

New Data on the Occurrence of Scarabeoid Beetles (Coleoptera: Scarabaeoidea) in Albania

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Abstract: In the course of a fieldwork in Albania in 2016, 128 species of the superfamily Scarabaeoidea (scarabaeoid beetles) have been recorded, including 13 species and one subspecies new to that country: *Odonteus armiger*, *Trox sabulosus*, *Acrossus depressus*, *Agrilinus convexus*, *Amidorus obscurus*, *Aphodius fimetarius*, *Biralus satellitius*, *Eupleurus subterraneus*, *Leiopsammodius belloi*, *Rhyssemus vinodolensis*, *Teuchestes fossor*, *Onthophagus andalusicus*, *Onthophagus medius* and *Gnorimus nobilis macedonicus*, increasing the number of species known from Albania to 201.

Key words: Geotrupidae, Trogidae, Lucanidae, Ochodaeidae, Glaphyridae, Scarabaeidae, distribution, new records, Albania

Introduction

The Albanian fauna of the superfamily Scarabaeoidea is not satisfactorily studied. The first comprehensive relevant work was „Fauna Insectorum Balcanica – Scarabaeoidea” (MIKŠIĆ 1956), including information on the occurrence of 106 species. In the following two appendices published by the same author, there are, respectively, 109 and 127 species from Albania (MIKŠIĆ 1957, 1959). In partial elaborations of Albanian scarabaeoids BALTHASAR & HRUBANT (1960) listed 65 and SCHULZE (1963) ten species of Dynastinae and Cetoniinae (Osmodermatini, Trichiini, Valgini), while PETROVITZ (1969) found 63 species of Glaphyridae, Melolonthinae, Rutelinae and Cetoniinae.

The Catalogue of Palaearctic Coleoptera (LÖBL & SMETANA 2006) lists 156 scarabaeoid species from Albania, whilst the second edition of the same catalogue (LÖBL & LÖBL 2016) already contains 181 (Geotrupidae – 9 species, Trogidae – 3, Lucanidae – 6, Ochodaeidae – 1, Glaphyridae – 4 and Scarabaeidae – 158) from this country.

Our contribution is aimed at supplementing the present knowledge on the Albanian scarabaeoid fauna.

Materials and Methods

The collecting of scarabaeoid beetles was done between the 22nd of May and 7th of June, 2016. We collected material at 38 localities in eight counties (Table 1, Fig. 1): Shkodër (10 localities), Kukës (2), Dibrë (1), Elbasan (3), Fier (2), Korçë (8), Vlorë (7) and Gjirokaster (5).

As the superfamily Scarabaeoidea contains foliophagous, rhizophagous, cariophagous, necrophagous and coprophagous beetles, we looked for them on the flowers and leaves of trees and herbs, on trunks of dead trees and in their hollows, in wood-dust, litter, the upper layer of soil, as well as in remnants of dead animals. Since the dominant type of alimentary specialisation within the Scarabaeoidea is coprophagy, the main collecting efforts were directed at pastures, where we checked the excrements of domestic (horse, mule, donkey, cattle, sheep and goat) and wild (boar, stag, roe deer) animals, and set traps baited with faeces. For psammophilous species we sifted sand on sea-shore dunes and river banks and examined pieces of wood lying there. Additionally, at nights we attracted insects to UV-

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Table 1. Localities of the collecting of scarabaeoid beetles in Albania in 2016.

