

## NOTES ON CERTAIN NEW GENERA AND SPECIES OF PTEROMALIDAE (HYMENOPTERA, CHALCIDOIDEA, PTEROMALIDAE) IDENTIFIED WITHIN PLAIUL FAGULUI NATURE RESERVE

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**Abstract.** As result of performed studies in various types of biotopes on the reserve territory and adjacent areas there were identified 118 species of pteromalid (Hymenoptera, Pteromalidae) belonging to 9 subfamilies and 64 genera, of which 3 genera (*Rhinocelesia* Graham, *Merismus* Walker, *Calliprymna* Graham), 10 species (*Rhinocelesia impar* Walker, *Merismus splendens* Graham, *Gastrancistrus acutus* Walker, *Gastrancistrus campressus* Walker, *Trichomalopsis laticeps* Graham, *Trichomalopsis acuminatus* Graham, *Trichomalus rufinus* Walker, *Calliprymna bisetosa* Graham, *Pteromalus papaveris* Forster, *Pteromalus chlorogaster* Thomson) are new for the fauna of the Republic of Moldova.

**Keywords:** Hymenoptera, Pteromalidae, "Plaiul Fagului" natural Reserve, new genera and species, Republic of Moldova.

**Rezumat. Note privind unele genuri și specii noi de Pteromalidae (Hymenoptera, Chalcidoidea, Pteromalidae) semnalate în Rezervația naturală Plaiul Fagului.** Ca rezultat al investigațiilor efectuate în diverse biotopuri pe teritoriul rezervației și zonele linitrofe au fost identificate 118 specii de pteromalide (Hymenoptera, Pteromalidae), incluse în 9 subfamilii și 64 genuri, dintre care 3 genuri (*Rhinocelesia* Graham, *Merismus* Walker, *Calliprymna* Graham), 10 specii (*Rhinocelesia impar* Walker, *Merismus splendens* Graham, *Gastrancistrus acutus* Walker, *Gastrancistrus campressus* Walker, *Trichomalopsis laticeps* Graham, *Trichomalopsis acuminatus* Graham, *Trichomalus rufinus* Walker, *Calliprymna bisetosa* Graham, *Pteromalus papaveris* Forster, *Pteromalus chlorogaster* Thomson) sunt noi pentru fauna Republicii Moldova.

**Cuvinte cheie:** Hymenoptera, Pteromalidae, Rezervația naturală „Plaiul Fagului”, genuri și specii noi pentru Republica Moldova.

### INTRODUCTION

Scientific Reserve Plaiul fagului was organized in March 1992, based on hunting household Rădenii Vechi. It is located in the north-eastern part of the Central Plateau of R. Moldova and occupies an area of 5558.7 ha, including 5375.5 ha of forest. Within the reserve is highly fragmented landscape, sometimes with mountain features, the altitudes ranging between 410 and 140 m above sea level. Rădeni rivulet with cascading lakes divide the reserve in two equal massives. The vegetation includes about 680 vascular plants, of which 27 plants species are included in the Red Book of Moldova. Plant associations are represented by woods of central European type, where natural stands of beech, oak, linden, hornbeam, pedunculate oak with beech reaching the age of 150 years are preserved. The animal world is represented by 211 species, 142 bird, 49 mammal, 8 reptiles, 12 amphibian and 65 species of soil invertebrates. In prospect is expected the biodiversity conservation insurance and reserve regime; developing of measures and ecological reconstruction of stands in relation to growth conditions; restoration of native stands; implementation of measures to contribute to natural regeneration from seeds; regulation of animal number in relation to the material basis; increasing of environmental education efficiency.

### MATERIAL AND METHODS

All the individuals were collected using the entomological net, between 2003 and 2013, mostly by the author. The majority of identified species were collected from different biotopes situated in the reserve's territory.

### RESULTS AND DISCUSSION

#### Family PTEROMALIDAE Subfamily Miscogarterinae Genus *Rhinocelesia* Graham, 1956

#### *Rhinocelesia impar* Walker, 1836

**Material examined:** Reserve "Plaiul Fagului", Rădenii Vechi (District Ungheni): 1♀ collected 10.VII. 2007, meadow; (Manic leg.).

**Geographical distribution:** Great Britain, Ireland, Whole Europe [4,5] (BOUCEK & RASPLUS, 1991; DZHANOKMEN, 1987).

**Biology:** unknown, but probably parasites of Diptera [4,5] (BOUCEK & RASPLUS, 1991; DZHANOKMEN, 1987).

**The genus and the species are new for fauna of the Republic of Moldova.** [2,3,6,7] (BOUCEK 1961, 1966; MANIC, 2010; TALICKIJ & KUSLICKIJ, 1990).

**Genus *Merismus*, 1833**

***Merismus splendens* Graham, 1969**

**Material examined:** Reserve "Plaiul Fagului", Rădenii Vechi (District Ungheni): 1♀ collected 5.VII. 2006, orchard; (Manic leg.).

