



New synonyms of specific and generic names in the family Chrysididae (Hymenoptera)

Новые синонимы видовых и родовых названий в семействе Chrysididae (Hymenoptera)

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Abstract. The type material of two Chrysididae genera described by Yu. Tarbinsky from Central Asia was examined. New synonyms are proposed: *Pseudochrysis* Semenov, 1891 = *Arnoldia* Tarbinsky, 2004, **syn. nov.**; *Spinolia* Dahlbom, 1854 = *Pseudochrysur*a Tarbinsky, 2004, **syn. nov.**; *Pseudochrysis neglecta* (Shuckard, 1837) = *Arnoldia seraphimi* Tarbinsky, 2004, **syn. nov.**; *Spinolia rusalka* (Semenov, 1901) = *Pseudochrysur*a *zonsteini* Tarbinsky, 2004, **syn. nov.**

Резюме. Изучены типовые материалы двух родов ос-блестянок, описанных Ю. Тарбинским из Средней Азии. Предлагается новая синонимия: *Pseudochrysis* Semenov, 1891 = *Arnoldia* Tarbinsky, 2004, **syn. nov.**; *Spinolia* Dahlbom, 1854 = *Pseudochrysur*a Tarbinsky, 2004, **syn. nov.**; *Pseudochrysis neglecta* (Shuckard, 1837) = *Arnoldia seraphimi* Tarbinsky, 2004, **syn. nov.**; *Spinolia rusalka* (Semenov, 1901) = *Pseudochrysur*a *zonsteini* Tarbinsky, 2004, **syn. nov.**

Key words: Central Asia, Palaearctic region, cuckoo wasps, Chrysidinae, new synonymy

Ключевые слова: Средняя Азия, Палеарктика, осы-блестянки, Chrysidinae, новая синонимия

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Introduction

After extensive series of publications on the Russian fauna (Rosa et al., 2017a, 2017b, 2017c, 2017d, 2017e, 2017f, 2017g; Rosa, 2018), my attention is now focused on the revision of Central Asian Chrysididae. During a recent visit to the Institute of Biology and Pedology of the National Academy of Sciences of Kyrgyzstan (Bishkek), I examined Yu.S. Tarbinsky's collection of Chrysididae. The collection is in good order, allowing a thorough study of the material including type specimens; only very few types, supposedly housed in the collection, are seemingly missing. This resulted in discovering several new clear or possible synonymies among the species described by Yu.S. Tarbinsky. A detailed planned article on Tarbin-

sky's collection will require rather long time; therefore, two new ascertained synonyms are discussed here, because the relevant species are to be dealt with in a preliminary work, to be published in the next future (Rosa, in prep.).

In his seven papers, Yu.S. Tarbinsky described as new 46 species and two genera, namely *Arnoldia* Tarbinsky, 2004 and *Pseudochrysur*a Tarbinsky, 2004 (Tarbinsky, 2000a, 2000b, 2001, 2002a, 2002b, 2002c, 2004). These genera have been apparently overlooked in literature and web resources, e.g. Agnoli & Rosa (2010) and Hymenoptera Online (2018).

Here I summarise my observations on the two genera described by this author, whose biography was published by Milko (2004) together with an overview of the described species.



Fig. 1. *Arnoldia seraphimi* Tarbinsky, 2004 (holotype, male). A, habitus, dorsal view; B, habitus, lateral view. Scale bar 1.0 mm.

Materials and methods

Pictures of chrysidid wasps were taken with a Nikon D-80 digital camera connected to a stereomicroscope Togonal SCZ and stacked with the software Combine ZP. Type material have been examined at the Institute of Biology and Pedology of the National Academy of Sciences of Kyrgyzstan (Bishkek; IBPB), and at the Zoological Institute of the Russian Academy of Sciences (St Petersburg, Russia; ZIN).

