

New and rare exochinae (Hymenoptera: Ichneumonidae, Exochinae) for the Romanian fauna

Irinel CONSTANTINEANU, Raoul CONSTANTINEANU & Camil Ștefan LUNGU-CONSTANTINEANU

Summary

In this paper the authors present 27 species of Ichneumonidae belonging to four genera of subfamily Exochinae, collected from different counties in Romania. The species *Exochus citripes* Thoms. and *Exochus separandus* Schm. are new for the Romanian fauna. The male of *Exochus citripes* Thoms. is new for science. The other 25 species are rare in Romanian fauna.

Rezumat

Exochinae (Hymenoptera: Ichneumonidae, Exochinae) noi sau rare pentru fauna României

În această lucrare autorii prezintă 27 specii de ichneumonide care aparțin la patru genuri din subfamilia Exochinae, colectate din diferite județe din România. Speciile *Exochus citripes* Thoms. și *Exochus separandus* Schm. sunt noi pentru fauna României. Masculul speciei *Exochus citripes* Thoms. este nou pentru știință. Celelalte 25 specii sunt rare pentru fauna României.

Keywords: Exochinae, new & rare species, Romanian fauna.

Introduction

In this paper the authors present 27 species of Ichneumonidae belonging to four genera of subfamily Exochinae, collected from different counties in Romania. The species *Exochus citripes* Thoms. and *Exochus separandus* Schm. are new for the Romanian fauna and other 25 species are rare in this fauna. The male of *Exochus citripes* Thoms. is new for science.

Order **HYMENOPTERA** Linnaeus, 1758
Family **ICHNEUMONIDAE** Latreille, 1802
Subfamily **Exochinae** Dalla Torre, 1901

I. Genus *Chorinaeus* Holmgren, 1856

1. *Chorinaeus longicornis* Thomson, 1887, ♀♂

Material: 2 ♀♀, 9. VIII. 1951, Babadag, Tulcea county and 3 ♂♂, 21. VII. 1964, Baia Mare (Usturoi Valley), Maramureș county.

♀♀: Length = 5,5 - 6,5 mm.; ♂♂: Length = 6,0 - 6,5 mm.

Hosts: *Choristoneura murinana* Hb. (Lep., Tortricidae), *Diurnea fagella* Den. & Schiff. (Lep., Oecophoridae).

Distribution: Sweden, England, Spain, France, Switzerland, Lithuania, Ukraine, Republic of Moldova, Russia (European and Siberian parts). In Roma-

nia is a rare species, being previously recorded from Baia Mare, Maramureș county [A. MOCSÁRY, 1918], Hodod and Spermezeu, Bistrița-Năsăud county [A. Kiss, 1925-1926], Ieșelnița and Ogradena (Mraconia Valley), Mehedinți county.

2. *Chorinaeus longicalcar* Thomson, 1887, ♀♂

Material: 1 ♀, 11. V. 1952, Bârnova forest, 1 ♂, 17. VI. 1966, "Valea lui David" natural reservation, Iași county and 1 ♂, 19. VII. 1956, Preluci mountain, Neamț county.

Length: ♀♀ = 6 - 7,5 mm.; ♂♂ = 6,5 - 7 mm.

Hosts: *Depressaria pastinacella* Dup. (Lep., Oecophoridae), *Caripeta divisata* Walk., *Paraphia piniata* Pack., *Protoboarmia porcellaria* Guén., *Semiothisa granita* Guén. (Lep., Geometridae) and *Choristoneura fumiferana* (Lep., Tortricidae).

Distribution: Sweden, France, England, Finland, Spain, Hungary, Switzerland, Ukraine, Russia (Iaroslav, Moscova, Irkutsk, Amursk, Habarovsk, Sakhalin island), Uzbekistan, Japan, Korea, North America. In Romania is a rare species, being previously recorded from "Ponoare" natural reservation, Suceava county [M. CONSTANTINEANU, M. VOICU, 1976- 1977] and "Valea lui David" natural reservation, Iași county [R. CONSTANTINEANU, 1982].

3. *Chorinaeus funebris* (Gravenhorst, 1829), ♀♂

Material: 2 ♀♀ și 1 ♂, 21. VII. 1964, Baia Mare (Usturoi Valley), Maramureș county.

Length: ♀♀ = 5 - 6 mm.; ♂♂ = 4,5 - 6 mm.

Hosts: *Archips betulana* Hb., *Ptycholomoides aeriferanus* H. -S., *Zeirapherta griseana* Hb., *Z. diniana* Guén., *Euxanthia angustana* Zell. (Lep., Tortricidae), *Yponomeuta malinella* Zell. (Lep., Yponomeutidae), *Eupithecia nanata* Hb. (Lep., Geometridae), *Teleia saltuum* Zell., *Recurvaria leucatella* Cl., *Telephila schmidiella* Hey. (Lep., Gelechiidae), *Depressaria heracleana* L. (Lep., Oecophoridae).

