

Z.Arb.Gem.Öst.Ent.	55	97-123	Wien, 15. 12. 2003	ISSN 0375-5223
--------------------	----	--------	--------------------	----------------

The Click Beetles of Cyprus **with descriptions of two new species and notes on species of** **the genus *Haterumelater* ÔHIRA, 1968** **(Coleoptera: Elateridae)**

Rüdiger PREISS and Giuseppe PLATIA

Abstract

During a 3-year stay in Cyprus (Preiss) new material was collected and access to the collections of the Ministry of Agriculture in Nicosia, of Mr. Makris and Mr. Georgiou in Limassol and of the Agricultural University in Athens led to a revision of the elaterid fauna of Cyprus. The present contribution treats 37 species.

Nine species are recorded for the first time from Cyprus. Two new species are described. *Drasterius makrisi* n. sp. can be separated from the very variable *D. bimaculatus* (ROSSI, 1790) by the coarse puncturation on the disc of the wider pronotum. *Cardiophorus georgioui* n. sp. can easily be distinguished from *Cardiophorus miniaticollis* CANDÈZE, 1860 by the orange coloured legs and from some south European species (Italy), in particular *C. argiolus* (GÉNÉ, 1836) and *C. ulcerosus* (GÉNÉ, 1836), by the absence of markings on the pronotum. The female of *Agriotes magnanii* PLATIA & GUDENZI, 1996 is also described.

The *Haterumelater* complex is partially revised. A new combination is proposed: *Haterumelater fulvago* (MARSEUL, 1868) n. comb., and two taxa are synonymised with this variable species: *Haterumelater picinus* (BUYSSON, 1891) n. syn. and *Haterumelater preissi* SCHIMMEL, 1995 n. syn. The status of *Haterumelater languidus* (BUYSSON, 1891) and *Haterumelater tauricola* (GURJEVA, 1957) remains uncertain.

Zusammenfassung

Während eines 3-jährigen Aufenthalts auf Zypern (Preiss) führte neu gesammeltes Material, sowie das Studium von Elateriden der Sammlungen des zypriotischen Landwirtschaftsministeriums in Nikosia, der Herren Makris und Georgiou aus Limassol und der Landwirtschaftlichen Universität in Athen zu einer Revision der Elateridenfauna Zyperns. 37 Arten werden in dieser Arbeit behandelt.

Neun Arten konnten zum ersten Mal für Zypern verzeichnet werden. Zwei neue Arten werden beschrieben. *Drasterius makrisi* n. sp. kann vom sehr variablen *D. bimaculatus* (ROSSI, 1790) anhand der doppelten Punktierung auf der Scheibe des breiteren Halsschildes unterschieden werden. *Cardiophorus georgioui* n. sp. unterscheidet sich von *C. miniaticollis* CANDÈZE, 1860 anhand der orange gefärbten Beine und von den südeuropäischen Arten (Italien), besonders von *C. argiolus* (GÉNÉ, 1836) und *C. ulcerosus* (GÉNÉ), anhand des einfärbigen Halsschildes. Das Weibchen von *Agriotes magnanii* PLATIA & GUDENZI, 1996 wird beschrieben.



Map of Cyprus

Der *Haterumelater*-Komplex wird teilweise revidiert. Eine neue Kombination, *Haterumelater fulvago* (MARSEUL, 1868) n. comb., wird vorgeschlagen und zwei Taxone werden zu dieser variablen Art synonym gestellt: *Haterumelater picinus* (BUYSSON, 1891) n. syn. und *Haterumelater preissi* SCHIMMEL, 1995 n. syn. Der Status von *Haterumelater languidus* (BUYSSON, 1891) und *Haterumelater tauricola* (GURJEVA, 1957) konnte nicht vollständig geklärt werden.

Introduction

Until now the click-beetle fauna of Cyprus was poorly known; comprehensive faunistic records were contributed by only two authors, BAUDI (1871) and over 100 years later by GEORGHIOU (1977), who included several misidentified species based on the collection of the Ministry of Agriculture in Cyprus. This collection was established by G. A. Mavromoustakis in the 1920s and extended mostly by Themistocles Shiakides after the 1930s. In his catalogue, Georghiou missed many species, which had been sent to The Natural History Museum in London (via the Commonwealth Institute of Entomology) or kept in the private collection of Shiakides. In the 1950s G. E. Bryant (The Natural History Museum) recorded species, which he received for determination. His comprehensive catalogue of the Coleoptera of Cyprus was never published, but proved that more species were known from the island than later recorded by Georghiou. After Shiakides died (23rd of February 1998, Makris, *in litt.*), the majority of his private collection was transferred to the University of Athens. Some parts are still kept by his relatives or have been lost (Prof. Emmanuel, pers. com.).

Materials and methods

The approximately 700 specimens studied are preserved in the following collections:

AUA, Agricultural University of Athens, Laboratory of Entomology; BMNH, The Natural History Museum, London; BOcH, Benjamin Orbach coll., Haifa; BcNMNH, Buysson coll., National Museum of Natural History, Paris; BcMT, Baudi coll., Museo Regionale di Scienze Naturali, Turin; MT, Museo Regionale die Scienze Naturali, Turin; CcV, Peter Cate coll., Vienna; EOcT, Eylon Orbach coll., Kiryat Tivon; GcL, Gabriel Georgiou coll., Limassol; LcMH, Lindberg brothers coll., Museum of Natural History, Helsinki; McL, Christodoulos Makris coll., Limassol; MoACyp, Ministry of Agriculture, Department of Entomology, Nicosia; NMNH, National Museum of Natural History, Paris; NMW, Museum of Natural History, Vienna; PcNMNH, Maurice Pic coll., National Museum of Natural History, Paris; PcG, Giuseppe Platia coll., Gatteo; PcC, Rüdiger Preiss coll., Carinthia; ScB, Ondrej ausa coll., Bratislava; ScV, Rainer Schimmel coll., Vinningen; TU, Tel-Aviv University coll.; ZIN, Zoological Institute coll., St. Petersburg.

Literature citations generally refer to primary literature and papers specifically recording species from Cyprus. The unpublished manuscript of BRYANT, kept in file at the Natural Histroy Museum, London, was probably compiled between 1950 and 1960. All relevant literature is cited where systematic changes are proposed.

Notes on geographical terms: Lefkosia = Nicosia, the capital of Cyprus and one of the 6 districts (see map). In many cases, collectors indicated the district rather than the town. Lemesos = Limassol; Paphos = Pafos; Chionistra = Olympos = the peak of Troodos Mountains. The most important localities are indicated in the map.

1. *Adelocera pygmaea* (BAUDI, 1871) (fig. 1)

Lacon pygmaeus BAUDI, 1871: 49.

Lacon pygmaeus BAUDI, 1871 – BRYANT: 49.

Type locality: Cyprus.

Distribution: Turkey, Cyprus, Lebanon.

Material examined: CYPRUS – Troodos Mts., Dhiarizos Riv., N34°53'40" E32°44'50", 17. VII. 1999, leg. Preiss, 1 ex. (PcC).

Remarks: This species came to light near the well vegetated river bed of Dhiarizos River together with *Peripontius ingridae* SCHIMMEL, 1996 and *Pittonotus theseus* (GERMAR, 1817). *Haterumelater fulvago* (MARSEUL, 1868) also occurs there.

2. *Lacon gillerforsi* PLATIA & SCHIMMEL, 1994

Lacon gillerforsi PLATIA & SCHIMMEL, 1994: 78.

Adelocera sp. – GEORGHIOU 1977: 61.

Type locality: Turkey (Yanisli).

Distribution: Greece (Peloponnes), Turkey, new to Cyprus.

Material examined: CYPRUS – Lemessos, Souni, 06. VI. 2001, leg. Georgiou, 1 ex. (GcL);

Remarks: A specimen dating from June 1938, recorded as *Adelocera* sp. in the paper of GEORGHIOU (1977: 61) should probably be referred to this species. *Adelocera pygmaea* can be excluded, since Georghiou did not notice HAYEK's "Reclassification of Agrypninae" (1973), so would have recorded *pygmaeus* as *Lacon*. This specimen was not found in any of the pertinent collections.

3. *Lacon punctatus* (HERBST, 1779)

Elater punctatus HERBST, 1779: 316.

Adelocera carbonaria SCHRANK – BAUDI 1871: 49.

Adelocera punctata HBST., 1779 – BRYANT: 49.

Adelocera punctata HBST. – GEORGHIOU 1977: 61.

Type locality: Germany.

Distribution: C-Europe (S & SE parts), S- & SE-Europe, Caucasus, Asia Minor, Cyprus, Middle East, N-Africa.

Material examined: CYPRUS – Famagusta env., I. 1996, leg. Preiss, 1 ex. (PcC); Platres, 05. I. 1968, leg. Shiakides, 1 ex. (AUA); Larnaca, Salt Lake, 29. I. 1996, leg. Preiss, 23 ex. (PcC, McL, MoACyp); Stavrovouni, 08. II. 1970, leg. Shiakides, 1 ex. (AUA); Troodos Mts., Macheras monastery, 10. II. 2001, leg. Makris, 2 ex. (McL); Asinou, 13. II. 1972, leg. Shiakides, 2 ex. (AUA); Kapoura, 05. III. 1972, leg. Shiakides, 1 ex. (AUA); Limassol, Armenochori, 13. IV. 1992, leg. Sama, 1 ex. (PcG); Platres, 10. XI. 1969, leg. Shiakides, 2 ex. (AUA); Kalokhorio, XII. 1938, leg. Shiakides, 4 ex. (MoACyp).

Remarks: This species is distributed all over the island and is generally found under the bark of rotten pine trunks, where it develops, sometimes in numbers on a single trunk. Makris (*in litt.*) also found specimens in rotten wood of *Prunus dulcis* and *Juglans regia*. Specimens found under the bark of eucalyptus probably stayed there over winter.

4. *Aeoloides grisescens* (GERMAR, 1844)

Cryptohypnus grisescens GERMAR, 1844: 151.

Heteroderes grisescens GERM. – BAUDI 1871: 51.

