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**DESCRIPTION OF THE HITHERTO UNKNOWN FEMALE OF
PRIOCNEMIS SUGONJAEVI LELEJ ET LOKTIONOV, 2015
(HYMENOPTERA, POMPILIDAE)**

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Summary. The hitherto unknown female of *Priocnemis sugonjaevi* Lelej et Loktionov, 2015 is described from Amurskaya oblast, Russia. The photographs of female are provided. Diagnosis of *P. sugonjaevi* is clarified for female and male.

Key words: spider wasps, Pepsinae, taxonomy, Russian Far East, Palearctic.

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Резюме. Из Амурской области описывается ранее неизвестная самка *Priocnemis sugonjaevi* Lelej et Loktionov, 2015. Даются фотографии внешнего вида самки. Уточнен диагноз *P. sugonjaevi* для самок и самцов.

INTRODUCTION

Priocnemis sugonjaevi Lelej et Loktionov, 2015 was described by a single male specimen collected in the Khinganskii Nature Reserve (Russia: Amurskaya oblast). This species belongs to *Priocnemis hyalinata* species-group (subgenus *Priocnemis* Schiødte, 1837) which was reviewed by Loktionov *et al.* (2017). New specimens of this species-group were collected in Khingansky reserve by second author in 2018–2021. Detailed study of male genitalia and hypopygium has revealed that all specimens belong to early described from this reserve *P. sugonjaevi*. Herein the hitherto unknown female of *P. sugonjaevi* is described and illustrated and diagnosis of this species is clarified for female and male.

The terminology for morphology is based on the glossary provided by the Hymenoptera Anatomy Consortium (2013). The terminology of wing venation and cells follows Day (1988). The following abbreviations are used for morphological terms: MID, the middle interocular distance; OOD, the distance between posterior ocellus and compound eye which is measured from above; POD, the postocellar distance which is measured from above; UID, the upper interocular distance.

Photographs were taken with the stereomicroscope Olympus SZX16 and digital camera Olympus DP74, and stacked using Helicon Focus software. The final illustrations were post-processed for contrast and brightness using Adobe® Photoshop® software. Material treated in this paper is deposited in the Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far East Branch of the Russian Academy of Sciences, Vladivostok [EATB].

TAXONOMY

Genus *Priocnemis* Schiødte, 1837

Priocnemis (*Priocnemis*) *sugonjaevi* Lelej et Loktionov, 2015

Figs 1–10

Priocnemis (*Priocnemis*) *sugonjaevi* Lelej et Loktionov, 2015 in: Lelej *et al.*, 2015: 486, ♂; Loktionov & Lelej, 2017: 22, ♂; Loktionov *et al.*, 2017: 555, ♂.

TYPE MATERIAL EXAMINED. Holotype – ♂, Russia: Amurskaya oblast, Khinganskii Nature Reserve, Antonovskoe forestry, environs of Kleshenskoe locality, 1–3.VIII 2014, D.N. Kochetkov [EATB].

OTHER MATERIAL EXAMINED. Russia: Amurskaya oblast, Khinganskii Nature Reserve: Arkharinskaya lowland, 27 km W Arkhara, environs of Yuzhnyi locality, 49°23'21"N 129°42'29"E, 1.VIII 2019, 1♀, 1♂, D.N. Kochetkov; same locality and collector, 12–15.VIII 2019, 1♀; Maliy Khingan Mountain Ridge, 3 km E Uril, Tarmanchukan River basin, 49°13'07"N 130°31'48"E, 13.VII 2016, 1♂, D.N. Kochetkov; same locality and collector, 5–6.VIII 2016, 1♂; same locality and collector, 13–14.VIII 2018, 1♂; same locality and collector, 30–31.VIII 2018, 1♂; same locality and collector, 18–19.VIII 2021, 1♀ [EATB].

DIAGNOSIS. The female can be easily separated from those of all other congeners of *Priocnemis hyalinata* species-group by combination of the following characters: the antenna shortened, the flagellomere 3 length $2.1–2.37 \times$ its width (Fig. 3) and fore wing evenly infuscate apically (Fig. 8). The male is clearly distinguished from those of all other congeners of the group by combination of the following characters: the hypopygium with distinct subbasal emargination; the hypopygium length $1.5 \times$ its width; ventral suberect setae on the volsella long and thin; length of apical spines on the paramere subequal to maximum width of the volsella.