Locality No.	County	Locality	Altitude	Date of collection
1.	Shkodër	Gropat e Selcës at Lëpushë	1430 m	6 VI 2016
2.	Shkodër	Lëpushë at Vermosh	1300 m	6 VI 2016
3.	Shkodër	Theth at Bogë	780 m	3 VI 2016
4.	Shkodër	Kroni i T'hores at Bogë	1680 m	4 VI 2016
5.	Shkodër	Gryke Lugje at Bogë	820 m	4 VI 2016
6.	Shkodër	Hani i Hotit at Ivanaj	15 m	7 VI 2016
7.	Shkodër	Qafe Malit at Fushë-Arrëz	950 m	2 VI 2016
8.	Shkodër	Bërdicë at Trush	30 m	6 VI 2016
9.	Shkodër	Oblikë at Zus	0 m	5 VI 2016
10.	Shkodër	Kçirë at Puka	660 m	2 VI 2016
11.	Kukës	Gjegjan at Bardhoc	490 m	31 V 2016
12.	Kukës	Bafa at Topojan	1340-1600 m	1 VI 2016
13.	Dibrë	Fushë Studë at Steblevë	1100 m	29 V 2016
14.	Elbasan	Mirakë at Librazhd	200 m	29 V 2016
15.	Elbasan	Hotolisht at Librazhd	290 m	29-30 V 2016
16.	Elbasan	Kostriçan at Rrajcë	1000 m	22 V 2016
17.	Fier	Divjaka at Lushnja	0 m	29 V 2016
18.	Fier	Darëzeze e Re at Levan	0 m	28 V 2016
19.	Korçë	Buqezë at Piskupat	690 m	22 V 2016
20.	Korçë	Pustec at Diellas	850 m	22 V 2016
21.	Korçë	Leska at Zvezdë	1050 m	22 V 2016
22.	Korçë	Kamnik at Ersekë	960 m	23 V 2016
23.	Korçë	Barmash at Ersekë	820 m	23 V 2016
24.	Korçë	Gozhdarazhde at Gërmenj	990 m	23 V 2016
25.	Korçë	Gërmenj at Leskovik	1060 m	22-23 V 2016
26.	Korçë	Radanj at Gërmenj	1060 m	23 V 2016
27.	Vlorë	Akerni at Zvërnec	0 m	28 V 2016
28.	Vlorë	Llogara, Camping Llogara	820 m	26-27 V 2016
29.	Vlorë	Llogara, Mts Çikës	1200-1400 m	26-28 V 2016
30.	Vlorë	Porto Palermo at Himarë	70 m	26 V 2016
31.	Vlorë	Borsh at Himarë	0 m	26 V 2016
32.	Vlorë	Muzinë at Delvinë	560-1000 m	25 V 2016
33.	Vlorë	Ksamil at Sarandë	70 m	25 V 2016
34.	Gjirokaster	Humelicë at Gjirokaster	120 m	25 V 2016
35.	Gjirokaster	Benjë at Përmet	320 m	24 V 2016
36.	Gjirokaster	Badëlonjë at Përmet	240 m	24 V 2016
37.	Gjirokaster	Lëshicë at Përmet	450 m	24 V 2016
38.	Gjirokaster	Petran at Përmet	280 m	24 V 2016

illuminated screens and searched on trunks of old trees using an LED light. All the collecting has been done by the authors.

Systematic arrangement and nomenclature follow the „Catalogue of Palearctic Coleoptera” (LÖBL & LÖBL 2016).

Results

The collecting work yielded 128 species of the subfamily Scarabaeoidea, representing six families: Geotrupidae (seven species, including one of the subfamily Bolboceratinae, five of Geotrupinae and one of Lethrinae), Trogidae (3), Lucanidae (four, including three representatives of Lucaninae and

one Syndesinae), Ochodaecidae (1), Glaphyridae (2), Scarabaeidae (111, distributed as follows: 42 of Aphodiinae, 34 of Scarabaeinae, nine of Melolonthinae, 11 of Rutelinae, three of Dynastinae and 12 of Cetoniinae).

One subspecies and 13 species had hitherto not been recorded from Albania.

List of taxa

FAMILY GEOTRUPIDAE

Subfamily Bolboceratinae

Odonteus armiger (Scopoli, 1772)

Localities: Hotolisht at Librazhd (7 exx.), Gërmenj at Leskovik (1 ex.), Llogara, Camping Llogara (11 exx.).

Reported from most European countries, including those around Albania (Greece, Macedonia, Serbia),