Taxonomic part

Order Hymenoptera

Family Chrysididae

Subfamily Chrysidinae

Tribe Chrysidini

Genus *Arnoldia* Tarbinsky, 2004, **syn. nov.**

Pseudochrysis Semenov, 1891: 444.

Arnoldia Tarbinsky, 2004: 245, 249, figs 7–10, nom. praeocc., nec *Arnoldia* Mayer-Eymar, 1887 (Mollusca), nec *Arnoldia* Kieffer, 1895 (Diptera), nec *Arnoldia* Wlasenko, 1931 (Trematoda), nec *Arnoldia* Stolley 1937 (Ammonoidea), nec *Arnoldia* Hovasse, 1956 (Protozoa).

Type species: *Arnoldia seraphimi* Tarbinsky, 2004, by original designation (= *Chrysis neglecta* Shuckard, 1837), **syn. nov.**

Arnoldia seraphimi Tarbinsky, 2004, **syn. nov.**

Chrysis neglecta Shuckard, 1837: 169.

Arnoldia seraphimi Tarbinsky, 2004: 249, figs 7–10.

Material examined. Holotype of *Arnoldia seraphimi*, **Kyrgyzstan**, Terskey Ala-Too Range, near Teploklyuchenka (Kyzyl-Suu), 19.VI.1995, leg. S. Ovchinnikov, male [not female]; *paratypes*: **Kyrgyzstan**: Kichik-Alai Range, Karagoi, 11.VII.1997, leg. A. Puchkov, 1 female; Fergansky Range, Karaungur, 22.IV.1966, leg. V. Krylova, 1 male; **Uzbekistan**, Chatkal Range, Syuren-Ata