**Geographical distribution:** Mainly N.W. and C. Europe, [4,5] (BOUCEK & RASPLUS, 1991; DZHANOKMEN, 1987).

**Biology:** it is a parasitoid of *Agromyza albipennis* Mg. (Agromyzidae) [5] (DZHANOKMEN, 1987)

**The genus and the species are new to fauna of the Republic of Moldova.** [2,3,6,7] (BOUCEK 1961, 1966; MANIC, 2010; TALICKIJ & KUSLICKIJ, 1990).

**Genus *Gastrancistrus* Westwood, 1833**

***Gastrancistrus acutus* Walker, 1834**

**Material examined:** Reserve "Plaiul Fagului": 1♀, 14.VI.2012, glade; (Manic leg.).

**Geographical distribution:** Sweden, Great Britain [5] (DZHANOKMEN, 1987)

**Biology:** parasite of cecidomyiids in their galls on various plants. [4,5] (BOUCEK & RASPLUS, 1991; DZHANOKMEN, 1987)

**The species is new to fauna of the Republic of Moldova** [2,3,6,7] (BOUCEK 1961, 1966; MANIC, 2010; TALICKIJ & KUSLICKIJ, 1990).

***Gastrancistrus campressus* Walker, 1834**

**Material examined:** Rădenii Vechi (District Ungheni): 1♀, 11.VII.2008, orchard; (Manic leg.).

**Geographical distribution:** Sweden, Great Britain [5] (DZHANOKMEN, 1987)

**Biology:** unknown. [5]. (DZHANOKMEN, 1987)

**The species is new to fauna of the Republic of Moldova** [2,3,6,7] (BOUCEK 1961, 1966; MANIC, 2010; TALICKIJ & KUSLICKIJ, 1990).

**Subfamily Pteromalinae**

**Genus *Trihomalipsis* Crawford, 1913**

***Trihomalipsis laticeps* Graham, 1969**

**Material examined:** Reserve "Plaiul Fagului": 1♀, 12.VIII.2003, skirt of a forest; (Manic leg.).

**Geographical distribution:** Great Britain [5] (DZHANOKMEN, 1987)

**Biology:** unknown, but probably parasitic in pupae, mainly Lepidoptera [4,5] (BOUCEK & RASPLUS, 1991, DZHANOKMEN, 1987).

**The species is new to fauna of the Republic of Moldova** [2,3,6,7] (BOUCEK 1961, 1966; MANIC, 2010; TALICKIJ & KUSLICKIJ, 1990).

***Trihomalipsis acuminatus* Graham, 1969**

**Material examined:** Rădenii Vechi (District Ungheni): 1♀, 4.VII.2013, orchard; (Manic leg.).

**Geographical distribution:** Sweden, Ireland [5] (DZHANOKMEN, 1987)

**Biology:** unknown, but probably parasitic in pupae, mainly Lepidoptera [4,5] (BOUCEK & RASPLUS, 1991, DZHANOKMEN, 1987).

**The species is new to fauna of the Republic of Moldova** [2,3,6,7] (BOUCEK 1961, 1966; MANIC, 2010; TALICKIJ & KUSLICKIJ, 1990).

**Genus *Trichomalus* Thomson, 1878**

***Trichomalus rufinus* Walker, 1835**

**Material examined:** Reserve "Plaiul Fagului": 2♀♀, 14.VI.2012, glade; (Manic leg.).

**Geographical distribution:** Austria, Belgium, Bosnia Herzegovina, Canary Islands, Czech Republic, France, Germany, Greece, Hungary, Ireland, Lithuania, Montenegro, Norway, Romania, Slovakia, Spain, Sweden, Turkey, Ukraine, United Kingdom [1,5] (ANDRIESCU & MITROIU, 2004; DZHANOKMEN, 1987)

**Biology:** primary parasitoid of Apionidae (Coleoptera). [1,5] (ANDRIESCU & MITROIU, 2004; DZHANOKMEN, 1987).

**The species is new to fauna of the Republic of Moldova** [2,3,6,7] (BOUCEK 1961, 1966; MANIC, 2010; TALICKIJ & KUSLICKIJ, 1990).

**Genus *Calliprymna* Graham, 1966**

***Calliprymna bisetosa* Graham, 1966**

**Material examined:** Reserve "Plaiul Fagului", Rădenii Vechi (District Ungheni): 1♀ collected 10.VIII. 2011, skirt of a forest; (Manic leg.).

**Geographical distribution:** Great Britain [5] (DZHANOKMEN, 1987).

**Biology:** unknown. [4,5] (BOUCEK & RASPLUS, 1991; DZHANOKMEN, 1987).

**The genus and the species are new to fauna of the Republic of Moldova.** [2,3,6,7] (BOUCEK 1961, 1966; MANIC, 2010; TALICKIJ & KUSLICKIJ, 1990).

