

CONTRIBUTION TO THE KNOWLEDGE OF THE ROMANIAN FAUNA OF LUCANIDAE (COLEOPTERA: SCARABAEOIDEA)

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Abstract. This paper tries to actualise the knowledge level concerning the lucanids from Romania, and it could be a reference point for this type of research in the future. For this group of coleopterans, data from the scientific papers previously published are reviewed, and added to the original research, unpublished yet by the author, for the species: *Platycerus caraboides* (Linnaeus 1758), *Dorcus paralelipipedus* (Linnaeus 1758), and *Lucanus cervus* (Linnaeus 1758), most of them collected from Oltenia.

Keywords: contributions, knowledge, lucanids, Romanian fauna.

Rezumat. Contribuții la cunoașterea faunei de Lucanidae (Coleoptera: Scarabaeoidea) din România. Lucrarea încearcă să actualizeze stadiul cunoașterii lucanidelor din România și poate constitui un punct de referință pentru cei ce vor aborda în viitor studiul lucanidelor. Ea reunește datele privind acest grup de coleoptere sintetizate din lucrările de specialitate publicate anterior de alți autori și de autoare, la care sunt adăugate date originale, nepublicate până în prezent, pentru speciile: *Platycerus caraboides* (Linnaeus 1758), *Dorcus paralelipipedus* (Linnaeus 1758) și *Lucanus cervus* (Linnaeus 1758), colectate în marea majoritate din Oltenia.

Cuvinte cheie: contribuții, cunoaștere, lucanide, fauna României.

Introduction

Lucanids are a small family of coleopterans in the Romania's fauna, and they have not been represented the object of review papers until 1997, when some data concerning the lucanids have been recovered in the entomofaunistic papers, elaborated by the Romanian or foreign specialists.

The only review on this group has been elaborated by Procheș (1997). Beside the six species known in the fauna of the country, this author identifies a new species to Romania: *Platycerus caprea* (DeGeer 1774); in consequence, seven species from six genera and three subfamilies are known, nowadays.

Material and Methods

This paper comprises data concerning the distribution of lucanids in the Romanian fauna, based on the reviews previously published by other specialists, and by the author, in addition of the collecting data, unpublished yet, for the species: *Platycerus caraboides* (Linnaeus 1758), *Dorcus paralelipipedus* (Linnaeus 1758), and *Lucanus cervus* (Linnaeus 1758).

Those three species were collected by the author and by the other specialists from our Museum, between the years 1979–2005, respectively 1951–2005, from 48 sites from Oltenia, and three sites out of this region.

The entomologic material has been identified or / and revised by the author, using a binocular, and starting from the papers of Paulian (1941), Panin (1951), Ene (1971), Maes (2005) and Martín-Piera & López-Colón (in press).

For each species the citations in the previous papers in chronologic order, personal data of collecting, and distribution, are mentioned. Gathered data are shown in the alphabetic order of the collecting sites. In the same time, it is mentioned the list of the collecting sites, and the abbreviations used for the name of the authors.

The taxonomic presentation of the identified species is conforming to the classification and nomenclature proposed by Martín-Piera & López-Colón (in press).

This paper is not exhaustive, but it could be a reference point for the knowledge of this group of coleopterans of the Romanian fauna.

Results and Discussion

As a result of the processing of the biologic material (286 individuals), belonging to seven species known in the Romanian fauna, three species have been identified: *Sinodendron cylindricum* (Linnaeus 1758), *Dorcus parallelipedus* (Linnaeus 1758), and *Lucanus cervus* (Linnaeus 1758), mentioned for the first time by Marcu (1928) in the karstic zone of the Mehedinţi and Gorj counties. Those three species are included in three genera.

Lucanus cervus (Linnaeus 1758) is a protected species, mentioned in the national (Order no. 1198/25 November 2005, Law no. 345/2006), respectively international (Habitats Directive/1992, Bern Convention/1979) environment legislation regarding the biodiversity.

Forty-eight collecting sites have been identified, unequally distributed in five counties of Oltenia Region. The majority are from Dolj (22) and Gorj (13) counties, followed by Vâlcea (6), Olt (2) and Mehedinţi (2). Three sites are situated out of Oltenia: Făgăraş (Braşov County), Bociu Forest (Cluj County), and Țibleş Mountains.

