

**THE MEDITERRANEAN LEAF BEETLES IN BULGARIA
(INSECTA: COLEOPTERA: CHRYSOMELIDAE)**

Blagoy A. Gruev
Department of Zoology, University of Plovdiv,
Tzar Assen 24, 4000 Plovdiv, Bulgaria

ABSTRACT. The Mediterranean leaf beetle species, distributed in Bulgaria, are listed, mapped and zoogeographically classified. Distributional and biological data of the species in the whole their geographical area are given.

KEY WORDS. Chrysomelidae, Bulgaria, Mediterranean species.

INTRODUCTION

The Mediterranean species of *Chrysomelidae*, established in Bulgaria, are 9: *Criocerinae* – 1, *Clytrinae* – 1, *Eumolpinae* – 1, *Alticinae* – 5 and *Hispiinae* – 1. This number constitutes about 2 % of the Bulgarian leaf beetle species and subspecies. The distributional data about the taxa in Bulgaria are illustrated by UTM maps with the biogeographical regions and subregions (maps from 1 to 10). The present-day valid locality names are given in square brackets, and at that some of the previously erroneously recorded locality data, are herein corrected.

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LIST OF THE MEDITERRANEAN LEAF BEETLE TAXA IN BULGARIA

Subfamily CRIOCERINAE

Crioceris paracenthesis (Linnaeus, 1767)

Chrysomela paracenthesis Linnaeus, Syst. Nat., ed. 12: 1066

DISTRIBUTION

EUROPE

Albania

CSIKI, 1940: 269: „Kula Ljums [Kula e Lumës]“

Bosnia - Hercegovina

APFELBECK, 1912: 240, 1916: 359: Krasno, Trebević, Domanović

Bulgaria (Map 2)

TOMOV, 1990: 74. „South-West Bulgaria (Kresna gorge: Sandanski)“

Croatia

KÜSTER, 1846: „Dalmatien“ [Dalmatia]

APFELBECK, 1912: 240, 1916: 359: „Gruž“

NOVAK, 1952: 303, 1970. „Istra i Dalmatia:Unije, Zadar, Kornat, Solin, Split, Solta, Brusje, Vrbanj, Orebić, Lumbarda, Mljet, Šipan, Lopud, Koločep, Gruž, Lokrum, Čibača, Budva, Lošinj“, Ščedro, Sv. Andrija, Lastovo, Korčula, Hvar, Vis“

MÜLLER, 1953: 278-279. „Istria, Fiume [Rijeka], Novi, Brioni [Is. Brioni], Unie [Is. Unije], Lussin [Is. Lošinj]“

France

CLAVAREAU, 1913: 49. „Korsika“ [Corsica]

Greece

CLAVAREAU, 1913: 49. „Griechenland“ [Greece]

WARCHALOWSKI, 1974: 481. „Sere“ [in Eastern Greece]

Italy

CLAVAREAU, 1913: 30. „Sizilien“ [Sicily]

WEISE, 1881 [1881-1893]: 77. „bei Görz“ [Gorizia]

PORTA, 1934: 251. „Tutta Italia [whole Italy]“

MÜLLER, 1953: 278-279. „Trieste, Venezia Giulia, Gorizia, Monfalcone, Sicilia [Sicily]: Messina“

RUFFO, 1964: 80. „Genova, Emilia, Toscana, Marche, Umbria, Lazio, Calabria, Veneto, Friuli, Sicilia [Sicily], Sardegna [Sardinia]“

DOCCORDI and RUFFO, 1971: 45. „Ponza; Ventotene“

DOCCORDI and RUFFO, 1975: „Isole Egadi“ [Egadi Is.]

BIONDI et al., 1995: 631. „Sardegna [Sardinia]: La Maddalena; San Pietro“

Malta

PORTA, 1934: 244. „Malta“

Montenegro

APFELBECK, 1912: 240, 1916: 359. „Ulcinj“

Portugal

MAGISTRETTI and RUFFO, 1959: 112. „Faro“

PETITPIERRE, 2000: 136. „Portugal“ (after OLIVEIRA, 1894)

Spain

PETITPIERRE, 2000: 136. „Cataluña, Aragón, Castellón, Valencia, Murcia, Andalucía, Salamanca, Navarra, Baleares“

JOLIVET, 1953 a: 6. „Majorque [Majórca]: Pallensa, Palma“

Turkey

ANONIMOUS, 1907: 338. „Constantinople“ [Istanbul]

AFRICA

Algeria

CLAVAREAU, 1913: 49. „Algier“ [Algeria]

Tunisia

MÜLLER, 1953: 278-279. „Tunisia“

Morocco

PETITPIERRE, 2000: 136. „Marruecos“ [Morocco]

This species, described from South Europe, occurs the Mediterranean from Portugal and Morocco to West Turkey. It had been considered by the chrysomelidologists as a west-mediterranean species. Herein however it has to be classified as a member of the Holomediterranean element to the Mediterranean faunistic complex in Bulgaria. The localities in the country lie in the Struma- Mesta subregion of the South-Bulgarian biogeogeographic region according to the bigeographical division of the country by GRUEV (1988).

BIONOMY

Crioceris paracenthesis is known from May till October in various parts of its area. (in Bulgaria – in May), on *Asparagus acutifolius*.