Drasterius grisescens GERM., 1844 – BRYANT: 49.

Aeoloides grisescens GERMAR, 1844 – WELLSCHMIED 1988: 119.

Type locality: Egypt & Mesopotamia.

Distribution: Asia Minor, Cyprus, Middle East, C-Asia, Arabian Peninsula, NE-Africa, Sudan, Chad.

Material examined: CYPRUS – Athienou env., VIII. 1994, leg. Preiss, 1 ex. (PcC).

Remarks: The specimen came to light at the edge of a village facing semi-arid open fields and grassland. It confirms Baudi's record of two specimens from Cyprus.

5. *Aeoloderma crucifer* (ROSSI, 1790)

Elater crucifer ROSSI 1790: 183.

Heteroderes crucifer ROSSI – BAUDI 1871: 51.

Heteroderes crucifer ROSSI, 1790 – BRYANT: 50.

Type locality: Italy (Toscana).

Distribution: S-Europe, Caucasus, Asia Minor, Cyprus, Middle East, C-Asia, N-Africa.

Material examined: CYPRUS – Yermasoia River, 3.-4. & 10. I. 1952, leg. Mavromoustakis, 2 ex. (BMNH); Foinikaria dam [Limassol distr.], 30. I. 2000, running on stone, leg. Makris, 1 ex. (McL); Yermasoia River, 20.- 31. I. & 04. III. 1950, leg. Mavromoustakis, 12 ex. (BMNH); Lemesos, Akrotiri, 24. III. 2000, under stone, leg. Makris, 2 ex. (McL, PcC); Lemesos, Fasouri, 25. V. 2002, leg. Makris, 101 ex. (McL, PcC); Limassol, 10. VI. 1939, leg. Lindberg, 1 ex. (LcMH); Limassol, 02. VII. 1939, leg. Lindberg, 2 ex. (*Oophorus*



fig. 1: *Adelocera pygmaea* (BAUDI), 5.1 mm



fig. 2: *Drasterius makrisi* n. sp., 5.6 mm

alginus det. Harald Lindberg) (LcMH); Limassol, XII. 1934, leg. Mavromoustakis, 3 ex. (BMNH)

Remarks: Makris collected this species with *Drasterius makrisi* n. sp. swarming in the late afternoon.

6. *Drasterius makrisi* n. sp. (figs. 2 & 3)

Drasterius figuratus GERM. – BAUDI 1871: 51.

Drasterius figuratus GERMAR, 1844 – BRYANT: 49.

Drasterius figuratus GERM. – GEORGHIOU 1977: 62.

Material examined. Holotype♂: CYPRUS – Troodos Mts., Dhiarizos Riv., E Agios Georgios, E 32°40'00", N 34°46'40", 18.VII.1999, leg. Preiss (BMNH). 61 Paratypes: 5 ex. same data as HT (PcC, PcG, CcV); Kakopetria, 17. I. 1924, leg. Shiakides (*Drasterius figuratus* GERMAR, det. ?), 1 ex. (AUA); Kakopetria, 19. I. 1924, leg. Wilkinson (*Drasterius figuratus* GERMAR, det. GE Bryant), 5 ex. (MoACyp, PcC); Kilani, Krios R., 09. X. 1937, leg. Mavromoustakis (*Drasterius bimaculatus* (R.), det. Platia 1996), 1 ex. (BMNH); Kykko, 15.-23. VI. 1939 & 15.-17. VII. 1939, leg. Lindberg, 2 ex. (LcMH); Agios Neophytos, 21.-22. VII. 1939, leg. Lindberg (*Drasterius figuratus* GERMAR, det. Harald Lindberg), 2 ex.

(LcMH); Akroteri Bay, 06. III. 1946, leg. Mavromoustakis, 1 ex. (BMNH); Dhekelia, 13. VII. 1958, leg. Connelly, 1 ex. (BMNH); Lemesos, Fasouri, 25. V. 2002, leg. Makris, 43 ex. (McL, PcC).

Remarks: The specimens at Dhiarizos River (leg. Preiss) were caught by watering gravel at the river bank. The 43 specimens collected by Makris were caught swarming in the late afternoon together with *Aeoloderma crucifer*.

Description. Male. Head blackish, pronotum entirely blackish or brown except underside of the anterior margin and the posterior angles lighter; scutellum black; elytra black with small yellowish spots very variable in shape and size; underbody blackish; antennae and legs yellow-ferrugineous; body covered with yellow-golden, dense pubescence, particularly at the base of pronotum, forming a swirl on each side of the median line.

Frons convex with punctures deep, simple, with shiny intervals (approximately 1 diameter of the punctures).

Antennae not reaching the apices of the posterior angles of pronotum; second and third segments subcylindrical and subequal, together much longer than fourth; fourth-tenth subtriangular, just longer than wide; eleventh ellipsoidal.

Pronotum wide, 1.2-1.25 times broader than long, moderately convex on the disk; sides subarcuate, feebly dilated in the middle or in the anterior third; posterior angles acuminate, not or feebly divergent at apices, with a short and indistinct carina; lateral margin complete; punctures on the disk coarse and deep, of variable size, simple to slightly umbilicate with short and shiny intervals, at sides much denser and coarser, at base finer.

Scutellum subquadrate, convex, strongly punctured. Elytra 2.5 times longer than pronotum and 1.9 times longer than wide, suboval, with the sides narrowed in the posterior half; striae well marked and punctured; interstriae flat, with very fine punctures.

The male genital is very similar to that of related species.

Female. Very similar to the male, generally slightly broader and larger.

Size. Length 3.8-5.6 mm, width 1.3-1.9 mm.

Derivatio nominis. Dedicated to our friend Christodolou Makris, naturalist and collector in Limassol, who contributed important material to this paper.

Comparative remarks. The new species can be separated from the very variable *D. bimaculatus* (ROSSI, 1790) by constant characters of the pronotum. This is more transverse with sides feebly, but clearly dilated from the middle to the anterior third and coarsely punctured on the disk. Because of the last character, it was confused with *Aeoloides figuratus* (GERMAR, 1844) by Baudi, Bryant and Georghiou, but can be separated from that species by sparser punctured pronotum (especially the secondary punctuation), swirled pubescence on the rear half of the disc and the more robust antennae.

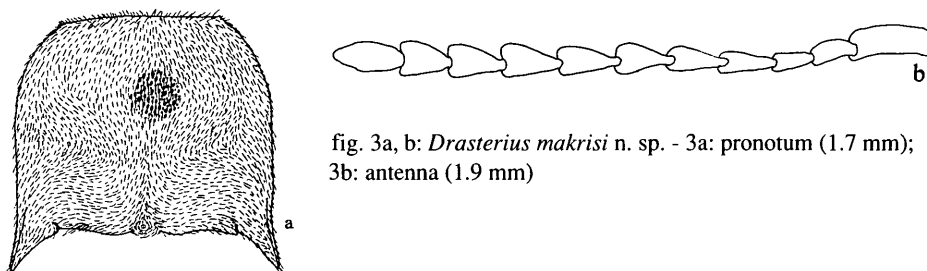


fig. 3a, b: *Drasterius makrisi* n. sp. - 3a: pronotum (1.7 mm); 3b: antenna (1.9 mm)

7. *Drasterius bimaculatus* (ROSSI, 1790)

Elater bimaculatus ROSSI, 1790: 182.

Drasterius bimaculatus FABR. – BAUDI 1871: 51.

Drasterius bimaculatus ab. *levantinus* ROUBAL, 1924: 81.

Drasterius bimaculatus ROSSI, 1790 – BRYANT: 49.

Drasterius bimaculatus (ROSSI, 1790) – GEORGHIOU 1977: 62.

Type locality: Italy (Toscana).

Distribution: C- & S-Europe, Caucasus, Asia Minor, Cyprus, Middle East, C-Asia, N-Africa.

Material examined: 107 specimens from all over Cyprus throughout the whole year, preserved in the following collections: AUA, BMNH, CcV, LcMH, MoACyp and PcC.

8. *Calais parreysii* (STEVEN, 1830)

Elater parreysii STEVEN, 1830: 154.

Alaus parreyssii [sic] STEV. – BAUDI 1871: 50.

Alaus parreyssi [sic] STEVEN, 1830 – BRYANT: 49.

Type locality: Crimea (Ukraine).

Distribution: Greece, Asia Minor, Ukraine, Cyprus, Syria.

Material examined: CYPRUS – Troodos Mts., Macheras monastery, 10. II. 2001, leg. Makris, 3 ex. (McL); Pafos prov., Argaka, 18. IV. 1995, leg. G. & M. Novak, 2 ex. (CcV); Polis, Arkata bei Yjalia, 300m, 19. IV. 1995, leg. Suppantisch, 1 ex. (CcV); Panayia, Forestry Station, 28. IV. 1982, leg. Antoniou, 9 ex. (MoACyp); Pafos, Argaka, 01. V. 1996, leg. Preiss, 5 ex. (PcC); Perapedhi, 10. V. 1937, leg. Shiakides, 1 ex. (AUA); Panayia, Forestry Station, 27. IX. 1986, leg. Antoniou, 3 ex. (MoACyp).

Remarks: This species is generally found under the bark of pine trunks or under pine logs. The nine specimens from Panayia Forestry Station were caught in April by Mr. Antoniou from flowering olive trees (Antoniou, pers. com.).

9. *Tetrigus cyprius* BAUDI, 1871 (fig. 4)

Tetrigus cyprius BAUDI, 1871: 50-51.

Ludioctenus cyprius BAUDI, 1871 – BRYANT: 49.

Type locality: Cyprus.

Distribution: Greece (Crete), Cyprus, Turkey, Syria, Lebanon.

Material examined: CYPRUS – without locality, Shiakides coll., 1 ex. (AUA); Alethriko, 100 m, VII. 2000 & 2001, leg. A. Aristophanous, 2 ex. (McL); Aplanta, 100 m, 17. VII. 2001, leg. M. Aristophanous, 1 ex. (McL); Polemidia, 50 m, 17. & 27. VII. 2002, leg. Georgiou, 3 ex. (GcL); Troodos Gebirge, Pedhoulas, 1000 m, 23. VII. 1981, leg. M. & E. Arenberger, 1 ex. (CcV).

