

Krasava, a new genus of Pteromalidae (Hymenoptera, Chalcidoidea) from the Palaearctic region

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Abstract

A new genus of Pteromalidae *Krasava* Tselikh, Rasplus & Lee, **gen. nov.**, along with its type species *Krasava sergeyi* Tselikh, **sp. nov.**, is described from the Republic of Korea. The genus can be distinguished by the following combination of characters: clypeus with neighbouring lateral parts convex, antenna inserted below ocular line, clava with a large micropilosity area on segments C1–C4, median area of propodeum concave, fore wing narrow.

Key words: description, parasitoids, new taxa, South Korea

Introduction

Pteromalidae is one of the largest families within the superfamily Chalcidoidea, yet the fauna of the Eastern Palaearctic remains poorly studied. During our investigation of the Pteromalidae in South Korea, several specimens were collected from forested areas that appeared to represent a new genus. Herein, we describe *Krasava* Tselikh, Rasplus & Lee, **gen. nov.**, and its type species *Krasava sergeyi* Tselikh, **sp. nov.** Although males and biological information are currently unknown, the females display morphological features characteristics of the subfamily Pteromalinae, to which the new genus is assigned.

Material and methods

Morphological terminology, including sculpture and wing venation nomenclature, follows Bouček & Rasplus (1991), Gibson (1997) and Burks *et al.* (2022). The flagellum consists of two anelli, a funicle composed of six funicular segments and a clava. The following abbreviations are used: **POL**—posterior ocular line, the minimum distance between the posterior ocelli; **OOL**—ocello–ocular line, the minimum distance between a posterior ocellus and compound eye; **C1–C4**—claval segments; **M**—marginal vein; **S**—stigmal vein; **PM**—postmarginal vein; **F1–F6**—funicular segments. The scape is measured without the radicle; the pedicel is measured in lateral view. The distance between the lower margin of the clypeus and the toruli is measured from the lower of the toruli. Eye height is measured as the maximum diameter, eye length as the minimum diameter. The mesosoma and metasoma are measured in lateral view, with the metasoma including the ovipositor sheaths.

Observations were conducted using a Leica MZ95 stereomicroscope. Illustrations were prepared using an Olympus SZX 10 stereomicroscope and a Canon EOS 70D digital camera. The images were then processed with Helicon Focus.

The holotype is deposited in the collection of the National Institute of Biological Resources, Incheon, Republic of Korea (NIBR), paratypes in the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia (ZISP) and the Science Museum of Natural Enemies, Geochang, Republic of Korea (SMNE).

Taxonomy

Family Pteromalidae Dalman, 1820

Subfamily Pteromalinae Dalman, 1820

Tribe Pteromalini Dalman, 1820

Genus *Krasava* Tselikh, Rasplus & Lee, gen. nov.

(Figs 1–7)

Type species. *Krasava sergeyi* Tselikh, **sp. nov.**, by present designation.

Description. Female. Body black with a dark metallic blue lustre (Figs 1, 7); fore wing with light brownish tint (Fig. 3).

Head in dorsal view, 2.00–2.08× as broad as long, scrobes absent (Fig. 4); gena and occiput without carina. Clypeus broad and with neighbouring lateral parts convex, tentorial pits indistinct (Fig. 2). Antennal formula 11264, with antennae inserted below level of lower edges of eyes (Fig. 2), both anelli transverse, clava symmetrical with large micropilosity area in C1–C4 (Fig. 5). Mandibular formula 3:3.

Mesosoma moderately arched dorsally. Pronotum almost as wide as mesoscutum, collar margin without carina (Fig. 4). Notauli incomplete (Fig. 7); prepectus shorter than tegula, upper mesepimeron alutaceous. Scutellum convex, with indistinct frenal area and frenal groove. Propodeum with concave median area, nucha short, spiracles positioned closer to metanotum (Fig. 6). Petiole transverse. Fore wing narrow, with speculum; basal cell partly pilose, veins not thickened (Fig. 3). Hind coxa bare dorsally; hind tibia with two spurs.

Metasoma lanceolate, longer than mesosoma and head combined (Fig. 1), cerci with setae of subequal length, ovipositor not strongly exerted.

