

NOTES ON THE PTEROMALID FAUNA (HYMENOPTERA: CHALCIDOIDEA, PTEROMALIDAE) OF DOBROGEA, ROMANIA (II)

BY

IONEL ANDRIESCU¹ & MIRCEA-DAN MITROIU¹

Key words: Pteromalidae, Dobrogea, genera and species new to Romania, new host records.

Dobrogea (Constanța and Tulcea counties) is the territory situated in the S-E of Romania, between the Danube and the Black Sea. Twenty-one pteromalid species from the subfamilies Spalangiinae and Pteromalinae are presented in this paper. The genera *Stenoselma* Delucchi, 1956 and *Stinoplus* Thomson, 1878, and the species *Stenoselma nigrum* Delucchi, 1956, *Stinoplus militaris* Thomson, 1878, *Spalangia irregularis* Bouček, 1963, *Norbanus scabriculus* (Nees, 1834) and *Pteromalus altus* (Walker, 1834) are recorded for the first time in Romania. *Rhizococcus agropyri* Borschs. is a new host record for *Pachyneuron muscarum* (L.); another host record is new to Romania. For one species Romania is the northern limit of its geographical distribution.

Introduction

Fifteen species of pteromalids from five subfamilies and twelve genera were presented in the previous note /8/. We are now adding to this list twenty-one pteromalid species from fifteen genera, placed in the subfamilies Spalangiinae and Pteromalinae. These records are not, however, complete. The species in each subfamily are presented in alphabetical order.

Material and methods

Most of the material was collected by the authors using a regular sweeping net, during a long period (1955-2001). Five species were reared in laboratory from various hosts. The material was collected in Constanța (CT) and Tulcea (TL) counties. Most of the individuals were collected in Agigea Natural Reserve (CT), situated near the Black Sea shore.

Results

Subfamily Spalangiinae

Spalangia irregularis Bouček, 1963 – new species to Romania

Identified material: Agigea Natural Reserve (CT): 1♀, 19. VII. 1965, on *Daucus* flowers.

¹ „Al.I. Cuza” University of Iași

Geographical distribution: Cyprus, Israel /24/. Romania is so far the northern limit of its distribution.

Biology: unknown.

Subfamily Pteromalinae

***Conomorium patulum* (Waker, 1835)**

Identified material: Valul lui Traian Natural Reserve (CT): 1♀, 27. VI. 1955.

Geographical distribution: widely distributed: Armenia, Canary Islands, Croatia, Czech Republic, Germany, Egypt, Spain, France, Greece, Hungary, Italy, Japan, Kazakhstan, Korea, Macedonia, Morocco, Republic of Moldavia, Russia, Serbia, Slovakia, Sweden, Turkey, Turkmenistan, Ukraine, United Kingdom /24/.

Previous records in Romania: /26, 1/. This is the first record of the genus and the species in Dobrogea.

Biology: primary parasitoid of Arctiidae, Geometridae, Notodontidae, Noctuidae, Lymanthriidae, Selidosemidae, Lasiocampidae, Gracillariidae, Lyonetiidae and Tineidae (Lepidoptera) /15, 24/.

***Dibrachys cavus* (Walker, 1835)**

Identified material: 9♀♀ and 2♂♂ reared on 26. VIII. 1971 from pupae of *Grapholitha molesta* Busck. (Lepidoptera, Tortricidae) collected at Basarabi (CT) on 18. VIII. 1971 – **new host record to Romania.**

Geographical distribution: widely distributed: Algeria, Argentina, Australia, Austria, Belarus, Belgium, Bosnia Herzegovina, Brazil, Bulgaria, Canada, Chile, China, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Hungary, India, Italy, Japan, Kazakhstan, Kyrgyz, Korea, Mexico, Morocco, Netherlands, Pakistan, Peru, Poland, Portugal, Republic of Moldavia, Russia, Serbia, Serbia, Slovakia, Serbia, South Africa, Spain, Sweden, Switzerland, Turkey, Turkmenistan, Ukraine, Uruguay, United Kingdom, USA. /24/.

Previous records in Romania: /25, 9, 21, 5, 22, 23/. This is the first record of the genus and the species in Dobrogea.

Biology: primary parasitoid of insects from orders like Coleoptera, Diptera and Lepidoptera or, more often, secondary parasitoid through Ichneumonidae, Braconidae (Hymenoptera), Tachinidae (Diptera) or other Chalcidoidea /15, 24/. Flight period: V-XI /15/.