10. *Athous haemorrhoidalis* (FABRICIUS, 1801)

Elater haemorrhoidalis FABRICIUS, 1801: 235.

Type locality: Austria.

Distribution: Europe, Turkey, Caucasus, new to Cyprus.

Material examined: CYPRUS – Cyprus, 30. I. 1957, leg. S. Pieris, 1 ex. (AUA).

11. *Elathous cyprius* (BAUDI, 1871) (fig. 5)

Athous cyprius BAUDI, 1871: 54-55.

Athous cyprius BAUDI, 1871 – BRYANT: 50.

Type locality: Cyprus (Troodos).

Distribution: endemic to Cyprus, Troodos Mountains above approx. 1000 meters.

Material examined: Troodos Mts., Chionistra, 1800 m, 8. VII. 2001, leg. Makris, 2 ex. (McL); Troodos Mts., Chionistra, 1800 m, 11. VII. 1999, leg. Makris, 1 ex. (McL); Troodos Gebirge, Pedhoulas, 1000 m, 23. VII. 1981, leg. M. & E. Arenberger, 1 ex. (CcV); Troodos Mts., Troodos, Chionistra, 1760 m, 24. & 25. VII. 1999, leg. Preiss, 3 ex. (PcC); Troodos Mts., Chionistra, 1800 m, 25. VII. 2000, leg. Makris, 2 ex. (McL); Chionistra, 31. VII. 1940, leg. Shiakides, 5 ex. (*Leptoschema* sp. from descr. not in BM, det. CMF von Hayek, 1955 – *Leptoschema* c. f. *Brucki*, det. K. Lienemann) (MoACyp); 1 ex. without locality and date (AUA); Mt. Olympus, 06. VIII. 1950, leg. Wahrmann, 2 ex. (*Melanotus* sp. not in BM, RD Pope det. 1951)(TU); Kannoures, 07. VIII. 1950, leg. Wahrmann, 1 ex. (TU); Troodos Mts., Chionistra, 1800 m, 10. VIII. 2000, leg. Makris, 5 ex. (McL); Troodos Mt., 5500 ft, 14. VIII. 1948, 1 ex. (PcG); Troodos Mts., Chionistra, 1800 m, 5. VIII. 2001, leg. Makris, 1 ex. (McL); Cedar Valley, 1100 m, 15. VIII. 2001, leg. Makris, 1 ex. (McL).

Remarks: Species of the genus *Elathous* REITTER, 1890 are generally found at high altitudes associated with meadows. The Troodos Range differs from mountains in Greece, Turkey and Lebanon by being covered with forest, including the peak (Chionistra or Olympos, almost 2000 meters). Natural meadows, except for occasional patches of grass, are literally not existant. Nevertheless, also *E. cyprius* avoids stands of trees and is found in forest clearings, mostly the result of human activities such as the ski runs on Chionistra. It is nocturnal and comes to light in the evening hours or can be found hiding (e.g. under stones) during the day.

12. *Hemicrepidius hirtus* (HERBST, 1784)

Elater hirtus HERBST, 1784: 114.

Type locality: Europe.

Distribution: Europe, Turkey, Caucasus, Iran, new to Cyprus.

Material examined: CYPRUS – Nicosia, 05. II. 1957, leg. S. Pieris, 1 ex. (AUA).

13. *Isidus moreli* MULSANT & REY, 1874

Isidus moreli MULSANT & REY, 1874: 405.

Isidus moreli MULSANT & REY – PLATIA 1994: 309.

Type locality: France (Corsica).

Distribution: S-Europe, Cyprus, Turkey, Black Sea, N-Africa.

Material examined: CYPRUS – Ayia Napa, 10 km W Capo Greco, 13.-23. VI. 1983, leg. B. Petersen, 4 ex. (CcV).

14. *Idotarmonides* sp.

Material examined: CYPRUS – Nicosia, 06. IV. 1933, leg. Th. Shiakides, 1 ex. (AUA);

Remarks: This specimen probably belongs to a new subspecies of *Idotarmonides anatolicus* (CANDEZE, 1881) or a new species. Since this single specimen is in very poor condition, a



fig. 4: *Tetrigus cyprius* BAUDI,
30.3 mm



fig. 5 : *Elathous cyprius*
(BAUDI), 13.6 mm



fig. 6: *Agriotes magnanii*
PLATIA & GUDENZI, 8.5 mm



fig. 8: *Ampedus assingi*
SCHIMMEL, 11.3 mm



fig. 9: *Ampedus pulcher*
(BAUDI), 8.7 mm

description is not advisable at this time. It generally differs from the Turkish specimens of *I. anatolicus* in the more extended yellowish colour on elytra, posterior angles on pronotum blunt, less divergent and punctuation sparser.

15. *Agriotes lundbergi* PLATIA, 1989

Agriotes lundbergi PLATIA, 1989: 83.

Agriotes corsicus CAND. – BAUDI 1871: 55. ?*

Agriotes corsicus CAND., 1863 – BRYANT: 50. ?*

Agriotes lundbergi PLATIA, 1989 – PLATIA & GUDENZI 1998: 56.

Type locality: S-Turkey (Adana).

Distribution: Turkey, Cyprus.

Material examined: CYPRUS – Paphos Forest, S. Kykkos, 400-1000 m, 06.-09. IV. 1995, leg. Assing, 4 ex. (PcG, ScV); Troodos Mts., Umg. Platres, 1500-1950 m, 02.-17. V. 1996, leg. R. & I. Schimmel, 1 ex. (ScV).

16. *Agriotes magnanii* PLATIA & GUDENZI, 1996 (figs. 6, 7)

Agriotes magnanii PLATIA & GUDENZI, 1996: 145.

Agriotes corsicus CAND. – BAUDI 1871: 55. ?*

Agriotes corsicus CAND., 1863 – BRYANT: 50. ?*

Type locality: Cyprus (Larnaca).

Distribution: Cyprus.

Material examined: CYPRUS – (Holotype) Larnaka, Odhou dint., 110 m, 17.-18. IV. 1993, leg. G. Magnani (PcG); (Paratype) same data as Holotype, 2 ex. (PcG, MT); Lefkosia, Cedar Valley, 1200 m, 06. V. 2002, leg. Makris, 7 ex. (McL).

Remarks: Makris collected the specimens on *Quercus alnifolia*, together with *Dicronychus merkli* (PIC, 1910) and *Ampedus assingi* SCHIMMEL, 1996. One of these specimens is a female, which was unknown until now:

The female is very similar to the male but with more convex body and shorter antennae, which do not reach the apices of posterior angles of pronotum. Sclerotized plates of the bursa copulatrix as in fig. 7.

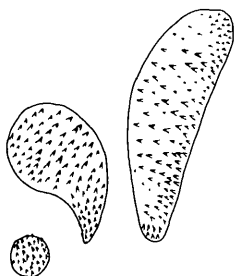


fig. 7: *Agriotes magnanii*, bursa copulatrix

* Whether the specimen identified by Baudi as *A. corsicus* should be referred to *A. magnanii* or *A. lundbergi* is not clear. Baudi only mentioned colour differences to *A. corsicus*. Baudi's specimen could not be located in the Museum in Turin.

17. *Agriotes strigosus* KIESENWETTER, 1859

Agriotes strigosus KIESENWETTER, 1859: 18.

Agriotes meticolosus CAND. – BAUDI 1871: 55.

Agriotes meticolosus CAND., 1863 – BRYANT: 50.

Type locality: Greece (Nauplia).

Distribution: Greece, Turkey, Syria, Israel, new to Cyprus.

Material examined: CYPRUS – Limassol, 01. I. 1952, leg. Mavromoustakis, 1 ex. (*Agriotes meticolosus* CD., det. QUELLE 1954)(TU); Lemesos, Akrotiri, 22. III. 2000, leg. Georgiou, 1 ex. (McL); Katokopia, 26. III. 1974, leg. Shiakides, 1 ex. (AUA); 2 ex. without date and locality (AUA).

18. *Ampedus assingi* SCHIMMEL, 1996 (fig. 8)

Ampedus assingi SCHIMMEL, 1996a: 63.

Type locality: Cyprus (Troodos).

Distribution: Cyprus (Troodos).

Material examined: CYPRUS – (Holotype) Olympos, N.-Hang, 1900 m, 10. IV. 1995, leg. Assing, (ScV); (Paratypes) Troodos-Gebirge, Umg. Platres, ca. 1600 m, 03. V. 1996, leg. R. & I. Schimmel, 3 ex. (ScV); Troodos, Cedar Valley, 11. V. 2002, leg. Makris, 1 ex. (McL).

19. *Ampedus pulcher* (BAUDI, 1871) (fig. 9)

Elatер pulcher BAUDI, 1871: 51-52.

Elatер pulcher BAUDI, 1871 ab. *pulcherrimus* REITT., 1889 – BRYANT: 49.

Type locality: Cyprus (Troodos).

Distribution: Cyprus, Turkey.

Material examined: CYPRUS – Olimpo Mt., 1900 m, IV. 1963, leg. Henrot & Cerruti, 1 ex. (PcG); Limassol, Prodhromos, 1200 m, 28. IV. 1993, leg. Magnani, 1 ex. (PcG); Lefkosia, Troodos (Almyrolivado), 1600 m, 22. X. 2000, leg. Makris, 2 ex. (McL, PcC).

Remarks: The specimens collected by Mr. Makris were found in a rotten trunk of *Pinus nigra*.

20. *Haterumelater fulvago* (MARSEUL, 1868) n. comb. (figs. 10-14)

Elatер fulvago MARSEUL, 1868: 176.

Elatер megerlei LACORD. – BAUDI 1871: 52.*

Ischnodes picinus BUYSSON, 1891a: 142. n. syn.

(*Ischnodes picinus* BUYSSON, 1891b: 135-136.) = reprint of 1891a.

Elatер (Ectamenogonus) megerlei LAC., 1885 – BRYANT: 49.*

Ischnodes picinus BUYSS. – SCHENKLING 1925: 165.