Distribution: North and centre of Europe, Ukraine, Bulgaria, Russia (Caucasus mountains, Perm, Murmansk, Sakhalin and Kurile islands), Republic of Moldova, Kazakhstan, Japan, North America. In Romania is a rare species, being previously recorded from only from Iacobeni, Suceava county [R. CONSTANTINEANU, 1978].

II. Genus *Triclistus* Foerster 1868

4. *Triclistus globulipes* (Desvignes, 1856), ♂

Synonyms: 1856 *Cteniscus (Exochus) globulipes* Desvignes, Cat. Ichn. British. Mus.: 120 p; 1911 *Triclistus globulipes* Morley, Ichn. Brit. Mus., 344 p.

Material: 1 ♂, 19 VII. 1964, Baia Mare (Viclean Valley), Maramureș county and 1 ♂, 4. VI. 1965, "Valea lui David" natural reservation, Iași county.

Length: ♀♀ = 5,5 - 6 mm.; ♂♂ = 5,5 - 6,3 mm.

Hosts: *Archips betulana* Hb., *A. podana* Scop., *A. rosana* L., *A. xylosteanana* L., *Argyrotaenia pulchellana* Hw., *Choristoneura murinana* Hb., *Epinotia carpana* F., *Pandemis cerasana* Hb., *P. heparana* Den. et Schiff., *Ptycholomoides aeriferanus* H. -S., *Spilionota ocellana* F., *Tortrix viridana* L., *Epiphyas postvittana* Walk. (Lep., Tortricidae), *Gelechia bilineata* Zell. (Lep., Gelechiidae).

Distribution: Sweden, England, Denmark, Germany, Lithuania, Byelorussia, Republic of Moldova, Russia (St. Petersburg, Tambov, Penza, Saratovsk, Kuibâshev, Krasnodar, Kurile islands), Maroc, Japan. In Romania is a rare species, being previously recorded from Mehadia, Caraș-Severin county [A. MOCSÁRY, 1918], Mraconia Valley, Ogradena village, Mehedinți county [M. CONSTANTINEANU et al., 1975], "Ponoare" natural reservation, Suceava county [M. CONSTANTINEANU, M. VOICU, 1976 - 1977], Jegălia, Ialomița county [M. CONSTANTINEANU et al., 1978].

5. *Triclistus niger* (Bridgman, 1883), ♂

Synonyms: 1883 *Exochus niger* Bridgman, Trans. Ent. Soc. London: 139-171; 1887 *Triclistus niger* Deutsch. Ent. Zeit., 31 (1): 193-218.

Material: 1 ♂, 18. VI. 1955, Timișul de Jos (Kilera Valley), Brașov county.

Length: ♀♀ = 4,2 - 5,3 mm.; ♂♂ = 4,2 - 5,3 mm.

Hosts: *Epinotia nanana* Tr. (Lep., Tortricidae).

Distribution: Sweden, England, Switzerland, France, ex-Czechoslovakia, Ukraine, Russia (St. Petersburg, Caucasus mountain). In Romania is a rare species, being previously recorded from Câmpulung Moldovenesc, Suceava county [M. CONSTANTINEANU, G. ISTRATE, 1973], Rarău mountains (Izvorul Alb Valley), Suceava county [R. CONSTANTINEANU, 1983] and "Ponoare" natural reservation, Suceava county [M. CONSTANTINEANU, M. VOICU, 1976 - 1977].

6. *Triclistus laevigatus* (Ratzeburg, 1848), ♀

Synonyms: 1848 *Exochus laevigatus* Ratzeburg, Ichneum. Forstins., 2: 120; 1887 *Triclistus laevigatus* Thomson, Deutsch. Ent. Zeit., 31: 206.

Material: 1 ♀, 21. VII. 1958, Pângărați, Neamț county.

Length: = 3,5 - 4 mm.

Hosts: *Tinea populella* L. (Lep., Tineidae).

Distribution: Germany. In Romania is a rare species, being previously recorded from only from "Hârboanca" natural reservation, Vaslui county [M. CONSTANTINEANU, L. ȚĂȚAN, 1971].

III. Genus *Hypsicera* Latreille, 1829

7. *Hypsicera femoralis* Geoffroy, 1785, ♀♂

Synonyms: 1785 *Ichneumon femoralis* Geoffroy, în Fourcroy, Ent. Parisiensis, 2: 396; 1829 *Exochus femoralis* Gravenhorst, Ichneumonologia Europaea, 1829 b: 346; 1864 *Exochus laevis* Cresson, Proc. Ent. Soc. Philadelphia, 3: 286; 1887 *Polyclistus femoralis* Thomson, Dtsch. entomol. Z., 31 (1): 218; 1873 *Metacoelus femoralis* Holmgren, Oefv. Svensk Vet. Akad. Förh., 30 (4): 61; 1959 *Hypsicera femoralis* Townes H. et M., U. S. Nat. Mus. Bull., 216: 161

Material: 1 ♀, 4. VII. 1956, Roșu Lake (Suhardul Mic), Harghita county; 1 ♂, 20. VI. 1963, Agigea, Constanța county.

