The spider genus *Tetragenatha* Latreille, 1804, from the southern Far East of Russia (Aranei Tetragenathidae).

Пауки рода *Tetragenatha* Latreille, 1804 юга Дальнего Востока России (Aranei Tetragenathidae).

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КЛЮЧЕВЫЕ СЛОВА: *Tetragenatha*, фаунистика, Дальний Восток России.

ABSTRACT: Eleven *Tetragenatha* species are recorded in the southern Far East of Russia, of which *T. mokiharae* Okuma, *T. recurva* Schenkel and *T. vermiciformis* Emeron are new to the Russian fauna.


Introduction.

The Far Eastern fauna of the spider genus *Tetragenatha* Latreille, 1804, has been yet quite poorly known. As regards the Far East of Russia, first Azevaganoa & Stuchenko [1977] referred to four species, and later Marusik [1985, 1989] recorded already nine *Tetragenatha* spp. More recently, Logunov [1992] has reported as many as eight *Tetragenatha* species from the Bolshoi Khekhtsyr Reserve alone, environs of Khabarovsk.

In Korea, 11 species of *Tetragenatha* have been known [Kim, 1991]. Okuma [1988a, b] referred to 31 species populating Asia, ignoring the Russian Far East as a terra incognita.

The present paper puts on record the results of my studies of *Tetragenatha* inhabiting the southern parts of the Russian Far East as based on the collectings of a few people including myself (DK), as well as the collection of the Zoological Museum of the Biological Institute of the Siberian Branch of the Russian Academy of Sciences, Novosibirsk. Of the 11 species discovered, no fewer than three appear to be new to the Russian list. Below, the faunistic records are given followed by brief remarks on the morphology, ecology and distribution of each species revealed. The map (Fig. 1) considers most of localities which are referred to as the respective number put in square brackets ([(]) in the material section for each species. The nomenclature of the cheliceral armature is given after Okuma [1987].

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Systematic part.

Faunistic records.


Figs 2-11.


Brief redescription of cheliceral armature: apophasal tooth a of ♂ chelicerae bifid, both teeth AXu & AXI absent, tooth T well-developed, tooth sl present, rsu with 4, rsl with 6 denticles, main accessory tooth AXI poorly-developed and rounded, outgrowth EX absent; ♀ chelicerae with rsu and rsl each with 5-6 denticles, AXu poorly developed, EX present; in both sexes, apical part surpassing spinnerets.

Distribution: Southern Far East of Russia, Japan, Korea.

2. *Tetragnatha dearmata* Thorell, 1873.

Figs 59-61

**MATERIAL:** 1 ♂, Khabarovsk Prov., environs of Khabarovsk [2], Bolshoi Khaktivtuy Reserve, broadleaved forest, in tree crowns, 19.VI.1992; leg. DK.

Brief redescription of cheliceral armature [after Wethele, 1963]: ♂ chelicerae bifid, Gu curved, AXI present, rsu with 5, rsl with 6 denticles; ♀ chelicerae with EX present, rounded, GU big, pointed, row rsu with 5, rsl with 4 denticles.

Distribution: Paleartic.


Figs 25-31


Brief redescription of cheliceral armature: apophasal tooth a of ♂ chelicerae bifid, teeth AXu & AXI absent, tooth T well-developed, tooth sl present, rsu with 4, rsl with 6 denticles, main tooth Gl well-developed, GU absent, outgrowth EX poorly-expressed; ♀ chelicerae with Gu present, AXu & AXI absent, rsu and rsl each with 6 denticles, Gl big, EX well-developed.

Distribution: Holarctic.

4. *Tetragnatha (Eucta) issidis* (Simon, 1880).

Fig.62


Brief redescription of cheliceral armature: ♂ chelicerae with AXu & AXI rounded, present in addition to only rsl with 3 denticles, L3 strongly developed, curved.

