IV: 0(1)-0-0-0; Ti I-II: 2-1-1-2, III-IV: 2-1-1-1; Mt



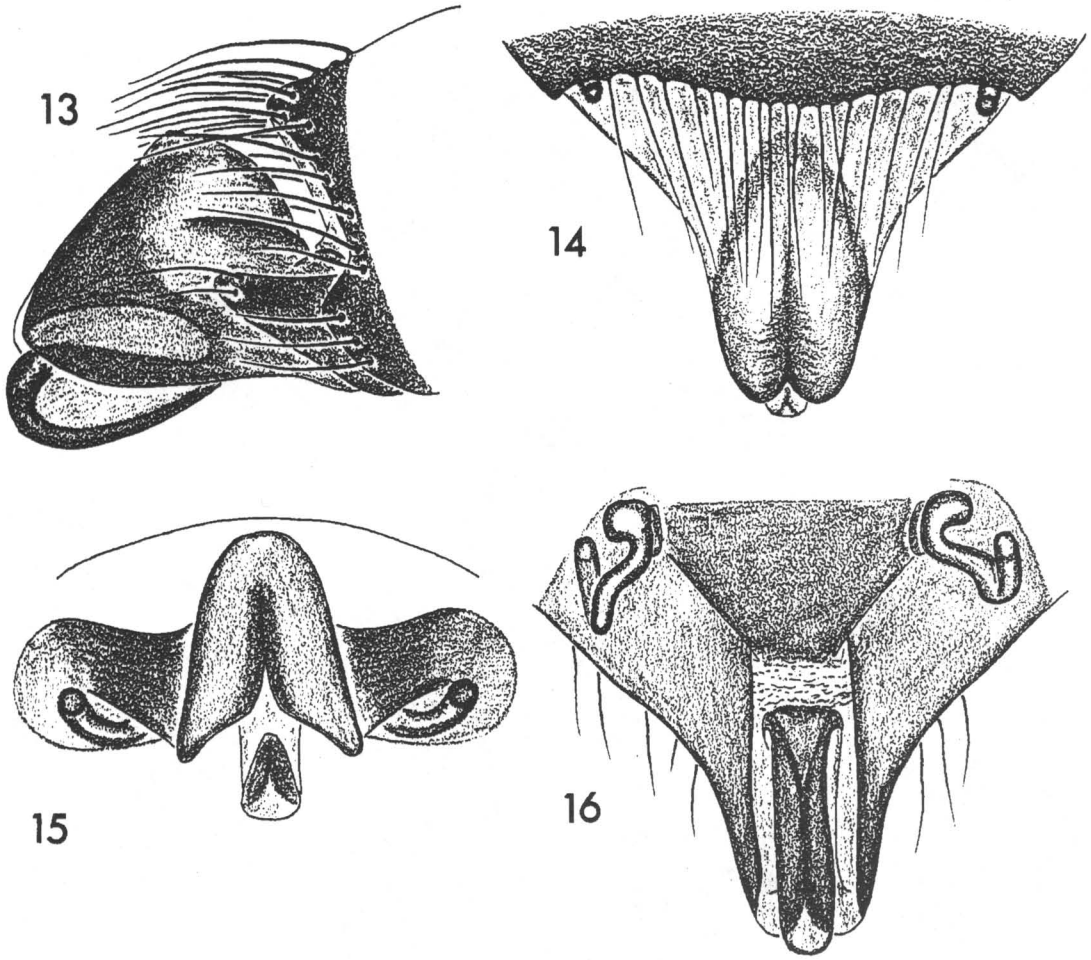
Figs 1-7. *Episolder finitimus* sp. n., ♂ & ♀ paratypes: 1 — right palp; 2 — embolic division; 3 — lamella characteristica; 4-7 — epigyne, lateral (4-5), dorsal (6), and ventral (7) views, respectively.