Subfamily CLYTRINAE

Macrolenes dentipes (Olivier, 1808)

Clytra dentipes Olivier, Ent., 6: 857

DISTRIBUTION

EUROPE

Albania

MOHR, 1966: 358. „Borshi südlich [South of] Vlora; Mali i Çorajt; Uji Ftothe südlich [South of] Tepelena; Poliçan westlich Tomor“

Bosnia-Herzegovina

APFELBECK, 1912: 241, 1916: 360. „Mostar, Stolac, Domanović,

Bulgaria (Map 3)

ROUBAL, 1931: 454. „Pirin“ – *Miopristis dentipes*

TOMOV, 1970: 147. „South-West Bulgaria: Sandanski - village Lilyanovo; village Strumsko. South-East Bulgaria: Strandzha Mt. (village Bolyarovo)“ – *Miopristis dentipes*

TOMOV, 1979: 176. „South-East Bulgaria: Harmanli District“

GRUEV and TOMOV, 1984: 93. Strandzha Mt., Black Sea side (Burgas District); Harmanli District; Sredna Gora Mts. (central part); Struma Valley: south-western parts of Rila and Pirin (up to 800-900 m)“

GRUEV and TOMOV, 1987: 254. „Strandzha Mt.: village Bolyarovo, Malko Tarnovo, above village Sinemorets, above Ahtopol“

VIG, 1992: 296. „Mitsurin“ [Tsarevo]

TOMOV, 1994: 8. „Sozopol, village Lozenets, Ahtopol, village Sinemorets“

VIG, 2002: 25. „Burgas District: „Micurin“ [Tsarevo], „Lozenec“ [village Lozenets]“

Croatia

APFELBECK, 1912: 241, 1916: 360. „Metković“

NOVAK, 1952: 304, 1970: 40. „Krk, Rab, Cres, Lošinj, Tasorka Šolta, Ščedro, Korčula, Mljet, Palagruža, Šipan, Lokrum, Vodnjak, Lopud, Hvar, Sv. Kliment, Sv. Andrija, Brač, Murter, Koločep, Kornat, Stipanska, Lastovo“

MÜLLER, 1953: 287. „Istria; Fiume [Rijeka]“; „Pola“ [Pula]; „Rabac“; „Abbazia“ [Opatija]; „Isole“ [Inlands]: „Veglia“ [Krk], „Cherso“ [Cres], „Lussin“ [Lošin]“

VIG, 2002: 25. „Is. Rab; Zelsa“

France

CLAVARAEU, 1913: 30. „Frankreich [France]“

Greece

OERTZEN, 1886: 286. „Crete“

CLAVAREAU, 1913: 49. „Griechenland [Greece]“

TZANAKAKIS, 1963: 201. „Attique“ [Attica], „Megaris“, „Achaia“, „Corfou [Is. Kerkira]“

WARCHALOWSKI, 1974: 481. „Sere“

GRUEV and TOMOV, 1979. „Kreta“ [Crete]: „Agios Nikolaos; Iraklion: Potamies“

VIG, 2002: 25. „Attica, Sunion; Delphi; Drepano-Adami; Epeiros, Petas: Mt. Makrinoros; Crete: Festos“

Italy

PORTA, 1934: 251. „Liguria, Venezia Giulia, Italia centrale e meridionale [Central and South Italy]“, „Sicilia [Sicily]“

BIONDI, M., DACCORDI M., REGALIN R., ZAMPETTI M. 1995: 21. „N, S“, [North and South Italy], „Si“ [Sicily]

Macedonia

TOMOV, 1984: 110. „Titov Veles“

VIG, 2002: 25. „Radoviš“

Montenegro

APFELBECK, 1912: 241, 1916: 360. „Rjeka“

GRUEV and TOMOV, 1979. „Titograd“

Spain

JOLIVET, 1953 a: 6. „Majorque“ [Majórca], Minorque [Minorca]: Capdera, Palma; Cabrera“

PETITPIERRE, 2000: 179. „Cataluña, Valencia, Alicante, Murcia, Andalucia, Baleares“

ASIA

Syria

CLAVARAEU, 1913: 30. „Syrien“ [Syria]

Turkey

GRUEV and TOMOV, 1979. „Egridir/Taurus; Uludag/Bursa“

AFRICA

Algeria

CLAVARAEU, 1913: 30. „Algier [Algeria]: Tebessa“

This species, described from South Europe, is spread from Spain and Algeria to Turkey and Syria. In Bulgaria it was recorded from the Struma-Mesta subregion, the Low Maritsa-Low Tundzha subregion and Strandzha subregion of the South-Bulgarian (with transitional-mediterranean climate) biogeographical region, the Upper Thrace subregion of the Middle-Bulgarian (with transitional-continental climate) biogeographical region and the Black Sea (with maritime climate) biogeographical region. It was classified as a Mediterranean species in Bulgaria by TOMOV (1970). Zoogeographically the species belongs to the Holomediterranean element of the Mediterranean faunistic complex.

BIONOMY

Macroles dentipes has been found from May till August (in Bulgaria – in May, June and July) in various parts of its area, on *Quercus* spp. In Bulgaria it was found on *Quercus pubescens*, *Q. conferta* and *Salix alba*.

Subfamily EUMOLPINAE

Colaspinella grandis (Fivaldszky, 1880)

Colaspinella grandis Fivaldszky, Termezetr. Füzet, 4: 264).

DISTRIBUTION

EUROPE

Bulgaria (Map 4)

GRUEV and ARNOLD, 1995: 23-24. „Zlatni Pyasatsi“ [Black Sea resort „Golden Sands“]

GRUEV and BECHEV, 2000: 19. „Black Sea biogeographical region“

Turkey

WEISE, J, 1893 [1881-1893]: 1121-1122. „Konstantinopel [Istanbul]; Europäische Türkei [European Turkey]“

ASIA

Turkey

FRIVALDSZKY, 1880 : 264. „Asiatische Olymp [Bythina or Bythin Olymp]“ (Locus typicus) – *Colaspidea grandis*

WINKLER, A, 1930 [1929-1930]: 1272. „T Asm [Turkey Asia Minor]“

ASLAN et al., 1996: 21. „Bursa; Antalya (Side)“

The species is distributed in the Mediterranean and Submediterranean zones of Turkey and in the maritime part of Bulgaria (Black Sea biogeographical region) . Is was classified as a member of the East-Mediterranean element of the Mediterranean faunistic complex in Bulgaria (GRUEV and BECHEV, 2000).

