Beitr. Ent.	Berlin	ISSN 0005 – 805X
50 (2000) 1	S. 91 – 101	11.04.2000

Contribution to the knowledge of the Jewel Beetles of Albania

(Coleoptera: Buprestidae)

With 2 figures and 1 table

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Summary

A total number of 48 species and subspecies belonging to 18 genera and 8 subfamilies of Buprestidae are reported from Albania. 15 taxa marked by asterisk in the text are new for the country's fauna. Including the new records, the number of jewel beetles known from the Albanian territory has increased to 111. The new localities for the reported buprestids are listed. A zoogeographical analysis based on all known Albanian jewel beetles is presented. The dominance of Mediterranean elements indicates a high impact of the Mediterranean fauna on the Albanian buprestid communities.

Key words

Coleoptera, Buprestidae, Albania, Mediterranean, Faunistics, Zoogeography

Zusammenfassung

Es wird über insgesamt 48 Arten und Unterarten von Albanien, die zu 18 Gattungen und 8 Unterfamilien der Familie Buprestidae gehören, berichtet. Die 15 für die Fauna des Landes neuen Taxa sind mit einem Sternchen markiert. Mit den gesammelten neuen Arten erhöht sich die Zahl der Buprestiden, die aus Albanien bekannt sind, auf 111. Angefügt ist eine zoogeographische Analyse aller bekannten albanischen Buprestiden. Das Überwiegen von mediterranen Arten zeigt den starken Einfluß der Mittelmeerfauna auf die Zusammensetzung der Buprestidenfauna Albaniens.

Acknowledgments

I wish to thank Dr S. BÍLÝ (Prague) and Dr M. KALASHIAN (Erevan) for the determination and confirmation of some species. I am obliged to my Bulgarian colleagues S. ABADJIEV, Dr P. BERON, G. BLAGOEV, B. GUÉORGUIEV, Dr J. KOLAROV, M. LANGOUROV, Dr L. PENEV and B. PETROV, for accepting the buprestid species for investigation. Special thanks to Dr K. MISJA and Dr O. MERKL for giving me the possibility to work with the collections of the Museums in Tirana and Budapest.

Introduction

After the summarizing paper of MÜHLE (1980) and its supplement (MÜHLE, 1984) so far there have been no other publications on the Albanian buprestids fauna. VOLKOVITSH (1989) in his work for buprestids from Eastern Mediterranea reported another one species (*Acmaeoderella jonica*).

The main goal of this paper is to present new faunistical and zoogeographical information about the Buprestidae family from this very interesting area of the Balkan Peninsula.