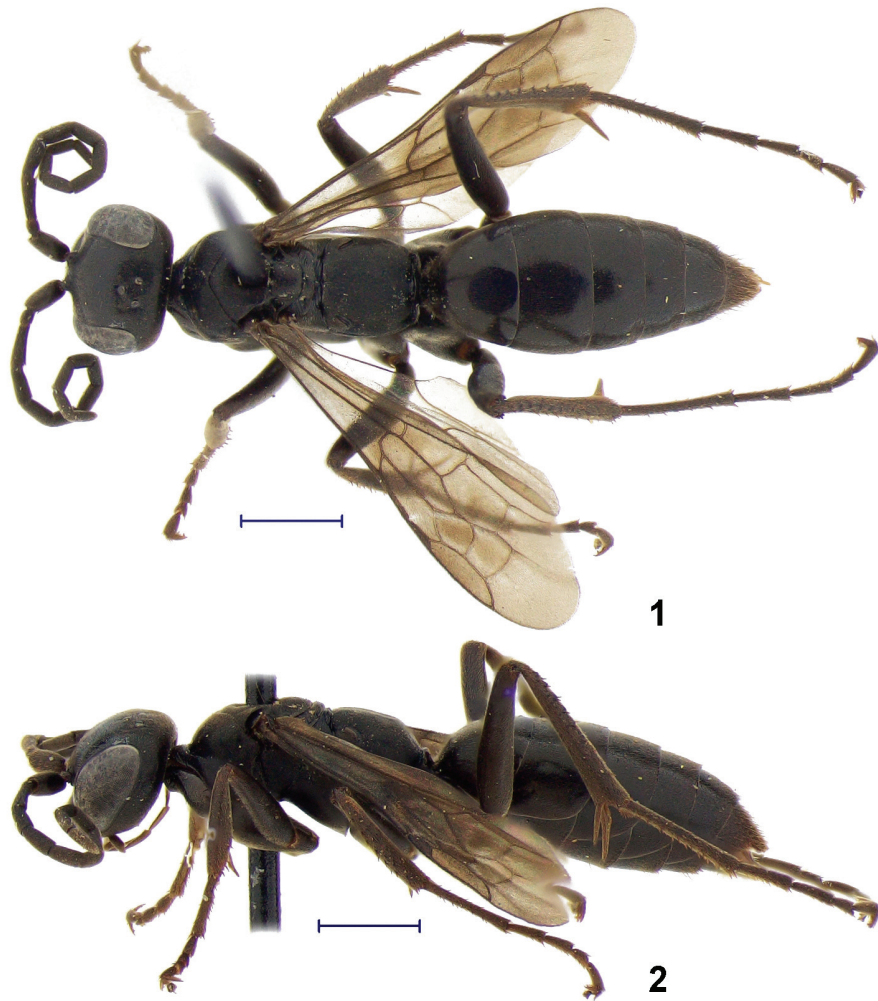
DESCRIPTION OF FEMALE (hitherto unknown). Length: body 6.65–6.8 mm; fore wing 4.2–4.5 mm. Body completely black (Figs 1, 2); one specimen with tergum 1 somewhat reddish-brown laterally. Body with sparse micropubescence. Body without setae, except following: upper frons with one gray erect setae; clypeus apically and mandible with long pale bristles; metasoma apically with erect setae. Head, meso-, metasoma, and legs matt. Frons, meso-, and metanotum densely punctate, punctures small. Pronotum indistinctly punctate. Metapostnotum with transverse striae anteriorly. Disc of propodeum somewhat shagrinated. Posterior face of propodeum with fine transverse striae. Metasomal terga microreticulate, without distinct punctures.

Head width $1.07–1.13 \times$ its length in frontal view. Vertex in frontal view barely convex (Fig. 4), its posterior margin hardly arcuate or straight in dorsal view (Fig. 3). Frons in profile convex (Fig. 5); frontal line slightly impressed. MID $0.56–0.60 \times$ head width in frontal view. Gena width medially $0.47–0.52 \times$ eye width in lateral view (Fig. 5). Ocelli hardly raised forming barely acute-angled triangle (Fig. 3). POD:OOD = $0.57–0.6$. Clypeus width $2.58–2.63 \times$ its length, gradually convex medially; apicolateral corner rounded; apical margin straight (Fig. 6). Apical margin of labrum slightly arcuate emarginated. Malar space short,

linear. Antenna distinctly shortened (Fig. 3); flagellomere 1 length $2.78\text{--}2.9 \times$ its width, $0.5\text{--}0.53 \times$ UID; flagellomere 3 length $2.1\text{--}2.37 \times$ its width. Apical flagellomere pointed at apex.

Pronotum with anterior declivity not differentiated from its dorsum. Discs of mesonotum, mesoscutellum and metanotum barely convex. Metapostnotum length $0.53\text{--}0.63 \times$ metanotum length medially. Disc of propodeum evenly convex; antero-median groove indistinct. Tergum 1 not petiolate basally. Tarsal claws dentate; preapical tooth acute, same size or somewhat larger than apical tooth (Fig. 10).