***Dinarmus acutus* Thomson, 1878**

Identified material: Agigea Natural Reserve (CT): 1♀ and 1♂, 15. VIII. 1956.

Geographical distribution: Algeria, Austria, Bulgaria, Canada, Croatia, Czech Republic, France, Germany, Gambia, Greece, Hungary, India, Iraq, Israel, Italy, Ivory Coast, Macedonia, Malta, Montenegro, Morocco, Republic of Moldavia, Senegal, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom, USA, former USSR /24/. Previous records in Romania: /1, 2/. This is the first record of the genus and the species in Dobrogea.

Biology: primary parasitoid of Bruchidae (Coleoptera); one record from Coccidae (Homoptera) (it needs confirmation) and one record from another species of *Dinarmus*, as hyperparasitoid /15, 24/.

***Homoporus fulviventris* (Walker, 1835)**

Identified material: Agigea Natural Reserve (CT): 1♀, 28. VI. 2000.

Geographical distribution: Belgium, Bosnia Herzegovina, Croatia, Czech Republic, Germany, Hungary, Italy, Kazakhstan, Spain, Republic of Moldavia, Russia, Serbia, Slovakia, Sweden, Turkey, United Kingdom /24/.

Previous records in Romania: /3, 4, 7/.

Biology: primary parasitoid of Cynipidae and Eurytomidae or hyperparasitoid through Eupelmidae (Hymenoptera) /24/. Flight period: V-IX /15/.

***Homoporus nypsius* (Walker, 1839)**

Identified material: Agigea Natural Reserve (CT): 1♀, 28. VI. 2000.

Geographical distribution: Canada, Croatia, Czech Republic, France, Germany, Spain, Hungary, Kazakhstan, Morocco, New Zealand, Republic of Moldavia, Russia, Serbia, Sweden, Slovakia, Ukraine, United Kingdom, USA /24/.

Previous records in Romania: /13, 3, 4, 17/.

Biology: primary parasitoid of Cecidomyiidae (Diptera), Eurytomidae, Torymidae (Hymenoptera) or Scolytidae (Coleoptera) (this last record needs confirmation) or hyperparasitoid through Eurytomidae and Torymidae /15, 24/. Flight period: VI-VIII /15/.

***Homoporus subniger* (Walker, 1835)**

Identified material: Agigea Natural Reserve (CT): 1♀, 28. VI. 2000.

Geographical distribution: Austria, Czech Republic, Germany, Hungary, Kazakhstan, Montenegro, Republic of Moldavia, Serbia, Slovakia, Spain, Sweden, Turkey, United Kingdom /24/.

Previous records in Romania: /3, 4/.

Biology: primary parasitoid of Cynipidae (Hymenoptera); one record from Apionidae (Coleoptera) and one from Lepidoptera need confirmation /15, 24/. Flight period: VI-IX /15/.

***Merisus splendidus* Walker, 1834**

Identified material: Valul lui Traian Natural Reserve (CT): 2♀♀, 5. VIII. 1955; Agigea Natural Reserve (CT): 1♀, 25. VI. 2000.

Geographical distribution: Belgium, Czech Republic, France, Germany, Hungary, Italy, Kazakhstan, Macedonia, Montenegro, Republic of Moldavia, Serbia, Slovakia, Spain, Sweden, Turkey, United Kingdom /24/.

Previous records in Romania: /13/. This is the first record of the genus and the species in Dobrogea.

Biology: primary parasitoid of Eurytomidae (Hymenoptera); one record from Lepidoptera (it needs confirmation) /15, 24/. Flight period: VI-VII /15/ but also later, as our record indicates.

***Norbanus obscurus* (Masi, 1922)**

Identified material: Periprava (TL): 1♂, 9. VI. 1995; Agigea Natural Reserve (CT): 1♀, 9. VII. 2000, leg. I. Popescu.

Geographical distribution: Azerbaijan, Croatia, former Czechoslovakia, Germany, Hungary, Italy, Kazakhstan, Macedonia, Serbia, Spain, Turkey, Ukraine /24/.

Previous records in Romania: /7/.

Biology: unknown, reared from stems of *Halogeton* sp. /12/.