BIONOMY

The species was established in June (Bulgaria). Food plants are unknown.

Subfamily ALTICINAE

Longitarsus (Testergus) corynthius (Reiche et Saulcy, 1858) s. str.

Haltica corynthia Reiche et Saulcy, Ann. Soc. ent. Fr., 3: 47

DISTRIBUTION

EUROPE

Albania

GRUEV, 1992: 264; GRUEV, 2001: 17; GRUEV and DÖBERL, 1997: 160. „Albania“

Bosnia Herzegovina

APFELBECK, 1914: 445, 1916: 390. „Mostar; Stolac“

GRUEV and DÖBERL, 1997: 160. „Bosnia - Herzegovina [South]“

GRUEV, 2001: 17. „Bosnia-Herzegovina“

Bulgaria (Map 5)

- GRUEV, 1973: 116. „Südost Bulgarien [South-East Bulgaria]: Harmanli; Sakar-Gebirge [Mt. Sakar]; Strandža-Gebirge [Mt. Strandzha]: village Golyamo Bukovo, village Fakiya, „Bolyarovo; Ahtopol“
- GRUEV, 1988 b: 95. „Burgas, Ahtopol, Nesebar, Sozopol“
- GRUEV and TOMOV, 1986: 230-231. „South Black Sea side (Ahtopol); Strandzha Mountain (Bolyarovo, village Fakiya, village Golyamo Bukovo); Sakar Mountain; Eastern Rhodopes (Druma Valley in Harmanli District); Mt. Golo Bardo; nr. village Marikostinovo (Petrich District)“
- TOMOV and GRUEV, 1987: 261. „Strandzha Mountain (Bolyarovo, village Golyamo Bukovo, village Fakiya and above Ahtopol)“
- GRUEV, 1992: 264. „dam Iskar, village Dositeevo“
- GRUEV and TOMOV, 1998: 90. „Black Sea area; Harmanli (Druma Valley); village Golyamo Bukovo; village Fakiya; Bolyarovo; Ahtopol; Nesebar; Sozopol; dam „Iskar; Haskovo District (Dositeevo)“
- GRUEV and BECHEV, 2000: „North-Bulgarian, South-Bulgarian and Black Sea biogeographical regions“
- GRUEV, 2003 b: 65. „Strandzha Mt.: Bolyarovo, above Ahtopol, village Golyamo Bukovo, village Fakiya“
- GRUEV and DÖBERL, 1997: 160. „Bulgaria (South and East)“
- GRUEV, 2001: 17. „Bulgaria“
- GRUEV, 2002: 27. „Mt. Sakar“
- GRUEV, 2002 b: 41-42. „Ivailovgrad“
- GRUEV, 2003 a: 48. „Sakar: above village Dositeevo“
- GRUEV, 2004: 445. „Eastern Rhodopes“

Croatia

- KUTSCHERA, 1862: 103. „Dalmatia“ – *Longitarsus cuprinus*
- WEISE, 1893 [1881-1893]: 1014. „Dalmatien [Dalmatia]“ – *Longitarsus cuprinus*, 1015 – *L. corynhius*
- APFELBECK, 1914: 445, 1916: 390. „Dračevo (nr. Metković)“
- GRUEV and DÖBERL, 1997: 160; GRUEV, 2001: 17 „Croatia (Dalmatia)“

Greece

- REICHE et SAULCY, 1858: 47. „Athens“ (Locus typicus) – *Haltica corynthia*
- OERTZEN, 1886: 290. „Griechenland [Greece]“ – *Longitarsus cuprinus*
- WEISE, 1888 [1881-1893]: 1014. „Jonische Inseln [Ionian Islands]“ – *Longitarsus cuprinus*
- HEIKERTINGER, 1914 [1912-1914]: 81. „Kefalinia [Kephallonia]: Argostoli; Zante [Zakintos]; Kalamaki; Kreta: Kandia [Crete: Candia]“
- WINKLER, 1930 [1929-1930: 1330]. „Gr [Greece]“
- WITTMER, 1935: 286: „Rodi [Rhodos]: Neocoria“

- CSIKI and HEIKERTINGER, 1940: 117 . „Kreta [Crete] „
MÜLLER, 1953: 528. „Corfu [Island Kerkira]“
DACCORDI, 1977. Creta [Crete]: Candia“
GRUEV, 1990: 325. „Is. Kerkira“
WARCHALOWSKI, 1967: 629. „Serrae [Sere or Seres], Lithochoron, [Lithoro], Attiki, Olympia, Korfu [Island Kerkira], Zante [Island Zakynthos], (Kalamaki)“
LEONARDI, 1972: 26. „Rodi [Rhodos]“
GRUEV and DÖBERL, 1997: 160; GRUEV, 2001: 17. „Greece (incl. Ionian Islands and Crete)“
GRUEV, 2002: 27. „Peloponnes: Galata“
Malta
^{44.}GRUEV and DÖBERL, 1997: 160 „Mdina“
Macedonia
GRUEV, 1992: 264. „Kavadarci“
GRUEV and DÖBERL, 1997: 160; GRUEV, 2001: 17. „Macedonia“
ASIA
Cyprus
CSIKI and HEIKERTINGER, 1940: 117. „Cypern [Cyprus]“
GOERGHIU, 1977: 48; GRUEV, 1995: 335. „Cyprus“
BIONDI, 1994: 13. „Chypre [Cyprus]“
Turkey
GÖK et al., 2004: 360. „Isparta, village Gelincik; Suleyman Demirel University Campus; Gökdere village“

