

Екол. Зашт. Живот. Сред.	Том 7	Број 1-2	стр. 33-40	Скопје 2000/1
Ekol. Zašt. Život. Sred.	Vol.	No.	p-p	Skopje

CONTRIBUTION TO THE KNOWLEDGE OF THE JEWEL BEETLES (COLEOPTERA: BUPRESTIDAE) OF THE REPUBLIC OF MACEDONIA

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ABSTRACT

Sakalian, V. P. (2000/1). Contribution to the knowledge of the Jewel Beetles (Coleoptera: Buprestidae) of the Republic of Macedonia. Ekol. Zašt. Život. Sred., Vol. 7, No.1/2, 33-40, Skopje.

A total number of 51 species and subspecies which belong to 14 genera and 8 subfamilies have been established. Two genera (*Paracylindromorphus* and *Cylindromorphus*) and 9 species, marked by asterisk in the text, are new for the Macedonian Buprestidae fauna. New faunistic information for the rest of the buprestids has been established. With the collected new taxa the number of jewel beetles known from the Macedonian territory runs to 104. Zoogeographical analysis is made for all known Macedonian jewel beetles. The great domination of Mediterranean taxa shows the high level of Mediterranean fauna impact of the buprestid community formation in this country.

Key words: Buprestidae, Coleoptera, Macedonia, Faunistic, Biogeography

ИЗВОД

Sakalian, V. P. (2000/1). Прилог кон познавањето на бупрестидите (Coleoptera: Buprestidae) во Република Македонија. Екол. Зашт. Живот. Сред. Том 7, Бр. 1/2, 33-40, Скопје.

Утврдени се вкупно 51 вид и подвид од 14 рода и 8 потфамилии. Два рода (*Para-cylindromorphus* и *Cylindromorphus*) и 9 вида, означени со ѕвезда се нови за македонската бупрестидна фауна. Нови податоци се презентирани и за останатите бупрестиди. Со новите таксони, бројот на бупрестиди во Македонија изнесува 104. Извршена е зоогеографска анализа на македонските бупрестиди. Високата доминација на медитерански таксони покажува високо ниво на влијание на медитеранската фауна врз составот на бупрестидите во земјата.

Клучни зборови: Buprestidae, Coleoptera, Македонија, фаунистика, биогеографија

INTRODUCTION

Following the summarizing paper of the Balkan peninsula's Buprestidae (Mühle, 1980) 3 publications containing information on the Macedonian jewel beetles have been released (Drovenik & Hladil, 1984, Volkovitsh, 1989 and Hristovski et

al., 1996). Nevertheless, the jewel beetles fauna of Macedonia is not well studied yet. The main goal of this paper is to present new faunistic and zoogeographic information about the Buprestidae family from this area of the Balkan peninsula.

MATERIAL AND METHODS

The studied material was collected by the Bulgarian and Macedonian entomologists (including the author) from 1994 to 1997. Traditional faunistic methods for buprestids catching were used: sweeping grass vegetation, beating of the trees and bushes branches, decortication of the trees and bushes etc. The collected species are kept in the Institute of Zoology Scientific Funds (IZ). Information on buprestids distribution in Macedonia

from our colleague Dr Manfred Niehuis (Germany) has also been used. The zoogeographical classification of the jewel beetles is based mainly on the data of their recent spreading. When the species are polytypic and the subspecies known in Macedonia are morphologically distinct or geographically separated information of the distribution of concrete subspecies area is used. New taxa for Macedonian fauna are marked by asterisk in the list.

FAUNISTICAL RESULTS

The established buprestids taxa are as follow:

POLYCESTINAE

Ptosima flavoguttata (Illiger, 1803)

Vardar Valley: Demir kapija, 14.05.1986 and 23-25.05.1990, leg. H. Mahr (M. Niehuis in litt.); Bistra Mt: Boshkov most near Mavrovo, 700 m, 30.05.1995, 1 ex on *Prunus domestica* leg. V. Sakalian (coll. IZ).