DOI: 10.21248/contrib.entomol.50.1.91-101

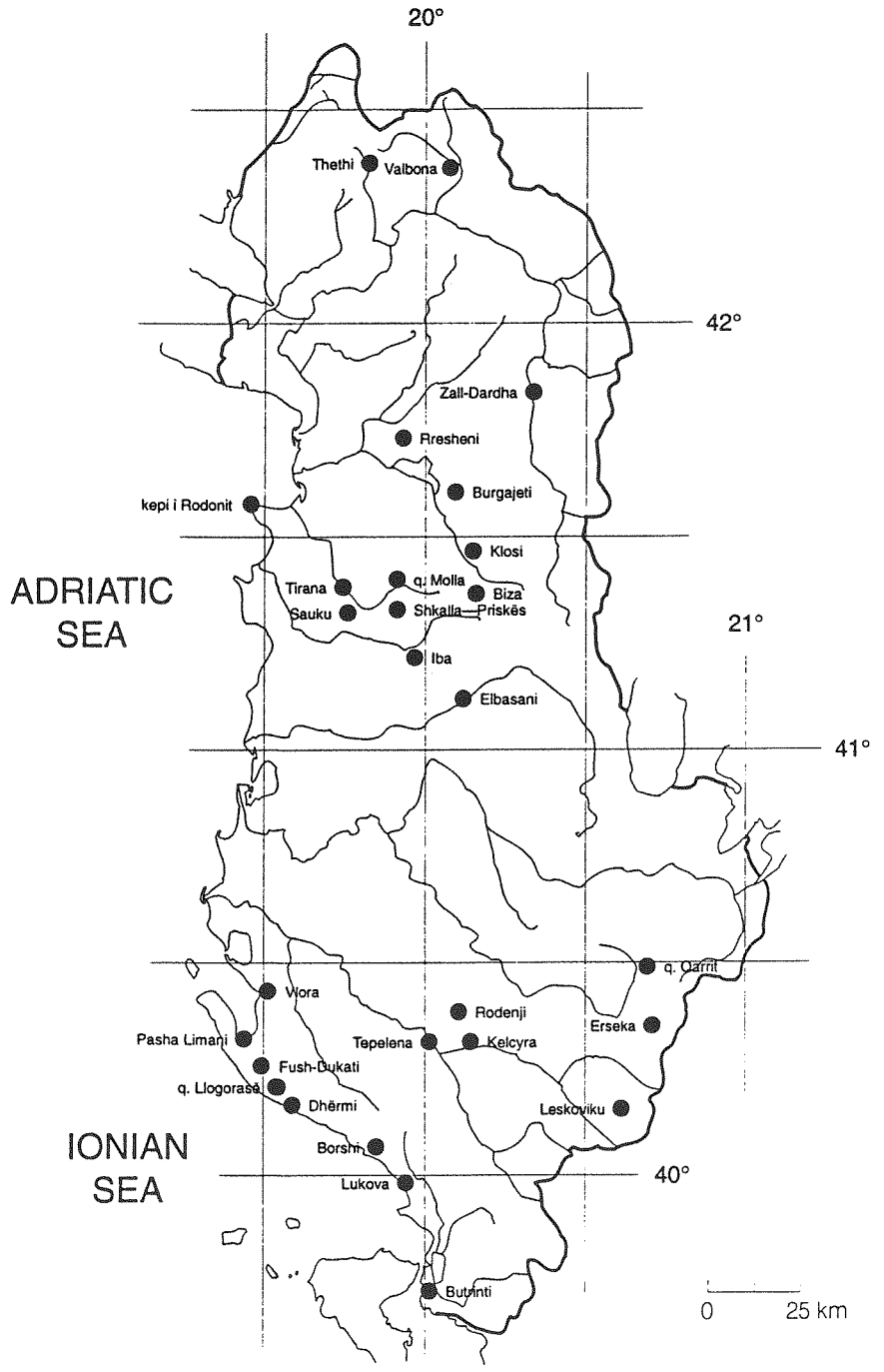

Fig. 1. Map of Albania showing the localities.

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Material and Methods

The greater part of studied material was collected by the author in 1994 and 1995. Traditional faunistical 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). Material and data from the following collections have been used: Museums of Natural History in Tirana (Muzeu Shkencave Natyrore - MSN) and in Budapest (Termeszettudomanyi Muzeum, Budapest - TMB). The localities included in this paper are presented in Fig. 1.

The zoogeographical classification of the jewel beetles is based mainly on the data of their recent spreading. When the species are polytypic and subspecies known for Albania are morphologically distinct or geographically separated, then the information of the distribution of concrete subspecies is used.

The list of the established species and subspecies comprises the following data: the valid taxa name; the information for provinces, concrete locality names (Fig. 1), date of catching, number of found specimens, the name of the collector or determinator (when the material was not collected or determined by the author), the name of collections where the taxa are kept and the plants where some species were found.

The new taxa for the Albanian fauna are marked by asterisk in the list.

Faunistical Results

The established buprestids taxa are as follow:

JULODINAE

**Julodis ehrenbergi* LAPORTE, 1835
Albania, 2 ex. (coll. FUSS in TMB).

POLYCESTINAE

Ptosima flavoguttata (ILLIGER, 1803)
Prov. Tirana: Shkalla-Priskès, 29.06.1958, 1 ex, leg. X. MURRAJ (coll. MSN).

ACMAEODERINAE

**Acmaeodera brevipes brevipes* KIESENWETTER, 1858
Prov. Saranda: Lukova, 5.06.1995, 1 ex (coll. IZ).

Acmaeodera bipunctata bipunctata (OLIVIER, 1790)
Prov. Korca: q. Qarrit, 1.06.1994, 1 ex; Prov. Kolonja: Leskoviku, 1.06.1994, 1 ex, 2.06.1995, 7 ex (coll. IZ).