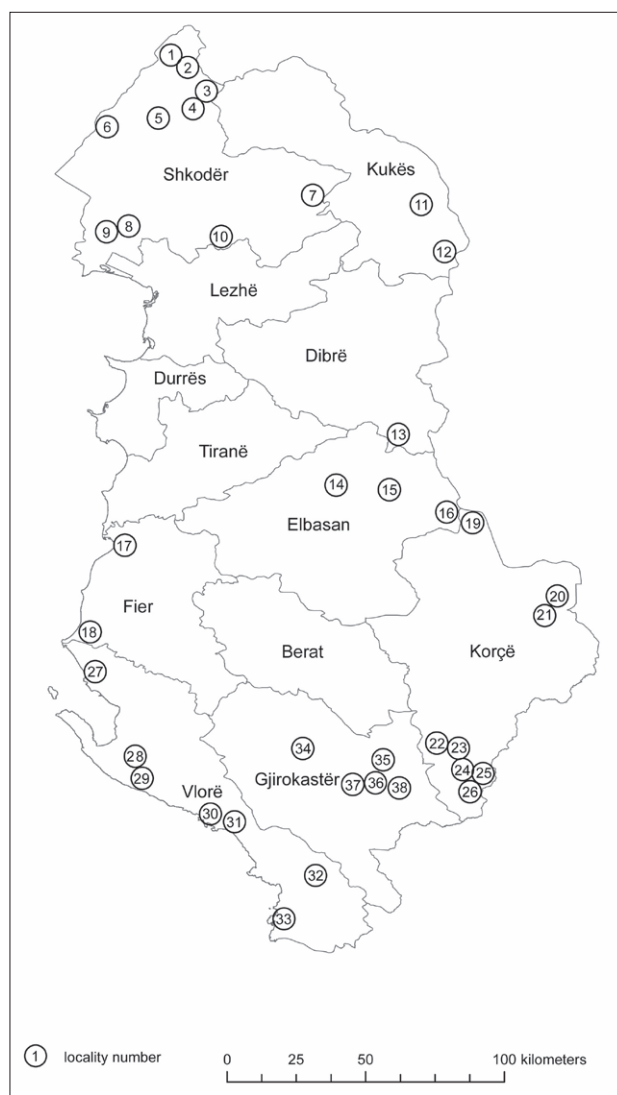


Fig. 1. Map of Albania with localities of the collecting of scarabeoid beetles in 2016. The numbers of the localities correspond to those in Table 1.

Armenia, Azerbaijan and Turkey (BYK et al. 2012, MIQUEL & VASKO 2014, NIKOLAJEV et al. 2016). Imagines, flying at dusk and early night, caught with net on small meadow adjoining an oakwood, as well as sitting on the top of grass in forest clearings; one came to light. First records from Albania.

Subfamily Geotrupinae

Anoplotrupes stercorosus (Scriba, 1791)

Localities: Lëpushë at Vermosh (4 exx.), Gryke Lugje at Bogë (1 ex.), Bafa at Topojan (1 ex.), Fushë Studë at Steblevë (5 exx.).

Geotrupes mutator (Marshall, 1802)

Localities: Bafa at Topojan (3 exx.), Fushë Studë at Steblevë (2 exx.).

Jekelius brullei brullei (Jekel, 1866)

Localities: Radanj at Gërmenj (1 ex.), Llogara, Mts Çikës (43 exx.), Ksamil at Sarandë (3 exx.).

The subspecies recorded from Albania, Bosnia Herzegovina, Croatia, Greece, Italy, Montenegro and Slovenia (KOREN et al. 2010, LOBO et al. 2015, NIKOLAJEV et al. 2016). Imagines singled out and ground-trapped using fresh horse excrements for bait.

Trypocopris alpinus balcanicola (Mikšić, 1954)

Locality: Kroni i T'hores at Bogë (1 ex., ver. O. Hillert).

The subspecies inhabits Albania, Bosnia Herzegovina, Italy and Montenegro (LELO 2006, NIKOLAJEV et al. 2016). Imagines collected on small pasture in sheep excrements and on nearby clearing surrounded by young pines.

Trypocopris vernalis vernalis (Linnaeus, 1758)

Localities: Theth at Bogë (1 ex.), Llogara, Mts Çikës (1 ex.), Porto Palermo at Himarë (6 exx.).

Subfamily Lethrinae

Lethrus elephas Reitter, 1890

Locality: Leska at Zvezdë (53 exx.).

Known from Albania, Greece and Macedonia (BAGATUROV & NIKOLAJEV 2015, NIKOLAJEV et al. 2016). Large population recorded from wide mountain pastures; males, females and pupae in 5-30 cm deep burrows.

FAMILY TROGIDAE

Trox niger P. Rossi, 1792

Localities: Fushë Studë at Steblevë (2 exx.), Hotolisht at Librazhd (1 ex.), Llogara, Camping Llogara (3 exx.).

Trox sabulosus sabulosus (Linnaeus, 1758)

Locality: Bafa at Topojan (2 exx.).