***Norbanus scabriculus* (Nees, 1834) – new species to Romania**

Identified material: Agigea natural reserve (CT): 1♀, 9. VII. 2000, leg. I. Popescu.

Geographical distribution: Azerbaijan, Canada, Croatia, Czech Republic, Germany, Hungary, Italy, Kazakhstan, Montenegro, Republic of Moldavia, Russia, Slovakia, Spain, Sweden, Ukraine /24/.

Biology: primary parasitoid of Cephidae (Hymenoptera), Curculionidae, Cerambycidae (Coleoptera) and Tenthredinidae (Hymenoptera) /12, 24/.

***Pachyneuron muscarum* (Linnaeus, 1758)**

Identified material: 1♀ and 1♂ reared on 4-5. V. 1962 from *Sphaerolecanium prunastri* Fonsc. (Homoptera, Coccidae) on *Prunus spinosa* collected in Agigea Natural Reserve (CT) on 27. IV. 1962; 2♀♀ and 2♂♂ reared from the same host in July 1965; 1♂ from *Rhizococcus agropyri* Borschs. (Homoptera) on *Agropyron intermedium* collected on 4. VII. 1963 in Agigea Natural Reserve (CT) – **new host record**.

Geographical distribution: Armenia, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, France, Germany, Georgia, Greece, Hungary, India, Iran, Israel, Italy, Kazakhstan, Netherlands, Poland, Republic of Moldavia, Russia, Saudi Arabia, Serbia, Slovakia, Spain, St. Vincent & Grenadines, Sweden, Switzerland, Taiwan, Turkey, Ukraine, United Kingdom /24/.

Previous records in Romania: /13, 18, 20, 20/. This is the first record of the species in Dobrogea.

Biology: primary parasitoid but usually hyperparasitoid of many species of Coccidae (Homoptera) through other parasitoids /15, 24/.

***Psilocera crassispina* (Thomson, 1878)**

Identified material: Agigea Natural Reserve (CT): 1♀, 25. VI. 2001 and 1♂, 21. VI. 2000, leg. L. Fusu.

Geographical distribution: Croatia, Czech Republic, France, Hungary, Italy, Kazakhstan, Serbia, Slovakia, Slovenia, Spain, Sweden, Ukraine, United Kingdom /24/.

Previous records in Romania: /3, 4, 7/.

Biology: unknown, associated with *Carduus pycnocephalus* (Asteraceae) and *Hordeum leparinum* (Poaceae) /24/. Flight period: VI-VIII /15/.

***Pteromalus altus* (Walker, 1834) – new species to Romania**

Identified material: Agigea Natural Reserve (CT): 1♀, 21. VI. 2000, leg. L. Fusu.

Geographical distribution: Croatia, Czech Republic, France, Montenegro, Republic of Moldavia, Spain, United Kingdom /24/.

Biology: unknown, associated with *Euphorbia amygdaloides* (Euphorbiaceae) /24/. Flight period: V-VI /15/.

***Pteromalus bifoveolatus* Förster, 1861**

Identified material: ♀♀ and ♂♂ reared from *Saturnia pyri* Schiff. pupae (Lepidoptera, Saturniidae) collected at Techirghiol (CT) on 25. II. 1962 and Agigea (CT) on 26. III. 1962.

Geographical distribution: Croatia, Czech Republic, Italy, Mauritania, Morocco, Republic of Moldavia, Serbia, Slovakia, Spain, Switzerland, Turkey, United Kingdom /24/.

Previous records in Romania: /2, 27/. This is the first record of the species in Dobrogea.

Biology: primary parasitoid of Lasiocampidae, Saturniidae, Lymanthriidae and Notodontidae (Lepidoptera) /15, 24/. Flight period: IV-VII /15/.

***Pteromalus varians* (Spinola, 1808)**

Identified material: Periprava (TL): 1♀, 14. IX. 1966.

Geographical distribution: Bulgaria, Czech Republic, France, Germany, Hungary, Italy, Kazakhstan, Latvia, Lithuania, Netherlands, Poland, Republic of Moldavia, Russia, Serbia, Spain, Sweden, United Kingdom /24/.

Previous records in Romania: /9, 1, 3, 4/.

Biology: primary parasitoid of Curculionidae and Cerambycidae (Coleoptera) /15, 24/. Flight period: IV-VIII /15/, but also later, as our record indicates.