Acmaeodera crinita crinita SPINOLA, 1838
Prov. Saranda: Lukova, 5.06.1995, 3 ex; Prov. Vlora: Vlora, 7.06.1995, 1 ex (coll. IZ).

**Acmaeodera ottomana* (FRIVALDSZKY, 1837)
Prov. Saranda: Butrinti, 4.06.1995, 2 ex, Lukova, 5.06.1995, 2 ex (coll. IZ).

**Acmaeoderella adspersula adspersula* (ILLIGER, 1803)
Prov. Saranda: Butrinti, 4.06.1995, 1 ex, Lukova, 5.06.1995, 1 ex (coll. IZ).

Acmaeoderella flavofasciata flavofasciata (PILLER & MITTERPACHER, 1783)
Prov. Permeti: Rodenji, 22.07.1962, 1 ex, leg. X. MURRAJ (coll. MSN).

**Acmaeoderella mimonti* (BOIELDIEU, 1865)
Prov. Saranda: Lukova, 5.06.1995, 1 ex (coll. IZ).

DOI: 10.21248/contrib.entomol.50.1.91-101

CHALCOPHORINAE

Chalcophora mariana (LINNAEUS, 1758)

Prov. Mati: Burgajeti, 9.08.1959, 1 ex, leg. X. MURRAJ (coll. MSN); Prov Kolonja: Leskoviku, 1.06.1994, 14 ex, coll. on the trunks of *Pinus* sp. (coll. IZ) .

Chalcophorella stigmatica (SCHÖNHERR, 1817)

Prov. Vlora: Fush-Dukati, 7.05.1958, 1 ex, 8.06.1958, 1 ex, 6.07.1959, 1 ex leg. X. MURRAJ (coll. MSN); Prov. Saranda: Butrinti, 24.06.1995, 1 ex, leg. S. ABADJIEV (coll. IZ).

Chalcophorella fabricii (ROSSI, 1794)

Prov. Vlora: Pasha Limani, 05.1908, 1 ex (coll. TMB).

Capnodis tenebricosa (OLIVIER, 1790)

Prov. Tirana: Iba, 4.07.1963, 1 ex, leg X. MURRAJ (coll. MSN); Prov. Vlora: Dhèrmi, 26.06.1995, 1 ex, leg. S. ABADJIEV; Prov. Saranda: Lukova, 3-4.06.1994, 2 ex, 3.06.1995, 1 ex (coll. IZ).

Capnodis tenebrionis (LINNAEUS, 1761)

Prov. Tirana: Sauku, 4.05.1959, 1 ex, leg. X. MURRAJ (coll. MSN); Prov. Saranda: Lukova, 5.06.1995, 1 ex (coll. IZ).

Capnodis cariosa (PALLAS, 1776)

Prov. Permeti: Kelcyra, 16-20.08.1962, 1 ex, leg. X. MURRAJ (coll. MSN); Prov. Kolonja: Leskoviku, 1.06.1994, 1 ex; Prov. Saranda: Lukova, 3.06.1994, 3 ex on *Phylirea media*; Prov. Vlora: Vlora, 5.06.1994, 1 ex, Dhèrmi, 26.06.1996, 1 ex (coll. IZ).

Capnodis porosa (KLUG, 1829)

Prov. Kolonja: Leskoviku, 1.06.1994, 1 ex (coll. IZ).

Aurigena lugubris lugubris (FABRICIUS, 1777)

Prov. Didra: Zall-Dardha, 23.05.1958, 1 ex; Prov: Permeti: Kelcyra, 16-20.08. 1962, 1 ex; Prov. Tirana: Tirana, 4.10.1966, 1 ex, leg. X. MURRAJ (coll. MSN); Prov. Saranda: Lukova, 3-4.06.1994, G. BLAGOEV; Prov. Vlora: Dhèrmi, 26.06. 1995, 2 ex, leg. S. ABADJIEV (coll. IZ).

SPHENOPTERINAE

**Sphenoptera lapidaria* BRULLÉ, 1832

Prov. Tepelena: Tepelena, 3.06.1995, 1 ex on *Platanus orientalis*, det. M. KALASHIAN (coll. IZ).

**Sphenoptera tappesi* MARSEUL, 1865

Prov. Saranda: Lukova, 5.06.1995, 1 ex on *Olea* sp. (coll. IZ).