Length: ♀♀ = 5,0 - 6,5 mm.; ♂♂ = 0,5 - 6,1 mm.

Hosts: *Choristoneura murinana* Hb. (Lep.,

Tortricidae).

Distribution: Ubiquitous species. Western Europe, Lithuania, Byelorussia, Ukraine, Russia (European and Siberian parts), Georgia, Kazakhstan, Japan, China, Taiwan, Hawaii, Australia, Africa, North America, South America. In Romania is a rare species, being previously recorded from only from Beclean, Bistrița-Năsăud county and Ineu, Arad county [A. Kiss, 1925-1926 and 1929 - 1930], Beclean, Bistrița-Năsăud county and Ineu, Arad county.

8. *Hypsicera curvator* Fabricius, 1793, ♀

Synonyms: 1793 *Ichneumon curvator* Fabricius, Ent. Syst., 2: 177; 1807 *Ichneumon mansuetor* Gravenhorst, Ver. Ulb. Zool. Syst.: 254; 1829 *Exochus mansuetor* Gravenhorst, Ichn. Eur., Vratislavie: 339; 1873 *Metacoelus mansuetor* Holmgren, Oefv. Svensk Vet. Akad. Förh., 30 (4): 61; 1959 *Hypsicera curvator* Townes H. & M., Ichn.-Flies Amer. North Mexico, Subfam. Metopiinae, U. S. Nat. Mus. Bull., 216: 163.

Material: 1 ♀, 21.VII.1958, Pângărați, Neamț county; 1 ♀, 29.V.1959, Cîrci-Iași, Iași county, 1 ♀, 19.VII.1964, Baia Mare (Valea Viclean), Maramureș county.

Length: = 3,5 - 4,0 mm.

Hosts: *Yponomeuta malinella* Zell., *Y. padella* L. (Lep., Yponomeutidae), *Tinea pelliionella* L. (Lep., Tineidae), *Pyralis farinalis* L. (Lep., Pyralidae), *Eutromula pariana* Cl. (Lep., Choreutidae), *Archips cerasivorana* Fitch., *Argyrotaenia velutinana* Walk., *Rhyacionia buoliana* Schiff., *Grapholitha molesta* Busck, *Epinotia nanana* T.R. (Lep., Tortricidae), *Nothris verbascella* Hb. (Lep., Gelechiidae).

Distribution: ubiquitous species. Western Europe, Ukraine, Russia (European and Siberian parts), Mongolia, North America, South America. In Romania is a very rare species, being previously recorded only from Comana, Giurgiu county, [J. ŠEDIVÝ, 1965] and Valea Putnei, Suceava county [M. CONSTANTINEANU & G. ISTRATE, 1973].

9. *Hypsicera anglica* Schmiedeknecht, 1925, ♂

Synonyms: 1925 *Metacoelus anglicus* Schmiedeknecht, Opusc. Ichn., 5 (40/41): 3166; 1963 *Hypsicera anglica* Aubert, Vie et milieu, 14: 857

Material: 1 ♂, 8.VI.1991, Caraorman forest, Tulcea county.

Length = 3,5 - 4,5 mm.

Hosts: *Borkhausenia formosella* Den. &

Schiff. (Lep., Oecophoridae).

Distribution: England, France, Ukraine. In Romania is a very rare species, being previously recorded only from Periprava, Tulcea county, [M. CONSTANTINEANU & R. CONSTANTINEANU, 1968].

IV. Genus *EXOCHUS* Gravenhorst 1829

10. *Exochus incidens* Thomson 1887, ♂

Material: 1 ♂, 18.VI.1964, "Valea lui David" natural reservation, Iași county.

Length = 7 mm.

Hosts: unknown.

Distribution: Sweden. Townes H. & Marjorie (1959) recorded this species from Holarctic region (Nearctic subregion). In România is a rare species, being recorded previously from Rus, Sălaj county and Deva, Hunedoara county [KISS (1925-1926 and 1929-1930)], "Codrul Secular Slătioara" natural reservation, Suceava county [R. CONSTANTINEANU, 1983].

11. *Exochus britannicus* Morley 1911, ♂

Material: 2 ♂♂, 3.VIII.1958, 15.IX.1959, Dumesti, Iași county.

Length = 5,0 - 7,0 mm.

Hosts: unknown.

Distribution: England, Switzerland, Hungary, Ukraine, Republic of Moldova, Russia (Irkutsk and Amursk regions). In România is a very rare species, being recorded previously only from "Danube Delta" Biosphere Reservation (Caraorman sand bank) [M. CONSTANTINEANU, 1973].