***Raphitelus maculatus* Walker, 1834**

Identified material: 1♀ and 4♂♂ reared 1-19. X. 1964 from stems of *Cotinus coggygria* collected on 19. IX. 1962 at Valea Iortmacului (CT); 13♀♀ and 99♂♂ reared IX. 1964 from branches of *Prunus armeniaca*.

Geographical distribution: Argentina, Belgium, Bulgaria, Canada, Chile, China, Croatia, Czech Republic, Egypt, France, Germany, Hungary, India, Israel, Italy, Japan, Kazakhstan, New Zealand, Poland, Republic of Moldavia, Russia, Serbia, Slovakia, Spain, Sweden, Tunisia, Turkey, Turkmenistan, Ukraine, United Kingdom, USA /24/.

Previous records in Romania: /14, 3, 4/.

Biology: primary parasitoid of Scolytidae and Curculionidae (Coleoptera) or hyperparasitoid through Braconidae (Hymenoptera) /15, 24/. Flight period: IV-X, several generations /15/.

***Stenoselma nigrum* Delucchi, 1956 – new genus and new species to Romania**

Identified material: Agigea Natural Reserve (CT): 1♀, 13. V. 1962.

Geographical distribution: Azerbaijan, Bosnia Hertegovina, Canary Islands, Croatia, Czech Republic, Germany, Italy, Kazakhstan, Macedonia, Slovakia, Spain /24/.

Biology: primary parasitoid of Buprestidae (Coleoptera), Cynipidae (Hymenoptera) and Sesiidae (Lepidoptera) /24/. Flight period: VII-IX /15/.

***Stichocrepis armata* Forster, 1860**

Identified material: Agigea Natural Reserve (CT): 4♂♂, 23. VI. 2000; 1♂, 25. VI. 2001; 1♂, 28. VI. 2001;

Geographical distribution: Austria, Croatia, Czech Republic, Hungary, Kazakhstan, Republic of Moldavia, Russia, Serbia, Slovakia, Switzerland /24/.

Previous records in Romania: /17/. This is the first record of genus and the species in Dobrogea.

Biology: primary parasitoid in pupae of Geometridae and Sesiidae (Lepidoptera) /24/.

Note: this species occurs mainly in xerothermic habitats and the females are very rare.

***Stinoplus militaris* Thomson, 1878 – new genus and new species to Romania**

Identified material: Agigea Natural Reserve (CT): 1♀, 23. VII. 1964.

Geographical distribution: Croatia, Czech Republic, Finland, Hungary, Montenegro, Republic of Moldavia, Serbia, Sweden, Ukraine /24/.

Biology: primary parasitoid of Scolytidae and Curculionidae (Coleoptera) /24/.

***Trichomalus rufinus* (Walker, 1835)**

Identified material: Agigea Natural Reserve (CT): 1♀, 12. VI. 1964.

Geographical distribution: Austria, Belgium, Bosnia Herzegovina, Canary Islands, Czech Republic, France, Germany, Greece, Hungary, Ireland, Lithuania, Montenegro, Norway, Slovakia, Spain, Sweden, Turkey, Ukraine, United Kingdom /24/.

Previous records in Romania: /13, 25/. This is the first record of the species in Dobrogea.

Biology: primary parasitoid of Apionidae (Coleoptera) /15, 24/. Flight period: V and IX-X /15/.

***Tricolas xylocleptis* Bouček, 1967**

Identified material: 6♀♀ reared on 7. VIII. 1964 from plants of *Clematis vitalba* attacked by *Xylocleptes bispinus* (Duft.) (Coleoptera, Anobiidae), collected on 14. VII. 1964 at Periprava (TL).

Geographical distribution: former Czechoslovakia, Germany /24/. Romania is so far the eastern limit of its distribution.

Previous records in Romania: /3, 4/.

Biology: primary parasitoid of *Xylocleptes bispinus* (Duft.) (Coleoptera, Anobiidae) in stems of *Clematis vitalba* (Ranunculaceae) /10/.

Acknowledgements: We thank Assist. Irinel Popescu and Assist. Lucian Fusu, “Al. I. Cuza” University, for collecting and offering a part of the material.