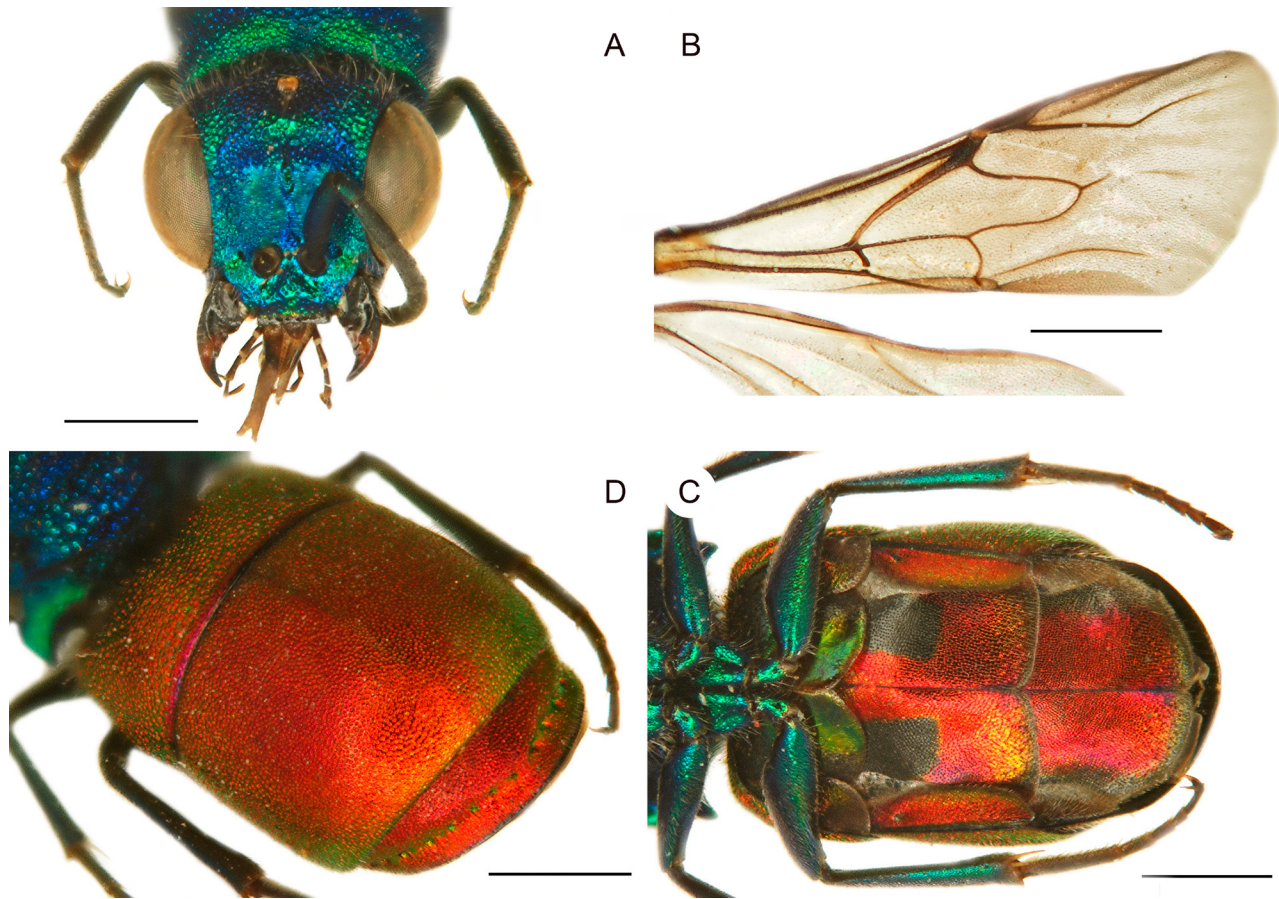


Fig. 2. *Arnoldia seraphimi* Tarbinsky, 2004 (holotype, male). **A**, head, frontal view; **B**, wing; **C**, metasoma, postero-lateral view; **D**, metasoma, ventral view. Scale bar 1.0 mm.

Mt., 15.VI.1997, leg. S. Zonstein, 1 male, 1 female (all in IBPB).

Diagnosis. Tarbinsky's (2004) diagnosis and line drawings of *Arnoldia* are accurate enough to suggest a close relationship or synonymy with the genus *Pseudochrysis* Semenov, 1891 (Rosa et al., 2017a, 2017b): tarsal claws simple; transverse frontal carina absent; scapal basin depressed; scape very short; mouth parts elongate; fore wings with basal veins almost straight, marginal cell broadly open, with Rs ending at one fourth of its length far from distal margin; mesopleuron convex, with weak scrobal sulcus; apical margin of third metasomal tergum oval, without teeth; pit row slightly depressed; pits shallow; metasoma entirely punctured, with even, dense punctures.

Remarks. The examination of the type series, including males and females, confirmed that *Arnoldia seraphimi* (Figs 1, 2) belongs to the genus *Pseudochrysis* (*Pseudochrysis* Semenov, 1891 =

Arnoldia Tarbinsky, 2004, **syn. nov.**), and it is a junior subjective synonym of *P. neglecta* (Shuckard, 1837), a common widespread Palaearctic species, also reported as introduced in North America, and already recorded for Central Asian countries (Rosa et al., 2017a). Pictures of the holotype from Kyrgyzstan [Terskei Ala-Too Range, near Teploklyuchenka (Kyzyl-Suu), 19.VI.1995, leg. S. Ovchinnikov], are given (Figs 1, 2) to be compared with those of *P. neglecta* (Paukkunen et al., 2015). Additionally, the genital capsule of the male paratype (Kyrgyzstan, Kichik-Alaj river, 50 km S Osh town, 11.VII.1997, leg. A. Putchkov) was dissected and found to match that of *P. neglecta*.

Besides being a junior subjective synonym of *Pseudochrysis* Semenov, 1891, the generic name *Arnoldia* Tarbinsky, 2004 is also objectively invalid, being a junior homonym of *Arnoldia* Mayer-Eymar, 1887 (Mollusca).