Haterumelater julianum PENEV, 1987: 1586. (= *picinus* BUYSSON, 1891 – PLATIA 1989: 279.)

Haterumelater picinus (BUYSSON, 1891) – PLATIA 1994: 279.

Haterumelater preissi SCHIMMEL, 1995: 49. n. syn.

* That Baudi's specimen refers to *Haterumelater fulvago* and not to *Ectamenogonus megerlei* is evident from his short description. The record in Bryant's manuscript refers to the same specimen.

Type locality: Lebanon (Beirut).

Distribution: ?NE-Italy, Bulgaria, Greece (including Crete), Turkey, Lebanon, new to Israel, new to Cyprus.

Material examined: LEBANON – Beirut, Appl., 1878 [*E. fulvago* MARS., det. Reitter (?); *fulvago*, det. Ganglb.] (NMW); CYPRUS – Troodos Mts., ca. 10 km WSW Troodos, Dhiarizos Riv., 500 m, 20. VI. 1994, leg. Preiss, 3 ex. [holotype ♂ *Haterumelater preissi* n. sp., Schimmel, 1994 (PcC) & 2 paratypes (CcV, ScV)]; Troodos Mts., Dhiarizos Riv., N34°53'40" E32°44'50", 460 m, 09. VII. 1999, leg. Preiss, 1 ex. (CcV); Pafos, Vretsia, 500 m, 13. VII. 2000, leg. Georgiou, 2 ex. (PcC); Troodos Mts., Dhiarizos Riv., E Ayios Georgios, N34°46'40" E32°40'00", 18. VII. 1999, leg. Preiss, 6 ex. (PcG, PcC); Stavros, 18.-19. VII. 1939, leg. Lindberg, 1 ex. (under '*Ampedus fulvago*' in the MH) (LcMH); Nicosia, Airport, UNPA, 23. VII. 1999, leg. Preiss, 1 ex. (PcG); Troodos Mts., Dhiarizos Riv., Kelephos Bridge, 460 m, N34°53'40" E32°44'50", 26. VII. 1999, leg. Preiss, 1 ex. (CcV); Troodos Mts., Lagoudhera Riv. 5km s. Xyliatos, N34°57'20" E33°01'40", 28. VIII. 1996, 1 ex. [*Haterumelater languroides* (BUYSS.) (det. Cate)] (PcC); GREECE – Krete, Theriso, VI. 1986, leg. Schurmann, 1 ex. (PcG); Chalkidike, Olympiada, 26. VII. - 8. VIII. 1988, leg. Novak, 2 ex. (PcG, PcC); UKRAINE – Sebastopol, Tauria, VII 14, Pliginski (holotype ♂ *Elatér tauricola* GUR.) (ZIN); Mangub-Kale, Krim, 21. 7. 06, W. Pliginski (paratype *Elatér tauricola* GUR.) (ZIN); Krim, Sevastopol, 27. 07. 11, Martinov (paratype *Elatér tauricola* GUR.) (ZIN); der. Muhalatka, jush. ber. (south bank) Krima, VII 1902, H. Kuznetsov (paratype *Elatér tauricola* GUR.) (ZIN); TURKEY – Oymapinar, Baraji, 20. V. 1987, leg. S. Adebratt, 1 ex. (*Haterumelater languidus* (BUYSS.), det. Platia 1989) (PcG); Antalya, Göynük, 01.-13. VII. 1991, leg. Schmid, 2 ex. (*Haterumelater languidus* (BUYSS.), det. Platia 1989 & det. Cate 1997) (PcG, PcC); Antalya, Konyalti, 19. VII. 1987, leg. Pettersson, 1 ex. (PcC); Adana, without date, 1 ex. (NMNH); Akbes, Région des Mte. Amanus, env. d'Akbès, 1891, leg. CD, 1 ex. (NMNH); H^t Syria, without date, leg. Delagrangé (?), 1 ex. (NMNH); Smyrne, without date, leg. CD, (type ♀ *Ischnodes picinus* DU BUYSS.) (NMNH); Akbes, without date, leg. CD, 1 ex. (BcNMNH); Akbes, H^t Syria, without date, 1 ex. (*picinus* du Buyss.) (NMNH); Syrie, Cheikhlhé, (type ♂ *languidus* var. *syriacus* PIC) (PcNMNH); Besika Bay (NW Turkey, near Troja), G. C. Champion coll. 1927 – 409. 5 ex. (BMNH); LEBANON – Beirut, Appl., 1878 (*E. fulvago* Mars., *fulvago* det. Ganglb.), 1 ex. (NMW); Syr.(?), collect. Plason, 2 ex. (*fulvago* det. Ganglb.) (NMW); ISRAEL – Lower Galilee, 1 km W HaSolelim, 03. VII. 2001, leg. E. & B. Orbach, 5 ex. (BOcH, EOcT, PcC); Panyas, 15. VII. & 30. VII. 2002*, leg. Kravchenko & Chikatunov, 18 ex. (TU, PcC); Tel Dan, 15. VII., 20. VIII. & 05. X. 2002*, leg. Kravchenko & Chikatunov, 8 ex. (TU, PcC); Hammat Gader, 22. VII. & 23. VIII. 2002*, leg. Kravchenko & Chikatunov, 2 ex. (TU, PcC); Bu'qata, 05. X. 2002*, leg. Kravchenko & Chikatunov, 3 ex. (TU).

Discussion: Large series (76 specimens in total) from various collections together with new material (Dhiarizos River) gave evidence for the variability of this species.

In 1994 *Haterumelater fulvago* (MARSEUL, 1868) was collected (Preiss) from a hollow *Alnus orientalis*. Larva, pupa and the imago, still in the pupal cell, were found together in red-rotten heart wood near the center of the trunk. These immature specimens led to the description of *H. preissi* SCHIMMEL, 1995 (fig. 11) on perceived differences in colour, pronotal structure and antennae to *H. languidus* (BUYSSON, 1891). A degree of humidity and balanced temperature

* These specimens were all collected by automatic light traps, maintained by Vasilij Kravchenko. Since they were emptied in some cases only once per month, or less (Kravchenko, pers. com.), the actual collecting date has to be estimated. *H. fulvago* is most probably not active after August or beginning of September.



fig. 10: *Haterumelater fulvago* (MARSEUL),
Dhiarizos River, Cyprus, 8.5 mm



fig. 11: *Haterumelater fulvago*, immature
specimen (type of *H. preissi*, n. syn.), 9.1 mm

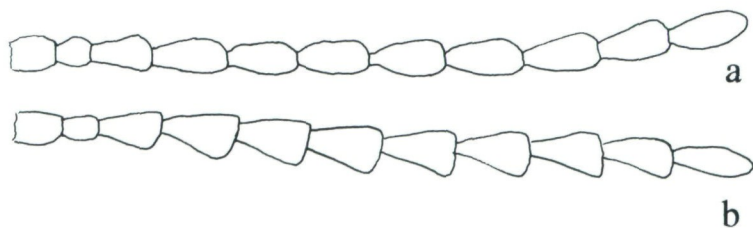


fig. 12: *Haterumelater fulvago*, antenna variability - a) Stavros, Cyprus,
2.3 mm; b) Dhiarizos River, Cyprus, 2.9 mm

are probably essential for the development of this species. In many cases ideal conditions are not present in arid countries, where *H. fulvago* occurs. Stunted specimens, probably from a drier substrate, noticeably differ in size and form of the pronotum and antennae.

A very small specimen from Stavros, Cyprus (LcMH), with almost subcylindrical antennal segments (fig. 12), subparallel lateral margins and finer puncturation of pronotum, fits the description of *H. languidus* but has to be considered within the range of variability of *H. fulvago*. A series of five specimens from Besika Bay, Turkey, in the collection of The Natural History Museum confirmed the range of variability – including several stunted specimens.

The type specimen of *H. languidus* could not be located in the Paris Museum and is possibly lost. Nevertheless, traces of the type specimen (elytra with mesosternum and parts of legs) of the variety *syriacus* PIC, 1904 were found in the Pic collection in Paris. The specimen almost certainly was seen by Buysson himself, because of the matching hand writing on the third label (“*Ischnodes languidus* var. ou sp. près.”) (fig. 13). This appeared to be parts of a small specimen of *H. fulvago*, but due to the missing parts it could not be certainly identified.

The colour of *H. fulvago* varies from brown to black, some specimens appear bicoloured, with a brown pronotum and darker elytra. Many authors might not have referred to *H. fulvago*, but to *H. picinus* (BUYSSON, 1891) or *H. languidus*, as Marseul did not mention the bicarinate hind angles of the pronotum. Probably because this character occasionally is reduced. Apart from this, Marseul’s description matches Buysson’s *H. picinus* (the brownish colour on Marseul’s specimen is subject to variability). We therefore consider *H. picinus* synonym with *H. fulvago*.

As already mentioned, *H. preissi* was described from 3 immature specimens, found in their pupal cells. This explains the difference in colour (lighter brown). Other characters, which SCHIMMEL (1995) noticed (compared to *H. languidus*) were larger size, ocellated puncturation on pronotum and robust antennae. Characters within the range of variability and which better fit the description of *H. picinus*, not mentioned in his paper.

H. tauricola (GURJEVA, 1957)** from Crimea probably also refers to *H. fulvago*. Gurjeva obviously did not know any of the European taxa (*H. fulvago*, *H. picinus* & *H. languidus*). She only compared *H. tauricola* with *H. bicarinatus* CANDÈZE, 1873 from Japan. In fact, the brownish coloured specimens from the Ukraine are all within the range of variability of *H. fulvago*. Unfortunately the dissected genital preparates could not be located in the separate slide collection at the ZIN in St. Petersburg. Since they are probably just temporarily unavailable (Prof. Karataev, pers. com.), we refrain from synonymising *H. tauricola* at this time.