Рис. 1-7. *Episolder finitimus* sp. n., паратипы ♂ и ♀: 1 — правый пальпус; 2 — эмболюсный отдел; 3 — lamella characteristica; 4-7 — эпигина соотвественно сбоку (4-5), сверху (6) и снизу (7).



Figs 8-12: *Epigytholus tuvensis* sp. n., ♂ paratype: 8 — right palp; 9 — embolic division & suprategulum; 10 — embolic division; 11 — "lamella characteristica"; 12 — membrosclerum & suprategulum.

Рис. 8-12. *Epigytholus tuvensis* sp. n., ♂ паратип: 8 — правый пальпус; 9 — эмболюсный отдел и супратегулум; 10 — эмболюсный отдел; 11 — "lamella characteristica"; 12 — мембросклерум и супратегулум.



Figs 13-16. Epigyne of *Epigytholus tuvensis* sp. n., ♀ paratype, lateral (13), dorsal (14), frontal (15), and ventral (16) views, respectively.

Рис. 13-16. Эпигина *Epigytholus tuvensis* sp. n., ♀ паратип, соответственно сбоку (13), сверху (14), спереди (15) и снизу (16).

I-IV: 1-0-0-0. TmI — 0.24. Palp (Figs 1-3): Tibia with a ventro-retrolateral process. Cymbium with a proximal oblong outgrowth. Paracymbium relatively large, its distal part well-sclerotized. Lamella characteristica as a long and narrow ribbon. Border between lamella characteristica and terminal apophysis indistinct. Terminal apophysis relatively large, with several branches. Embolus with a well-developed membrane. Abdomen 1.40 long, 0.93 wide, with a wide pale stripe dorsally often with a variable indistinct pattern.

Female. Total length 2.75. Carapace 1.00 long, 0.80 wide. Leg I 4.36 long (1.10 + 0.30 + 1.13 + 1.05 + 0.78), leg IV — 4.24 long (1.23 + 0.28 + 1.00 + 1.03 + 0.70). TmI — 0.21. Epigyne (Figs 4-7) capsule-like, situated on a long base. All sclerites of epigyne seemingly fused. Stretcher very small, pit reduced. Abdomen 1.88 long, 1.20 wide. Body and legs coloration, chaetotaxy as in ♂.

Epigytholus gen. n.

Type-species: *Epigytholus tuvensis* sp. n.

Etymology: The generic name consists of two Latin words: *epigyne*, the female genitalia, and *tholus*, translated as a cupola, this referring to the peculiar shape of the epigyne.

Diagnosis: The new genus is distinguished by the peculiar structure of the epigyne, as well as by the presence in the ♂ palp of a large, dark, well-sclerotized and strong **membrosclerum**[1] conspicuously protruding from inside the bulbus (see below).

Description: Medium-sized linyphiids: total length 2.20-2.50. Carapace pale brown, unmodified. Legs pale brown, without dark bands. Chaetotaxy. Fe I: 0-1-0-0, II-IV: 0-0-0-0; Ti I: 2-1-1-0, II: 2-0-1-0, III-IV: 2-0-0-0; Mt I-IV: 1-0-0-0. TmI — 0.16-0.19. Palp: Femur and patella unmodified. Cymbium without proximal outgrowths.

[1] I coin a new term here, **membrosclerum**, to designate this kind of median membrane. The latter is a cliche too widely used for various, frequently non-homologous, structures in many spider families. Yet a membrosclerum is present in several subgroups of the linyphiids, e.g. *Uralophantes* Esyunin, 1992, the *keyserlingi*-complex of *Lepthyphantes* Menge, 1866 (cf. Saaristo & Tanasevitch [1993]), in most species of *Centromerus* Dahl, 1886, and some others.