Longitarsus corynthius s. l. occurs the Mediterranean and Submediterranean zones. It is a polytypic species: the eastmediterranean sbsp. *corynthius* is distributed in the localities pointed above; the sbsp. *metallescens*– in South Croatia, France, Italy (incl. Sardinia and Sicily), Malta and Spain, and the sbsp. *multipunctatus* – in North Africa [Algeria, Morocco and Tunisia]). *L. corynthius* s. str. is known in Bulgaria from the Struma-Mesta subregion, Lower Maritsa-Lower Tundzha subregion and Strandzha subregion of the South-Bulgarian biogeographical region, submountainous parts below the Vitosha-Ihtiman subregion of the Mountainous biogeographical region, and the Black Sea biogeographical region; with transitional – mediterranean, transitional - continental and maritime climate. It was classified as a member of the East-Mediterranean element of the Mediterranean faunistic complex (GRUEV and BECHEV, 2000).

BIONOMY

L. corynthius s. l. has been established from March till September in various parts of its area, on species of *Boraginaceae*. In Bulgaria sbsp. *corynthius* was found on *Echium italicum*.

Phyllotreta pontoaegeica Gruev, 1982

Ph. pontoaegeica Gruev, Deutsche Entomologische Zeitschrift, N. F., 29: 99-100

DISTRIBUTION

EUROPE

Bulgaria (Map 6)

GRUEV, 1982: 99-100. „Burgas“ [East Bulgaria, at the Black Sea side; nr. the salterns] (Locus typicus)

GRUEV and BECHEV, 2000: 30. „Black Sea biogeographical region“

Greece

GRUEV, 1990: 340. „Central Greece: Almiros“

Macedonia

GRUEV, 1998: 42-43. „Novi Dojran“

ASIA

Turkey

GRUEV and DÖBERL, 1997: 300. „İçel: Gülnar“ [Mersin District] and „Antalya: Side“

GÖK and ÇILBIROĞLU, 2003: 67. „Egridir-Isparta“

Phyllotreta pontoaegeica occurs the eastern parts of the Mediterranean and Submediterranean (partly maritime) zones of the Balkan Peninsula and West Turkey. It was classified as a member of the East-Mediterranean element of the Mediterranean faunistic complex in Bulgaria (GRUEV and BECHEV, 2000). In Bulgaria the species has been found in the Black Sea biogeographical region only.

BIONOMY

The species was established in May and June, in conditions of maritime and subarctic, mediterranean and submediterranean climate of the area. Food plants have not been found. Classified as a member of the East-Mediterranean element of the Mediterranean faunistic complex in Bulgaria (GRUEV and BECHEV, 2000; GRUEV, 2003)

Phyllotreta variipennis (Boieldieu, 1859) s. str.

Haltica variipennis Boieldieu, 1859, Ann. Soc. ent. Fr., 3: 477

DISTRIBUTION

EUROPE

Bosnia-Herzegovina

APFELBECK, 1914: 444. „Herzegovina: Stolac; Domanović“

Bulgaria (Map 7)

GRUEV and TOMOV, 1998. „village Dositeevo (Haskovo District; lowland in Matitsa Valley)“

GRUEV and BECHEV, 2000: 31. „South-Bulgarian biogeographical region“

Croatia

APFELBECK, 1914: 444. „Dalmatia: Zara [Zadar]; Metković“

HEIKERTINGER, 1925 [1925-1926]: 122. „Spalato [Split], Vis [Is. Vis], Kurzola [Is Korčula], Lapad [Island Lopud], Lagosta [Is. Lastovo], Lacroma [Is. Lokrum]

MÜLLER, 1953: 494. „Pula [Pola], Salvore [Savudija], Val di Leme [Leme Valley], Unie [Is. Unije]“

GRUEV, 1992: 363. „Slano“

NOVAK, 1952: 320. „Trogir, Sućurac, Solin, Split, Kupari, Island Lošinj, Island Unije, Is. Šolta, Is. Hvar, Is. Sv. Andrija“

NONVEILLER, 1960: 261. „Dubrovnik“

France

BOIELDIEU, 1859. „Monpellier“ (Locus typicus)

DOGUET, 1994: 87-88. „dans tous départements méditerranéens“ [all the Mediterranean districts]; Massif-Central, Alpes: Aveyron; Montlaur; Alpes de Haute-Provence; Drome; Savoie; Corse [Corsica]“

Greece

WEISE, 1889: 61. „Karpathos [Island Karpathos]“

OERTZEN, 1886: 290. „Attiki [Attica]; Parnassos“

APFELBECK, 1914: 444. „Phaleron nr. Athens“

DACCORDI, 1977: 87. „Crete: Perivolia“

GRUEV, 1990: 341. „Thessaloniki, Athens: Mt. Lykavitos, Is. Kerkira“

Italy

WEISE, 1888 [1881-1893]: 873. „Trieste; Gorz“ [Gorizia]

PAGANETTI, 1910: 171. „Varano; Is. Elba“

PORTA, 1934: 346. „Tutta Italia [Whole Italy], Is. Elba, Is. Capri, Sicilia [Sicily]“

BIONDI and DACCORDI, 1995: 1203. „North and South Italy, Sicily, Sardinia

Macedonia

GRUEV, 1983: 24. „Skopje“

Montenegro

NONVEILLER, 1984: 288. „Durmitor Mt.: Crno Jezero“

Portugal

SEABRA, A. 1943: 107. „Lusitania [Portugal]“

BASTAZO et al., 1993: 63. „Coimbra“

Slovenia

MÜLLER, 1953: 494. „Isola [Izola]“

Spain

WOLLASTON, 1864: 407. „Tenerife“ (Canary Isls)