BUPRESTINAE

Dicerca aenea (LINNAEUS, 1761)

Prov. Tepelena: Tepelena, 2.06.1994, 1 ex (coll. IZ).

Dicerca berolinensis (HERBST, 1779)

Prov. Tirana: Biza, 9-16.07.1961, 4 ex leg. X. MURRAJ (coll. MSN); Prov. Mirdita: Rresheni, 11.06.1993, 1 ex, leg. P. BERON and B. PETROV (coll. IZ).

Scintillatrix mirifica MULSANT, 1855

Prov. Elbasani: Elbasani, 20.06.1994, 1 ex, leg. J. KOLAROV and M. LANGOUROV (coll. IZ).

**Eurythyrea austriaca* (LINNAEUS, 1767)

Prov. Tropoja: Valbona, 28.07.1959, 1 ex, leg. X. MURRAJ (coll. MSN).

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Eurythyrea aurata (PALLAS, 1776)
Prov. Tirana: Sauku, 10-20.06.1961, 1 ex, leg. X. MURRAJ (coll. MSN).
Buprestis haemorrhoidalis haemorrhoidalis HERBST, 1780
Prov. Kolonja: Leskoviku, 9.07.1959, 1 ex, leg. X. MURRAJ (coll. MSN).
Buprestis novemmaculata novemmaculata LINNAEUS, 1767
Prov. Mati: Burgajeti, 9.08.1959, 1 ex, leg. X. MURRAJ (coll. MSN).
**Buprestis novemmaculata gravida* ABEILLE DE PERRIN, 1904
Prov. Didra: Zall-Dardha, 25.05.1958, 1 ex, leg. X. MURRAJ (coll. MSN).
Buprestis splendens FABRICIUS, 1774
Prov. Shkodra: Thethi, 21.07.1959, 1 ex, leg.X. MURRAJ (coll. MSN).
Anthaxia hungarica hungarica (SCOPOLI, 1772)
Prov. Kolonja: Leskoviku, 2.06.1995, 1 ex; Prov. Saranda: Butrinti, 4.06.1995, 2 ex (coll. IZ).
**Anthaxia diadema diadema* (FISCHER, 1823)
Prov. Permeti: Rodenji, 2-22.07.1962, 1 ex, leg. X. MURRAJ (coll. MSN).
Anthaxia millefolii millefolii (FABRICIUS, 1801)
Prov. Saranda: Butrinti, 3.06.1994, 4 ex, 4.06.1995, 14 ex, Lukova 4.06.1994, 2 ex, 5.06.1995, 2 ex; Prov. Mati: Klosi, 8.06.1995 1 ex (coll. IZ).
Anthaxia umbellatarum umbellatarum (FABRICIUS, 1787)
Prov. Saranda: Lukova, 3-4.06.1994, 7 ex, 5.06.1995, 1 ex (coll. IZ).
**Anthaxia scutellaris scutellaris* GENÉ, 1839
Prov. Saranda: Lukova, 5.06.1995, 1 ex, det. S. BÍLÝ (coll. IZ).
Anthaxia cichorii cichorii (OLIVIER, 1780)
Prov. Tirana: q. Molla, 17.06.1960, 1 ex; Prov. Tepelena: Tepelena, 30.05.1961, 1 ex; Prov. Tirana: Sauku, 16.05.1962, 1 ex, leg. X. MURRAJ (coll. MSN); Prov. Durres: kepi i Rodonit, 21.06.1994, 1 ex, leg. B. GUÉORGUIEV; Prov. Saranda: Lukova, 4-5.06.1994, 3 ex, Butrinti, 4.06.1995, 5 ex (coll. IZ).
Anthaxia istriana ROSENHAUER, 1847
Prov. Kolonja: Erseka, 12.05.1995, 1 ex, L. PENEV, Leskoviku, 2.06.1995, 2 ex; Prov. Korca: q. Qarrit, 1.06.1995, 2 ex (coll. IZ).
**Anthaxia godeti* LAPORTE & GORY, 1839
Prov. Korca: q. Qarrit, 1.06.1994, 5 ex; Prov. Kolonja: Leskoviku, 2.06.1995, 1 ex (coll. IZ).
**Anthaxia brevis brevis* LAPORTE & GORY, 1839
Prov. Saranda: Butrinti, 3.06.1994, 2 ex (coll. IZ).