The type specimen of *H. fulvago* itself could not be located in the Paris Museum or other pertinent collections. Marseul described this species in 1868 from Beirut. The possibility that one of the three known similar elaterids found in the same area [*Reitterelater dubius* PLATIA & CATE, 1990 in Turkey and Israel, *Brachygonus megerlei* (LACORDAIRE, 1835) in

** Not only this species from the Crimea shows parallels to the fauna in Cyprus. *Lacon punctatus*, *Aeoloides griseus*, *Aeoloderma crucifer*, *Drasterius bimaculatus*, *Calais parreyssi*, *Athous haemorrhoidalis*, *Hemicrepidius hirtus*, *Isidus moreli* (Anapa, close to Crimea) and probably other species are recorded from both localities.

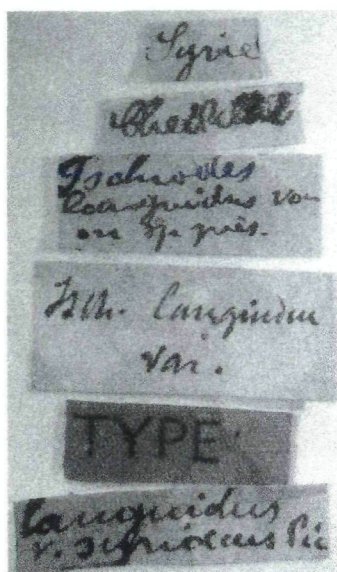


fig. 13: *Heteromelater languidus* var. *syriceus* (PIC), labels of type.



fig. 14: *Heteromelater fulvago*, iridescence on a specimen from Dhiarizos River

Turkey and *Ectamenogonus montandoni* (BUYSSON, 1888) in Turkey and Cyprus] was described by Marseul can be excluded due to the clear characters noted in his paper: habitus little convex “peu convexe”, brighter on underside “plus clair en dessous”, second article of antenna small, button-like, third article obconical, of the same length as the following “II petit, en bouton; III obconique, aussi long que le suivant”.

Marseul’s description is sufficient and has to be given priority. Since all efforts to find the type or a specimen suitable for the designation of a lectotype over a period of several years have proven negative, we believe that it is lost. A specimen from the type locality, preserved in the Museum of Natural History in Vienna, fits the description best.

In addition to Marseul’s description, bicarinate posterior angles of the pronotum and a faint iridescence (fig. 14) on the beetle’s surface can be observed. Gurjeva, who mentioned this character on *H. bicarinatus* as opposed to *H. tauricola*, probably did not notice iridescence on her specimens due to weak illumination.

Biology. The larva was found in rotten wood of hollow *Alnus orientalis*, but possibly also develops in other deciduous trees (Israel) growing near water or in humid places. The imago ecloses in the early summer. The 3 immature specimens (“*H. preissi*”) were collected in June, which suggests that contrary to most Ampedini the imago does not hibernate. The beetle is found in well vegetated areas with natural undisturbed formations of deciduous woodland, containing enough moist dead wood. It is active from June to end of August

during warm evenings and comes to light. *H. fulvago* is also attracted by wine-traps (Georgiou), a collecting method introduced to Cyprus by Robert Alexis (Belgium). One specimen recorded from Nicosia (leg. Preiss) most probably was introduced by a vehicle, which operated at Dhiarizos River (Troodos Mts.) a few days before.

21. *Ectamenogonus montandoni* (BUYSSON, 1888) (fig. 15)

Ludius montandoni BUYSSON 1888: 202.

Type locality: Romania (Bucarest).

Distribution: Europe S & SE, Turkey, Iran, new to Cyprus.

Material examined: CYPRUS – Pafos, Chrysorrogiatissa, 850 m, 05. VII. 1999, leg. G. Georgiou, 5 ex. (GcL, McL); Pafos, 13. VII. 2001, leg. G. Georgiou, 1 ex. (PcC);

Remarks: These specimens were attracted together with *Haterumelater fulvago* by wine traps placed in old oak trees.

22. *Peripontius ingridae* SCHIMMEL, 1996 (fig. 16)

Peripontius ingridae SCHIMMEL 1996b: 121.

Silesis concolor DESBR., 1874 (1875) – BRYANT: 51.

Silesis concolor DESBR. – GEORGHIOU 1977: 62.

Type locality: Cyprus (Troodos).

Distribution: Cyprus (Troodos).

Material examined: CYPRUS – Lapithos, 07. II. 1935, leg. Shiakides, 6 ex. (AUA); Lapithos, 14. II. 1935 (1 ex. 1933), leg. Shiakides, 14 ex. (MoACyp); Polis, 15. II. 1934, leg. Shiakides, 4 ex. (*Silesis concolor* DESBR., det. Fleutiaux) (MoACyp, AUA); Lapithos, 15. II. 1935, leg. Shiakides, 6 ex. (AUA); (Holotype) Umg. Platers, 1500-1950 m, 02.-17. V. 1996, leg. R. & I. Schimmel, (ScV); (Paratypes) Umg. Platers, 1500-1950 m, 02.-17. V. 1996, leg. R. & I. Schimmel, 4 ex. (ScV, PcG); Troodos, 16.-22. VI. 1939, leg. Lindberg, 1 ex. (LcMH); Troodos, Platania, 18. VI. 1939, leg. Lindberg, 1 ex. (*Peripontius oertzeni* (SCHW.), det. Platia 1996) (LcMH); Troodos, Mesopotamos, 21. VI. 1939, leg. Lindberg, 1 ex. (LcMH); Milikouri, pr. Kykko, 16. VII. 1939, leg. Lindberg, 1 ex. (*Silesis omissus*, det. Harald Lindberg) (LcMH); Troodos Mts., Dhiarizos Riv., 380 m, 10. VII. 1999, leg. Preiss, 3 ex. (PcC, ScB); Troodos Mts., Dhiarizos Riv., 460 m, 17. VII. 1999, leg. Preiss, 1 ex. (PcC); Paphos, Yeroskipos, 20. VII. 1939, leg. Lindberg, 1 ex. (LcMH); Troodos Mts., Dhiarizos Riv., Kelephos Bridge, 460 m, 26. VII. 1999, leg. Preiss, 11 ex. (CcV, PcG, PcC, ScB); Vrissi, 08. VIII. 1950, leg. Wahrmann, 1 ex. (TU); Platres, 10. VIII. 1950, leg. Wahrmann, 1 ex. (*Cardiophorus* sp., not in BM, det. R. D. Pope 1951)(TU); Troodos Mts., Kakopetria, 940 m, 15. VIII. 1999, leg. Preiss, 1 ex. (PcC).

Remarks: The specimens collected by Shiakides in February were found in numbers in their winter quarter under bark of citrus and Eucalyptus. *P. ingridae* was also collected from vegetation (SCHIMMEL, 1996b: 124) and with black-light trap (Preiss).

23. *Peripontius terminatus* (ERICHSON, 1841)

Adrastus terminatus ERICHSON 1841: 118.

Silesis terminatus ER. – BAUDI 1871: 56.

Silesis terminatus ER., 1842 – BRYANT: 51.



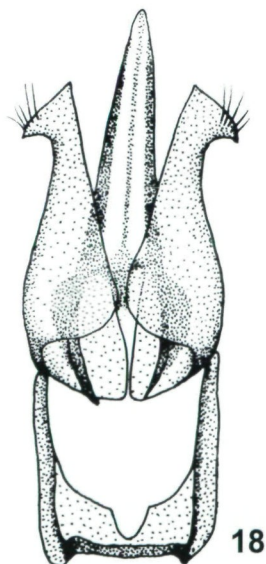
15



16



17



18

fig. 15: *Ectamenogonus montandoni* (BUYSSON), 11mm

fig. 16: *Peripontius ingridae* SCHIMMEL, 6.8 mm

fig. 17: *Melanotus fusciceps* (GYLLENHAL), 13.4 mm

fig. 18: *Melanotus fusciceps*, aedeagus, 1.8 mm

Type locality: Istria (Croatia).

Distribution: S- & SE-Europe, Asia Minor, Cyprus, Middle East.

Material examined: CYPRUS – Troodos Mts., Lagoudhera, 700 m, 01. & 07. VI. 1999, leg. Preiss, 4 ex. (PcC); Galata, 15.-23. VI. 1939, leg. Lindberg, 2 ex. (*Silesis concolor* v. *juvencus*, det. Harald Lindberg) (LcMH); Troodos, Prodhromos, 19. VI. 1939, leg. Lindberg, 1 ex. (LcMH); Troodos, Mesopotamos, 21. VI. 1939, leg. Lindberg; Kykko, 15.-17. VII. 1939, 1 ex. (LcMH).

24. *Mulsanteus guillebelli* (MULSANT & GODART, 1853)

Trichophorus guillebelli MULSANT & GODART., 1853: 183.

Ludius guillebelli MULS. – BAUDI 1871: 55.

Neotrichophorus gillebeaui MULS. et GODART, 1853 – BRYANT: 50.

Neotrichophorus guillebeaui CAND. – GEORGHIOU 1977: 62.

Type locality: France (Narbonne).

Distribution: S-Europe, Asia Minor, Cyprus, Middle East to Iran.

Material examined: CYPRUS – approx. 40 specimens from Famagusta, Athienou, Nicosia, Larnaca, Limassol and Pafos.

Remarks: This nocturnal species, which comes to light, is found everywhere in the lowland and submontane area, but not in numbers.

25. *Pittonotus theseus* (GERMAR, 1817)

Elater theseus GERMAR, 1817: 218.

Ectinus theseus GERM. – BAUDI 1871: 56.

Pittonotus theseus GERMAR, 1817 – BRYANT: 50.

Type locality: Dalmatia (Croatia).

Distribution: S-Europe, Asia Minor, Cyprus, Middle East.

Material examined: CYPRUS – Zakaki, 02. VI. 1971, leg. Shiakides, 1 ex. (AUA); Vassilia, 20. VI. 1974, leg. Shiakides, 1 ex. (AUA); Yermasoyia, 23. VII. 1971, leg. Shiakides, 1 ex. (AUA); Troodos Mts., Dhiarizos Riv., 09. VII., 17. VII. & 26. VII. 1999, leg. Preiss, 5 ex. (PcC, McL); Limassol, Akrotiri, 17. 07. 1999, leg. Makris, 1 ex. (McL).