JOLIVET, 1953 a: 30. Baleares: „Majorque [Is. Mallorca], Ibiza [Is. Ibiza]“

BASTAZO et al. 1993: 63. „Cadiz, Huesca, Malaga“

PETITPIERRE, 1997: 279. „Aragon (Moncayo)“

PETITPIERRE, 1999: 119. „Barcelona, Canoves, Tarragona, Lleida, Girona, Castello, Valencia, Osca, Malaga, Cadis, Guadarrama (Madrid), Sierra Nevada, Granada“

VIVES, 2000: 17. „Zaragoza“

BASELGA and NOVOA, 2001: 126. „Galicia“

Switzerland

DÖBERL, 1995: 48. „Genf: Sionnet“

ASIA

Cyprus

BIONDI, 1994: 17-18. „Mandria, Kilani (Krios), Pera Pidi“

Iraq

GRUEV, 1998 a: 41. „an-Najaf Shabakan“

Israel

FURTH, 1979: 33. „Sinai Mountain“

Turkey

HEIKERTINGER, 1941: 34. „Kleinasien [Asia Minor]“

TÖLG, 1938: 237. „Konstantinopel [Istanbul]; Polnisches Tschiftlik [Eskişehir Çiftlik]; Kutschuk Tschekmedsche [Küçük Çekmece]“

KRÁL, 1967: 261. „Ankara Baraj“

GRUEV and KASAP, 1985: 59. „Eğridir (Isparta)“

AFRICA

Algeria

DOGUET, 1984: 251. „Tlemcen; Oran“

Egypt

HEIKERTINGER, 1941: 34. „Agypten [Egypt]“

Morocco

JOLIVET, 1967: 336. „Tanger; Meknés“

DOGUET, 1984: 251. „Tanger, Tuza, Oued Judias“

Sahara

HEIKERTINGER, 1941: 34. „Sahara“

COBOS, 1958: 352. „Sahara. Hoggar: Adrar Amezzeroui“

Sudan

HEIKERTINGER, 1941: 34. „Sudan“

Phyllotreta variipennis is a polytypic species. Its nominate form is distributed around the whole Mediterranean Sea (partly in the Submediterranean zone), and the subspecies *aegyptiaca* Pic, 1915 – in Saudi Arabia, Algeria, Libya, Aegypt, Sudan, Chad, Senegal, Canary Islands. In Bulgaria *Phyllotreta variipennis* s. str. was established in the Lower Maritsa-Lower Tundzha subregion of the South-Bulgarian biogeographic region (transitional-mediterranean climate). Zooogeographically the species belongs to the Holomediterranean element of the Mediterranean faunistic complex (GRUEV and BECHEV, 2000)

BIONOMY

The species is known from January till December in various parts of its area (in Bulgaria – in August), on many species of *Brassicaceae*, and also on *Reseda* and *Capparis*. In Bulgaria host plants have not been recorded.

Psylliodes pallidicolor, Pic, 1903

P. pallidicolor Pic, L'Echange, p. 125

DISTRIBUTION

EUROPE

Bulgaria (Map 8)

GRUEV, 1971: 59. „Strandža-Gebirge [Strandzha Mt.: village Golyamo Krushevo]“ –

Psylliodes luteola wachasmanni

GRUEV, 1978: 212. „Outfall of Ropotamo; Sandanski - village Lilyanovo; vill. Golyamo Krushevo“.

GRUEV, 1988 b: 114. „Outfall of Ropotamo“

GRUEV and TOMOV, 1998: 126. „Black Sea area (outfall of Ropotamo; Mt. Strandzha: village Golyamo Krushevo), Pirin Mts. (Sandanski – Lilyanovo)“; South-West Bulgaria (Kresna) [railway station Pirin]“

GRUEV and BECHEV, 2000: 32. „Middle-Bulgarian, South-Bulgarian and Black Sea biogeographical regions“

GRUEV, 2002: 32. „Montana; Konyavska Mt.: village Tavalichevo; Melnik“

Greece

SAHLBERG, 1913: 250. „Greece“

Spain

WARCZALOWSKI, 2003: 531. „Spain“

ASIA

Iraq

FURTH, 1983: 44. „Iraq“

Israel

FURTH, 1983: 44. „Israel“

Lebanon

PIC, 1903: 125. „Mt. Liban [Lebanon Mts.]: Breitmari“ (Lectotype)

DOGUET, 1992: 362. „Liban, Broumana; Liban; Beyrouth“ (Paralectotype)

Syria

DOGUET, 1992: 362. „Syrie, Akbes“ (Paralectotype)

Turkey

DOGUET, 1976: 91. „Amasia, 100 m“

DOGUET, 1992: 362. „Turquie [Turkey], Amasia, 420-900 m“ (Paralectotype)

GRUEV and DÖBERL, 1997: 347. „Antalya: Aseki, 1200 m“

ASLAN et al. 1999: 406. „Içel: Gülnar“

AFRICA

Algeria

GRUEV and DÖBERL, 1997: 347. „Constantine, sud Ain Yagout, Les Lacs“

Psylliodes pallidicolor is distributed mainly in the mediterranean and partly in the submediterranean and moderate-continental climatic zones of Europe, Asia and Africa. It is a member of the Holomediterranean element of the Mediterranean faunistic complex in Bulgaria (GRUEV and BECHEV, 2000). Its localities, marked by now, lie in the Struma-Mesta subregion and the Strandzha subregion of the South-Bulgarian biogeographical region, the Upper Struma subregion of the Middle-Bulgarian biogeographical region, the Fore-Balkan subregion of the North-Bulgarian biogeographical region, and in the Black Sea biogeographic regions with transitional-mediterranean, transitional-continental, moderate-continental and maritime climate.