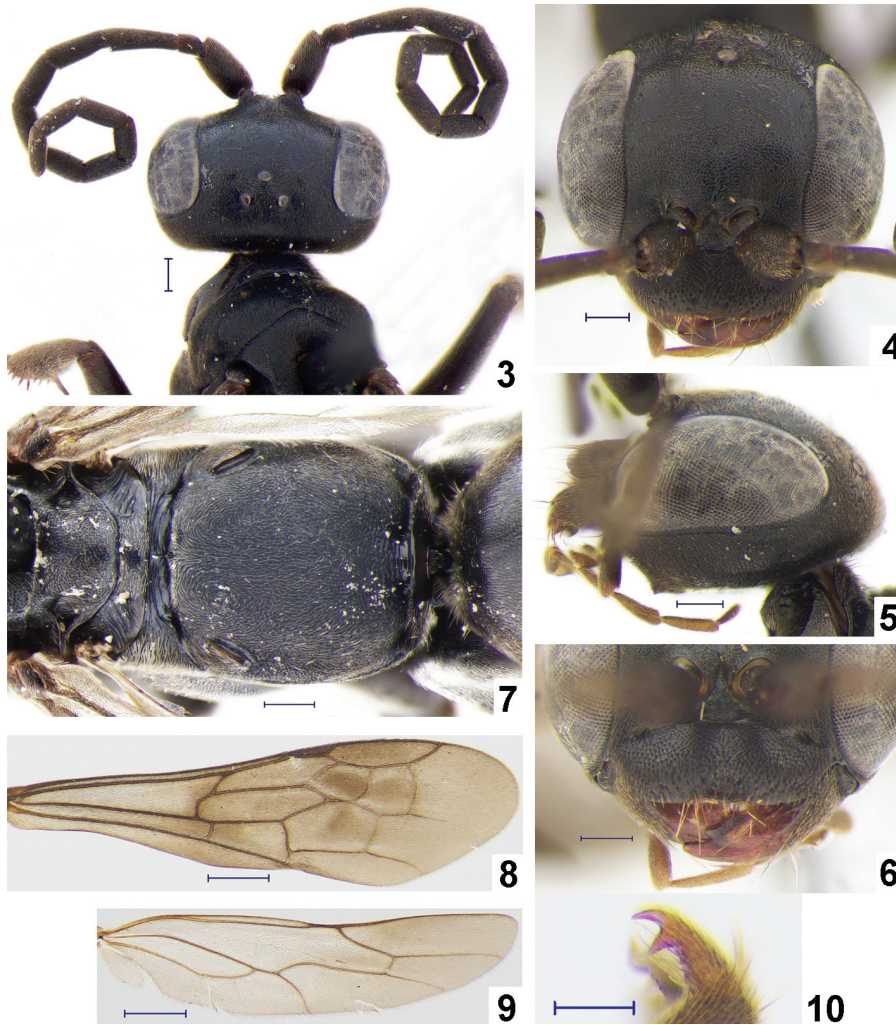
Fore wing infusate, without milky-white spot preapically (Fig. 8). Hind wing (Fig. 9).



Figs 1–2. *Prioctenemis sugonjaevi* Lelej et Loktionov, female from Amurskaya oblast, Russia. 1 – habitus, dorsal view; 2 – habitus, lateral view. Scale bar: 1 mm.

DISTRIBUTION. Russia: Far East (Amur Prov.).

BIOLOGY. In Arkharinskaya lowland the species occurs in outer woods of broad-leaved forests with *Quercus mongolica*, *Tilia amurensis*, and *Betula daurica*. In Malyi Khingan Mountain Ridge the species inhabits *Quercus mongolica* forest with *Lespedeza bicolor* and *Corylus sieboldiana* var. *mandshurica* interspersed with dry rocky slopes of southern exposure.



Figs 3–10. *Priocnemis sugonjaevi* Lelej et Loktionov, female from Amurskaya oblast. 3 – antenna, head, and pronotum, dorsal view; 4 – head, frontal view; 5 – head, lateral view; 6 – clypeus, frontal view; 7 – mesoscutellum, metanotum, metapostnotum, propodeum, and tergum 1 part., dorsal view; 8 – fore wing; 9 – hind wing; 10 – claw of fore leg. Scale bar: 0.5 mm for 8 and 9; 0.2 mm for 3–7; 0.1 mm for 10.

DISCUSSION

Priocnemis hyalinata species-group currently includes eight species. Seven of them are distributed in Palaearctic (from Europe in the West to Japan and Southern China in the East) and one species in Nearctic (USA). The representatives of the group are clearly distinguished within all congeners of nominotypical subgenus of the genus *Priocnemis* by enlarge preapical tooth of the claw, which is equal or larger than apical one in females and males, and by the paramere reduced, i.e. its length no more than half length of the volsella in males (Loktionov *et al.*, 2017).

The female of *P. sugonjaevi* possesses unique combination of characters which clearly distinguish it from females of all other congeners of the group: antenna shortened (flagellomere 3 length $2.1\text{--}2.37 \times$ its width) and evenly infuscated fore wing apically (preapical milky-white spot is absent). The first character "antenna shortened" was known in the female of *P. hyalinata* (Fabricius, 1793) only, separating this species from all other congeners. The second character "fore wing evenly infuscated apically" was known in *P. unicolor* (Gussakovskij, 1926) only, while all other species have fore wing with a distinct milky-white spot preapically.

Sexual dimorphism in the family Pompilidae is noticeably expressed. Due to this, in most cases it is not possible to combine sexes on the basis of morphological characters. Despite this, we consider the female and male as opposite sexes of the same species, *P. sugonjaevi*, based on the following indirect facts: females and males were collected in same places closely located to type locality of the species, moreover one female and one male were caught in one place in one day (see material examined); females of all other species occurring in Russia and Japan are already known (Loktionov *et al.*, 2017).

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