Remarks: Makris (*in litt.*) reared one specimen from a larva, which he found in rotten wood of *Alnus orientalis*. The specimens from Cyprus appear slightly slimmer than those from Turkey and Greece.

26. *Melanotus fusciceps* (Gyllenhal, 1817) (figs. 17 & 18)

Elater fusciceps GYLLENHAL, 1817: 135.

Melanotus fusciceps ER. – BAUDI 1871: 54.

Melanotus fuscipes GYLL. var. *robustus* ER., 1841 – BRYANT: 50.

Melanotus fusciceps GYLL. – GEORGHIOU 1977: 62.

Type locality: Caucasus (S-Russia).

Distribution: SE-Europe, Asia Minor, Caucasus, Middle East, Iran.

Material examined: CYPRUS – approx. 100 specimens from all over Cyprus.

Remarks: The specimens from Cyprus are distinctly less variable than the continental ones. We believe that the species *Melanotus rufipes*? (HERBST, 1784) and *M. dichrous* ERICHSON, 1841 recorded in Baudi's paper (BAUDI 1871: 54) refer to specimens of *M. fusciceps* from the Middle East, where they are very variable. The variety *robustus* ERICHSON, 1841 added by hand in Bryant's manuscript, is not applicable to the material from Cyprus, which probably belong to a new subspecies.

27. *Spheniscosomus cuneiformis* (BAUDI, 1871) (fig. 19)

Melanotus cuneiformis BAUDI, 1871: 53.

Spheniscosomus sulcicollis MULS. & GUILL. ssp. *cuneiformis* BAUDI, 1871 – BRYANT: 50.

Type locality: Cyprus.

Distribution: Turkey, Cyprus, Lebanon.

Material examined: CYPRUS – Troodos Mts., Macheras Monastery, 10. II. 2001, leg. Makris, 1 ex. (McL); Pafos, Agia Marina, XII. 2001, leg. Makris, 13 ex. (McL, PcC, GcL); Troodos Mts., Pafos Forest, near Panagia village, 800 m, 18. III. 2002, leg. Makris, 1 ex. (McL); Souni (Lemesos) 400 m, 16. III. 2001, leg. Makris, 7 ex. (McL, GcL).

Remarks: All specimens were found in their pupal cells under the bark of pine.

28. *Dicronychus merkli* PIC, 1910

Cardiophorus (Platynychus) merkli PIC, 1910: 50.

Cardiophorus decorus FALD. – BAUDI 1871: 53.

Cardiophorus crassicollis ER. – BAUDI 1871: 53.

Cardiophorus decorus FALD. ab. *crassicollis* ER., 1840 – BRYANT: 51.

Type locality: Turkey.

Distribution: Greece, Turkey, Cyprus.

Material examined: CYPRUS – Nicosia, Cedar Valley, m 1100, 12. IV. 1992, leg. Gianasso, 1 ex. (PcG); Nicosia, Cedar Valley, 20. & 24. IV. 1993, leg. Sama, 2 ex. (PcG); Lefkosia, Cedar Valley, 1200 m, 06. V. 2002, leg. Makris, 8 ex. (McL, PcC); Lefkosia, Cedar Valley, 1200 m, 27. & 28. V. 2002, leg. Georgiou, 3 ex. (GcL); Lefkosia, Almyrolivado, 1600 m, 29. V. 2002, leg. Georgiou, 20 ex. (GcL); Lefkosia, Cedar Valley, 1200 m, 2. & 16. VI. 2002, leg. Georgiou, 15 ex. (GcL); Troodos, Chionistra, 17. VI. 1939, leg. Lindberg, 1 ex. (PcG); Lefkosia, Almyrolivado, 1600 m, 7. & 19. VI. 2002, leg. Georgiou, 26 ex. (GcL).

Remarks: This species was collected on *Quercus alnifolia* together with *Agriotes magnanii* and *Ampedus assingi* (Georgiou, in litt.).

29. *Cardiophorus ovipennis* DESBROCHERS, 1875 (fig. 20)

Cardiophorus ovipennis DESBROCHERS, 1875: 38.

Cardiophorus cyprius PIC, 1910: 33, 49.

Cardiophorus ovipennis DESBR., 1874-75 – BRYANT: 49.

Cardiophorus ovipennis ab. *cyprius* PIC – BRYANT: 50.

Type locality: Cyprus.

Distribution: Cyprus, Troodos Mts.

Material examined: CYPRUS – Mt. Olympicus, ?, 1 ex. (BMNH); Chypre, 1901, 3 ex. [*cyprius* PIC (type & syntypes), *Cardiophorus cyprius* = *ovipennis* DESBR. 1875 det. CMF

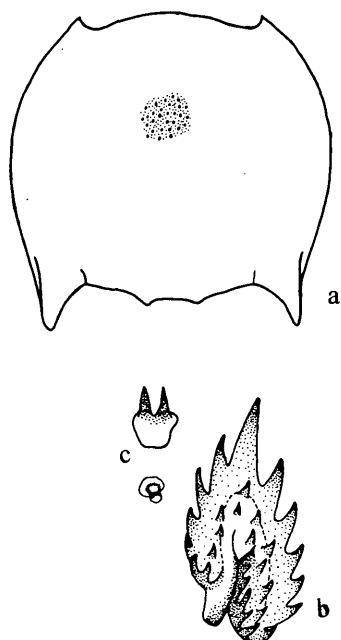


fig. 21: *Cardiophorus pharaonum* BUYSSON. - a) pronotum, 2.1mm, b) femal genital plate 0.75 mm, c) median pieces of bursa copulatrix.

von Hayek 1961] (PcNMNH); Stavrovouni (Mt. de la Croix), 1901, 1 ex. [cyprius PIC, *Cardiophorus ovipennis* DESBR. det. CMF von Hayek] (PcNMNH); Palenolpia, 05. IV. 1996, leg. Ziani, 1 ex. (PcG); Troodos Mts., Livadia, 18. VI. 1939, leg. Lindberg, 1 ex. (PcG); Troodos Mts., Chionistra, 1700m, 26. VII. 1999 (dead under stone), leg. Preiss, 1 ex. (PcC).

Remarks: BUYSSON (1910: 167-168) described the aberration *mimicus* from Guleh (Turkey). This taxon does not belong to *C. ovipennis*, which is endemic to Cyprus.

The specimens from Cyprus vary from entirely blackish with paler appendages to dark brown with ferruginous edges on pronotum and elytra.

30. *Cardiophorus pharaonum* BUYSSON 1911 (fig. 21)

Cardiophorus pharaonum BUYSSON, 1911: 140-142.

Cardiophorus dilutus ER. – BAUDI 1871: 52-53.

Paracardiophorus dilutus ER. 1840 – BRYANT: 51.

Type locality: Egypt (Alexandria).

Distribution: Egypt, Jordan, Algeria, new to Cyprus.

Material examined: CYPRUS – Nicosia, 05. XI. 1933, leg. Th. Shiakides, 2 ex. (AUA, MoACyp); Cyprus (without further collecting data), 2 ex. (BcMT); ALGERIA – El Amri, leg. Dr. Thiébault, coll M. Oberthur, Museum Paris 1952 (NMNH); EGYPT – Alexandrie, Hénou, coll. Leon Fairmaire 1905 (type *Cardiophorus pharaonum* Buyss. n. sp.) (NMNH).

Remarks: This species belongs to a group of nocturnal *Cardiophori*. Most are characterized by hand-shaped plates of the bursa copulatrix ('palmate' group, von Hayek, *in litt.*). The beetles are generally brown to yellowish brown and are marked with a more or less spindle-shaped spot along the suture of the elytra. Due to the colour, *C. pharaonum* was confused with *Craspedostethus dilutus* ERICHSON, 1840, which does not occur in Cyprus. This species varies in the extension of the dark area on the elytras and the dark brown to ferruginous colour of the body.

31. *Cardiophorus vestigialis* ERICHSON, 1840

Cardiophorus vestigialis ER. – BAUDI 1871: 52.

Cardiophorus rufipes GOEZE, 1777 – BRYANT: 51.

Cardiophorus tenellus REICHE, 1856 [sic] – BRYANT: 50.

Cardiophorus tenellus ER. – GEORGHIOU 1977: 62.

Cardiophorus vestigialis ER. – GEORGHIOU 1977: 62.

Type locality: Austria, Germany and Portugal.

Distribution: C-, S- & E-Europe, Caucasus, Asia Minor, Cyprus, Middle East, N-Africa, C-Asia.

Material examined: CYPRUS – Nicosia, 13. & 17. I. 1934, leg. Shiakides, 3 ex. (*Cardiophorus tenellus* det. GE Bryant)(MoACyp); Lemesos, Akrotiri, 19.I.2003, leg.



fig. 19: *Spheniscosomus cuneiformis* (BAUDI), 16.5 mm

fig. 20: *Cardiophorus ovipennis* DESBROCHERS, 8.3 mm

Makris, 1 ex.; Limassol, 15. II. 1936, leg. Shiakides, 18 ex. (*Cardiophorus vestigialis* ER., det. CMF von Hayek) (MoACyp); Lemesos, Kourion, 15. III. 2003, leg. Makris, 1 ex.; Amathous, 31. III. 2000, leg. Makris, 1 ex.; Troodos, Agios Nicolaos, m 800, 16. IV. 1994, leg. Suppantisch, 1 ex. (CcV); Troodos, Almyrolivado, 1700m, 07. VI. 2002, leg. Makris (McL); Troodos, Xyliatos Dam, 12. VI. 1999, leg. Preiss, 1 ex. (PcC); Troodos, Chionistra, 17. VI. 1939, leg. Lindberg, 2 ex. (LcMH).

Remarks: *Cardiophorus rufipes* GOEZE, 1777, recorded by Bryant, most probably has to be referred to *C. vestigialis*, but could also be referred to *C. ruficruris*. No specimen identified as *C. rufipes* was found in any of the collections.

The specimens collected by Shiakides in February were found in their winter quarters under the bark of eucalyptus.

32. *Cardiophorus ruficruris* (BRULLÉ, 1832)

Elater (*Cardiophorus*) *ruficruris* BRULLÉ, 1832: 140.