BIONOMY

The species has been found from May till August in its area, including in Bulgaria. Host plants are not known.

***Psylliodes puncticollis* Rosenhauer, 1856**

P. puncticollis Rosenhauer, *Thiere Andalusiens*, p. 341

DISTRIBUTION

EUROPE

Albania

HEIKERTINGER, 1926: 110. „Albania“

Bulgaria (Map 9)

GRUEV, 1971: 59. „Schwarzes Meer [Black Sea area]: Mičurin [Tsarevo]“
WARCHALOWSKI, 1974: 532. „Hisar – Momina banja“ – *Psylliodes luteola*
GRUEV AND BECHEV, 2000: 32. „Middle-Bulgarian and Black Sea biogeographical regions“

Croatia

HEIKERTINGER, 1926: 110. „Istrien [Istria]“
CSIKI and HEIKERTINGER, 1940: 565. „Dalmatien [Dalmatia]“

France

HEIKERTINGER, 1926: 110. „Südfrankreich [South France]“
DOGUET, 1994: 576. „Littoral mediterranéen; Corse [Mediterranean littoral; Corsica]“

Greece

HEIKERTINGER, 1926: 110. „Kreta [Crete]“

Italy

HEIKERTINGER, 1926: 110. „Liguria; Triest [Trieste]“
LEONARDI, 1970: 222. „Belvedere Grado (Gorizia)“
LEONARDI, 1975: 70. „Liguria, Puglia, Basilicata“
BIONDI, 1990: 172. „Tutta la penisola e le isole principali [whole Apenninian Peninsula and the islands: Sicilia; Sardinia]“

Spain

ROSENHAUER, 1856: 341. „Malaga: Andalusia“ (Locus typicus)
JOLIVET, 1953 a: 25. „Majorque [Balears: Majórca]“
CODINA, P. 1963. „Nava del Espino, Mesa del Poyo del Manquillo“
PETITPIERRE, 1999: 124. „Barcelona; Girona“

AFRICA

Algeria

CSIKI and HEIKERTINGER, 1940: 565. „Algerien [Algeria]“
GRUEV and DÖBERL, 1997: 350. „Plage Zeralda“

Tunisia

NORMAND, 1937: 136. „Tunisie [Tunisia]“

The species occurs mainly the Mediterranean and partly the Submediterranean zones of Europe and Africa. In Bulgaria it was found in the Upper –Thrace subregion of the Middle-Bulgarian biogeographical region (with transitional-continental climate) and the Black Sea (with maritime climate) biogeographical region, and was classified as a member of the Holomediterranean element of the Mediterranean faunistic complex (GRUEV, 1988).

BIONOMY

Known from April till June (in Bulgaria – June) in its area, on *Centaurea*, *Apocynum*, *Oenothera* and spp. of *Poaceae* (*Ammophila*, *Calagrostis*, *Stipa*). In Bulgaria host plants have not been established.

Subfamily HISPINAE

Di cladispa testacea (Linnaeus, 1767)

Hispa testacea Linnaeus, Syst. Nat., ed.12: 603

DISTRIBUTION

EUROPE

Albania

MOHR, 1966: 376. „Lukova (nr. Saranda), Poličan westlich Tomor, Durrësi (nr. Dajti)“ – *Hispa testacea*

Bulgaria (Map 10)

GRUEV, 1968: 64. „Strandscha-Gebirge (Südost-Bulgarien): Dorf Balgari [Strandzha Mt. (South-West Bulgaria) village Balgari]“

GRUEV, 1980: 89. „village Sinemorets“

TOMOV, V. and GRUEV, B. 1987: 264. „Strandzha Mt.: village Balgari, village Koszti and above village Sinemorets“

GRUEV and BECHEV, 2000: 32. „South-Bulgarian and Black Sea biogeographical regions“

VIG, 2002: 159. „Mičurin [Tsarevo], Lozenec“

Croatia

APFELBECK, 1914: 448. „Spalato“ [Split]; Is. Lastovo, Is. Meleda [Mljet]“

UHMAN, 1952: 233. „Pola [Pula]“

MÜLLER, 1953: 594. „Punta Salvore [Savudrija], Pola [Pula], Dalmatzia [Dalmatia]; Brioni, Lussin, Arbe [Islands Brioni, Lošinj, Rab]“ – *Hispa testacea*

NOVAK, 1952: 326. „Biograd, Šukovan, Split (Marjan), Janiina, Ugljan, Iž, Šcedro, Rava, Hvar, Brać, Dugi otok, Šolta, Korčula, Biešvo, Lastovo, Mljet“ – *Hispa testacea*

NOVAK, 1970: 43. „Island Sveti Klement“

GRUEV, 1979: 141. „Dubrovnik“

France

SAINTE-CLAIRE DEVILLE, 1937: 370. „Charente- Inf., Lande; Languedoc; Provence; Isère“ – *Hispa testacea*

BOURDONNE, J.-C. 1993: 86. „Pyrenees orientalis: Mosset“ [East-Pyrenees: Mosset] – *Hispella testacea*

PORTA, 1934: 372. „Corsica“ – *Hispa testacea*

Greece

OERTZEN, 1886: 291. „Attiki [Attica]; Corfu [Is. Kerkira]“ – *Hispa testacea*

WITTMER, 1935: 287. „Rodi [Rhodos]: „Neocoria, Fileremo, Trianda, Rodino, Jane“ – *Hispa testacea*