Paracymbium large, narrow, its distal part spineless. Tegulum conical. No distinct border between "lamella characteristica" and radix (maybe "lamella characteristica" = radical apophysis?). Radix large, wide, regularly curved on frontal plain. Embolus slender, narrow, elongated. Median membrane (= conductor sensu Merrett [1963]) is transformed into a strong sclerite, conspicuously protruding from inside the bulbus. Fickert gland lying outside radix, rounded and membranous. Column with a large, extremely well-sclerotized membrane transformed into a strong sclerite highly conspicuously projecting from inside the bulbus. Epigyne capuchin-like, "scape" sigmoid.

Taxonomic remarks: By the structure of the ♂ palp, in particular the shape of the paracymbium, the presence of a membrosclerum, the structure of the radix, the slender and elongated embolus, the new genus is close to the recently described *Uralophantes* Esyunin, 1992, as well as to the *keyserlingi*-complex of *Lepthyphantes*. From both, *Epigytholus* differs well by the unique structure of the epigyne.

Species included: Only the type-species.

Epigytholus tuvensis **sp. n.**
Figs 8-16.

Material: Holotype ♂, Russia, Tuva Republic, near Kyzyl, flood-lands of Yenisei River, meadow, tussock of *Achnatherum*, 1.VII.1990, leg. D. Logunov. — Paratypes: 2 ♂♂, 6 ♀♀, same locality, together with holotype; 3♂♂, 7♀♀, 5-7 km W of Kyzyl, Agrobiological Station, 700 m, flood-lands of Yenisei River, meadow, tussock of *Achnatherum*, 15-22.V.1990, leg. D. Logunov; 2♂♂, 10♀♀, Erzin Distr., 20 km NW of Erzin, near Lake Dus-Khol, 800 m, tussock of *Achnatherum*, 13.VII.1989, leg. D. Logunov.

Etymology: The specific name refers to the terra typica.

Description: Male. Total length 2.23. Carapace 0.95 long, 0.75 wide, yellow, pale brown, with narrow dark margin, sometimes with greyish radial stripes. Legs pale brown, without dark bands. Leg I 4.19 long (1.10 + 0.28 + 1.10 + 0.93 + 0.78), leg IV — 3.91 long (1.10 + 0.25 + 1.00 + 0.93 + 0.63). Chaetotaxy Fe I: 0-1-0-0, II-IV: 0-0-0-0; Ti I: 2-1-1-0, II: 2-0-1-0, III-IV: 2-0-0-0; Mt I-IV: 1-0-0-0. TmI — 0.16. Palp (Figs 8-12): Cymbium without proximal outgrowths. Paracymbium large, narrow, its distal part spineless. Both lobes of paracymbium narrow. Tegulum conical. "Lamella characteristica" fused with radix, latter large, wide, regularly arched in frontal plain. Embolus relatively small, slender, rounded and membranous. Fickert gland lying outside radix. Membrosclerum large, dark, well-sclerotized.

Female. Total length 2.45. Carapace 0.95 long, 0.95 wide. Leg I 3.87 long (1.00 + 0.28 + 0.98 + 0.88 + 0.73), leg IV — 3.78 long (1.03 + 0.25 + 0.95 + 0.90 + 0.65). TmI — 0.18. Epigyne (Figs 13-16) capuchin-like, "scape" sigmoid. Abdomen 1.73 long, 1.05 wide. Body and leg coloration, chaetotaxy as in ♂.

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References

Esyunin S.L. 1992. Notes on the Ural spider fauna (Arachnida, Aranei), 2. A new genus and species of the family Linyphiidae // Zool. zhurn. Vol.71. No.12. P.136-139 [in Russian, English summary].

Merrett P. 1963. The palpus of male spiders of the family Linyphiidae // Proc. Zool. Soc. London. Vol.140. No.3. P.347-467.

Saaristo, M. I. & Tanasevitch, A. V. 1993. Notes on the systematics of the spider genus *Lepthyphantes* Menge (Aranei Linyphiidae Micronetinae) // Arthropoda Selecta. Vol.2. No.2. P.55-61.