Collecting sites:

Amărăştii de Jos (DJ)	Desa (DJ)	Radovan (DJ)
Argetoaia (DJ)	Golumbu (GJ)	Rânca (GJ)
Baia de Fier (GJ)	Făgăraş (BV)	Săcelu (GJ)
Bârza – Balş (OT)	Filiaşi (DJ)	Scoarţa (GJ)
Bistreţ (DJ)	Leamna (DJ)	Secui (DJ)
Bratovoeşti (DJ)	Țibleş Mountains	Segarcea (DJ)
Bucovăţ (DJ)	Negoi (DJ)	Straja – Vâlcan
Bugiuleşti (VL)	Novaci (GJ)	Mountains (GJ)
Cărbuneşti (GJ)	Ocele Mari (VL)	Strehaia (MH)
Câineni (VL)	Olăneşti (VL)	Șimnic (DJ)
Cheile Bistriței (GJ)	Bociu Forest (CJ)	Tâmbureşti (DJ)
Cheile Galbenului (GJ)	Plenița Forest (DJ)	Tg. Logreşti (GJ)
Cheile Sohodol (GJ)	Saru Forest (OT)	Teasc (DJ)
Craiova (DJ)	Stârmina Forest (MH)	Titeşti (VL)
Craiova – Depou (DJ)	Pietrele Albe (GJ)	Tunarii Vechi (DJ)
Craiova – Parc (DJ)	Poiana Mare (DJ)	
Craiova – V. Gang (DJ)	Racovița (VL)	

Abbreviations of the counties: BV – Braşov, CJ – Cluj, DJ – Dolj, GJ – Gorj, MH – Mehedinţi, OT – Olt, VL – Vâlcea.

Name of the collectors (legit): B.E. – Bazilescu Elena; B.L. – Bălă Lavinia; C.C. – Cornelia Chimişliu; F.G. – Filcu Gheorghita; F.I. – Firu Ion; G.Z. – Găraş Zaharia; N.A. – Năstase Adrian; P.G. – Păduraru Galina; P.I. – Păunescu Irina; P.M. – Popescu Mircea; R.A. – Ruicănescu Adrian; V.A. – Vişan Aneta.

Further on we present, in systematic order, the identified species, according to the taxonomic system proposed by Martín-Piera & López-Colón (in press).

FAMILY LUCANIDAE

Subfamily LUCANINAE Latreille 1804

Genus *Platycerus* Geoffroy 1762.

Platycerus caraboides Linnaeus 1758

Reports in Romania: Transylvania (Petri, 1912), Comana, Brănești, Vălenii de Munte, Broșteni (Procheș, 1997).

Material examined: 2 ♀♀ Bociu Forest (Cluj): 29.04.1994 leg. R.A.

Platycerus caprea De Geer 1774

Reports in Romania: Mehadia (Procheș, 1997).

Distribution: Central Europe. Central-European element (Procheș, 1997), specific to high-altitudes.

Genus *Dorcus* MacLeay 1819

Dorcus paralelipipedus Linnaeus 1758

Reports in Romania: Căldărușani, Cocos, Enisala, Ciucurova, Murfatlar (Fleck, 1905), Broșteni, Comana (Montandon, 1906), Bucharest (Ochs, 1921), karstic zone of the Gorj and Mehedinți counties (Marcu, 1928), Novaci (Bobîrnac, 1962), Iortmac (Negru & Roșca, 1967), Preajba (Bobîrnac *et al.*, 1973), Orșova Valea Cernei (Ieniște, 1975), Gurghiu Mountains (Lunca Bradului) (Szel *et al.*, 1997), Sulina Făgăraș Mountains, Bucharest (Procheș, 1997), Gutâi Mountains (Hotea & Hotea, 2003).