ACMAEODERINAE

Acmaeodera brevipes brevipes Kiesenwetter, 1858

Vardar Valley: Demir kapija, 14.05.1986, leg. H. Mahr (M. Niehuis in litt.).

Acmaeodera pilosellae pilosellae (Bonelli, 1812)

Galichitsa Mt, 1500-1600 m, 19.06.1994, 2 ex, leg. J. Kolarov and M. Langourov; Kitka Mt: Preslop, 900-1000 m, 24.06.1994, 1 ex, leg. B. Guéorguiev; Karadzhitsa Mt, 1200 m, 29.07.1997, 1 ex, leg. G. Blagoev (coll. IZ).

Acmaeodera crinita crinita Spinola, 1838

Pchinja Valley: Katlanovo, 19.06.1996, 1 ex, leg. S. Hristovski (coll. IZ).

Acmaeodera ottomana (Frivaldszky, 1837)

Pchinja Valley: Katlanovo, 14.05.1994, 1 ex, leg. S. Beshkov and 12.06.1996, 1 ex, leg. S. Hristovski; Dren Mt, 680 m, 17.06.94, 1 ex, leg. B. Guéorguiev (coll. IZ).

Acmaeoderella circassica (Reitter, 1890)

Vardar Valley: Veles, 14.06.1988, leg. A. Szalles (M. Niehuis in litt.).

Acmaeoderella seminata (Abeille de Perrin, 1895)

Vardar Valley: Veles (Volkovitsh in litt.). In opinion of Volkovitsh the reports from Macedonia (Mühle, 1980 and Drovenik & Hladil, 1984) of *Acmaeoderella hellenica* and *A. macedonica* are related to *Acmaeoderella circassica* and *A. seminata*.

Acmaeoderella flavofasciata flavofasciata (Piller & Mitterpacher, 1783)

Ohrid Lake, 18.07.1975, leg. M. Niehuis (M. Niehuis in litt.); Kriva reka Valley: Usem near Kriva palanka, 9.08.1995, 1 ex; Galitsitsa Mt: Korita, 1500 m, 17-31.08.1996, 4 ex, leg. S. Hristovski (coll. IZ);

Acmaeoderella mimonti (Boieldieu, 1865)

Vardar valley: Demir Kapija, 10.07.1983, leg. M. Niehuis (M. Niehuis in litt.).

**Acmaeoderella villosula* (Steven, 1830)

Pchinja Valley: Katlanovo, 24.05.1996, 1 ex, leg. S. Hristovski (coll. IZ), det. M. Volkovitsh.

CHALCOPHORINAE

Capnodis tenebricosa (Olivier, 1790)

Vardar Valley: Demir Kapija, 14.05.1986, leg. H. Mahr (M. Niehuis in litt.).

Capnodis tenebrionis (Linnaeus, 1761)

Pchinja Valley: Katlanovo, 24.05.1996, 1 ex and 13-20.06.1996, 5 ex, leg. S. Hristovski (coll. IZ).

Aurigena lugubris lugubris (Fabricius, 1777)

Vardar Valley: Taor, 12.05.1995, 1 ex, leg. S. Beshkov (coll. IZ).

SHENOPTERINAE

**Sphenoptera coracina* (Steven, 1829)

Vardar Valley: Veles, 300 m, 15.05.1994, 1 ex, leg. S. Beshkov (coll. IZ).

Sphenoptera petriceki Obenberger, 1949

Vodno Mt, 8.06.1975, leg. O.E. Kratschmer (M. Niehuis in litt.).

BUPRESTINAE

Dicerca aenea aenea (Linnaeus, 1761)

Vardar Valley: Negotino, 31.07.1983, leg. H. Gunther (M. Niehuis in litt.).

Dicerca berolinensis (Herbst, 1779)

Ohrid Lake, 9-13.07.1975 ex *Acer* sp., leg. M. Niehuis (M. Niehuis in litt.).