CHRYSOBOTHRINAE
Chrysobothris affinis (FABRICIUS, 1794)
Prov. Tirana: Biza, 9-16.07.1961, 1 ex, leg. X. MURRAJ (coll. MSN).

AGRILINAE
Coroebus rubi (LINNAEUS, 1767)
Prov. Tirana: Tirana, 1.06.1958, 1 ex, 10.05.1961, 1 ex, Iba 4.07.1963, 1 ex; Prov. Permeti: Rodenji, 26-28.07.1962, 1 ex, leg. X. MURRAJ (coll. MSN); Prov. Saranda: Butrinti, 4.06.1995, 1 ex (coll. IZ).
Coroebus elatus (FABRICIUS, 1787)
Prov. Permeti: Rodenji, 2-22.07.1962, 1 ex, leg. X. MURRAJ (coll. MSN); Prov. Korca: q. Qarrit, 1.06.1994, 1 ex; Prov. Vlora: q. Llogorasè, 5.06.1994, 1 ex; Prov. Kolonja: Leskoviku, 2.06.1995, 1 ex (coll. IZ).

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Nalanda fulgidicollis (LUCAS, 1849)
Prov. Korca: q. Qarrit, 1.06.1994, 6 ex on *Quercus* sp.; Prov. Saranda: Lukova, 3-4.06.1994, 1 ex on *Quercus coccifera* (coll. IZ).
**Agrilus convexicollis convexicollis* REDTENBACHER, 1849
Prov. Saranda: Butrinti, 3.06.1994, 1 ex, 4.06.1995, 1 ex on *Olea* sp. (coll. IZ).
**Agrilus dualis dualis* ALEXEEV & BÍLÝ, 1980
Prov. Saranda: Butrinti, 4.06.1995, 3 ex on *Quercus coccifera* (coll. IZ).
Agrilus laticornis (ILLIGER, 1803)
Prov. Korca: q. Qarrit, 1.06.1994, 1 ex on *Quercus* sp. (coll. IZ).
Agrilus obscuricollis KIESENWETTER, 1857
Prov. Korca: q. Qarrit, 1.06.1994, 1 ex on *Quercus* sp. (coll. IZ).
Agrilus angustulus (ILLIGER, 1803)
Prov. Korca: q. Qarrit, 1.06.1995, 1 ex on *Quercus* sp.; Prov. Saranda: Butrinti, 4.06.1995, 4 ex on *Quercus coccifera* (coll. IZ).
Agrilus auricollis KIESENWETTER, 1857
Prov. Saranda: Borshi, 13-28.05.1961, 1 ex, leg. X. MURRAJ (coll. MSN).
Agrilus roscidus KIESENWETTER, 1857
Prov. Saranda: Lukova, 3-4.06.1994, 1 ex, 5.06.1995, 6 ex on *Olea* sp.; Prov. Kolonja: Leskoviku, 2.06.1995, 1 ex on *Arbutus* sp. (coll. IZ).

As it is evident from the list of taxa a total number of 48 species and subspecies which belong to 18 genera and 8 subfamilies have been established. The 15 taxa are new for the Albanian Buprestidae fauna. The new localities are established for the rest of the buprestids. With the collected new taxa the number of jewel beetles which are known from the Albanian territory is increased to 111.

Zoogeographical Results

From the zoogeographical point of view all the established 111 buprestid taxa in Albania are arranged in 15 zoogeographical categories (Table 1).

Table 1. Zoogeographical characteristic of the Albanian buprestids.

TAXA	ZOOGEOGRAPHICAL CATEGORIES
Julodis ehrenbergi LAPORTE	Eastmediterranean
Ptosima flavoguttata (ILLIGER)	Southwestpalaearctic
Acmaeodera brevipes brevipes KIESENWETTER	Eastmediterranean
Acmaeodera pilosellae pilosellae (BONELLI)	Northmediterranean
Acmaeodera bipunctata bipunctata (OLIVIER)	Transmediterranean
Acmaeodera crinita crinita SPINOLA	Eastmediterranean
Acmaeodera ottonana (FRIVALDSZKY)	Eastmediterranean
Acmaeoderella jonica (OBENBERGER)	Eastmediterranean
Acmaeoderella adspersula adspersula (ILLIGER)	Transmediterranean