Material examined: 141 specimens, of which 64 ♂♂ and 77 ♀♀. Baia de Fier: 1 ♂ and 1 ♀ 30.08.1951 leg. F.I.; 1 ♂ 06.08.1958 leg. F.I.; 1 ♂ 14.08.1960 leg. F.I.; Bârza-Balș: 1 ♂ 29.05.1967 leg. F.I.; 1 ♀ Bistret: 1 ♂ 02.06.1982 leg. N.A.; 3 ♂♂ and 2 ♀♀ 01.06.1982 leg. C.C.; 04.10.2001 leg. V.A.; Bratovoesti: 2 ♂♂ and 2 ♀♀ 10.07.1982; Bucovăț 1 ♂ 24.06.1968 leg. P.I.; 1 ♀ 12.06.1980 leg. C.C.; 1 ♂ and 1 ♀: 01.06.1996 leg. V.A.; 1 ♀ 03.07.1997 leg. B.L.; 1 ♂ 17.05.2000 leg. B.L.; 2 ♂♂ and 1 ♀ 19.06.2000 leg. C.C.; 1 ♀ 19.07.2001 leg. C.C.; Bugiulești: 1 ♀ 01.08.1961 leg. F.I.; 1 ♂ 16.08.1961 leg. F.I.; Căineni: 1 ♂ 14.05.2003 leg. N.A.; Cheile Bistriței: 1 ♂ 10.08.2005 leg. C.C.; Cheile Galbenului: 2 ♀♀ 20.07.1993 leg. C.C.; 5 ♂♂ and 7 ♀♀ 12.08.2005 leg. C.C.; Cheile Sohodol: 1 ♂ 17.06.1964 leg. P.I.; 1 ♂ 17.06.1976 leg. P.I.; 1 ♀ 16.07.1982 leg. P.I.; 1 ♀: 05.08.1996 leg. C.C.; 2 ♂♂ 26.08.1999 leg. C.C.; 1 ♂ and 3 ♀♀: 09.08.2003 leg. C.C.; 1 ♂ and 1 ♀ 09.08.2003 leg. C.C.; 2 ♀♀ 11.08.2005 leg. C.C. Craiova: 1 ♂ 14.08.1960; 1 ♂ 08.07.1962 leg. F.I.; 1 ♂ 14.07.2001 leg. B.L.; 1 ♀ 24.06.2003 leg. B.L.; Craiova – Parc: 1 ♀ 19.06.1984 leg. C.C.; 1 ♂ 28.05.1999 leg. V.A.; Craiova (Valea Gangului): 1 ♂ 10.06.1992 leg. N.A.; Desa: 1 ♂ and 1 ♀ 25.07.1984 leg. C.C.; Golumbu: 2 ♀♀ 17.06.1981 leg. B.E.; Făgărași: 1 ♀ 06.1964 leg. F.I.; Leamna: 1 ♀ 16.05.1969 leg. P.M.; 1 ♀: 31.07.2001 leg. B.L.; Novaci: 1 ♂ 15.06.1957; Ocnele Mari: 1 ♂ 24.07.2002 leg. A.N.; Olănești: 2 ♀♀ 05.07.2002 leg. A.N.; Stârmina Forest: 1 ♀ 25.07.2001 leg. N.A.; Pietrele Albe: 1 ♀ 18.06.1999 leg. C.C.; Poiana Mare: 2 ♂♂ and 2 ♀♀ 07.06.1980 leg. C.C.; Racovița: 1 ♂ and 2 ♀♀ 11.07.1982 leg. N.A.; 3 ♂♂ and 4 ♀♀ 06.08.1983 leg. N.A.; 19.07.1984; 3 ♂♂ and 2 ♀♀: 20.07.1984 leg. C.C.; 1 ♂ and 2 ♀♀ 28.06.1989 leg. N.A.; 2 ♂♂ and 1 ♀ 06.1990 leg. N.A.; 6 ♂♂ and 9 ♀♀ 20.08.1991 leg. N.A.; 1 ♀ 22.07.1999; 3 ♂♂ and 1 ♀ 04.07.2000 leg. N.A.; 1 ♀ 08.10.2001 leg. N.A.; Rânca: 1 ♀ 03.08.1980 leg. C.C.; Săcelu : 1 ♂ 29.07.1980 leg. N.A.; Scoarța : 1 ♀ 20.07.1979 leg. B.E.; Segarcea: 1 ♂ 16.05.2000 leg. B.L.; Strehaia: 1 ♀ 22.05.1951 leg. F.I.; Șimnic: 1 ♀ 30.05.2000 leg. C.C.; Tâmburești: 1 ♂ 01.05.1959 leg. F.I.; Titești: 1 ♀ 09.05.2002 leg. N.A.; Tunarii Vechi: 4 ♂♂ and 2 ♀♀ 07.06.1980; 1 ♂ and 2 ♀♀ 27.06.1980 leg. C.C.

