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Pseudarge taurica sp. n. from Crimea, and a new synonymy in *Pseudarge* Gussakovskij, 1935 (Hymenoptera: Argidae)

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Abstract. *Pseudarge taurica* sp. n. is described from Crimea. This is the first species of the genus *Pseudarge* Gussakovskij, 1935 known from the territory of Crimea and the second in the fauna of Russia. The new species is distinguished from *Pseudarge* species found in Central Asia and Southern Europe by its completely black head and dark thorax with a blue metallic reflection. The new synonymy is introduced: *Pseudarge rubicunda* Gussakovskij, 1935 = *Arge tigrata* Blank, Liston et Taeger in Blank et al., 2009, **syn. n.**

Key words: Argidae, *Pseudarge*, new species, new synonym, fauna of Russia.

Pseudarge taurica sp. n. из Крыма и новая синонимия в роде *Pseudarge* Gussakovskij, 1935 (Hymenoptera: Argidae)

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Резюме. С полуострова Крым описан новый вид *Pseudarge taurica* sp. n. Это первый вид рода *Pseudarge* Gussakovskij, 1935, обнаруженный на территории Крымского полуострова, и второй, указанный для фауны России. Новый вид отличается от видов *Pseudarge* из Центральной Азии и Южной Европы полностью черной головой и темной грудью с синим металлическим блеском. Установлена новая синонимия: *Pseudarge rubicunda* Gussakovskij, 1935 = *Arge tigrata* Blank, Liston et Taeger in Blank et al., 2009, **syn. n.**

Ключевые слова: Argidae, *Pseudarge*, новый вид, новый синоним, фауна России.

Introduction

The genus *Pseudarge* Gussakovskij, 1935 includes only six described species, all of which are distributed in the Palaearctic Region [Taeger et al., 2010]. Koch and Goergen [2008] resurrected it from the synonymy with *Alloscena* Enderein, 1919 and confirmed that six previously described species are valid [Koch, Goergen, 2008]. Recently, supplementary information about the males of two of these species was published [Basov, 2023].

Specimens of this genus are very scarce in museum collections. Recently we received additional material of Argidae, among which two large specimens with a strong blue metallic sheen stood out. Upon detailed study, it turned out that they belong to a previously unknown species of *Pseudarge*.

Furthermore, during examination of the collection of the Zoological Institute of the Russian Academy of Sciences (ZISP, St Petersburg, Russia), it was found that the basal part of the anal cell of the forewing of the single specimen representing *Arge tigrata* Blank, Liston et Taeger in Blank et al., 2009 are not closed. Further study of this and some additional characters showed that this specimen from Turkmenistan belongs to the species *Pseudarge rubicunda* Gussakovskij, 1935. Only one crumpled wing is preserved, which prevented V.V. Gussakovskij from seeing this feature,

which led to further misidentification. After study of the relevant morphological characters and comparison of the original descriptions, the introduction of a new synonymy is considered necessary.

Material and methods

The study was performed based on the collections of ZISP.