Melanophila acuminata (De Geer, 1774)

Shar planina Mt: Vratnitsa, 800 m, 20.07.1997, 1 ex, leg. M. Langourov (coll. IZ).

Melanophila picta decastigma (Fabricius, 1787)

Vardar Valley: Demir Kapija, 10.07.1985 and 16.07.1988, leg. M. Niehuis (M. Niehuis in litt.).

Anthaxia hungarica hungarica (Scopoli, 1772)

Vardar Valley: Demir Kapija, 14.05.1986 and 11-12.05.1990, leg. H. Mahr and 10.07.1985, leg. M. Niehuis (M. Niehuis in litt.).

Anthaxia sponsa Kiesenwetter, 1857

Pchinja Valley: Katlanovo, 20.06.1996, 1 ex, leg. S. Hristovski (coll. IZ).

Anthaxia scorzonerae (Frivaldszky, 1828)

Vodno Mt, 8.06.1975, leg. O.E. Kratschmer;

Vardar Valley: Demir Kapija, 14.05.1986, leg. H. Mahr (M. Niehuis in litt.); Pchinja Valley: Katlanovo, 12-20.06.1996, 4 ex, leg. S. Hristovski (coll. IZ).

***Anthaxia kiesenwetteri* Marseul, 1865**

Pchinja Valley: Katlanovo, 13-19.06.1996, 7 ex, leg. S. Hristovski (coll. IZ).

***Anthaxia millesfolii millesfolii* (Fabricius, 1801)**

Ohrid Lake, 8-13.07.1975, leg. M. Niehuis (M. Niehuis in litt.); Pchinja Valley: Katlanovo, 20.06.1996, 1 ex, leg. S. Hristovski (coll. IZ).

***Anthaxia hypomelaena* (Illiger, 1803)**

Vardar Valley: Demir Kapija, 14.05.1986, leg. H. Mahr (M. Niehuis in litt.); Dren Mt: Belovoditse, 650 m, 17.06.1994, 1 ex, leg. J. Kolarov and M. Langourov (coll. IZ).

***Anthaxia istriana* Rosenhauer, 1847**

Galichitsa Mt, 1500-1600 m, 19.06.1994, 1 ex, leg. J. Kolarov and M. Langourov (coll. IZ).

***Anthaxia helvetica* Stierlin, 1868**

Galitsitsa Mt, 06.1995, 1 ex, leg. S. Hristovski; Shar planina Mt: Studena River, 1700-1850 m, 10-16.07.1995, 1 ex, leg. G. Blagoev and V. Sakalian (coll. IZ).

***Anthaxia quadripunctata* (Linnaeus, 1758)**

Shar planina Mt: Studena River, 1700-1850 m, 10-16.07.1995, 2 ex, leg. G. Blagoev and V. Sakalian (coll. IZ).

***Anthaxia nitidula nitidula* (Linnaeus, 1758)**

Vodno Mt, 8.06.1975, leg. O.E. Kratschmer (M. Niehuis in litt.); Galichitsa Mt, 1500-1600 m, 19.06.1994, 1 ex, leg. J. Kolarov and M. Langourov (coll. IZ).

***Anthaxia nitidula signaticollis* Krynicki, 1832**

Vardar Valley: Demir Kapija, 8-9.06.1981, 17.05.1982 and 14.05.1986, leg. H. Mahr (M. Niehuis in litt.).

***Anthaxia discicollis* Laporte & Gory, 1839**

Galichitsa Mt: Trpejtsa, 900 m, 31.05.1995, 3 ex on *Juniperus* sp., leg. V. Sakalian (coll. IZ).

***Anthaxia bicolor* Faldermann, 1835**

Vardar valley: Demir Kapija, 14.05.1986, leg. H. Mahr (M. Niehuis in litt.).