Bibliography

1. Andriescu, I., 1971 – Lucr. Staț. Cercet. Biol. Geol. Geogr. “Stejarul”, Pângărați, 4: 425-444.
2. Andriescu, I., 1972-1973 – Lucr. Staț. “Stejarul”, Ecologie terestră și genetică, Pângărați :155-190.
3. Andriescu, I., 1993 – Anal. Șt. Inst. Delta Dunării, Tulcea (România): 49-58.
4. Andriescu, I., 1996 – Verh. 14 Internat. Symp. Ent. Mitt., SIEEC, München: 290-294.
5. Andriescu, I., Săucinițeanu, Veronica & Oancea, I., 1974-1975 – Lucr. Staț. “Stejarul”, Ecol. terestră și genetică, Pângărați: 47-65.
6. Andriescu, I. & Mitroiu, M.-D., 2001 – Anal. Șt. Univ. “Al I. Cuza”, Iași (ser. nouă), XLVII: 21-28.
7. Andriescu, I. & Mitroiu, M.-D., 2003a – Volum omagial Vasile Radu, Univ. “Babeș-Bolyai” Cluj-Napoca: 19-24.
8. Andriescu, I. & Mitroiu, M.-D., 2003b – Anal. Șt. Univ. “Al I. Cuza”, Iași (ser. nouă), XLIX: 71-77.
9. Boțoc, Margareta, 1967 – Stud. Univ. “Babeș-Bolyai” Cluj-Napoca, Ser. Biol., 2: 81-86.
10. Bouček, Z. 1967 – Acta Ent. Mus. Nat. Pragae, 37: 635-647.
11. Bouček, Z. & Rasplus, J. Y., 1991 – “Illustrated Key to West-Palearctic Genera of Pteromalidae (Hymenoptera, Chalcidoidea)”, Techniques et Pratiques, INRA, Paris, pp. 140.
12. Dzhankmen, A. K., 1999 – Russ. Journ. Zool., 78, (8): 952-959.
13. Erdős, J., 1948 – Fragm. Faun. Hung., XI (2): 36-51.
14. Fiñescu, G. N., 1930 – Bul. Min. Agr. și Dom., VI (11-12): 1-6.
15. Graham, M. W. R. de V., 1969 – Bull. Brit. Mus. (Nat. Hist.) Ent., Suppl. 16: 1-908.
16. Mitroiu, M.-D., 2001 – Bull. Soc. Roy. Belg. Ent., 137: 91-97.

17. Mitroiu, M.-D. & Andriescu, I., 2003 – Anal. Șt. Univ. “Al. I. Cuza”, Iași, (ser. nouă), XLIX: 63-70.
18. Moglan, I., Moglan, Veronica, 1998 – Anal. Șt. Univ. “Al. I. Cuza”, Iași. (ser. nouă), 41-43: 45-50.
19. Moglan, I., 2000 – Mitt. Dtsch. Ges. Allg. Angew. Ent 12 (1-6): 133-139.
20. Moglan, I., 2002 – in “Parasitic Wasps: Evolution, Systematics, Biodiversity and Biological Control”, International Symposium, Keszeg, Hungary. (eds.: Melika, G., Thuroczy, Cs.), pp. 480.
21. Mustață, Gh. & Tudor, Constanța, 1973 – Stud. Com., Muz. Jud. Suceava, Șt. Nat., III.
22. Mustață, Gh. & Costea, Gabriela 2000 – Mitt. Dtsch. Ges. Allg. Angew. Ent 12 (1-6): 331-335.
23. Mustață, Gh., Mustață, Mariana & Costea, Gabriela, 2002 – in “Parasitic Wasps: Evolution, Systematics, Biodiversity and Biological Control”, International Symposium, Keszeg, Hungary. (eds.: Melika, G., Thuroczy, Cs.), pp. 480.
24. Noyes, J. S., 2003 – Universal Chalcidoidea Database. World Wide Web electronic publication, <http://www.nhm.ac.uk/entomology/chalcidoids/index.html> [accessed 25-NOV-2003].
25. Perju, T. 1965 – Lucr. Șt. Ser. Agric., Inst. Agr. “Dr. Petru Groza” Cluj Napoca, XXI, 285-304.
26. Suciu, I., 1960 – Anal. Șt. Univ “Al. I. Cuza” (ser. nouă), secț. II (Șt. Nat.), VI, 3: 805-813.
27. Suciu, I., 1979 – Stud. Cercet. Șt. Nat., Muz. Jud. Brașov, XII, 3.