#### Genus *Pteromalus* Swederus, 1795

##### *Pteromalus papaveris* Forster, 1841

**Material examined:** Reserve "Plaiul Fagului", Rădenii Vechi (District Ungheni): 1♀ collected 16.VII. 2006, glade; (Manic leg.).

**Geographical distribution:** Mainly and C. Europe [5] (DZHANOKMEN, 1987).

**Biology:** parasite of *Aylax papaveris* Perris (Cynipidae) on the *Papaver rhoeas*. [5]. (DZHANOKMEN, 1987).

**The species is new to fauna of the Republic of Moldova.** [2,3,6,7] (BOUCEK 1961, 1966; MANIC, 2010; TALICKIJ & KUSLICKIJ, 1990).

##### *Pteromalus chlorogaster* Thomson, 1878

**Material examined:** Reserve "Plaiul Fagului", Rădenii Vechi (District Ungheni): 1♀ collected 18.VI. 2005, orchard; (Manic leg.).

**Geographical distribution:** Sweden [5] (DZHANOKMEN, 1987).

**Biology:** unknown. [5]. (DZHANOKMEN, 1987).

**The species is new to fauna of the Republic of Moldova.** [2,3,6,7] (BOUCEK 1961, 1966; MANIC, 2010; TALICKIJ & KUSLICKIJ, 1990).

### CONCLUSIONS

After identifying that 9 species (*Rhynocoelia impar* Walker, *Merismus splendens* Graham, *Gastrancistrus acutus* Walker, *Gastrancistrus campressus* Walker, *Trichomalopsis laticeps* Graham, *Trichomalopsis acuminatus* Graham, *Trichomalus rufinus* Walker, *Calliprymna bisetosa* Graham, *Pteromalus papaveris* Forster, *Pteromalus chlorogaster* Thomson) and 3 genres (*Rhynocoelia* Graham, *Merismus* Walker, *Calliprymna* Graham) new for fauna of Republic of Moldova, number of known species and genres of fauna Natural Reserve Plaiul Fagului and adjacent areas increases from 109 to 118 species and respectively from 61 to 64 genres.

Thus our research contributes to a better acquaintance of diversity and area of spreading of the Pteromalidae in fauna of Republic of Moldova.

The species: *Merismus splendens* Graham, *Gastrancistrus acutus* Walker parasite of Cecidomyiidae and Agromyzidae. *Trichomalus rufinus* Walker primary parasitoid of Apionidae (Coleoptera). *Pteromalus papaveris* forster parasite of *Aylax papaveris* Perris (Cynipidae) on the *Papaver rhoeas*. The biology of six species (*Rhynocoelia impar* Walker, *Gastrancistrus campressus* Walker, *Trichomalopsis laticeps* Graham, *Trichomalopsis acuminatus* Graham, *Calliprymna bisetosa* Graham, *Pteromalus chlorogaster* Thomson) is unknown.

### REFERENCES

- ANDRIESCU I. & MITROIU M. D. 2004. Notes on Pteromalid Fauna (Hymenoptera:Chalcidoidea, Pteromalidae) of Dobrogea, Romania (II). *Analele Științifice ale Universității „Al. I. Cuza” Iași, Seria Biologie Animală*. **50**: 89-96.
- BOUCEK Z. 1961. Notes on the Chaicid fauna (Chalcidoidea) of Moldavian SSR (in Russian with English summary). *Trudy Moldavskogo naučno-issledovatel'skogo instituta sadovodstva i vinodeliâ*. Isdatelstvo „Știința”, Kișinëv. **7**: 5-30. [In Russian with English summary].
- BOUCEK Z. 1966. *Materialy po faune hal'cid (Hymenoptera, Chalcidoidea) Moldavskoj SSR*. Trudy Moldavskogo naučno-issledovatel'skogo instituta sadovodstva i vinodeliâ. Isdatelstvo „Cartea moldovenească”. Kișinëv. **13**: 15-38.
- BOUCEK Z. & RASPLUS J. Y. 1991. Illustrated Key to West Palearctic Genera of Pteromalidae (Hymenoptera, Chalcidoidea). *Techniques et Pratiques. Institut National de la Recherche Agronomique*. Paris. 140 pp.
- DZHANOKMEN A. K. 1987. Family Pteromalida. In: Medvedev, G.S. (Ed. in Chiev) - *Keys to the Insects of the European Part of USSR (Opredelitel' Nasekomykh Evropeiskoi Chasti SSR. Pereponchatokrylye, Vtoraia Chast' 1978, Nauka, Moskva-Leningrad) Hymenoptera. (Transl. from Russian)*. Rehka Printers. New Delhi. India: **3**(2): 88-410.
- MANIC GH. 2010. *Diversitatea și ecologia pteromalidelor din Republica Moldova*. Edit. „Știința”. Chișinău. 247 pp.
- TALICKIJ V. I. & KUSLICKIJ V. S. 1990. *Paraziticeskie Perepončatokrylye Moldavii*. Edit. „Cartea Moldovenească”, Kișinëv. 303 pp.

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