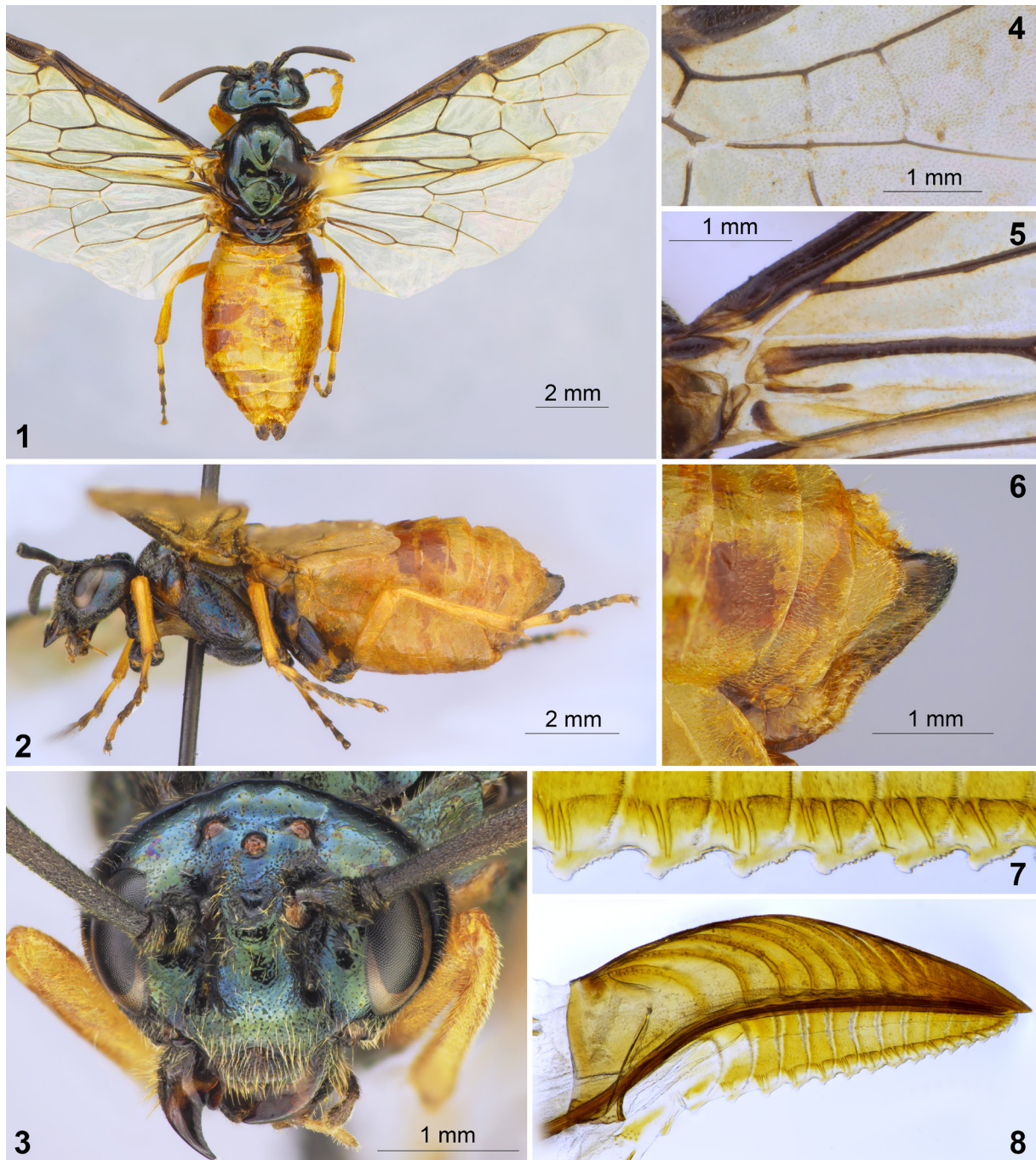
An Olympus SZ61 stereomicroscope was used for examination of specimens. Photos were taken in the Laboratory of Insect Systematics of ZISP using an Olympus SZX10 stereomicroscope with an Olympus OM-D EM1 camera, and processed with Helicon Focus 5.0 software. Images of genitalia were taken using Nikon DS-Ri2 digital microscopy camera via Nikon SMZ25 stereomicroscope.

The terminology of the female genitalia follows Ross [1945].

Genus *Pseudarge* Gussakovskij, 1935

Pseudarge Gussakovskij, 1935: 223, 394; Koch, Goergen, 2008: 49; Taeger et al., 2010: 144.

Type species *Pseudarge rubicunda* Gussakovskij, 1935 (by original designation).



Figs 1–8. *Pseudarge taurica* sp. n., female, holotype, general view and details of structure.
 1 – habitus, dorsal view; 2 – habitus, lateral view; 3 – head, front view; 4 – forewing, cell 1Rs2; 5 – forewing, anal cell; 6 – sawsheath, lateral view; 7 – median serrulae of lancet; 8 – saw, lateral view.

Рис. 1–8. *Pseudarge taurica* sp. n., самка, голотип, общий вид и детали строения.

1 – внешний вид, сверху; 2 – внешний вид, сбоку; 3 – голова, спереди; 4 – переднее крыло, ячейка 1Rs2; 5 – переднее крыло, анальная ячейка; 6 – ножны, сбоку; 7 – срединные зубцы пиляки; 8 – яйцеклад, сбоку.

Pseudarge taurica sp. n.
 (Figs 1–8)

Material. Holotype, ♀ (ZISP): Russia, Crimea, Pervomayskiy District, vicinity of Voykovo, 45°35'52"N / 33°52'11"E, 22.05.2016 (A.V. Fateryga). Paratype: 1♀ (ZISP), same data as for the holotype.

Description. Female (Fig. 1). Length 10.5–10.7 mm; fore wing 9.5–9.6 mm.