12. *Exochus gravis* Gravenhorst 1829, ♀♂

Material: 1 ♀ and 2 ♂♂, 9, 11 și 17.VI.1955, Timișul de Jos, Brașov county; 1 ♀, 27.VII.1961, Ciocanu, Dâmbovicioara commune, Argeș county.

Length = 6,6-8,0 mm.

Hosts: unknown.

Distribution: England, Denmark, Spain, France, Germany, Hungary, Russia (Voronej, Krasnodarsk, Rostov on Don, Stavropol), Ukraine. In Romania is a rare species, being recorded previously from Oena Dej, Cluj county; Bocșa Montană, Caraș - Severin county; Ineu, Arad county [A. Kiss, 1925-1926, 1929-1930] and Mraconia Valley, Ogradena village, Ieșelnița commune, Mehedinți county [M. CONSTANTINEANU & R. CONSTANTINEANU, 1975].

13. *Exochus prosopius* Gravenhorst 1829, ♀

Synonyms: 1829 *Exochus prosopius* Gravenhorst, Ichn. Eur., 2: 349; 1856 Holmgren, Svensk. Vet. Akad. Handl., 1 (2): 310; Ent. Tidskr., 310; 1887 Thomson, Opusc. Ent., 209; 1901 Dalla Torre, Cat. Hym., 3: 214; 1925 Schmiedeknecht, Opusc. Ichn., 39-41: 3203; 1936 Meyer, Tabl. Syst. Hym. Parasit. (Hym., Ichn.) URSS, 6: 142; 1969 Bajáry, Mócsár, Fauna Hung., Furk. 4, Ichn. 4, 96: 49; 1981 Tolkanitz, Opr. Faun. SSSR., 129: 472; 1871 *Exochus maculatus* Brischke, Schrift. Physik. Ökon. Gesell., Königsberg, 11: 100; 1871 *Exochus procerus* Holmgren, Öfversigt Kongl. Vetensk.-Akad. Förhandl., 29 (6): 68; 1926 *Exochus dioszeghyi* Kiss, Verh. Mitt. Sieb. Ver. Naturwiss. Hermannstadt, 45-46: 117.

Material: 2 ♀♀, 12. VII. 1965, National Park in Retezat Mountains (Scientific Zone), Hunedoara county.

Length = 6,0-8,0 mm.

Hosts: *Homoeosoma nimbella* Zell. (Lep., Phycitidae) and *Pyrausta olivalis* Schiff. (Lep., Pyraustidae).

Distribution: Centre and North of Europe, Ukraine, Byelorussia, Russia (St. Petersburg), Japan. In România is a rare species, being recorded previously from Rus, Sălaj county, Codru Mare, Bihor county, Bucegi mountains, Maramureş [A. Kiss, 1925-1926, 1931-1932], and Jegălia, Ialomiţa county [J. ŠEDIVÝ, 1965].

14. *Exochus elegantissimus* Schmiedeknecht 1924, ♂

Material: 1 ♂, 13. VIII. 1949, Hanu Conachi, Galaţi county.

Length = 7,5 mm.

Female is unknown.

Hosts: unknown.

Distribution: Germany, Bulgaria, Ukraine, Republic of Moldova. In România is a very rare species, being recorded previously from only from natural reservations "Hârboanca" şi "Bălteni", Vaslui county [M. CONSTANTINEANU and L. ȚĂȚAN, 1976-1977].

15. *Exochus flavomarginatus* Holmgren 1856, ♂

Material: 1 ♂, 4. VII. 1981, Murighiol, Tulcea county.

Length = 5,5-6,0 mm.

Hosts: *Witlesia truncicolela* Stt. (Lep., Pyraustidae).

Distribution: Sweden, Finland, England,

Lithuania, Germany, France, Hungary, Ukraine, Russia (St. Petersburg), Mongolia, Japan. In România is a rare species, being recorded previously from only from Cehul Silvaniei, Sălaj county [A. Kiss, 1925-1926], Mraconia Valley, Ogradena village, Ieşelniţa commune, Țișovița, Mehedinți county, "Danube Delta" Biosphere Reservation (Murighiol) [M. CONSTANTINEANU et al, 1968, 1975], and from "Hârboanca" natural reservation, Vaslui county [M. CONSTANTINEANU & L. ȚĂȚAN 1976-1977].

16. *Exochus pictus* Holmgren 1856, ♂

Material: 1 ♂, 23. VII. 1953, Tismana (Dumb-rava forest), Gorj county.

Length = 6,5 - 8 mm.

Hosts: *Laspeyresia strobilella* L. (Lep., Tortricidae).

Distribution: Sweden, Finland, Spain, England and North America. In România is a very rare species, being recorded previously from only from Pojorâta, Suceava county [R. CONSTANTINEANU & G. ISTRATE, 1971].