The subspecies reported from most European countries (including Albania's neighbours: Greece, Serbia) and Asia (ZÍDEK 2013, PITTINO & BEZDĚK 2016). A male and a female under dog excrements on a mountain pasture. First record from Albania.

Trox scaber (Linnaeus, 1767)

Localities: Akerni at Zvërnec (1 ex.), Llogara, Camping Llogara (1 ex.).

FAMILY LUCANIDAE

Subfamily Lucaninae

Dorcus parallelipedus (Linnaeus, 1758)

Localities: Gropat e Selcës at Lëpushë (8 exx.), Mirakë at Librazhd (5 exx.), Hotolisht at Librazhd (2 exx.), Akerni at Zvërnec (1 ex., dead).

Lucanus cervus (Linnaeus, 1758)

Localities: Hotolisht at Librazhd (1 ex.), Pustec at Diellas (1 ex.), Porto Palermo at Himarë (1 ex., det. D. Král).

Platycerus caraboides (Linnaeus, 1758)

Localities: Gropat e Selcës at Lëpushë (1 ex.), Fushë Studë at Steblevë (1 ex.).

Subfamily Syndesinae

Sinodendron cylindricum (Linnaeus, 1758)

Localities: Lëpushë at Vermosh (2 exx., dead), Kroni i T'hores at Bogë (2 exx.).

FAMILY OCHODAEIDAE

Ochodaeus chrysomeloides (Schrank, 1781)

Locality: Hotolisht at Librazhd (26 exx.).

Known from many countries of Europe (including Greece, Macedonia and Serbia around Albania), Armenia, Azerbaijan and Georgia; reported also from Algeria (NIKOLAJEV & BEZDĚK 2016). Leads a highly clandestine life, with imagines appearing rarely, in sweltering sultry days before sunset and at night, flying slowly and ponderously just above the undergrowth. Larvae seem to feed on subterranean fungi, which makes the detailed study of their biological cycle difficult (BYK et al. 2016). Imagines, flying at dusk and early night, caught with net on small meadow adjoining an oakwood.

FAMILY GLAPHYRIDAE

Eulasia pareyssei (Brullé, 1832)

Localities: Kostričan at Rrajcë (24 exx.), Ksamil at Sarandë (1 ex.), Humelicë at Gjirokaster (3 exx.), Benjë at Përmet (22 exx.), Lëshicë at Përmet (3 exx.), Petran at Përmet (2 exx.).

Pygopleurus diffusus (Petrovitz, 1958)

Localities: Kostričan at Rrajcë (53 exx.), Barmash at Ersekë (7 exx.), Gozhdarazhde at Gërmenj (8 exx.), Llogara, Camping Llogara (2 exx.).

FAMILY SCARABAEIDAE

Subfamily Aphodiinae

Acanthobodilus immundus (Creutzer, 1799)

Localities: Gryke Lugje at Bogë (5 exx.), Gjegjan at Bardhoc (8 exx.), Kostričan at Rrajcë (3 exx.), Buqezë at Piskupat (1 ex.), Pustec at Diellas (1 ex.), Barmash at Ersekë (1 ex.), Radanj at Gërmenj (2 exx.).

Acrossus depressus (Kugelann, 1792)

Localities: Lëpushë at Vermosh (12 exx.), Kroni i T'hores at Bogë (1 ex.), Fushë Studë at Steblevë (2 exx.).

Recorded from most countries of Europe (including those neighbouring Albania: Greece, Macedonia, Montenegro, Serbia, Armenia, Azerbaijan, Georgia, as well as Central and Eastern Asia; introduced to Nearctic Region (DELLACASA et al. 2016). Prefers forested areas (BYK & WĘGRZYNOWICZ 2015, KAMIŃSKI et al. 2015, BYK & RUTKIEWICZ 2017). Collected from cattle and wild boar excrements on edges of beech forest. First records from Albania.

Acrossus luridus (Fabricius, 1775)

Localities: Lëpushë at Vermosh (4 exx.), Theth at Bogë (3 exx.), Gryke Lugje at Bogë (7 exx.), Kçirë at Puka (5 exx.), Gjegjan at Bardhoc (3 exx.), Bafa at Topojan (10 exx.), Fushë Studë at Steblevë (3 exx.), Kostričan at Rrajcë (17 exx.), Leska at Zvezdë (26 exx.), Radanj at Gërmenj (23 exx.), Muzinë at Delvinë (2 exx.), Lëshicë at Përmet (1 ex.).