***Anthaxia fulgurans* (Schränk, 1783)**

Dren Mt: Belovoditse, 650 m, 17.06.1994, 1 ex, leg. J. Kolarov and M. Langourov; Kitka Mt: Preslop, 900-1000 m, 24.06.1994, 1 ex, leg. B. Guéorguiev; Pchinja Valley: Katlanovo, 12-20.06.1996, 7 ex, leg. S. Hristovski (coll. IZ).

***Anthaxia podolica podolica* Mannerheim, 1837**

Vardar Valley: Demir Kapija, 19.05.1984, leg. H.

Mahr (M. Niehuis in litt.); Galitsitsa Mt: Dizgino, 800 m, 15.07.1995, 1 ex, leg. S. Hristovski (coll. IZ).

***Anthaxia thalassophila pseudokervillei* Niehuis, 1990**

Scopie, 29.05.1995, 1 ex and Galichitsa Mt: Trpejtsa, 900 m, 31.05.1995, 1 ex, leg. V. Sakalian (coll. IZ).

***Anthaxia passerinii* Pecchioli, 1837**

Vardar Valley: Demir kapija, 14.05.1986 and 11-12.05.1990, leg. H. Mahr (M. Niehuis in litt.); Galichitsa Mt: Trpejtsa, 900 m, 31.05.1995, 1 ex on *Juniperus* sp., leg. V. Sakalian (coll. IZ).

***Anthaxia manca* (Linnaeus, 1767)**

Vardar Valley: Demir kapija, 14.05.1986, leg. H. Mahr (M. Niehuis in litt.).

CHRYSOBOTHIRINAE

***Chrysobothris affinis* (Fabricius, 1794)**

Vardar Valley: Demir kapija, 17.05.1982 and 14.05.1986, leg. H. Mahr (M. Niehuis in litt.).

AGRILINAE

***Coraebus rubi* (Linnaeus, 1767)**

Ohrid Lake: Peshtani, 10-16.06.1986, leg. M. Niehuis (Niehuis in litt.).

***Coraebus elatus* (Fabricius, 1787)**

Dren Mt: Belovoditse, 650 m, 17.06.1994, 2 ex and Prespansko Lake: Oteshevo, 780 m, 18.06.1994, 2 ex, leg. J. Kolarov and M. Langourov; Galichitsa Mt: Trpejtsa, 900 m, 31.05.1995, 4 ex on *Potentilla* sp.; Pchinja Valley: Katlanovo, 24.05.1996, 1 ex, leg. S. Hristovski (coll. IZ).

****Agrilus biguttatus* (Fabricius, 1777)**

Prespansko Lake: Oteshevo, 780 m, 18.06.1994, 1 ex, leg. B. Guéorguiev (coll. IZ).

****Agrilus derasofasciatus* Lacordaire, 1835**

Vardar Valley: Demir Kapija, 23-25.05.1990, leg. H. Mahr (M. Niehuis in litt.).

***Agrilus obscuricollis* Kiesenwetter, 1857**

Prespansko Lake: Oteshevo, 850 m, 18.06.1994, 2 ex, leg. J. Kolarov and M. Langourov; Galitsitsa Mt, 1050 m, 18.06.1994, 1 ex, leg. B. Guéorguiev (coll. IZ).

***Agrilus auricollis* Kiesenwetter, 1857**

Vardar Valley: Demir kapija, 17.05.1982, leg. H. Mahr (M. Niehuis in litt.).

****Agrilus pratensis pratensis* (Ratzeburg, 1839)**

Vardar Valley: Demir kapija, 17.05.1982, leg. H. Mahr (M. Niehuis in litt.).

****Agrilus viridis* (Linnaeus, 1758)**

Pchinja Valley: Katlanovo, 20.06.1996, 1 ex, leg. S. Hristovski (coll. IZ).

****Agrilus cuprescens* Ménétriés, 1832**

Galichitsa Mt, 1500-1600 m, 19.06.1994, 1 ex, leg. J. Kolarov and M. Langourov (coll. IZ).