Distribution: all Europe, including Great Britain, Caucasus, Armenia, Kazakhstan, Minor Asia, Maroc and Northern Tunisia (Nikolaijev, 1987; Maes, 1992, Baraud, 1993; Franciscolo, 1997, cit. Martín-Piera & López-Colón, in press); Euro-

Caucasian element (Procheş, 1997).

Genus *Lucanus* Scopoli 1763

Lucanus cervus (Linnaeus 1758)

Reports in Romania: Azuga, Filaret, Caldăruşani (Fleck, 1905), Bucharest, Broşteni (Montandon, 1906), Cernavoda (Ochs, 1921), karstic zone of the Gorj and Mehedinţi counties (Marcu, 1928), Baş Punar (Negru & Roşca, 1967), Preajba (Bobîrnac *et al.*, 1973), Svinîţa (Ieniştea, 1975), Gurghiu Mountains (Valea Târnava Mică), Harghita Mountains (Perla Harghitei, Deva) (Szel *et al.*, 1997), Letea, Bucharest (Băneasa), Southern Carpathians, counties of Ialomiţa, Brăila and Botoşani (Procheş, 1997), Bârseşti, Cheile Bistriţei, Cheile Sohodol, Lainici, Pietrele Albe, Tismana (Chimişliu, 2006).

Material examined: 140 individuals : 79 ♂♂ and 61 ♀♀ Amăraştii de Jos: 1 ♂ 15.07.1969 leg. P.I.; Argetoaia: 1 ♀ 08.07.1995 leg. C.C.; Balş: 2 ♂♂ and 1 ♀ 04.07.1997 leg. C.C.; Bucovăţ: 2 ♀♀ 03.06.1967; 1 ♂♂ and 6 ♀♀ 31.08.1967 leg. M.P.; 1 ♂ and 2 ♀♀ 24.06.1968 leg. P.I.; 4 ♂♂ and 1 ♀: 01.06.1996 leg. V.A.; 1 ♀ 16.06.1996 leg. B.L.; 7 ♂♂ 03.07.1997 leg. A.V. and F.G.; 3 ♂♂ and 1 ♀ 23.06.1998; 3 ♂♂ and 6 ♀♀ 09.06.1999 leg. C.C., B.L.; 3 ♂♂ 19.06.2000 leg. C.C.; 1 ♂: 19.07.2001 leg. A.V.; 4 ♂♂ and 1 ♀ 02.07.2003 leg. C.C., L.B. and F.G.; Cărbuneşti: 1 ♂ 12.07.2003 leg. N.A.; Căineni: 1 ♀ 18.07.2003 leg. N.A.; Craiova: 1 ♂ 25.06.1982 leg. V.A.; 1 ♂ 20.08.1991 leg. C.C.; 1 ♂ and 1 ♀ 10.06.1993 leg. F.G.; 1 ♂ 15.05.1994 leg. C.C.; 1 ♂ 25.06.1994 leg. V.A.; 2 ♀♀ 07.06.1996 leg. C.C.; 1 ♂ 11.06.1997 leg. G.Z.; 2 ♂♂ and 2 ♀♀ 14.06.1996 leg. C.C.; 3 ♂♂ 16.06.1996; 1 ♂ 28.06.1996 leg. N.A.; Craiova (Depou): 19.06.1984 leg. N.A.; Filiaş i: 1 ♂ 09.07.1990 leg. N.A.; 1 ♂ and 1 ♀ 08.06.1992 leg. C.C.; 27.06.1994 leg. C.C.; Negoii: 1 ♂ 22.06.1992 leg. A.V.; 2 ♂♂ 16.06.1993 leg. V.A.; 18 individuals Pleniţa Forest: 1 ♂ 05.06.1951 leg. F.I.; 1 ♂ 01.06.1959 leg. I.F.; Saru Forest: 5 ♂♂ 11.06.1986 leg. V.A.; Poiana Mare: 1 ♀ 07.06.1980 leg. C.C.; 1 ♂ 20.07.1990 leg. C.C.; 2 ♂♂ 15.06.1994 leg. C.C.; Racoviţa VL 2 ♂♂ and 1 ♀ 06.08.1983 leg. N.A.; 5 ♂♂ and 2 ♀♀ 20.07.1984 leg. C.C.; 1 ♀ 30.08.1989; 1 ♀ 06.1990 leg. N.A.; 1 ♂ and 4 ♀♀ 20.08.1991 leg. C.C.; 1 ♂ 11.08.1992 leg. N.A.; 3 ♂♂ and 3 ♀♀ 22.07.1999 leg. N.A.; 2 ♀♀ 04.07.2000 leg. N.A.; Radovan: 1 ♂ 16.07. 2003 leg. A.V.; Strehaia: 1 ♂ 20.07.1953 leg. I.F.; Şimnic: 2 ♂♂ and 1 ♀ 30.05.2000 leg. B.L.; 1 ♀ 15.06.1998 leg. F.G.; Teasc DJ: 4 ♂♂ and 4 ♀♀ 11.08.1996 leg. N.A.; Tg. Logreşti: 1 ♀ 10.07.1975 leg. I.P.