Agrilinus convexus (Erichson, 1848)

Localities: Lëpushë at Vermosh (3 exx.), Bafa at Topojan (2 exx.).

Known from many European countries (including Albanian neighbours: Greece, Macedonia, Serbia), Armenia, Azerbaijan, Georgia, Iran, Mongolia, Asiatic Russia (East Siberia, West Siberia, Far East), Turkey, as well as Algeria, Morocco and Tunisia (PITTINO & MARIANI 1993, ZIANI et al. 2015, BYK & MARCZAK 2016, DELLACASA et al. 2016). Found in excrements of sheep

and cattle on mountain pastures adjoining beech-and-birch forests. First records from Albania.

Ahermodontus bischoffi (Všetečka, 1939) (Fig. 2a)

Locality: Llogara, Mts. Çikës (126 exx.).

Species was described according to single female specimen collected by A. BISCHOFF in Llogara in 1934 (VŠETEČKA 1939). After more than 80 years, re-caught in May 2015 and 2016 in the same locality. In fragments and edges of old relict pine forests (*Pinus heldreichii* H. Christ) and less frequently in shady places or open terrain, always between 900 and 1400 m a.s.l. All specimens collected only in old, dry excrements of cattle and goat, no fresh dung was observed at this locality (BYK et al. 2018).

Amidorus cribrarius (Brullé, 1832)

Localities: Leska at Zvezdë (1 ex.), Llogara, Camping Llogara (1 ex.), Llogara, Mts Çikës (1 ex.).

According to TARASOV (2008), it is difficult to discuss the distribution of the species due to frequent misidentifications. Presumably it is distributed in the south part of Balkan Peninsula and southern Turkey. Probably sympatric with *A. obscurus* (Fabricius, 1792) but its biotopic preferences are different: the former inhabits altitudes of 500-1500 m a.s.l. and does not occur in the alpine zone. DELLACASA et al. (2016) reported it from Albania, Bosnia Herzegovina, Bulgaria, Croatia, Macedonia, Serbia, south of European part of Russia, Azerbaijan, Georgia, Cyprus, Israel, Lebanon, Syria and Turkey. Imagines in cattle and horse excrements on mountain meadows.

Amidorus obscurus obscurus (Fabricius, 1792)

Locality: Kroni i T'hores at Bogë (1 ex.).

Recorded in most European countries (including those adjoining Albania: Greece, Macedonia, Montenegro, Serbia, Kosovo), Azerbaijan, Armenia, Georgia, as well as Cyprus, Iran, Israel and Turkey (DELLACASA et al. 2016). Imago from human faeces in a small pasture. First record from Albania.

Aphodius fimetarius (Linnaeus, 1758)

Localities: Hani i Hotit at Ivanaj (2 exx.), Kamnik at Ersekë (2 exx.), Akerni at Zvërnec (1 ex.), Llogara, Mts Çikës (5 exx.), Porto Palermo at Himarë (1 ex.), Muzinë at Delvinë (2 exx.), Ksamil at Sarandë (2 exx.).

Known from most European countries (including Greece, Montenegro, Serbia and Kosovo), Georgia, Near East and North Africa; introduced to Australian, Nearctic and Neotropical Regions (DELLACASA et al. 2016). Two species of the *Aphodius fimetarius* complex are treated in the "Catalogue of Palaearctic Coleoptera" (LÖBL & LÖBL 2016) under the names *Aphodius fimetarius* (Linnaeus, 1758) and *Aphodius pedellus* (De Geer, 1774). The former, of mainly Mediterranean distribution, does not occur in Northern Europe and Russia that are inhabited by the latter. In contrast, FERY & RÖSSNER (2015) use and justify in detail another concept of the names of these two species: *Aphodius fimetarius* (Linnaeus, 1758) (= *A. pedellus* sensu Wilson 2001) for the more northern species and *Aphodius cardinalis* Reitter, 1892 (= *A. fimetarius* sensu Wilson 2001) for the southern (FERY 2016). Imagines from pastures from cattle and horse excrements. First records from Albania.