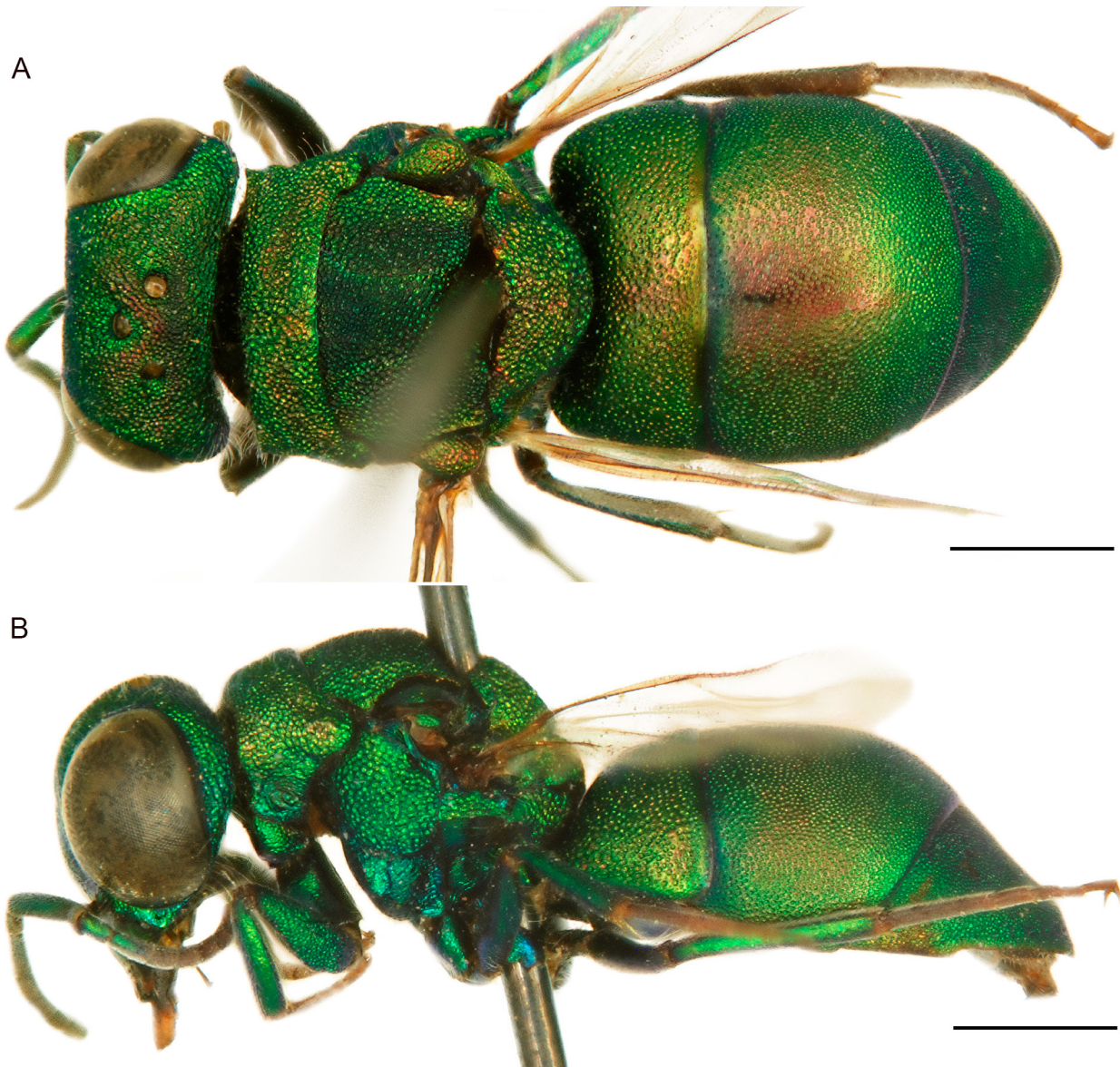


Fig. 3. *Pseudochrysurina zonsteini* Tarbinsky, 2004 (holotype, female). **A**, habitus, dorsal view; **B**, habitus lateral view. Scale bar 1.0 mm.