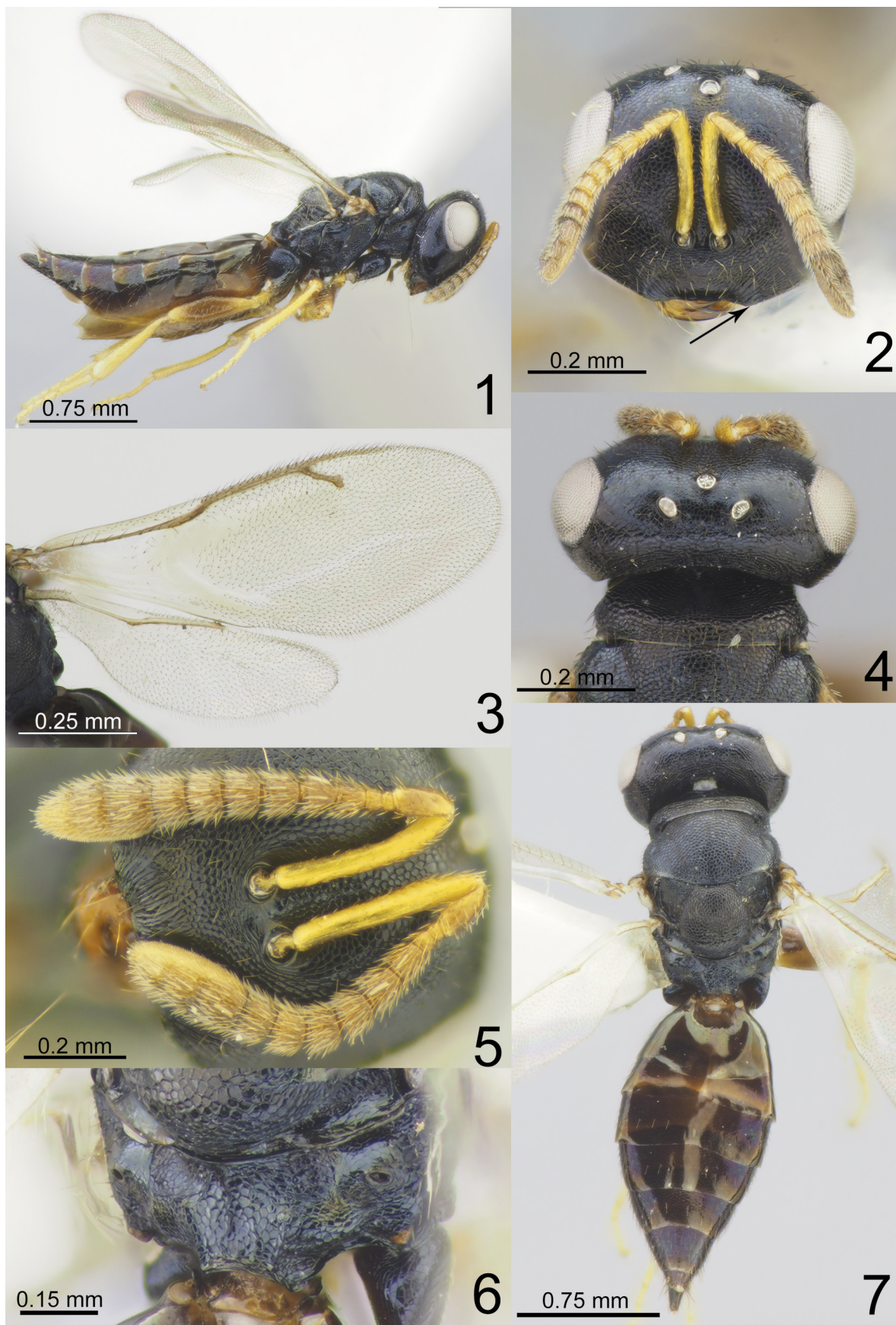
Male unknown.

Etymology. The generic name is the feminine noun “krasava”, which means “handsome” in Russian.

Distribution. Eastern Palearctic.