Cardiophorus tenellus REICHE – BAUDI 1871: 52.

Type locality: Greece.

Distribution: SE-Europe, Asia Minor, new to Cyprus.

Material examined: CYPRUS – Akrotiri, 0m, 10. I. 2003, leg. Makris, 1 ex. (McL); Lemesos, 0m, 19. I. 2003, leg. Makris, 1 ex. (PcG); Amathous, 3. III. 2000, leg. Makris, 1 ex. (McL).

Remarks: The specimen recorded by Baudi (as *C. tenellus*) could not be located in the Museum in Turin. It probably has to be referred to *C. ruficruris*, since Baudi knew *C. vestigialis* from Cyprus.

33. *Cardiophorus stussineri* BUYSSON, 1913

Cardiophorus stussineri BUYSSON, 1913: 14.

Cardiophorus stussineri BUYSSON, 1913 – PLATIA & GUDENZI 2000a: 149.

Type locality: Greece (Thessalie, Macédoine), Caucasus (Bakou).

Distribution: Greece, Cyprus, Turkey, Caucasus.

Material examined: CYPRUS – Limassol, Amathus, V. 1983, leg. Kronblad, 1 ex. (PcG).

34. *Cardiophorus sacratus* ERICHSON, 1840

Cardiophorus sacratus ERICHSON, 1840: 284.

Cardiophorus aeratus ER. = *nigricornis* BAUDI – BAUDI 1871: 52.

Cardiophorus sacratus ER., 1840 – BRYANT: 50.

Cardiophorus nigricornis BAUDI, 1859 – BRYANT: 50.

Cardiophorus sacratus ER. – GEORGHIOU: 62.

Cardiophorus sacratus ER. – BERGER 1988: 83.

Cardiophorus sacratus ERICHSON, 1840 – PLATIA & GUDENZI 2000b: 608.

Type locality: Mesopotamia

Distribution: Asia Minor to Caucasus, Cyprus, Middle East to Iran.

Material examined: CYPRUS – Lefkosia, Archangelos, Pediaios Riv., 21. II. 2003, leg. Makris, 1 ex. (McL); Famagusta, 08. III. 1932, leg. Shiakides, 8 ex. (AUA); Athienou env., 17., 18. & 20. III. 1994, leg. Preiss, 5 ex. (PcC); Episkopi, 27. III. 1987, leg. Sama, 1 ex. (PcG); Athienou env., 03. & 05. IV. 1994, leg. Preiss, 3 ex. (PcC); N^r-Kyreneia, 04. IV. 1927, leg. Morris, 1 ex. (MoACyp); Nicosia, 13. IV. 1927, leg. Morris, 3 ex. (MoACyp); Famagusta, 13. IV. 1929 & 1932, leg. Shiakides, 9 ex. (MoACyp); Athienou, 18. IV. 1994, leg. Preiss, 1 ex. (PcC); Nicosia, 27. IV. 1972, leg. Shiakides, 1 ex. (AUA); Nicosia, 20. V. 1932, leg. Shiakides, 2 ex. (AUA).

Remarks: the black markings on the pronotum are variable in size, to the extent that the pronotum can be almost entirely black.

35. *Cardiophorus georgioui* n. sp. (figs. 22 & 23)

Cardiophorus cyanipennis MULS., 1852 – BRYANT: 49.

Material examined. CYPRUS – Holotype ♀: Lemesos, Korfi, 600m, 04.VI.2002, leg. Georgiou (GcL).

Description. Female. Body, head, prosternum, and elytra entirely black, the latter with indistinct metallic reflexions. Pubescence generally blackish, sparse and short, ventrally yellow-fulvous, denser. Pronotum and legs bright orange, tarsi with a dark tint. The black area on the prosternum overlaps the lateral sutures. There it forms a narrow band along the suture, which widens in the posterior third and continues along the posterior margin. Dorsally the pronotum is bright orange except for anterior and hind margins, including margins of

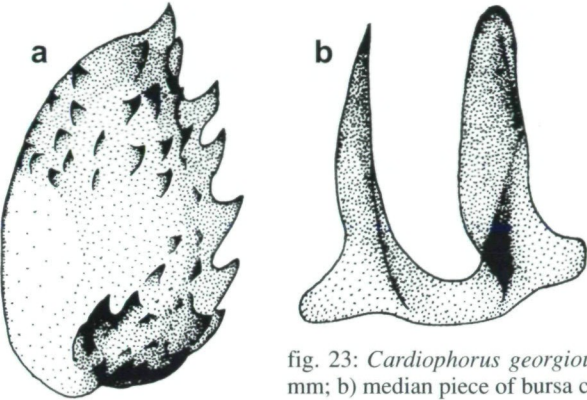


fig. 23: *Cardiophorus georgioui* n.sp. - a) femal genital plate, 0.5 mm; b) median piece of bursa copulatrix, 0.35mm.



fig. 22: *Cardiophorus georgioui* n.sp., 6.9 mm



fig. 24: *Zoroachros alysidotus* (KIESENWETTER), 3.9 mm

the hind angles, which are black. Antennae almost black, each segment apically brownish. 1st segment subcylindrical, 2nd approx. half of the length of the third, just longer than wide. This and the following segments are narrowly triangular extended, the last segment subellipsoidal. Antennae do not reach the apices of posterior angles of the pronotum by approx. 1 segment. Head little convex, with frontal margin slightly but distinctly bulging, broadly curved. Punctures on head simple, standing approx. 1-1.5 diameters apart. Pronotum indistinct and just wider than long, with greatest width before the middle, subarcuate, posterior angles slightly diverging. Punctures on pronotum sparse and very fine, approx. 3 diameters apart, of clearly two different sizes. Lateral margin carved downwards in a flat bow, ending in the anterior third of the pronotum. Elytra subparallel, 2.25x longer than wide. Striae punctured, regularly marked from base to apex. Interstriae convex, very fine bi-punctured. Scutellum heart-shaped, approx. 10% longer than wide. Claws simple.

Bursa copulatrix as in fig. 23, sclerotized median piece clearly TT-shaped.

The male is unknown.

Size. Length 6.9 mm; width 2 mm.

Derivatio nominis. Dedicated to Mr. Georgiou, naturalist in Limassol, Cyprus. His specimen led to the discovery of this new species and his excellent collecting skills contribute vital information to the Fauna of Cyprus.

Comparative remarks. The species is closely allied to *C. argiolus* (GÉNÉ, 1836), but can be distinguished by the entirely bright orange pronotum and legs; From similar colour variations of *C. argiolus*, it can be distinguished by the subarcuate pronotum and sparser pronotal punctuation, narrower scutellum, which is distinct longer than wide, entirely black prosternum and sternites and the clearly TT-shaped sclerotized median piece of the bursa copulatrix. Species of the *C. argiolus* group (*C. argiolus*, *C. collaris* ERICHSON, 1840, *C. ulcerosus* GÉNÉ, 1836 and *C. italicus* PLATIA & BARTOLOZZI, 1988) have not yet been recorded from the eastern Mediterranean. The most similar species in the general region is *C. miniaticollis* CANDEZE, 1860, from which the new species can easily be distinguished by the orange coloured legs, subarcuate sides of pronotum, finer punctuation on pronotum and different shape of the female genital plates.

In his manuscript, Bryant recorded *C. cyanipennis* Mulsant & WACHANRU, 1852, which sometimes also occurs with an entirely red-orange pronotum. However, this species is much more robust with distinct blue-metallic elytra. The specimen recorded by Bryant could not be found in any of the pertinent collections, but most probably can be referred to *C. georgioui* n. sp.

36. *Cardiophorus hinkei* FRIVALDSZKY, 1837

Cardiophorus hinkei FRIVALDSZKY, 1837: 176.

Cardiophorus hinkei FRIVALDSZKY, 1837 – PLATIA & GUDENZI 2000b: 602.

Type locality: Bulgaria.

Distribution: Bulgaria, Greece, Cyprus, Asia Minor, Armenia, Azerbadjan.

Material examined: CYPRUS – Karoni (= Maroni?), 30. IV. 1974, leg. H. W. Woldün, 1 ex. (PcG).

38. *Zorochros alysidotus* (KIESENWETTER, 1858) (fig. 24)

Crypthypnus alysidotus KIESENWETTER, 1858: 368.

Cryptohypnus alysidotus KIESW. – BAUDI 1871: 52.

Hypnoidus (Zorochrus) alysidotus KIES., 1858 – BRYANT: 50.

Type locality: Dalmatien.

Distribution: S- & SE-Europe, Cyprus, Turkey, Middle East.

Material examined: CYPRUS – Lemesos, Alassa (Kourris Dam), 16. IV. 2000, leg. Georgiou, 14 ex. (GcL, McL, PcC); Pafos, Foinikas (Asprokremmos Dam), 4. IV. 2000, leg Makris, 1 ex. (McL).

Other species referred to Elateridae and recorded from Cyprus:

Schistoceros bimaculatus OLIV. – GEORGHIOU 1977: 62.

The species belongs to the Family Bostrychidae. It was recorded under Elateridae in Georgiou's paper by mistake.

Hypnoidus (Zorochrus) curtus GERM., 1844 – BRYANT: 50.

The specimen(s) to which Bryant refers were not found. Since *Zorochrus curtus* GERMAR, 1844 does not occur in the Eastern Mediterranean area, we believe that this record based on (a) misidentified specimen(s).

Acknowledgements

The authors wish to thank Mr. Yannakis Antoniou, Ministry of Agriculture of Cyprus (Nicosia), Prof. Nicholas Emmanuel, Agricultural University of Athens, Dr. M. Daccordi, Museo Regionale di Scienze Naturali Turin, Christodolou Makris (Limassol), Mr. Gabriel Georgiou (Limassol), Dr. Hans Silfverberg (Helsinki) and Dr. Claude Girard (Paris) for allowing us to study their material; Dr. Peter Cate (Vienna) and Dr. Rainer Schimmel (Vinningen) for advice and contribution to the faunistic records; Josef Mertlik (Czech Republik) for advice; Eylon and Benjamin Orbach (Haifa), Prof. Valdimir Chikatunov and Vasilii Kravchenko (Tel-Aviv), Dr. Heinrich Schönmann (Vienna), Prof. Boris Karataev (St. Petersburg) and Dr. Claude Girard (Paris) for allowing us to study *Haterumelater* specimens; Finally, we specially wish to thank Howard Mendel (London) for allowing us to study material, for the use of facilities at The Natural History Museum and for reviewing the manuscript.