Distribution: Paleartic.
Figs 2-24. 2-11: *Tetragnatha caudicula* (Karsch), *♂* (2-3, 6, 7, 11) & ♀ (5, 8-10), 12-16: *Tetragnatha makibarai* Okuma, ♀, 17-24: *Tetragnatha praeclara* L.Koch, ♀ (17, 18, 21, 22) & ♀ (19, 20, 23, 24): 2, 12, 17, 19 - left chelicera, dorsal; 3, 13, 18, 20 - left chelicera, ventral; 4, 14 - left chelicera, mesal; 5 - left chelicera, ventrolateral; 6, 15, 21 - conductor & embolus; 7, 16, 22 - paracymbium; 8, 23 - genital fold, 9, 24 - vulva; 10-11 - distal part of abdomen.

Рис. 2-24. 2-11: *Tetragnatha caudicula* (Карш), *♂* (2-3, 6, 7, 11) и ♀ (5, 8-10), 12-16: *Tetragnatha makibarai* Окума, ♀, 17-24: *Tetragnatha praeclara* L.Коч, ♀ (17, 18, 21, 22) и ♀ (19, 20, 23, 24): 2, 12, 17, 19 - левая хелицера, дорсально; 3, 13, 18, 20 - левая хелицера, вентрально; 4, 14 - левая хелицера, медиально; 5 - левая хелицера, вентролатерально; 6, 15, 21 - кондуктор и эмболус; 7, 16, 22 - парадимбум; 8, 23 - генитальная складка, 9, 24 - вульва; 10-11 - дистальная часть брюшка.

Figs 12-16.

MATERIAL: 1 ♂, Maritime Prov., Khasan Distr. [1], Kedrovaaya Pad Reserve, 26.VI.1976. - 1 ♂, same locality [1], 14.VII.1976; all leg. BZ.

Brief redescriptions of cheliceral armature: apophysal tooth of ♂ chelicerae bifid, tooth T well-developed, both teeth sl and t present, rsu with 5, rsl with 6 denticles, GI directed toward base of segment, main accessory tooth AX1 as well as AXu present.

Distribution: Maritime Prov., Japan. This is a species new to the Russian list!

6. Tetragnatha montana Simon, 1874.
Figs 63-65.

MATERIAL: 1 ♂, Khabarovsk Prov., environs of Khabarovsk [2], Bolshoi Khekhtsy Reserve, Belaya River, small-leaved forest, tree crowns, 19.VII.1992; leg. DK.

Brief redescriptions of cheliceral armature [after Wiehle, 1963]: apophysal tooth a of ♂ chelicerae bifid, tooth t rounded in shape, U2 big, row rsu with 5, rsl with 7 denticles, EX absent; ♀ chelicerae with EX present, row rsu with 5, rsl with 7 denticles.

Distribution: Paleartic.

7. Tetragnatha pinicola L.Koch, 1870.
Figs 32-38.


Brief redescriptions of cheliceral armature: apophysal tooth a of ♂ chelicerae not bifid, both teeth AXu and Gu absent, teeth T, sl, AX1 & GI present, rsu with 4, rsl with 5 denticles, outgrowth EX absent; ♀ chelicerae with Gu & GI present, rsu and rsl each with 5 denticles, EX absent.

Distribution: Paleartic.

8. Tetragnatha praedonia L.Koch, 1878.
Figs 17-24.


Brief redescriptions of cheliceral armature: apophysal tooth a of ♂ chelicerae bifid, teeth T, t, AXu, AX1 present, tooth sl on a tubercle, both upper and lower rows (rsu & rsl) with 6 denticles, outgrowth EX well-developed; ♀ chelicerae with AXu & AX1 present, large, U2 on a tubercle, rsu with 6, rsl each with 8 denticles, main teeth Gu & GI present, EX well-developed; in both sexes, apical part surpassing spinnerets, distal third of movable tooth with a row of denticles.

Distribution: Southern Far East of Russia, Japan, Korea, China, Taiwan.

Figs 50-57.