17. *Exochus thomsoni* Schmiedeknecht 1925, ♀♂

Synonyms: 1895 *Exochus crassicornis* Thomson, Opusc. Ent., 19: 2134; 1925 *Exochus thomsoni* Schmiedeknecht, Opusc. Ichneum., 5 (25): 3213.

Material: 1 ♀, 16. VIII. 1949, Ivești, Galaţi county; 1 ♂, 13. VIII. 1949, Hanu

Conachi, Galaţi county; 1 ♂, 11. VII. 1958, Bicaz, Neamţ county; 1 ♂, 4. VI. 1965, "Valea lui David" natural reservation, Iași county; 1 ♂, 21. VIII. 1958, Agigea, Constanța county.

♀. Length = 8 mm.

♂ = **new**. Head slightly narrower than thorax. Antennae thick, filiform, little thinned at apex, little shorter than body. Notauli deep and long enough. Costula obvious. Extreme end of radial vein is almost straight. Nervulus is opposite. Nervellus slightly antefurcal, intercepted slightly above the middle, almost at the middle. Abdomen is punctured and covered with hairs.

Black. Yellow are: face, two points on vertex, inferior edge of front, ventral part of scape and of pedicle, a line before and one below base of wings, tegulae, root of wings, almost entire stigma, mesosternum and ventral part of abdomen. Scutellum and postscutellum brown, each with a whitish-yellow spot in anterior part. Legs are red, with black coxae and trochanters. Apex of trochanters, fore and middle coxae are whitish. Hind tibiae with a whitish

ring. Hind tarsi black-brown, with $\frac{3}{4}$ of base of segments 1-2 reddish.

Length = 6 - 7,5 mm.

Hosts: unknown.

Distribution: Sweden. In Romania is a very rare species, being recorded previously from only from Ada Kaleh island, Mehedinți county [M. CONSTANTINEANU & all., 1975].

18. *Exochus decoratus* Holmgren 1873, ♀♂

Material: 1 ♀ and 3 ♂♂, 10 and 21.VII.1964, Baia Mare (Valea Usturoi); 3 ♂♂, 19.VI.1964, Baia Mare (Viclean valley), Maramureș county and 1 ♂, 11.VI.1968, Slătioara, Suceava county.

Length: ♀♀ = 5,2-6,5 mm.; ♂♂ = 5,0-7,5 mm.

Hosts: unknown.

Distribution: Sweden, Finland, England, Spain, Ungaria, Ukraine, Byelorussia, Russia (European and Siberian), Azerbaidjan, China (Manciuria), Japan and North America. In România is a very rare species, being recorded previously from Rus, Sălaj county and Deva, Hunedoara county [A. KISS, 1925-1926, 1929-1930] and from "Bălteni" and "Hârboanca" natural reservation, județul Vaslui [M. CONSTANTINEANU and L. ȚĂȚAN, 1976-1977].

19. *Exochus citripes* Thomson 1887, ♂

Material: 1 ♂, 19.VII.1964, Baia Mare (Viclean valley), Maramureș county.

♂ = **new**. Head is transversal, slightly narrowed beyond eyes, shiny and wide as thorax. Temples convex, slightly swollen, laterally are longer as transversal diameter of eye. Occipital carina fail in superior part. Antennae filiform, a little shorter as head and thorax together. Flagellum with 30 segments. Face and clypeus are united, uniform convex, densely punctured. Face transverse. The hind half of clypeus is strongly convex, its hind side with a slight median cut. Mandibles at base with a transversal furrow; mandibles teeth are equal. Genae are equal with $\frac{1}{2}$ of width of mandible base.

Notauli deep and long enough. Costula obvious. The apical extremity of the radial vein is almost straight. Nervellus is slightly antefurcal, slightly broken above the middle, almost at the middle. The abdomen is punctured, covered with hairs.

Thorax is shiny and covered with short gray hairs. Mesonotum fine punctured with short, obvious notauli. Epicnemii obvious. Propodeum shiny, with carinae; areae superomedia and basal are united; costula obvious. Area superomedia almost

quadratic. Lateral II areae are smooth, glabrous. Arcolet absent. Nervellus slightly postfurcal, nervellus is intercepted below the middle. Discoideus is unchitinous. Legs are stout, hind femorae thicken. The spurs of hind tibiae are longer than $\frac{1}{2}$ of first tarsal segment.

Abdomen is finely punctured, shiny, covered with short, gray hairs. Tergite 1 with short longitudinal carinae. Tergite 2 transversal, punctured.

Black. Antennae brickly-red, black at base. Face, clypeus, one spot on each lateral part of vertex are yellow. Lateral sides and ventral side of thorax with yellow drawings. Legs are yellow, with hind coxae and femorae red-yellow. Apex of hind tibiae black. Ventral side of abdomen brown-yellow, with dark apex. Length = 5,5 mm.

Hosts: unknown.