- Aphodius foetidus* (Herbst, 1783)
Localities: Akerni at Zvërnec (1 ex.), Llogara, Mts Çikës (10 exx.), Muzinë at Delvinë (7 exx.).
- Aphodius pedellus* (De Geer, 1774)
Localities: Lëpushë at Vermosh (2 exx.), Theth at Bogë (1 ex.), Bafa at Topojan (7 exx.), Fushë Studë at Steblevë (7 exx.), Llogara, Camping Llogara (1 ex.), Llogara, Mts Çikës (1 ex.), Lëshicë at Përmet (1 ex.).
- Biralus satelliti* (Herbst, 1789)
Locality: Radanj at Gërmenj (1 ex.).
Known from many European countries (including neighbours of Albania: Greece, Montenegro, Serbia), Armenia, Azerbaijan and Georgia, as well as Near East, Kazakhstan and Turkmenistan; old reports from Italy, Pyrenean Peninsula and North Africa refer rather to *Biralus mahunkaorum* Ádám, 1983 (RÖSSNER & FERY 2014, DELLACASA et al. 2016). Imago in horse excrements on large pasture. First record from Albania.
- Bodilus lugens* (Creutzer, 1799)
Locality: Gjogjan at Bardhoc (5 exx.).
- Calamasternus granarius* (Linnaeus, 1767)
Localities: Theth at Bogë (8 exx.), Gryke Lugje at Bogë (9 exx.), Bafa at Topojan (102 exx.), Kostriçan at Rrajcë (1 ex.), Akerni at Zvërnec (1 ex.), Muzinë at Delvinë (14 exx.), Lëshicë at Përmet (1 ex.).
- Chilothorax distinctus* (O.F. Müller, 1776)
Locality: Bafa at Topojan (13 exx.).
SHOKHIN (2016) synonymised *Aphodius* (*Chilothorax*) *distinctus sevanicus* RAKOVIĆ, 1991 with *Chilothorax clathratus* (REITTER, 1892). Imagines in horse excrements on extensive mountain pasture.
- Colobopterus erraticus* (Linnaeus, 1758)
Localities: Lëpushë at Vermosh (12 exx.), Gryke Lugje at Bogë (3 exx.), Hani i Hotit at Ivanaj (7 exx.), Oblikë at Zus (1 ex.), Kçirë at Puka (3 exx.), Bafa at Topojan (10 exx.), Fushë Studë at Steblevë (4 exx.), Kostriçan at Rrajcë (19 exx.), Buqezë at Piskupat (1 ex.), Leska at Zvezdë (12 exx.), Kamnik at Ersekë (1 ex.), Barmash at Ersekë (1 ex.), Radanj at Gërmenj (1 ex.), Llogara, Camping Llogara (1 ex.), Borsh at Himarë (1 ex.), Muzinë at Delvinë (5 exx.), Ksamil at Sarandë (8 exx.), Lëshicë at Përmet (1 ex.).
- Coprimumphus scrutator* (Herbst, 1789)
Localities: Kostriçan at Rrajcë (4 exx.), Kamnik at Ersekë (1 ex.), Barmash at Ersekë (1 ex.).
- Esymus merdarius* (Fabricius, 1775)
Localities: Lëpushë at Vermosh (1 ex.), Bafa at Topojan (6 exx.), Fushë Studë at Steblevë (1 ex.), Radanj at Gërmenj (2 exx.).
- Esymus pusillus pusillus* (Herbst, 1789)
Localities: Lëpushë at Vermosh (55 exx.), Theth at Bogë (2 exx.), Gryke Lugje at Bogë (13 exx.), Bafa at Topojan (34 exx.), Fushë Studë at Steblevë (1 ex.), Radanj at Gërmenj (2 exx.).
- Eudolus quadriguttatus* (Herbst, 1783)
Localities: Theth at Bogë (1 ex.), Gryke Lugje at Bogë (7 exx.), Hani i Hotit at Ivanaj (1 ex.), Fushë Studë at Steblevë (2 exx.), Leska at Zvezdë (1 ex.), Radanj at Gërmenj (5 exx.).
- Euorodalus paracoenosus* (Balthasar & Hrubant, 1960)
Localities: Gryke Lugje at Bogë (1 ex.), Fushë Studë at Steblevë (2 exx.), Leska at Zvezdë (1 ex.), Radanj at Gërmenj (1 ex.).
- Eupleurus subterraneus subterraneus* (Linnaeus, 1758)
Locality: Bafa at Topojan (1 ex.).
The subspecies has been recorded from most countries of Europe (including Greece and Serbia), as well as Armenia, Azerbaijan, Georgia, central and eastern Asia, Algeria and Morocco. Introduced to Nearctic Region (DELLACASA et al. 2016). Imagines in cow excrements on wide mountain pasture. First record from Albania.
- Labarrus lividus* (A.G. Olivier, 1789)
Localities: Kçirë at Puka (1 ex.), Muzinë at Delvinë (28 exx.).
- Leiopsammodius belloii* Pierotti, 1981 (Fig. 2b)
Locality: Hotolisht at Librazhd (4 exx., det. Ł. Minkina).
Known from Greece, Serbia and Asiatic Turkey (RAKOVIĆ & KRÁL 2015, RAKOVIĆ et al. 2016). This species is closely related to – and, according to RAKOVIĆ (1986), possibly identical with – *L. strumae* (Chromý, 1983) which was described from the basin of the Struma River (Kresna, Sandanski) (KRÁL & MALÝ 1993). Imagines collected at dusk on shaded sandy riverbank. First record from Albania.
- Loraphodius suarius* (Faldermann, 1835)
Locality: Kostriçan at Rrajcë (1 ex.).
- Melinopterus consputus* (Creutzer, 1799)
Locality: Gryke Lugje at Bogë (1 ex.).
- Melinopterus prodromus* (Brahm, 1790)
Localities: Theth at Bogë (1 ex.), Bafa at Topojan (16 exx.), Fushë Studë at Steblevë (1 ex.).
- Melinopterus sphacelatus* (Panzer, 1798)
Localities: Lëpushë at Vermosh (2 exx.), Bafa at Topojan (11 exx.), Fushë Studë at Steblevë (1 ex.).
- Nialus varians* (Duftschmidt, 1805)
Localities: Bërdicë at Trush (6 exx.), Oblikë at Zus (9 exx.), Fushë Studë at Steblevë (1 ex.), Buqezë at Piskupat (4 exx.), Radanj at Gërmenj (1 ex.), Akerni at Zvërnec (1 ex.).
- Otophorus haemorrhoidalis* (Linnaeus, 1758)
Localities: Lëpushë at Vermosh (6 exx.), Kroni i T'hores at Bogë (1 ex.), Gryke Lugje at Bogë (2 exx.).
- Oxyomus sylvestris* (Scopoli, 1763)
Localities: Theth at Bogë (13 exx.), Gryke Lugje at Bogë (1 ex.).
- Phalacrothous biguttatus* Germar, 1824
Localities: Theth at Bogë (2 exx.), Gryke Lugje at Bogë (2 exx.), Leska at Zvezdë (1 ex.), Radanj at Gërmenj (7 exx.).
- Phalacrothous quadrimaculatus* (Linnaeus, 1761)
Localities: Theth at Bogë (1 ex.), Gryke Lugje at Bogë (36 exx.), Bafa at Topojan (4 exx.), Kamnik at Ersekë (1 ex.), Radanj at Gërmenj (2 exx.).
- Plagiogonus arenarius* (A.G. Olivier, 1789)