MATERIAL: 2 ♂, 2 ♀, Khabarovsk Prov., environs of Khabarovsk [2], 5 km W of Piamurskii, small-leaved forest, tree crowns, 2.VIII.1991; leg. DK.

Brief redescriptions. Male: frontal row of eyes somewhat broader than caudal, both rows equally arcuate. PME-PME isthmus somewhat broader than AME-AME one. Clypeus equal to PME-AME distance. Chelicerae well-developed, a not bifid apically, AXu present, directed parallel to GI, tooth U2 placed halfway between GI and U3, row rsu with 5, rsl with 3 denticles, AX1 present, placed near GI, latter big, with a knob, outgrowth EX present, claw-shaped. Abdomen clothed with silvery scales, ventromedially sparse, dorsomedially with two reddish spots, of which fore one extending to about abdominal middle and caudal one from

spinnerets to anterior 1/3 abdomen. Vital colour green, in ethanol pale yellow.

Female: eyes arranged as in \( \sigma \), cheliceral \( Ga \) small, \( rsu \) with 6, \( rsl \) with 3 denticles, Gl little; abdomen clothed with silvery scales, a bit more sparsely ventromedially.

Distribution: Hitherto known but from the original description from central China [Schenkel, 1936]. This is the first record of this species in Russia.


Figs 39-42.

**MATERIAL:** 2 \( \varphi \), Khabarovsky Prov., Ulchsky Distr., Amur River, 445 km downstream from Khabarovsky, *Calamagrostis* meadow, 25.VI.1990. - 1 \( \varphi \), Ulchsky Distr., 20 km upstream from Bogorodskoye, Suchu Island (52°N, 140°E), *Quercus* forest with herbaceous undergrowth, 25.VIII.1991; all leg. DK.

Brief redescription: A characteristic, dark, ventral line without silver sparkles in the middle of abdomen; \( Ga \), Gl & EX not large, \( rsu \) & \( rsl \) each with 4 denticles.

Distribution: Bangladesh, India, Sri Lanka, Burma, Thailand, Malaysia, China, Korea, Japan, USA, Russian Far East. This is a species new to the Russian list.


Figs 43-49.

**MATERIAL:** 1 \( \sigma \), Maritime Prov., Khasan Distr. [1], Kedrovaya Pad State Reserve, valley broadleaved forest, 25.VI.1976; leg. El. - 2 \( \sigma \), 2 \( \varphi \), Khabarovsky Prov., environs of Khabarovsky [2], Bolshoy Khekhtayskiy Reserve, 200 m a.s.l., broadleaved forest, herb undergrowth, 22.VI.1987; leg. DL. - 1 \( \varphi \), same locality [2], broadleaved forest, tree crowns, 7.VII.1992; leg. DK.

Brief redescription of cheliceral armature: \( \sigma \) AXU with small exterior knob, \( Ga \) well-developed, pointedly triangular, both \( rsu \) & \( rsl \) with 5 denticles, AXI absent, Gl very big, as a tin-opener, outgrowth EX present; \( \varphi \) chelicerae with main tooth EX present, \( rsu \) & \( rsl \) each with 5 denticles.

Distribution: Southern Far East of Russia, Japan, Korea.
Discussion.

In the southern part of the Far East of Russia, 11 Tetragnatha species are currently known. The fauna includes the widespread Holarctic T. textensa and T. termiformis as well as Palearctic T. dearmata, T. tisidis, T. montana, and T. pinicola. More local forms, such as T. makiharae, T. praedonia, T. yessoensis and T. recurva, seem to be of a Manchurio-Japanese distribution pattern. Like the above Holarctic congeners, T. pinicola appears to occur both in the arboreal and herbaceous strata of valley, mainly small-leaved, forests and meadows but, contrary to them, it also populates dry valley meadows, broadleaved and Pinus sibirica-broadleaved forests. The Manchurio-Japanese elements are euryoeic, ranging from insular and floodplain habitats to indigenous taiga (coniferous thick) biotopes.

References.