Distribution: France, Switzerland. **New species for the Romanian fauna.**

20. *Exochus tibialis* Holmgren 1856, ♂

Material: 1 ♂, 27.VI.1952. Rarău mountains (Izvorul Alb Valley); 2 ♂♂, 6.VI.1968 and 15.VII.1969, natural rezervation "Codrul Secular Slătioara", Suceava county.

Length = 5 - 5,5 mm.

Hosts: *Epinotia nanana* T. R., *Clysia ambiuella* Hb., *Lobesia botrana* Schiff., *Zeiraphera rufimitrana* H. S. (Lep., Tortricidae), *Anacampsis populella* Cl., *Gelechia pinguinella* Tr. (Lep., Gelechiidae), *Andricus kollaris* Htg. (Hym., Cynipidae).

Distribution: England, Sweden, Germany and Austria. In România is a rare species, being recorded previously from Iezer (Cibin mountains), Sibiu county [G. Strobl, 1900 - 1901]; Satu Mare, Maramureș county, Carei, Satu Mare county, Beliș, Cluj county [J. ŠEDIVÝ, 1965] and Câmpulung Moldovenesc, Suceava county [M. CONSTANTINEANU & G. ISTRATE, 1973].

21. *Exochus lentipes* Gravenhorst 1829, ♀♂

Material: 1 ♀, 5.VIII.1953, Iacobeni, 1 ♀, 31.VIII.1969, Slătioara, Suceava county; 1 ♀, 15.VII.1964, Firiza (Valea Neagră), Maramureș county; 1 ♂, 12.VI.1965, Hașmacul Mare forest - Letea sand bank (Biosphere Reservation "Danube Delta"), Tulcea county and 2 ♀♀ și 8 ♂♂, in the months: June and July 1967 and 1968, Mraconia Valley, Ogradena commune, Mehedinți county.

Length: ♀♀ = 6 mm.; ♂♂ = 5 - 6 mm.

Hosts: *Hedya dimidioalba* Retz., *Acleris fer-*

rugana Schiff. (Lep., Tortricidae), *Anacamptis populella* Cl. (Lep., Gelechiidae).

Distribution: Sweden, Finland, France, Germany, England, Poland, Ukraine, Russia (St. Petersburg), Republic of Moldova. In Romania is a rare species, being recorded previously from Haşmacul Mare forest, Biosphere Rezervation "Danube Delta", Tulcea county [M. CONSTANTINEANU & R. CONSTANTINEANU, 1968]; Iacobeni and natural reservation "Codrul Secular Slătioara", Suceava county [R. CONSTANTINEANU, 1983], Mraconia Valley, Ogradena commune, Mehedinţi county [M. CONSTANTINEANU & R. CONSTANTINEANU, 1975].

22. *Exochus notatus* Holmgren 1856, ♀♂

Material: 2 ♂♂, 14.VIII.1951, Babadag, Tulcea county; 1 ♀, 10.VII.1964, Baia Mare (Usturoi Valley), Maramureş county; 1 ♀, 20.VII.1964, on the right bank of the Lăpuşel river, in nearby of Baia Mare city, Maramureş county; 2 ♀♀ and 4 ♂♂, 12.VIII.1967, Mraconia Valley and 2 ♂♂, 9.VIII.1967, Dubova, Mehedinţi county.

♀♀: Length = 5-6,5 mm.; ♂♂: Length = 5-5,5 mm.

Hosts: *Clysia ambiguella* Hb. (Lep., Cochyliidae), *Olethreutes dimidana* Sod., *Lobesia botrana* Schiff., *Ancylis siculana* Hb. (Lep., Tortricidae).

Distribution: Centre and northern of Europe, Russia (St. Petersburg). In Romania is a rare species, being recorded previously from Rus, Sălaj county [A. KISS, 1925-1926], In Romania is a rare species, being recorded previously from natural reservations "Bălteni" and "Hârboanca", Vaslui county [M. CONSTANTINEANU & L. ȚĂȚAN, 1976-1977].

23. *Exochus separandus* Schmiedeknecht, ♀

Material: 1 ♀, 21.VII.1964, Baia Mare (Valea Usturoi), jud. Maramureş.

Length = 5 mm.

Head dorsally is strongly narrowed beyond eyes, as broad as thorax; temples convex, in lateral view are equal with transversal diameter of eye. Occipital carina absent in superior side. Front presents a deep socket on each side. Antennae are longer than head with thorax together; flagellum presents 23 segments. Face and clypeus are united and they have a squared shape, with a dense, rough punctuation. Face is almost two times wider than transversal diameter of eye. The triangular process of face, between antennae base, is short. The anterior margin of clypeus is right. Genae are shorter than 1/2 of mandible base breadth.

Mesonotum is densely punctured, with short, shallow notauli. Metapleuri shiny, glabrous. Dorso-longitudinal carinae of propodeum are almost parallel. Supramedian and basal areae are united. Costula is unobvious. Scutellum is almost glabrous. Propodeal spiracles are small, oval. Nervulus is obvious postfurcal, inclined.