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Acmaeoderella flavofasciata flavofasciata (PILLER et MITTERPACHER)	Mediterranoeuropean
Acmaeoderella mimonti (BOIELDIEU)	Southwestpalaearctic
Chalcophora intermedia REY	Northmediterranean
Chalcophora mariana (LINNAEUS)	Eurosiberian
Chalcophora detrita (KLUG)	Eastmediterranean
Chalcophorella stigmatica (SCHÖNHERR)	Eastmediterranean
Chalcophorella fabricii (ROSSI)	Eastmediterranean
Capnodis tenebricosa (OLIVIER)	Southwestpalaearctic
Capnodis tenebrionis (LINNAEUS)	Southwestpalaearctic
Capnodis cariosa (PALLAS)	Pontomediterranean
Capnodis porosa (KLUG)	Eastmediterranean
Cyphosoma euphraticum (LAPORTE & GORY)	Eastmediterranean
Aurigena lugubris lugubris (FABRICIUS)	Pontomediterranean
Sphenoptera albanica OBENBERGER	Balkan endemic
Sphenoptera barbarica (GMELIN)	Transmediterranean
Sphenoptera lapidaria BRULLÉ	Eastmediterranean
Sphenoptera carceli (LAPORTE & GORY)	Eastmediterranean
Sphenoptera aulacophora JAKOVLEV	Eastmediterranean
Sphenoptera rauca (FABRICIUS)	Southwestpalaearctic
Sphenoptera trebinjensis OBENBERGER	Balkan endemic
Sphenoptera laportei SAUNDERS	Mediterranoeuropean
Sphenoptera tappesi MARSEUL	Eastmediterranean
Dicerca moesta (FABRICIUS)	Eurosiberian
Dicerca aenea (LINNAEUS)	Transpalaearctic
Dicerca alni (FISCHER)	Westpalaearctic
Dicerca berolinensis (HERBST)	European
Scintillatrix mirifica MULSANT	European
Scintilatrix rutilans (FABRICIUS)	European
Eurythyrea quercus (HERBST)	European
Eurythyrea austriaca (LINNAEUS)	European
Eurythyrea aurata (PALLAS)	Pontomediterranean
Buprestis cupressi GERMAR	Eastmediterranean
Buprestis rustica LINNAEUS	Eurosiberian

DOI: 10.21248/contrib.entomol.50.1.91-101

Buprestis haemorroidalis haemorroidalis HERBST	Westpalaearctic
Buprestis dalmatina MANNERHEIM	Eastmediterranean
Buprestis novemmaculata novemmaculata LINNAEUS	Transpalaearctic
Buprestis novemmaculata gravida ABEILLE DE PERRIN	Eastmediterranean
Buprestis splendens FABRICIUS	European
Melanophila acuminata (DE GEER)	Holarctic
Melanophila cuspidata (KLUG)	Transmediterranean
Phaenops cyanea (FABRICIUS)	Transpalaearctic
Anthaxia hungarica hungarica (SCOPOLI)	Mediterranoeuropean
Anthaxia diadema diadema (FISCHER)	Pontomediterranean
Anthaxia millefolii millefolii (FABRICIUS)	Pontomediterranean
Anthaxia umbellatarum umbellatarum (FABRICIUS)	Mediterranoeuropean
Anthaxia scutellaris scutellaris GENÉ	Westmediterranean
Anthaxia cichorii cichorii (OLIVIER)	Mediterranoeuropean
Anthaxia hypomelaena (ILLIGER)	Southwestpalaearctic
Anthaxia praeclara MANNERHEIM	Eastmediterranean
Anthaxia olympica KIESENWETTER	Pontomediterranean
Anthaxia similis SAUNDERS	European
Anthaxia istriana ROSENHAUER	Mediterranoeuropean
Anthaxia sepulchralis (FABRICIUS)	Westmediterranean
Anthaxia sturanyi OBENBERGER	Balkan endemic
Anthaxia helvetica STIERLIN	European
Anthaxia godeti LAPORTE et GORY	Southwestpalaearctic
Anthaxia quadripunctata (LINNAEUS)	Eurosiberian
Anthaxia funerula (ILLIGER)	Mediterranoeuropean
Anthaxia nitidula (LINNAEUS)	Westpalaearctic
Anthaxia discicollis LAPORTE & GORY	Eastmediterranean
Anthaxia brevis brevis LAPORTE & GORY	Pontomediterranean
Anthaxia fulgurans (SCHRANK)	European
Anthaxia podolica podolica MANNERHEIM	European
Anthaxia lucens KÜSTER	Eastmediterranean
Anthaxia deaurata (GMELIN)	Mediterranoeuropean