Comments. *Krasava* is similar to the cosmopolitan genus *Psilocera* Walker, 1833 (Bouček, 1988; Bouček, Rasplus, 1991; Sureshan, Narendran, 2004; Xiau, Huang, 2019; UCD Community 2025) in several features including the large antennal clava with a wide micropilosity area (Fig. 5); broad head, in dorsal view (Fig. 4); head and mesosoma black (Figs 1, 7); notauli incomplete (Fig. 7); propodeum with spiracles positioned closer to metanotum (Fig. 6); petiole transverse (Figs 6, 7). However, *Krasava* **gen. nov.**, can be distinguished by the clypeus with convex neighbouring lateral parts (Fig. 2) *vs* clypeus without convex neighbouring lateral parts; lower margin of clypeus weakly emarginate (Fig. 2) *vs* lower margin of clypeus with two teeth; antenna inserted below ocular line (Fig. 2) *vs* antenna inserted above ocular line; propodeum with concave median area and without subglobose nucha and costula (Fig. 6) *vs* propodeum without concave median area and with subglobose nucha and costula; fore wing narrow (Fig. 3) *vs* fore wing not narrow.

Krasava also resembles the Palearctic genera *Monoksa* Bouček, 1991 and *Rohatina* Bouček, 1954 in having a clypeus with convex neighbouring lateral parts (Fig. 2); notauli incomplete (Fig. 7); propodeum with spiracles positioned closer to metanotum (Fig. 6); petiole transverse (Figs 6, 7). However, the new genus clearly differs in the concave median area of propodeum (Fig. 6) *vs* propodeum without concave median area; clava with a large micropilosity area on C1–C4 (Fig. 5) *vs* micropilosity area never present on C1; antenna inserted below ocular line (Fig. 2) *vs* antenna inserted above ocular line; fore wing narrow and slightly infusate (Fig. 3) *vs* fore wing not narrow and hyaline.



FIGURES 1–7. *Krasava sergeyi* Tselikh **sp. nov.**, ♀, holotype; 1—habitus, lateral view; 2—head, frontal view; 3—wings; 4—head, dorsal view; 5—antenna; 6—propodeum, dorsal view; 7—habitus, dorsal view.

***Krasava sergeyi* Tselikh, sp. nov.**

(Figs 1–7)

Material examined. Holotype: ♀, **REPUBLIC OF KOREA**, “Gyeongsangnam-do, Gaseon-ri, Ilbanseong-myeon, Jinju-si, 16.VII–13.VIII.2022, malaise trap, coll. An Tae-Ho” (NIBR).

Paratypes: **REPUBLIC OF KOREA**, 3 ♀, “Gyeongsangnam-do, Soheul-eup, Pocheon-si, Gyeonggi-do, 24.V–12.VI.2017, 30.VI–17.VII.2017, 31.VII–16.VIII.2017, coll. Kim, Kim, Nam” (SMNE); 1 ♀, “Gyeongsangnam-do, Seok Hyeon-dong, Suncheon-si, malaise trap, 5.VI–20.VI.2017, coll. J.H. Lee” (SMNE); 1 ♀, “Jeju-do, Hannam-ri, Namwon-eup, Seogwipo-si, 16.VI–14.VII.2021, malaise trap, coll. Y.H. Park, M.H. Kim, D.H. Park, J.Y. Kim” (SMNE); 3 ♀, “Gyeongsangnam-do, Gaseon-ri, Ilbanseong-myeon, Jinju-si, 4.VI–16.VII.2022, malaise trap, coll. An Tae-Ho” (SMNE); 2 ♀, “JuWangSan-myeon, Cheongsong-gun, (Mt) JuWangSan, 12.V.2022, coll. J.H. Lee” (SMNE); 1 ♀, “Daegwallyeong-myeon, Pyeongchang-gun, Daegwallyeong Pass, 28.VIII.2022, coll. J.H. Lee” (SMNE); 1 ♀, “Gyeongsangnam-do, Sirubong Peak, Jinhae-gu, Changwon-si, 26.IX.2022, coll. J.H. Lee” (SMNE); 1 ♀, “Wolpyeong-ri, Hoengcheon-myeon, Hadong-gun, 23.V.2023, coll. J.H. Lee” (ZISP); 2 ♀, “Gyeongsangnam-do, Jeondae-ri, Hoengcheon-myeon, Hadong-gun, 22.VI.2023, coll. J.H. Lee” (ZISP); 1 ♀, “Gyeongsangnam-do, Namsan-ri, Hoengcheon-myeon, Hadong-gun, 22.VI.2023, coll. J.H. Lee” (ZISP); 1 ♀, “Gyeongsangnam-do, Aechi-ri, Hoengcheon-myeon, Hadong-gun, 22.VI.2023, coll. J.H. Lee” (ZISP); 1 ♀, “Gyeongsangnam-do, Geochang-gun, Science Museum of Natural Enemies, 27–VI.2023, coll. E. Tselikh” (ZISP).