Tergite 1 is a little prolonged, almost quadratic; dorso-longitudinal carinae reach its middle. Tergite 2-3 are almost transversal. The epipleuri of third tergite are semicircular.

Body is black, with yellow drawings on head and thorax. Transversal stripe along superior margin of face (sometimes entire face is yellow), points on genae and on external orbits, a spot on each side of vertex, the most part of mandibles, superior angle of pronotum, lines under the base of wings, a spot on each mesopleuri, tegulae, tip of scutellum and postscutellum are yellowish-white. Antennae are brown; on ventral side and at the tip are reddish-yellow. Legs are light yellowish-red; coxae and trochanters, often, are reddish; the hind coxae with a brown or black drawing; the tip of fore femorae are yellowish; base and tip of hind tibiae and the tip of segments of hind tarsi are dark. The hind tibiae with a white ring near the base. The hind tarsi are whitish, the tarsi segments with reddish or blackish tip. The wings are colourless, stigma is yellowish or brown.

Tergites 1-2-3 with red posterior edge. All tergites with light hind edge.

Length = 5 mm.

Hosts: unknown.

Distribution: Germany, France, Ukraine.
New species for the Romanian fauna.

24. *Exochus suborbitalis* Schmiedeknecht 1924, ♀♂

Material: 1 ♂, 21.VIII.1958, Agigea, Constanţa county, 1 ♂, 12.VI.1965, Haşmacul Mare forest (Letea sand bank), Biosphere Reservation "Danube Delta", Tulcea county; 2 ♀♀, 7.VI.1964 and 4.VI.1965, natural reservation "Valea lui David", Iaşi county and 1 ♂, 17.VII.1964, Tăuţi-Măgherauşi (in nearby of Baia Mare), Maramureş county.

Length: ♀♀ = 5-7 mm.; ♂♂ = 7 mm.

Hosts: *Aphanis hartmanniana* L. (Lep., Olethreutidae).

Distribution: Germany, France, Hungary, Ukraine, Lithuania, Republic of Moldova. In Romania is a rare species, being recorded previously from Mraconia Valley, Ogradena, Ieşelniţa commune, Mehedinţi county [M. CONSTANTINEANU & all, 1975]

and natural reservation "Hârboanca", Vaslui county [M. CONSTANTINEANU & L. ȚĂȚAN, 1975-1976].

25. *Exochus quadrimaculatus* Schmiedeknecht 1924, ♂

Material: 1 ♂, 7.V.1967, Ieșelnița, Mehedinți county.

Length = 6,5 mm.

Hosts: unknown.

Distribution: Germany. In România is a rare species, being recorded previously only from Caraorman sand bank, Biosphere Reservation "Danube Delta", Tulcea county [M. CONSTANTINEANU, 1973].

26. *Exochus albicinctus* Holmgren 1873, ♀♂

Synonyms: 1873 *Exochus albicinctus* Holmgren, Svensk. Vet.-Akad. Handl. Förh., **30** (4): 51, 1895 Thomson, Deutsch. Ent. Zeitschr., **31** (1):217, 1969 Bájjary, Mócsár, Fauna Hung. **4**: 47; 1981 Tolkanitz, Opred. Faun. SSSR, **129**: 472; 1887 *Exochus anospilus* Thomson, Deutsch. Ent. Zeitschr., **31** (1):157; 1894 Thomson, 1894, Opusc. Ent., **19**: 2137; 1925 Schmiedeknecht, Opusc. Ichn., **5** (39-41): 3231; 1936 Meyer, Tabl. Syst. Hym. Parasit. (Hym., Ichn.), **6**: 157; 1898 *Amesolytus nigricans* Szépligeti, Rov. Lapok, **5** (1): 59-61

Material: 2 ♀♀ și 5 ♂♂, 14, 15 și 16.VII.1965, Retezat mountains (Gura Zlata), Hunedoara county, 1 ♀ și 1 ♂, 14.VII.1966 și 5.VI.1968, Slătioara, Suceava county.

Length: ♀♀ = 7-7,5 mm.; ♂♂ = 4,1-4,6 mm.

Hosts: unknown.

Distribution: Sweden, Finland, England, France, Hungary, Ukraine, Russia (European and Syberian parts), Armenia, Mongolia. In România is a rare species, being recorded previously from Câmpulung Moldovenesc, Suceava county [R. CONSTANTINEANU & G. ISTRATE, 1971] and from natural reservation "Hârboanca", Vaslui county [M. CONSTANTINEANU & L. ȚĂȚAN, 1976-1977].

27. *Exochus fasciatus* Strobl 1903, ♂

Material: 4 ♂♂, collected in July - August 1971 - 1973, from natural reservation "Bălteni" and "Hârboanca", Vaslui county.

♂. Length = 5 mm.

Hosts: unknown.