MAULIK, 1939: 131, 153. „Crete: Assietaes“ – *Hispa testacea*

UHMAN, 1952: 233. „Naxos; Thassos“

JOLIVET, P. 1954: 289. „Mont Olympe [Olimpos]: Stavros, Prioni, 1000 m“

KARNOŽICKIJ, N. 1959: 251. „Is. Thassos (Limen)“ – *Hispa testacea*

TZANAKAKIS, SELMAN and THOMPSON, 1963: 422. „Mali: Aegialia [in Peloponnes]“

GRUEV, 1968: 350. :“Mont Athos [Mt. Atos]“

GEISTHARDT, 1975: 18. „Kassandra“ - *Hispa testacea*

DACCORDI, 1977: 90. „Marathos“

GRUEV, 1992: “Thassos ; Iti; Amfiklia; Scaloula Doris“

Italy

WEISE, 1893 [1881-1893]: 1063. „Triest [Trieste]“ – *Hispa testacea*

PORTA, 1934: 372. „Tutta Italia [whole Italy], Islands Elba, Capri, Patelleria“ – *Hispa testacea*

UHMAN, 1952: 233. „Calabria: Aspromonte“

MAGISTRETTI and RUFFO, 1959: 119. „Sicilia [Sicily]; Sardegna [Sardinia], tutte le regioni centro-meridionali, fino alla Liguria nel settore tirenico e alla Romagna in quello adriatico [all the centro-southern regions, to Liguria in the Thyrenian part, and also in Romagna of the Adriatic part]; Pantelleria“ – *Hispa testacea*

DACCORDI and RUFFO, 1971: 48. „Ponza“ - *Hispa testacea*

BIONDI, REGALIN, DACCORDI and POGGI, 1995: 646. „Sardegna [Sardinia] (Caprera, Santo Stefano, Molara, San Pietro, Asinara)“

BIONDI and LAURENZI, 1997: 502. „Abruzzo“

Portugal

UHMAN, 1949: 9. „Portugal“ – *Hispa testacea*

UHMAN, 1952: 233. „Coimbra“

Spain

UHMAN, 1949: 9. „Kanaren [Canarian Isls]“ – *Hispa testacea*

JOLIVET, 1953 a: 42. „Minorquie; Majorque [Menorca; Mallorca]“ - *Hispa testacea*

COBOS, 1954: 154. „Sierra Nevada“ – *Hispa testacea*

STEINHAUSEN, 1965: 33. „Ibiza [Baleares: Is Ibiza]“ – *Hispa testacea*

SART, 1968: 131. Islands „Menorca, Mallorca, Ibiza“ [Baleares] – *Hispa testacea*

DACCORDI and PETITPIERRE, 1977: 234. „Fuente: Bermeja“

BASELGA and NOVOA, 1999: 311. „Coruña“

BASELGA and NOVOA, 2000: 175. „Lugo“

VIVES, 2000: 17. „Zaragoza“

BASELGA and NOVOA, 2002: 67. „Ourence“

ASIA

Syria

CSIKI AND HEIKERTINGER, 1940 [1939-1940]: 73. „Syrien {Syria}“

UHMAN, 1952: 233. „Jaffa“

Turkey

CSIKI AND HEIKERTINGER, 1940 [1939-1940]: 73. „Kleinasien [Asia Minor]“

UHMAN, 1949: 9. „Bosporus“; „Kleinasien [Asia Minor]“

LOPATIN, 1981: 376. „Sapanca gölü“

GÖK AND ÇILBIROGLU, 2003: 71. „Egridir-Isparta“

AFRICA

North Africa

LINNAEUS, 1767: 603. „Barbaria [Barbary]“ (Locus typicus)

Morocco

KOCHER, 1858: 145. „Maroc [Morocco]“

Algeria

CSIKI AND HEIKERTINGER, 1940: 73. „Algier [Algeria]“ – *Hispa testacea*

BOUNECHADA 1994: 246. „Nord-Est de l’Algerie: Setif [North-East Algeria: Setif]“

Tunisia

NORMAND, 1937: 137. „Ain Draham; Fernana; Le Kef; Souk-el-Arba; Téboursouk“

Dicladispa testacea occurs mainly the Mediterranean and partly the Submediterranean zones. In Bulgaria it was found in the Strandzha subregion of the South- Bulgarian (with transitional- mediterranean climate) biogeographical region and the Black Sea biogeographical region, and was classified as a member of the Holomediterranean element of the Mediterranean faunistic complex in Bulgaria (GRUEV, 1980; GRUEV AND BECHEV, 2000)

BIONOMY

The species has been found from April till November in various parts of its area, on *Cistus* spp. In Bulgaria it is known from May to June, on *Cistus salvifolius*

ZOOGEOGRAPHY

The Mediterranean *Chrysomelidae* taxa in Bulgaria belong to two elements of the Mediterranean faunistic complex: Holomediterranean (*Crioceris paracenthesis*, *Macrolenes dentipes*, *Phyllotreta variipennis*, *Psylliodes pallidicolor*, *P. puncticollis*, *Dicladispa testacea*) and East-Mediterranean (*Colaspidea grandis*, *Longitarsus corynthius* s. str., *Phyllotreta pontoaegeica*). They inhabit the parts of the country, which are influenced by the mediterranean climate (see the maps).

All the very Mediterranean species are stenochoric and stenotopic relict forms without possibilities for an expansion beyond the Mediterranean and Transitional-Mediterranean (Submediterranean) zones (GRUEV, 1990 a). As for the Mediterranean leaf beetles, their distribution depends of their mediterranean food plants (*Crioceris paracenthesis* – of *Asparagus acutifolius*; *Dicladispa testacea* – of *Cistus* spp; etc.). A definitive factor for their distribution is however the climate. A good illustration is for example the distribution of the species *Phyllotreta variipennis*. Some of its food plants of *Brassicaceae* occur a very large area out of the Mediterranean region (*Sinapis arvensis* and *Brassica oleracea* are cosmopolites; *Sisymbrium officinale* – Europe and Siberia, and others). In spite of that the area of *Phyllotreta variipennis* however is not spread but of the Mediterranean and Submediterranean climatic zones.