Genus *Pseudochrysurina* Tarbinsky, 2004, **syn. nov.**

Spinolia Dahlbom, 1854: 363.

Pseudochrysurina Tarbinsky, 2004: 246, 247, figs 1–6.

Type species: *Pseudochrysurina zonsteini* Tarbinsky, 2004, by original designation (= *Pseudochrysurina rusalka* Semenov, 1901), **syn. nov.**

Pseudochrysurina zonsteini Tarbinsky, 2004, **syn. nov.**

Pseudochrysurina rusalka Semenov, 1901: 248.

Pseudochrysurina zonsteini Tarbinsky, 2004: 248, figs 1–6.

Material examined. Holotype of *Pseudochrysurina zonsteini*, **Uzbekistan**, Shurob env., Dyubere-Olend Mts., 25.V.1997, leg. S.L. Zonstein, female (IBPB).

Diagnosis. Tarbinsky's (2004) diagnosis and illustrations of *Pseudochrysurina* suggest a close relationship or synonymy with the genus *Spinolia* Dahlbom, 1854: tarsal claws simple; discoidal cell distinct; fore wing radial vein ending at one third of its length far from distal margin; frontal impression almost completely flat, with longitu-

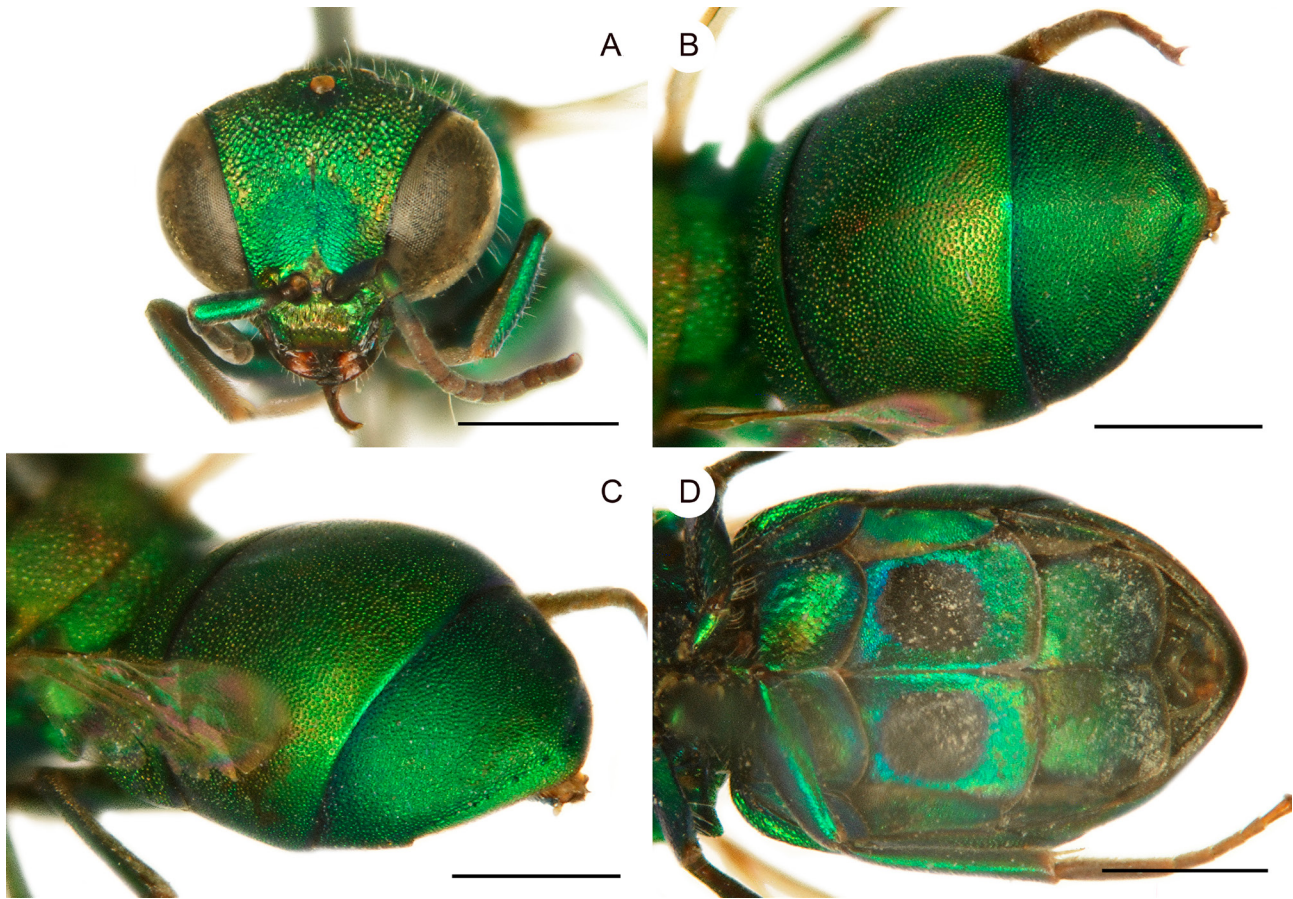


Fig. 4. *Pseudochrysurina zonsteini* Tarbinsky, 2004 (holotype, female). **A**, head, frontal view; **B**, metasoma, posterior view; **C**, metasoma, postero-lateral view; **D**, metasoma, ventral view. Scale bar 1.0 mm.

dinal vertical line; transverse frontal carina absent, antennae short; mesopleuron divided into two well-limited parts by sharp scrobal sulcus; lower part of mesopleuron almost triangular, with vertical carina in middle; malar sulcus absent; metasoma with elongate third tergum, tapering towards apex; pit row not depressed, with shallow pits; lateral sides of third metasomal tergum with distinct edge at beginning of pit row; scapal basin evenly and densely punctured, without corrugation; body evenly and densely punctured, only the second and third metasomal terga coriaceous.