Distribution: Europe, Middle Asia, Crimeea, Caucasus, Northern Africa (Neculiseanu *et al.*, 1992); Euro-Caucasian element (Procheş, 1997).

Subfamily AESALINAE

Genus *Aesalus* Fabricius 1801

Aesalus scarabaeoides Panzer 1794

Reports in Romania: Băile Herculane, Comana and Dobrogea (Procheş, 1997).

Distribution: Russia, Moldova, Ukraine, Bosnia, Serbia, Italy, Slovenia, Hungary, Austria, Slovakia, Czech Republic, Germany, Spain, France (Maes, 2005).

Subfamily SYNDESINAE MacLeay, 1819

Genus *Ceruchus* MacLeay, 1819

Ceruchus chrysomelinus (Hochenwarth 1785)

Reports in Romania: Maramureş, Bistriţa Năsăud, Harghita, Covasna, Prahova, Braşov, Argeş, Sibiu, Caraş-Severin (Procheş, 1997).

Distribution: in the mountain regions from Europe and Siberia (Martín-Piera & López-Colón, in press); Central-European element (Procheș, 1997).

Genus *Sinodendron* HELLWIG 1792

Sinodendron cylindricum (Linnaeus 1758)

Reports in Romania: Azuga (PH), Slanic (PH) (Fleck, 1905), Gurghiu Mountains (Bicaz Valley) (Szel *et al.*, 1997), in the counties Mehedinți, Hunedoara, Vâlcea, Dâmbovița, Prahova, Brașov, Vrancea, Suceava, Bistrița-Năsăud (Procheș, 1997).

Material examined: 1 ♂ Țibleș Mountains: 05.1996 leg. R.A; 1 ♂ Straja – Vâlcău Mountains: 09.08.2004 leg. V.A.

Geographical distribution: Norway, Sweden, Belgium, France, Spain, Czech Republic, Switzerland, Hungary, Italy, Slovenia, Albania, Bulgaria, Turkey, Ukraine, China (Maes, 2005).

Conclusions

The family Lucanidae is represented in the Romanian fauna by seven species, included in three subfamilies and six genera.

By the identification of 48 new collecting sites (45 situated in Oltenia), this paper contributes to the knowledge of the distribution area of lucanids in Romania, especially in Oltenia Region, from where only some few data have been previously published.

The well represented species in the patrimony of the Oltenia Museum of Craiova are *Dorcus paralelipedus* (Linnaeus, 1758) and *Lucanus cervus* (Linnaeus, 1758).

A research on this group of coleopterans is imposed for the complete knowledge of the distribution area of the species, particularly because some data are from the beginning of the XXth century, and the presence of some species must be reconfirmed; the identification of the community interest species *Lucanus cervus*, which needs a strict protection (Annexe 4, Law 345/2006), could be at the basis of documentations for the special areas of conservation and avifaunistic distribution areas with special protection (Annex 3, Berne Convention).

Acknowledgements

I am indebted to Professor Dr. Mircea Varvara, “Al. I. Cuza” University, for useful and constructive discussions and for the help in the translation of the text.

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