Remarks. Five taxa, classified previously by the author as members of the Mediterranean faunistic complex in Bulgaria, have to be taken out of the Mediterranean species list in the country: *Cryptocephalus prusias* Suffrian, 1853 (Bosnia-Herzegovina, Bulgaria, Syria, Jordan; recently it was established that the species occurs also Asiatic Turkey and Armenia) *Chrysolina grossa* (Fabricius, 1792) (recorded to the fauna of Bulgaria on the basis of a false label: „Plovdiv“), *Aphthona bonvouloiri* Allard, 1869 (Sicily, East Bulgaria: Emineh Balkan; European and West Asiatic Turkey, Rhodos, Syria, Lebanon, Israel; recently established in East Turkey: Erzurum District, 1600-1850 m, and in North-West Iran: Horasan), *Mantura cylindrica* Miller, 1880 (Croatia [Dalmatia, incl. the Adriatic Isls]; Greece [incl. Crete and Zakinthos], Italy [incl. Sicily], Asiatic Turkey; recently established in Azerbaijan and Syria, and confirmed from Caucasus), and *Neocrepidodera impressa obtusangula* (J. Daniel, 1904) (Bulgaria: Black Sea area; Greece: incl. Crete, South Sporades, Is. Lesbos, Kyklades; Cyprus; recently recorded from East Turkey: Erzurum Distr., 1600 m).

Undoubtedly the species *Cryptocephalus prusias*, *Aphthona bonvouloiri*, *Mantura cylindrica* and *Neocrepidodera* (? sp.) *obtusangula* have Asiatic origin and they have to be added to the Southwest-Asiatic faunistic complex (? perhaps to the Subiranian element) in Bulgaria

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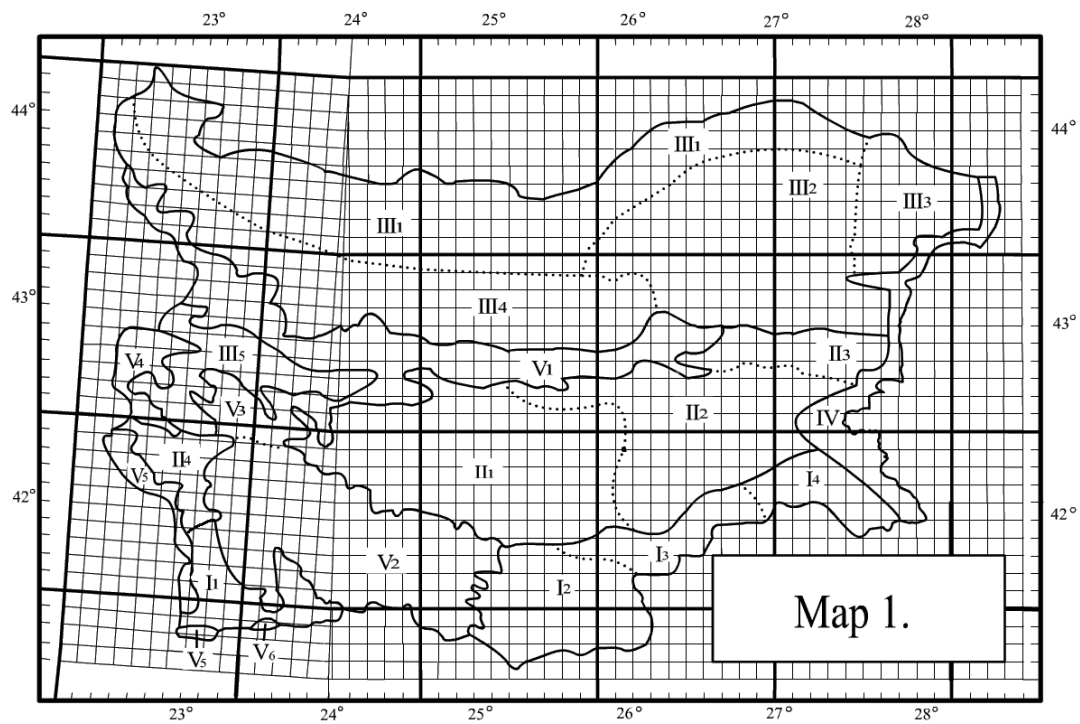
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Biogeographical regions and subregions of Bulgaria

- I. South-Bulgarian region:** I.1. Struma-Mesta subregion, I.2. East-Rhodopes subregion, I.3. Lower Maritsa-Lower Tundzha subregion, I.4. Strandzha subregion;
- II. Middle-Bulgarian region:** II.1. Upper Thrace subregion, II.2. Tundzha hilly-plane subregion, II.3. East Stara Planina subregion, II.4. Upper Struma subregion;
- III. North-Bulgarian region:** III.1. Danube subregion, III.2. Ludogorie subregion, III.3. Dobrudzha subregion, III.4. Fore-Balkan subregion, III.5. Sofia-Radomir subregion;
- IV. Black Sea region; V. Mountainous region:** V.1. Stara Planina ridge subregion, V.2. Rila-Rhodopes subregion, V.3. Vitosha-Ihtiman subregion, V.4. Kraishite-Konyavska subregion, V.5. West-Bulgarian border mountainous subregion, V.6. Slavyanka subregion (after Gruev, 1988 a)