Remarks. The examination of the holotype (Figs 3, 4) confirmed that *Pseudochrysurina zonsteini* precisely is a junior subjective synonym of *S. rusalka* (Semenov, 1901) described from Turkmenistan, and therefore *Pseudochrysurina* Tarbinsky, 2004 is a synonym of *Spinolia* Dahlbom, 1854. *Spinolia rusalka* is a rarely collected species, close to *S. chalcites* (Mocsáry, 1890). The latter is

more frequently collected and is distributed from southern Russia to Turkmenistan and Kazakhstan (Semenov-Tian-Shanskij, 1967; Rosa et al., 2017a). Female of *S. rusalka* is distinguished from *S. chalcites* by the following diagnostic characters: frons with continuous profile, without large ovoid and flattened areas (frons of female with two large ovoid and flattened areas, similar to those of male in *S. chalcites*); mesosoma with fine, dense, and even punctuation (*vs.* irregularly punctured in *S. chalcites*); lateral tooth on third metasomal tergum blunt (*vs.* sharp in *S. chalcites*) (Rosa et al., 2017a).

Conclusions

In the family Chrysididae (sensu Kimsey & Bohart, 1991), 301 genus-group names have been introduced in all period of its study, of which 112 are currently considered valid, including 17 fossil

genera (Rosa, unpubl.), with more than 2800 species accepted as valid, out of a total of 4595 species-group names. Future molecular phylogenetic analyses are expected to strongly modify the currently accepted classification of the family, mainly at the generic level as stressed by Pauli et al. (2018). The actual number of species, either still undescribed or currently interpreted as simple varieties or synonyms, is expected to be considerably higher, given our poor knowledge of cuckoo wasps of several zoogeographical areas, such as Central Asian countries, but also Afrotropical and Oriental regions (Madl & Rosa, 2012; Rosa et al., 2016).

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