DOI: 10.21248/contrib.entomol.50.1.91-101

Chrysobothris affinis (FABRICIUS)	Westpalaearctic
Coroebus rubi (LINNAEUS)	Southwestpalaearctic
Coroebus elatus (FABRICIUS)	Westpalaearctic
Meliboeus amethystinus (OLIVIER)	Westmediterranean
Meliboeus graminis (PANZER)	Mediterranoeuropean
Nalanda fulgidicollis (LUCAS)	Mediterranoeuropean
Agrilus ater ater (LINNAEUS)	Westeurosiberian
Agrilus biguttatus (FABRICIUS)	Westpalaearctic
Agrilus convexicollis convexicollis REDTENBACHER	European
Agrilus derasofasciatus LACORDAIRE	Mediterranoeuropean
Agrilus hastulifer RATZEBURG	Southwestpalaearctic
Agrilus graminis LAPORTE et GORY	Southwestpalaearctic
Agrilus dualis dualis ALEXEEV et BÍLÝ	Pontomediterranean
Agrilus laticornis (ILLIGER)	Westpalaearctic
Agrilus obscuricollis KIESENWETTER	European
Agrilus sulcicollis LACORDAIRE	European
Agrilus angustulus (ILLIGER)	Westpalaearctic
Agrilus sinuatus (OLIVIER)	European
Agrilus pratensis pratensis RATZEBURG	Westeurosiberian
Agrilus auricollis KIESENWETTER	European
Agrilus viridis (LINNAEUS)	Transpalaearctic
Agrilus cuprescens MÉNÉTRIÉ	Transpalaearctic
Agrilus lineola REDTENBACHER	European
Agrilus croaticus ABEILLE DE PERRIN	Centraleuropean
Agrilus marozzinii GOBBI	Transmediterranean
Agrilus viridicaerulans rubi SCHAEFER	Mediterranoeuropean
Agrilus roscidus KIESENWETTER	Southwestpalaearctic
Agrilus hyperici (CREUTZER)	European
Agrilus albaniae OBENBERGER	Balkan endemic
Paracylindromorphus subuliformis subuliformis (MANNERHEIM)	Westpalaearctic
Aphanisticus pusillus (OLIVIER)	Mediterranoeuropean
Aphanisticus emarginatus (OLIVIER)	Mediterranoeuropean
Aphanisticus elongatus (VILLA)	Mediterranoeuropean

DOI: 10.21248/contrib.entomol.50.1.91-101

Trachys minutus (LINNAEUS)	Eurosiberian
Trachys scrobiculatus KIESENWETTER	Mediterranoeuropean
Trachys troglodytes GYLLENHAL	European
Trachys coruscus PONZA	Southwestpalaearctic

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 (14 taxa) where Transpalaearctic (5) and Westpalaearctic (9) buprestids are included, Eurosiberian complex (7) represented by Eurosiberian (5) and Westeurosiberian (2) taxa, Southpalaearctic - including, in our case, 12 Southwestpalaearctic species, European complex (19) represented by 18 Transeuropean and 1 Centraleuropean taxa, Mediterranean complex (54) where belong taxa from 6 categories: Mediterranoeuropean (16), Transmediterranean (5), Northmediterranean (2), Westmediterranean (3), Pontomediterranean (8) and Eastmediterranean (20). The Balkan endemics are represented by 4 species. Up till now *Sphenoptera albanica* and *Agrilus albaniae* have been known only from the Albanian territory.