***Agrilus viridicaerulans rubi* Schaefer, 1837**

Vardar Valley: Demir Kapija, 4-15.06.1979, leg. H. Mahr (M. Niehuis in litt.).

***Agrilus roscidus* Kiesenwetter, 1857**

Vardar Valley: Demir Kapija, 8-9.06.1981, leg. H. Mahr and 10.07.1985, leg. M. Niehuis (M. Niehuis in litt.).

CYLINDROMORPHINAE

****Paracylindromorphus subuliformis* subuliformis (Mannerheim, 1837)**

Dren Mt: Belovoditse, 650, 17.06.1994, 1 ex, leg. J. Kolarov and M. Langurov (coll. IZ).

****Cylindromorphus filum* (Gyllenhal, 1817)**

Dren Mt: Belovoditse, 650, 17.06.1994, 6 ex, leg. J. Kolarov and M. Langurov (coll. IZ).

As it is evident from the list of taxa a total number of 51 species and subspecies which belong to 14 genera and 8 subfamilies have been established. Two genera (*Paracylindromorphus* and *Cylindromorphus*) and 9 species are new for the Macedonian Buprestidae fauna. New faunistic information has been established for the rest of the buprestids. With the collected new taxa the number of jewel beetles known from the Macedonian territory runs to 104.

ZOOGEOGRAPHICAL RESULTS

From the zoogeographical point of view all the established 104 buprestid taxa in Macedonia are arranged in 15 zoogeographical categories (Table 1).

Tab. 1 Zoogeographical characteristic of the Macedonian Buprestidae taxa.

TAXA	ZOOGEOGRAPHICAL CATEGORIES
<i>Julodis ehrenbergi</i> Laporte	Eastmediterranean
<i>Ptosima flavoguttata</i> (Illiger)	Southwestpalaeartic
<i>Acmaeodera brevipes brevipes</i> Kiesenwetter	Eastmediterranean
<i>Acmaeodera pilosellae pilosellae</i> (Bonelli)	Northmediterranean
<i>Acmaeodera crinita crinita</i> Spinola	Eastmediterranean
<i>Acmaeodera ottonana</i> (Frivaldszky)	Eastmediterranean
<i>Acmaeoderella discoidea</i> (Fabricius)	Transmediterranean
<i>Acmaeoderella circassica</i> (Reitter, 1890)	Pontomediterranean
<i>Acmaeoderella seminata</i> (Abeille de Perrin)	Eastmediterranean
<i>Acmaeoderella levantina</i> (Obenberger)	Balkan subendemic
<i>Acmaeoderella flavofasciata flavofasciata</i> (Piller et Mitterpacher)	Mediterraneouropean
<i>Acmaeoderella mimonti</i> (Boieldieu)	Southwestpalaeartic
<i>Acmaeoderella gibbulosa</i> (Ménétriés)	Southwestpalaeartic
<i>Acmaeoderella villosula</i> (Steven)	Eastmediterrano-iranoturanean
<i>Chalcophorella stigmatica</i> (Schönherr)	Eastmediterranean
<i>Chalcophorella fabricii</i> (Rossi)	Eastmediterranean
<i>Capnodis tenebricosa</i> (Olivier)	Southwestpalaeartic
<i>Capnodis tenebrionis</i> (Linnaeus)	Southwestpalaeartic
<i>Capnodis cariosa</i> (Pallas)	Pontomediterranean
<i>Capnodis carbonaria</i> (Klug, 1829)	Eastmediterranean
<i>Capnodis porosa</i> (Klug)	Eastmediterranean
<i>Aurigena lugubris lugubris</i> (Fabricius)	Pontomediterranean

