New taxa records of the rare family Embolemidae (Hymenoptera: Chrysidoidea) in the Russian Far East

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Новые находки таксонов редкого семейства Embolemidae (Hymenoptera: Chrysidoidea) на Дальнем Востоке России

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Ключевые слова. Осы, Embolemidae, Восточная Палеарктика, Амурская область, остров Кунашир.

Introduction

Embolemidae (Hymenoptera: Chrysidoidea) is a small family of wasps which develop in the nymphs of planthoppers (Hemiptera: Auchenorrhyncha) (Varrone, Olmi, 2012; Guglielmino, Buckle, 2013; Achterberg, Kats, 2000; Olmi et al., 2014a, 2014b). Embolemid females are micropterous, brachypterous or macropterous, but males always macropterous. Besides primary sexual dimorphism (genitalia, absence or strong reduction of wings in females), females of these wasps additionally differ from males by distinctly elongated scape, which is longer than flagellomere 1 (in male scape short, obviously shorter than flagellomere 1).

Three extant genera are known in this family: worldwide distributed Embolemus Westwood, 1833, parasitoids of nymphs of Cixiidae, and Ampulicomorpha Ashmead, 1893, parasitoids of nymphs of Achi-lidae, as well as the Eastern Palaearctic Trogloembolemus Olmi, Mita et Guglielmino, 2014 with unknown biology (Olmi, 1996; Olmi et al., 2014b). Also three fossil genera were described in Embolemidae: Bais-

All three extant genera are known in the Palaearctic Region: *Ampulicomorpha* with two species, *Embolemus* with seven species, and exclusively Japanese *Troglombolemus* with one species. In Russia, two genera and five species were recorded (Trjapitzin, 1978; Rasnitsyn, Matveev, 1989; Belokobylskij, 1990; Olmi et al., 2014a).

In this paper, the new records of two rare embolemid species are documented. Studied material is stored in the collections of the Federal Scientific Center of the East Asia Terrestrial Biodiversity (Vladivostok) and Zoological Institute RAS (St Petersburg).

**Taxonomy**

**Genus Ampulicomorpha Ashmead, 1893**

Type species: *Ampulicomorpha confusa* Ashmead, 1893, by original designation.

This is a small genus with worldwide distribution. The member of this genus are known as parasitoids of the nymphs of Achilidae living in rotten logs and feeding on hyphal sheets of shelf fungi (Olmi et al., 2014a, 2014b). The status of this genus is discussed: Achterberg and Kats (2000) considered it as synonym of *Embolemus*, but Olmi with coauthors (Olmi, 1996; Olmi et al., 2014a, 2014b) treated it as valid taxon. For resolving of this question requires deep phylogenetic analysis on the basis not only morphological, but also molecular and biochemical data.

*Ampulicomorpha thauma* Rasnitsyn et Matveev, 1989

Rasnitsyn, Matveev, 1989: 657; Achterberg, Kats, 2000: 268 (as *Embolemus thaumus* and as provisional synonym of *E. hachijoensis* Hirashima et Yamagushi, 1976); Olmi et al., 2014a: 106.

**Material examined.** Russia. Sakhalin Province: Kuril Islands, SW of Kunashir Island, Ivanovskiy Cape, 11.IX.2013 (Yu. & L. Sundukovy), 1 ♀.

**Distribution.** Russia: European part (Rostov Province), *Far East (Kunashir I.). – Korea, ?Japan.*

**Remark.** Discovery of *A. thauma* in the Eastern Asia needs to be confirmed after study of males of this species which are still unknown.

**Genus Embolemus Westwood, 1833**

Type species: *Embolemus ruddii* Westwood, 1833, by monotypy.

This is the largest and worldwide distributed embolemid genus. Members of this genus are known as parasitoids of Cixiidae nymphs living in the soil and feeding on roots (Varrone, Olmi 2012; Olmi et al., 2014a, 2014b). In the world fauna 34 species are known (including one fossil), in the Palaearctic Region – 7, in Russia – 4 (*E. pecki* Olmi, 1997, *E. sensitivus* Xu, Olmi et Guglielmino, 2012, *E. ruddii* Westwood, 1833 and *E. tauricus* Olmi, Belokobylskij et Guglielmino, 2014).

*Embolemus sensitivus* Xu, Olmi et Guglielmino, 2012

Xu et al., 2012: 118; Olmi et al., 2014a: 100; 2014b: 431.

**Material examined.** Russia. Amur Province, Khingan Nature Reserve: Khingan forestry, Dyrovatka River, mixed forest, 8.VIII.2016 (D. Kochetkov), 1 ♀; Khingan forestry, Tarmanchukan River, 49°13’07”N, 130°31’48”E, 26 & 27.VIII.2016 (D. Kochetkov), 2 ♀.

**Distribution.** Russia: Far East (*Amur Prov., Primorskiy Terr.). – China (North, South-West, South-East), Korea, Japan (Hokkaido, Honshu, Kyushu, Shikoku), Vietnam.

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References