Description. *Female.* Body length 2.7–3.3 mm; fore wing length 2.1–2.4 mm.

Head and mesosoma black with weak blue metallic lustre; metasoma dark brown with violet and blue metallic lustre; antenna with scape yellow, pedicel and flagellum yellowish-brown. All coxae black with a faint blue metallic lustre; femora brown; tibiae and tarsi entirely yellow. Fore wing with light brownish tint, venation brown; ovipositor sheath brown.

Head in dorsal view $2.0\text{--}2.08\times$ as broad as long and $1.26\text{--}1.29\times$ as broad as mesoscutum; in frontal view, $1.22\text{--}1.30\times$ broader than high. POL $0.89\text{--}1.07\times$ OOL. Eye height $1.28\text{--}1.36\times$ eye length and $1.44\text{--}1.50\times$ as long as malar space. Distance between antennal toruli and lower margin of clypeus $0.60\text{--}0.63\times$ distance between antennal toruli and median ocellus. Clypeus radially striate, its lower margin weakly emarginate. Antenna with scape as long as eye height and $1.37\text{--}1.43\times$ as long as eye length, not quite reaching lower margin of median ocellus; pedicel $2.6\text{--}2.7\times$ as long as broad and $2.4\text{--}2.6\times$ as long as F1; combined length of pedicel and flagellum $0.83\text{--}0.86\times$ head breadth; flagellum clavate; second anellus transverse, $1.2\times$ as long as first anellus; F1–F2 subquadrate, F3–F6 transverse, each bearing one row of dense sensilla, clava $1.83\text{--}2.00\times$ as long as broad.

Mesosoma $1.45\text{--}1.50\times$ as long as broad. Scutellum as long as broad. Propodeum medially $0.50\text{--}0.53\times$ as long as scutellum; median carina absent, plicae irregular; nucha short and reticulate, propodeum with a concave median area. Fore wing $2.6\text{--}2.75\times$ as long as its maximum width; basal cell partly pilose; speculum open; M $1.30\text{--}1.45\times$ as long as P and $2.75\text{--}2.90\times$ as long as S; S curved; stigma small.

Metasoma lanceolate, $2.04\text{--}2.30\times$ as long as broad; $1.50\text{--}1.55$ as long as mesosoma and $1.10\text{--}1.15$ as long as mesosoma and head. Ovipositor sheath slightly projecting beyond apex of metasoma.

Etymology. This new species is named in honour of Prof. Sergey Yurievich Storozhenko, a renowned Russian orthopterologist, in celebration of his upcoming 70th birthday.

Distribution. Eastern Palearctic (South Korea).

Discussion

Like other chalcidoid families, the Pteromalidae family is poorly understood, with many species yet to be described. The true diversity of the family within the Palearctic fauna is still unknown and underestimated, and the lack of contemporary identification keys for at least the genera of this region remains a major problem.

During our revision of the biodiversity, reconstruction of the phylogeny, and development of the systematics and classification of the Palearctic Pteromalidae, several specimens were collected in forested areas of South Korea that appeared to belong to a new genus, *Krasava* Tselikh, Rasplus & Lee, **gen. nov.** (type species: *Krasava sergeyi* Tselikh, **sp. nov.**). This genus belongs to the family Pteromalidae, the subfamily Pteromalinae and the tribe Pteromalini, and comprises only one species. Unfortunately, the biology of this genus is unknown, but all specimens were collected in deciduous broadleaf forests.

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