REFERENCES

- BAUDI A SELVE F., 1871. Coleopterorum messis in insula Cypro et Asia minore ab Eugenio Truqui congregatae recensitio. Berliner entomologische Zeitschrift 15: 49-71.
- BERGER P., 1988. Contribution a l'Histoire Naturelle de l'Ile de Chypre. Biocosme Mésogéen 5 (3-4): 83 (Elateridae).
- BRYANT G. E., (~1950-1960). The Coleoptera of Cyprus. Manuscript. The Natural History Museum, London: 49-51 (Elateridae, typed part). not published!
- BUYSSON H. DU, 1888. Description d'une nouvelle espèce d'Elatéride d'Europe. Bulletin de la Société Entomologique de France 1888: 202.
- BUYSSON H. DU, 1891a. Espèces nouvelles d'Elatérides. Bulletin de la Société Entomologique de France 1891: 142.
- BUYSSON H. DU, 1891b. (Extraits du Bulletin de la Société Entomologique de France.) Espèces nouvelles d'Elatérides. Echange Revue Linnéenne 7: 135-136.
- BUYSSON H. DU, 1910. Description d'une variété nouvelle de *Cardiophorus*. Révue d'Entomologie 28: 167-168.
- BUYSSON H. DU, 1911. Documents sur quelques Elatérides d'Égypte ou d'Afrique. Bulletin de la Société Entomologique d'Égypte 4 (2): 134-146.

- BUYSSON H. DU, 1913. Note sur le *Cardiophorus ruficruris* BRULLÉ et description d'une espèce nouvelle. *Miscellanea Entomologica* 21: 14-15.
- BRULLÉ A., 1832. Expédition scientifique de Morée. Section des sciences physiques 3 - 1^{re} partie. Deuxième section. Des animaux articulés. Levrault, Paris. 136-143 (Elateridae).
- DESBROCHERS DES LOGES J., 1875. Description d'un *Throscus* et de quelques Elatérides nouveaux. *Opusculs Entomologiques (Coléoptères)*: 56 pp.
- ERICHSON W. F., 1840. Über Elateriden ohne Bruststachel (*Cardiophorus*). *Zeitschrift für die Entomologie* 2: 279-341.
- ERICHSON W. F., 1841. Über die Elateren mit kammförmig gezähnten Krallen. *Zeitschrift für die Entomologie* 3: 88-129.
- FABRICIUS J. C., 1801. *Systema Eleutheratorum* (...) 2, Bibliopolii Academici Novi, Kiel: 687 pp.
- FRIVALDSZKY I., 1837. A Magyar Tudos Táraság Evkönyvei. In: *Annalen der Ungarischen Akademie (Coleptera des Balkans)*. Madosik Koetet 7: 176.
- GEORGHIOU G. P., 1977. The insects and mites of Cyprus. Kiphissia, Athens: 61-62 (Elateridae).
- GERMAR E. F., 1817. Reise durch Österreich, Tyrol nach Dalmatien und in das Gebiet von Ragusa 2. Brockhaus, Leipzig & Altenburg: 323 pp. (Elateridae: 218-219).
- GERMAR E. F., 1844. Bemerkungen über Elateriden. *Zeitschrift für die Entomologie* 5: 133-192.
- GURJEVA E. L., 1957. Sistematicheskij obzor vidov roda *Elater* L. (Coleoptera, Elateridae) fauni SSSR. *Entomologicheskoe obozrenie* 36 (2): 451-475.
- GYLLENHAL L., 1817. Eleutherata oder Käfer. In: C. J. Schönherr. *Synonymia insectorum* (...) 1 (3), Lewerentz, Skara: 506 pp.
- HERBST J. F. W., 1779. Beschreibung und Abbildung einiger, theils neuer, theils noch nicht abgebildeter Insecten. Beschäftigungen der berlinischen Gesellschaft naturforschender Freunde 4: 316-317, pl. 7, fig. 1 (Elateridae).
- HERBST J. F. W., 1784. Verzeichnis seiner Insectensammlung. Fortsetzung. *Archiv für Insectengeschichte* 5: 73-151.
- KIESENWETTER H. VON, 1858. In: Erichson, *Naturgeschichte der Insecten Deutschlands*. Erste Abtheilung Coleoptera 4, Berlin, 1857 (1858)-1863: 212-384 (Elateridae).
- KIESENWETTER H. VON, 1859. Beitrag zur Käferfauna Griechenlands. *Berliner entomologische Zeitschrift* 3: 17-22.
- MARSEUL M. S. A. DE, 1868. Descriptions des espèces nouvelles. *l'Abeille* 5: 171-218.
- MULSANT E. & REY C., 1874. Description d'un genre nouveau de la tribu des Elatérides. *Annales de la Societe Linneenne de Lyon* 21: 405-408.
- MULSANT E. & GODART J. B., 1853. Description d'un Coléoptère inédit constituant un nouveau genre parmi les Elatérides. *Opusculs entomologiques* 2: 194 pp.
- ÔHIRA H., 1968. The Elateridae of the Ryukyu Archipelago, V. *Kontyû* 36 (2): 134-143.
- PENEV L., 1987. A new species of the genus *Haterumelater* (Col. Elateridae) from Bulgaria. *Zoologichky Zhurnal* 66: 1586-1589.
- PIC, M. 1904. Nouvelles espèces et variétés de Coléoptères paléarctiques. *Échange Revue Linnéenne* 20 (No. 239): 81-82.
- PIC, M. 1910. Descriptions ou diagnoses et notes diverses. *Échange Revue Linnéenne* 26 (No. 305 & No. 308): 33, 50.
- PLATIA G., 1989. Descrizione di nuove specie di Elateridi della Grecia e Turchia (Coleoptera Elateridae). *Lavori - Società Veneziana di Scienze Naturali* 14 (1): 79-86.
- PLATIA G., 1994. Fauna d'Italia 33. Coleoptera, Elateridae. Calderini, Bologna: 429 pp.
- PLATIA G. & SCHIMMEL R., 1994. Descrizione di tre nuove specie di Elateridi di Grecia, Turchia e Siria, con note su *Agriotes cribrithorax* Pic, 1910 (Coleoptera, Elateridae). *Lavori - Società Veneziana di Scienze Naturali* 19: 77-82.
- PLATIA G. & GUDENZI I., 1996. Descrizione di tre nuove specie di Elateridi di Grecia, Turchia ed Isola di Cipro con note geonemiche e sinonimiche (Coleoptera, Elateridae). *Bollettino Museo Regionale di Scienze Naturali, Torino* 14 (1): 139-150.
- PLATIA G. & GUDENZI I., 1998. Note tassonomiche e faunistiche su elateridi del vicino oriente (Coleoptera, Elateridae). *Bollettino dell'Associazione Romana di Entomologia* 53 (1-4): 49-62.

- PLATIA G. & GUDENZI I., 2000a. Contributo alla conoscenza dei *Cardiophorus* della Grecia. Bollettino della Società Entomologica Italiana 132 (2): 135-155.
- PLATIA G. & GUDENZI I., 2000b. Revisione dei *Cardiophorus* ESCHSCHOLTZ della Turchia. I: Le specie bicolori. Lambillionea 100 (4): 601-612.
- ROSSI P., 1790. Fauna Etrusca, sistens Insecta, quae in provinciis Florentina et Pisana praesertim collegit I. Liburni: 272 pp (Elateridae: 176-183).
- ROUBAL J., 1924. Einige Käferneuheiten. Entomologischer Anzeiger 8: 80-81.
- SCHENKLING S., 1925. Coleopterorum Catalogus, auspiciis et auxilio W. Junk, pars 80, Elateridae 1, Berlin: 263 pp.
- SCHIMMEL R., 1995. Neue Elateriden aus Zypern und aus Südostasien (Insecta, Coleoptera, Elateridae). Reichenbachia, Staatliches Museum für Tierkunde Dresden 31 (11): 49-56.
- SCHIMMEL R., 1996a. Neue Arten der Tribus Ampedini aus Griechenland und Zypern (Coleoptera, Elateridae). Mitteilungen des internationalen entomologischen Vereins 21 (1-2): 63- 67.
- SCHIMMEL R., 1996b. Eine neue *Peripontius*-Art aus dem Troodos-Gebirge in Zypern (Coleoptera, Elateridae). Mitteilungen des internationalen entomologischen Vereins 21 (3-4): 121-124.
- STEVEN CH. DE, 1830. Description de l'Elater Parreysii et de quelques nouveaux Buprestes. Bulletin de la Société Impériale des Naturalistes de Moscou 2: 154-156 (Elateridae).
- WELLSCHMIED K., 1988. Die Elateriden der Kapverden und Festlegung des Lectotypus von *Aeoloides grisescens* GERMAR, 1844, sowie dessen Abgrenzung von *Aeoloides bicarinatus* REITTER, 1891 (Coleoptera, Elateridae, Monocrepidini). Entomofauna 9 (4): 117-129.

Adresses of the authors: Rüdiger PREISS, Linden 37, A-9074 Keutschach (Carinthia), Austria. E-mail: preiss@aon.at

Giuseppe PLATIA, Via Molino Vecchio 21, 47030 Gatteo (Forlì), Italia. E-mail: pinoplatia@libero.it

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Zeitschrift der Arbeitsgemeinschaft Österreichischer Entomologen](#)

Jahr/Year: 2003

Band/Volume: [55](#)

Autor(en)/Author(s): Preiss Rüdiger, Platia Giuseppe

Artikel/Article: [The Click Beetles of Cyprus with descriptions of two new species and notes on species of the genus Haterumelater Ohira, 1968 \(Coleoptera: Elateridae\). 97-123](#)