Colour. Head, thorax and apex of sawsheath black with metallic reflection; abdomen yellow. Flagellum dark brown to black. Mandible basally and apically blackish, in middle reddish. Palpi dark brown to black. All legs yellow, coxae, trochanters, apical part of tibia and four basal tarsomeres or just their apex black with metallic reflection. Wings hyaline; intercostal cell infuscate; pterostigma and veins blackish-brown. Setae yellowish. Surface generally smooth and polished, weakly punctate.

Head behind eyes distinctly expanded. Distance between eyes 1.5 times vertical diameter of eye; eye with vertical diameter 2 times its horizontal diameter. Postocellar area strongly convex, with anterior and short lateral furrows; width 2 times its length. Area between ocelli and frontal area weakly concave. POL 1.1 times OCL or OOL. Median fovea not deep. Interantennal carinae blunt, dorsally separated from each other, ventrally converge towards each other but do not fused together (Fig. 3). Supraclypeal area distinctly convex and without median carina; smooth with distinct individual punctures. Malar space 1.1 times width of front ocellus. Clypeus weakly sunk, then almost flattened ventrally, rugose; its ventral margin roundly concave medially to one third of its length. Labrum densely punctate.

Antenna. Antennal length 1.1–1.2 times maximum head width; flagellum not compressed, clavate, with a single carina on anterior side, weakly curved basally and widely rounded at apex.

Thorax. Mesonotum smooth and shiny with scattered punctures; scutellum flat.

Legs. Middle and hind tibiae with pre-apical spurs; spurs simple.

Wings. In fore wing, cell 1Rs2 with anterior length 0.8 times its posterior length, crossvein 3r-m weakly curved (Fig. 4); in both wings, wing margin between veins Rs and Cu not ciliate, without glabrous marginal area. Basal and cubital veins converge to one point.

Abdomen with basal tergites nearly glabrous dorsally; apical four tergites weakly setose. Sawsheath ventrally broadly rounded, sawsheath valves not tightly closed, their tips diverge; ventrally, with long black setae directed backwards; in lateral view acute, articulated at right angles (Fig. 6); interior surface slightly convex. Lance with several linear membranous areas (Fig. 8) and groups of very minute setae along ventral margin; its dorsal margin apically crested and finely serrate. Lancet dorsally curved, with concave ventral margin and 17 serrulae (Fig. 8). Lancet with short, simple annular spines (ctenidia) most pronounced on 7–17 annuli. Basal annuli curved, others nearly straight. Serrulae triangular with a blunt, rounded apex, clearly dentate along anterior edge, with short almost straight or slightly concave back slope (Fig. 7).

Male unknown.

Comparative diagnosis. In colouration, the female of *P. taurica* sp. n. differs greatly from the other three known species from Central Asia and Southern Europe in the completely black colour of the head, thorax and wing veins, while in *P. rubicunda* Gussakovskij, 1935, *P. ushinskii* Gussakovskij, 1935 and *P. eversmanni* Gussakovskij, 1935 these parts are always partly pale. The Chinese *P. wui* Wei et Nie, 1998 and *P. tricincta* Wei et Nie, 2001 have partly or entirely black abdominal tergites in contrast to the yellow abdomen of *P. taurica* sp. n. Using the recently compiled key [Basov, 2023], *P. taurica* sp. n. runs to *P. sinica* Wei et Nie, 1998 described from China on the basis of the body colouration, but differs from the latter by right-angled and pointed sawsheath (in lateral view) and yellow legs. In lancet structure, *P. taurica* sp. n. is most similar to *P. eversmanni*, but its serrulae are significantly shorter and the length of lancet is 3–4 times its height (only in 2 times in *P. eversmanni*), its apex bluntly rounded (hook-like in *P. eversmanni*) and the anterior edge of the teeth more dentate (less dentate in *P. eversmanni*). Moreover, *P. taurica* sp. n. has a body length of more than 10 mm (8.5–9 mm in *P. eversmanni*), the ventral edge of the clypeus is roundly concave in the middle for one third of its length (with wide shallow emargination in *P. eversmanni*), and the wide of postocellar area is 2 times its length (in 1.5 times in *P. eversmanni*).

Host plant. Unknown. Imago was collected from flowers of *Euphorbia virgate* Waldst. et Kit., 1803 (Euphorbiaceae).

Distribution. Russia: Crimea.

Etymology. The name of this species comes from the Greek name for the Crimean Peninsula, where the type specimens were collected.

Pseudarge rubicunda Gussakovskij, 1935

Pseudarge rubicunda Gussakovskij, 1935: 294, 431–432.