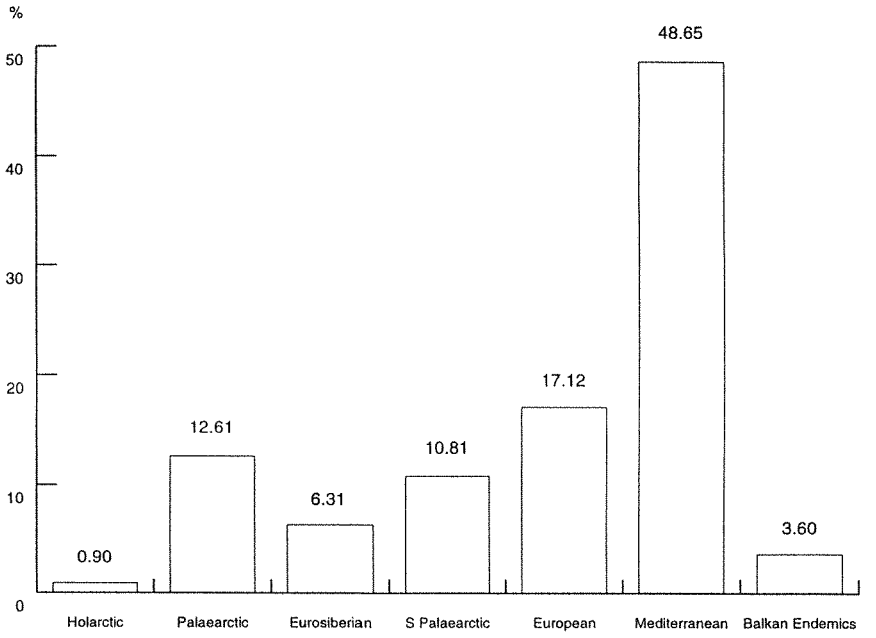

Fig. 2. Zoogeographical complexes in the study area.

The results of the zoogeographical analysis based on the presentation of these complexes in the studied area are shown in the Fig. 2.
The Mediterranean (in the broad sense) taxa are dominant in Albania as it is evident from the figure. More than 50 % of the buprestids in the Mediterranean complex are Pontomediterranean and Eastmediterranean species and subspecies.

DOI: 10.21248/contrib.entomol.50.1.91-101

Discussion

In our opinion the jewel beetles fauna of Albania is not studied enough. Nevertheless, the investigations by now, show that the great diversity of different natural habitat types in this country allows the distribution of many buprestid species there.
The great domination of Mediterranean taxa demonstrates the high level of the Mediterranean (especially Easmediterranean) fauna impact of buprestid community formation in the Albanian territory.
The location of relict *Buprestis splendens* and 4 Balkan endemics in Albania represent refugial peculiarity of some habitats in the country.

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Besprechungen

THIEDE, W.: **Greifvögel und Eulen: Alle Arten Mitteleuropas erkennen und bestimmen.** - München; Wien; Zürich: BLV Verlagsgesellschaft, 1999. - 95 S.: zahlr. Abb. - (BLV Naturführer). - ISBN 3-405-15117-1. - 12.90 DM

Dieser Naturführer informiert über alle in Mitteleuropa häufig brütenden Greifvogel- und Eulenarten. Die gelungenen Farbfotos geben die faszinierenden Jäger naturgetreu wieder. Einer überblicksartigen Einführung folgen informative Vogelporträts, in denen die Merkmale exakt erklärt, Angaben zum Vorkommen der Arten und damit auch zum Zuchtverhalten und zum Winterquartier gemacht, die Nahrung und die Fortpflanzung beschrieben und Hinweise zur Gefährdung und zum Schutz der Tiere gegeben werden. 60 Graphiken zum Text zeigen Flugbilder oder geben Informationen zu Gefiedermerkmalen und zum Verhalten. In der Einführung geht es neben dem Überblick über die einzelnen Gruppen auch um die Gefährdung der Greifvögel und Eulen sowie um ihre Rolle im Leben des Menschen in verschiedenen Kulturkreisen.
Wie alle Bände des BLV Naturführers vermittelt auch dieser einen ersten Eindruck von der Vielfalt, vom Leben und vom Aussehen der behandelten Vogelgruppen. Wer Interesse an diesen Tieren gefunden hat, wird auf Adressen von Vereinen und Arbeitsgemeinschaften sowie auf weiterführende und vertiefende Literatur hingewiesen.

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DOI: 10.21248/contrib.entomol.50.1.91-101