<i>Sphenoptera antiqua</i> (Illiger)	Mediterranoeuropean
<i>Sphenoptera coracina</i> (Steven, 1829)	Eastmediterranean
<i>Sphenoptera parnassica</i> (Jakovlev)	Balkan endemic
<i>Sphenoptera rauca</i> (Fabricius)	Southwestpalaeartic
<i>Sphenoptera buresi</i> Obenberger	Balkan endemic
<i>Sphenoptera laportei</i> Saunders	Mediterranoeuropean
<i>Sphenoptera jugoslavica</i> Obenberger	Balkan subendemic
<i>Sphenoptera petriceki</i> Obenberger	Balkan subendemic
<i>Dicerca aenea</i> (Linnaeus)	transpalaeartic
<i>Dicerca berolinensis</i> (Herbst)	European
<i>Scintillatrix mirifica</i> Mulsant	European
<i>Scintillatrix gloriosa</i> Marseul	Eastmediterranean
<i>Palmar festiva</i> (Linnaeus)	Mediterranoeuropean
<i>Palmar bella</i> (Gory)	Eastmediterranean
<i>Buprestis cupressi</i> Germar	Eastmediterranean
<i>Buprestis rustica</i> Linnaeus	Eurosiberian
<i>Buprestis haemorroidalis haemorroidalis</i> Herbst	Westpalaeartic
<i>Buprestis novemmaculata novemmaculata</i> Linnaeus	Transpalaeartic
<i>Melanophila acuminata</i> (De Geer)	Holarctic
<i>Melanophila picta decastigma</i> (Fabricius)	Mediterranoeuropean
<i>Anthaxia hungarica hungarica</i> (Scopoli)	Mediterranoeuropean
<i>Anthaxia nupta</i> Kiesenwetter	Eastmediterranean
<i>Anthaxia sponsa</i> Kiesenwetter	Eastmediterranean
<i>Anthaxia diadema diadema</i> (Fischer)	Pontomediterranean
<i>Anthaxia scorzonerae</i> (Fivaldszky)	Eastmediterranean
<i>Anthaxia kiesenwetteri</i> Marseul	Eastmediterranean
<i>Anthaxia millefolii millefolii</i> (Fabricius)	Pontomediterranean
<i>Anthaxia umbellatarum umbellatarum</i> (Fabricius)	Mediterranoeuropean
<i>Anthaxia cichorii cichorii</i> (Olivier)	Mediterranoeuropean
<i>Anthaxia hypomelaena</i> (Illiger)	Southwestpalaeartic
<i>Anthaxia rossica</i> Daniel	Pontomediterranean
<i>Anthaxia olympica</i> Kiesenwetter	Pontomediterranean
<i>Anthaxia mundula</i> Kiesenwetter	Eastmediterranean
<i>Anthaxia similis</i> Saunders	European
<i>Anthaxia istriana</i> Rosenhauer	Mediterranoeuropean
<i>Anthaxia sturanyi</i> Obenberger	Balkan endemic
<i>Anthaxia helvetica</i> Stierlin	European
<i>Anthaxia quadripunctata</i> (Linnaeus)	Eurosiberian
<i>Anthaxia funerula</i> (Illiger)	Mediterranoeuropean
<i>Anthaxia amasina</i> (Daniel)	Eastmediterranean
<i>Anthaxia nitidula nitidula</i> Linnaeus	European
<i>Anthaxia nitidula signaticollis</i> Krynicki	Pontomediterranean
<i>Anthaxia discicollis</i> Laporte & Gory	Eastmediterranean
<i>Anthaxia anatolica anatolica</i> Chevrolat	Eastmediterranean
<i>Anthaxia tuerki</i> (Ganglbauer)	European