Hylotoma versicolor André, 1882: 438, nomen preocc., not *Hylotoma versicolor* Klug, 1834.

Arge tigrata Blank, Liston et Taeger in Blank et al., 2009: 16 (replacement name for *Hylotoma versicolor* André), **syn. n.**

Material. 1♂ (ZISP), Turkmenistan, "Kopet-Dag, Syulyukli, K.D. Anger".

Notes. The name *Hylotoma versicolor* André, 1882 is a junior primary homonym of *Hylotoma versicolor* Klug, 1834 (= *Ptilia versicolor*). Due to homonymy, it was replaced with the new name, *Arge tigrata* [Blank et al., 2009]. The types or specimens of this species have not been found in the Zoological Museum of Moscow State University (Moscow, Russia), where the type should have been preserved. Thus, the type is assumed to be lost.

Kuznetzov-Ugamskij [1927] and Gussakovskij [1935] clarified *Arge versicolor* (André, 1882) based only on males known to them as well as the original description by André [1882]. However, our re-examination of the only specimen present in the collection demonstrated that it belongs to *Pseudarge rubicunda*.

Pseudarge rubicunda was described by Gussakovskij based only on females, but its male was described recently [Basov, 2023]. The original descriptions by André [1882] and Gussakovskij [1935] of *Arge versicolor* are not detailed, but do not disagree with the description of *Pseudarge rubicunda* males. Descriptions and illustrations by Kuznetzov-Ugamskij [1927] of *Arge versicolor* clearly identify it as *Pseudarge*. In addition, as previously noted by Basov [2023], *P. rubicunda* was described from the same type locality as *Hylotoma versicolor*. According to articles 23.1 and 23.9 of International Code of Zoological Nomenclature [1999], if the senior synonym is not available, the junior one should be considered the valid name. *Hylotoma versicolor* André, 1882 is primary homonym. *Pseudarge rubicunda* Gussakovskij, 1935 is the oldest available name. Thus, the new synonymy is introduced: *Pseudarge rubicunda* Gussakovskij, 1935 = *Arge tigrata* Blank, Liston et Taeger in Blank et al., 2009, **syn. n.**

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References

- André E. 1882. Notes hyménoptérologiques. III. Description de Quelques Tenthredines orientales inédites. *Annales de la Société Entomologique de France*. 6: 437–443.
- Basov S.A. 2023. First data on males of the sawfly genus *Pseudarge* Gussakovskij, 1935 (Hymenoptera, Argidae) from Middle Asia. *Entomological Review*. 103(9): 1021–1028. DOI: 10.1134/S0013873823090099
- Blank S.M., Taeger A., Liston A.D., Smith D.R., Rasnitsyn A.P., Shinohara A., Heidema M., Viitasaari M. 2009. Studies toward a World Catalog of Symphyta (Hymenoptera). *Zootaxa*. 2254(1): 1–96. DOI: 10.11646/zootaxa.2254.1.1
- Gussakovskij V.V. 1935. Fauna SSSR. Nasekomye pereponchatokrylye. T. 2, vyp. 1. Rogokhivosty i pilil'shchiki (Ch. 1) [Fauna of the USSR. Hymenoptera. Vol. 2, Issue 1. Horntails and sawflies (Part 1)]. Moscow, Leningrad: Academy of Sciences of the USSR. 454 p. (in Russian).
- International Commission on Zoological Nomenclature. 1999. International Code of Zoological Nomenclature. Fourth Edition. London: International Trust for Zoological Nomenclature. xxix + 306 p.
- Koch F., Goergen G. 2008. Annotations to the Palaearctic sawfly genus *Pseudarge* Gussakovskij, 1935 gen. rev. with a contribution to the genus *Arge* Schrank, 1802 in the Afrotropical region (Hymenoptera: Symphyta: Argidae: Arginae). *Mitteilungen der Münchner Entomologischen Gesellschaft*. 98: 43–57.
- Kuznetzov-Ugamskij N.N. 1927. Neue oder wenig bekannte Argiden aus Mittelasien. *Zoologischer Anzeiger*. 71(9–10): 209–215.
- Ross H.H. 1945. Sawfly genitalia: terminology and study techniques. *Entomological News*. 61(10): 261–268.
- Taeger A., Blank S.M., Liston A.D. 2010. World catalog of Symphyta (Hymenoptera). *Zootaxa*. 2580(1): 1–1064. DOI: 10.11646/zootaxa.2580.1.1

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