Distribution: Austria. In România is a rare species, being recorded previously only from natural reservation "Bălteni" and "Hârboanca", Vaslui county [M. CONSTANTINEANU & L. ȚĂȚAN, 1979].

CONCLUSIONS

1. The species *Exochus citripes* Thoms. and *Exochus separandus* Schm. are new for the Romanian fauna;

2. The male of *Exochus citripes* Thoms. is new for science;

3. The other 25 species are rare in the Romanian fauna.

REFERENCES

- CONSTANTINEANU M. 1973 Ichneumonidae (Hymenoptera) din Delta Dunării (Grindul Caraorman), PEUCE, Stud. Com. Șt. Nat., **3**: 131 - 163.
- CONSTANTINEANU M. I. & R. M. CONSTANTINEANU 1968. Ord. Hymenoptera (Fam. Ichneumonidae), in: L'Entomofaune de l'île de Letea (Delta du Danube), Trav. Mus. Hist. Nat. "Grigore Antipa", **9**: 149 - 183.
- CONSTANTINEANU M., PISICĂ C., PETCU I., MUSTAȚĂ Gh., CONSTANTINEANU R. & V. CIOCHIA 1975. Hymenoptera, Ichneumonidae. (pp. 112-155) in: Fauna, Grupul de cercetări complexe "Porțile de Fier" - Seria monografică, 316 pp., Ed. Acad. Rom.
- CONSTANTINEANU M. I. & L. G. ȚĂȚAN 1976 - 1977. Tryphonoidae (Hym., Ichn.) din rezervațiile naturale "Bălteni" și "Hârboanca" (jud. Vaslui), Trav. Stat. "Stejarul" Ecol. Terr. Gén.: 297 - 306.
- CONSTANTINEANU M. I. & M. C. VOICU 1976 - 1977. Tryphonoidae (Hym., Ichn.) din rezervațiile naturale "Ponoare" și "Frumoasa", jud. Suceava, Trav. Stat. "Stejarul", Ecol. Terr. Gén.: 269 - 277.
- CONSTANTINEANU R. 1982. Ichneumonidae (Hymenoptera) din rezervația naturală "Valea lui David" (jud. Iași), noi și rare pentru fauna României, Stud. Cercet. Biol., Seria Biol. Anim., **34** (2): 94 - 98, Ed. Acad., București.
- CONSTANTINEANU R. 1983. Contribuții la cunoașterea exochinelor (Hym.: Ichneum.) din județul Suceava, An. Muz. Jud. Suceava, Fasc. Șt. Nat., **7**: 151 - 157.
- CONSTANTINEANU R. & I. CONSTANTINEANU 1979. Ichneumonide din masivul Ceahlău, noi și rare pentru fauna României, St. Cerc. Biol., Seria Biol. Anim., **31**(2): 137 - 140.
- CONSTANTINEANU R. & I. CONSTANTINEANU 1995 - 1997. Contributions to the Knowledge of Ichneumonids (Hymenoptera, Ichneumonidae) from Măcin Mountains (II), An. Șt. Univ. "Al. I. Cuza", s. Biol. anim., **41** - **43**: 59 - 67, Iași.
- CONSTANTINEANU R. & I. CONSTANTINEANU 1997. Ich-

- neumonide (Hymenoptera, Ichneumonidae) din parcurile naționale Retezat și Valea Cernei pp. 153 - 211, in "Entomofauna Parcurilor Naționale Retezat și Valea Cernei" (Ed.: L. Rákosy), 243 pp., Cluj-Napoca.
- CONSTANTINEANU I. & R. CONSTANTINEANU 1997. Contributions to the Faunistic and Ecological Study of Ichneumonids (Hymenoptera, Ichneumonidae) in the Danube Delta Biosphere Reservation, Mem. Sect. Șt. Acad. Rom., **21**: 145 -188.
- PISICĂ C. 2001. Ichneumonidele (Hymenoptera, Insecta) din România și gazdele lor. Catalog, 406 pp., Edit. Univ. "Al. I. Cuza" Iași.
- TOLKANITZ V. I. 1987. Fauna Ukraini, 40 (11) Paraziticeskie pereponciatokrâlaie, Fasc. 2: Ihnevmonidî - metopiinî, Nauk. Dumka, Kiev, 212 pp.
- YU D. S. & K. HORSTMANN 1997. A catalogue of World Ichneumonidae (Hymenoptera), Mem. Amer. entomol. inst. 58 (1-2): 1-1558.

<p>Irinel CONSTANTINEANU, Raoul CONSTANTINEANU Biological Research Institute of Iași Bd. Carol I No. 20 A RO – 6600 Iași Romania</p>	<p>Camil Ștefan LUNGU – CONSTANTINEANU "Al. I. Cuza" University of Iași Faculty of Biology Bd. Carol I No. 20 A RO – 6600 Iași Romania</p>
--	--

Received: 12.11.2003

Accepted: 10.12.2003

Printed: 30.12.2003