<i>Anthaxia brevis brevis</i> Laporte & Gory	Pontomediterranean
<i>Anthaxia salicis</i> Fabricius	Mediterranoeuropean
<i>Anthaxia bicolor bicolor</i> Faldermann	Pontomediterranean
<i>Anthaxia fulgurans</i> (Schrank)	European
<i>Anthaxia podolica podolica</i> Mannerheim	European
<i>Anthaxia thalassophila pseudokervillei</i> Niehuis	Eastmediterranean
<i>Anthaxia passerinii</i> Pecchioli	Eastmediterranean
<i>Anthaxia lucens</i> Küster	Eastmediterranean
<i>Anthaxia manca</i> (Linnaeus)	Mediterranoeuropean
<i>Anthaxia deaurata</i> (Gmelin)	Mediterranoeuropean
<i>Chrysobothris affinis</i> (Fabricius)	Westpalaeartic
<i>Chrysobothris leonhardi</i> Obenberger	Balkan subendemic
<i>Coroebus florentinus</i> (Herbst)	Mediterranoeuropean
<i>Coroebus rubi</i> (Linnaeus)	Southwestpalaeartic
<i>Coroebus elatus</i> (Fabricius)	Westpalaeartic
<i>Meliboeus violaceus</i> Kiesenwetter	Eastmediterranean
<i>Meliboeus episcopalis</i> (Mannerheim)	Eastmediterranean
<i>Nalanda fulgidicollis</i> (Lucas)	Mediterranoeuropean
<i>Agrilus biguttatus</i> (Fabricius)	Westpalaeartic
<i>Agrilus olivicolor</i> Kiesenwetter	European
<i>Agrilus derasofasciatus</i> Lacordaire	Mediterranoeuropean
<i>Agrilus graminis</i> Laporte et Gory	Southwestpalaeartic
<i>Agrilus obscuricollis</i> Kiesenwetter	European
<i>Agrilus sulcicollis</i> Lacordaire	European
<i>Agrilus angustulus</i> (Illiger)	Westpalaeartic
<i>Agrilus auricollis</i> Kiesenwetter	European
<i>Agrilus pratensis pratensis</i> (Ratzeburg)	Westeurosiberian
<i>Agrilus viridis</i> (Linnaeus)	Transpalaeartic
<i>Agrilus cuprescens</i> Ménétriés	Transpalaeartic
<i>Agrilus viridicaerulans rubi</i> Schaefer	Mediterranoeuropean
<i>Agrilus roscidus</i> Kiesenwetter	Southwestpalaeartic
<i>Agrilus hyperici</i> (Creutzer)	European
<i>Agrilus vaginalis philippovi</i> (Alexeev)	Pontomediterranean
<i>Paracylindromorphus subuliformis subuliformis</i> (Mannerheim)	Westpalaeartic
<i>Cylindromorphus filum</i> (Gyllenhal)	European
<i>Trachys puncticollis rectilineata</i> Abeille de Perrin	European
<i>Trachys scrobiculatus</i> Kiesenwetter	Mediterranoeuropean

Following Sakalian's (1994) conception, the established 15 zoogeographical categories are combined in 7 zoogeographical complexes as follows: Holarctic complex with 1 species (*Melanophila acuminata*); Palaearctic complex (10 taxa) where Transpalaeartic (4) and Westpalaeartic (6) buprestids are included; Eurosiberian complex (3)

represented by Transeurosiberian (2) and Westeurosiberian (1) taxa; Southpalaeartic complex (11) - including, in our case, 10 Southwestpalaeartic species and 1 (*Acmaeoderella villosula*) Eastmediterranean; European complex (15) represented by the taxa from the zoogeographical category of

the same name; Mediterranean complex (57) comprising taxa from 5 categories: Mediterraneaneuropean (18), Transmediterranean (1), Northmediterranean (1), Pontomediterranean (11) and Eastmediterranean (26). The Balkan endemics and subendemics are represented by 7 species - 3 endemics and 4 subendemics. There are no endemics known only from the Macedonian territory.

The results of the zoogeographical analysis based on the presentation of these complexes in the studied area are shown in Fig. 1.

The Mediterranean (in the broad sense) taxa are dominant in Macedonia as it is evident from the figure. About 65 % of the buprestids in the Mediterranean complex are Pontomediterranean and Eastmediterranean species and subspecies.

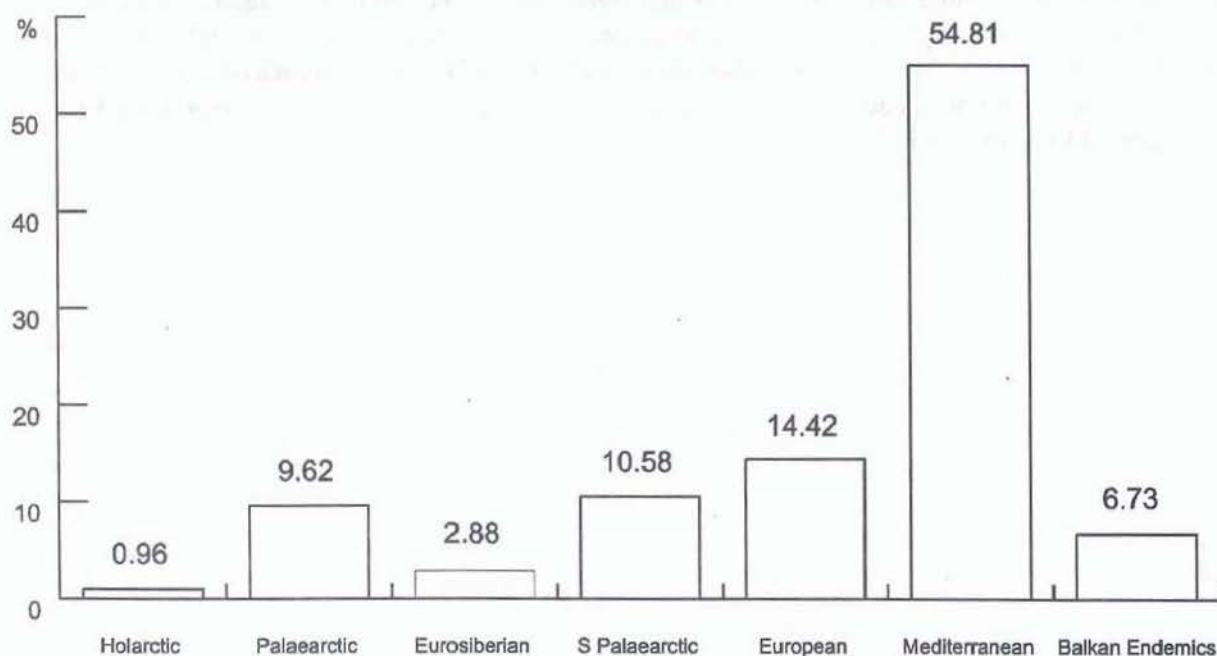


Fig. 1. Zoogeographical complexes in the study area.

DISCUSSION

In our opinion the jewel beetles fauna of Macedonia has not been studied well enough. Probably the taxa which are distributed in the neighbouring countries might also be established in Macedonia as well. It is possible that the obtained results from the zoogeographical analysis will be corrected by new investigations especially in the high mountainous regions. Nevertheless, the

great domination of Mediterranean taxa shows the high level of the Mediterranean (especially Eastmediterranean) fauna impact of buprestid community formation in the Macedonian territory. The location of the relict *Anthaxia tuerki* and 7 Balkan endemics and subendemics in Macedonia represents refugial peculiarity of some habitats in the country.

ACKNOWLEDGMENTS

I wish to thank very much Dr M. Niehuis (Albersweiler) for the precious information and for his permission to use the distributional data on some buprestids in Macedonia. I am especially thankful to Dr M. Volcovitsh (Saint-Petersburg) for the determination of *Acmaeoderella villosula* and for the information on the distribution of some

Acmaeoderinae in the Balkan peninsula. I am obliged to S. Hristovski (Scopje) as well as to my Bulgarian colleagues S. Abadjiev, S. Beshkov, G. Blagoev, B. Guéorguiev, Dr J. Kolarov and M. Langourov for accepting the buprestid species for investigation.

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