Localities: Lëpushë at Vermosh (1 ex.), Theth at Bogë (1 ex.), Kroni i T'hores at Bogë (1 ex.), Gryke Lugje at Bogë (1 ex.), Fushë Studë at Steblevë (2 exx.).

Pleurophorus caesus (Panzer, 1796)

Localities: Hotolisht at Librazhd (7 exx.), Akerni at Zvërnec (2 exx.).

Psammodius laevipennis A. Costa, 1844

Locality: Badëlonjë at Përmet (41 exx.).

Known from southern and eastern Europe, as well as from Azerbaijan, Near East and North Africa. Introduced to Azores and Nearctic Region (RAKOVIČ & KRÁL 2015, RAKOVIČ et al. 2016). Imagines collected at dusk and night on sandy riverbank.

Psammodius pierottii Pittino, 1979

Locality: Akerni at Zvërnec (1 ex.).

Known from Albania, Austria, France, Germany, Greece, Hungary, Italy, Malta, Slovakia, Spain, Switzerland and European Turkey, as well as Algeria and Tunisia. Introduced to Nearctic Region (RAKOVIČ & KRÁL 2015, RAKOVIČ et al. 2016). Imago in sand on seashore dune.

Rhyssesus annaedicatus Pierotti, 1980

Locality: Badëlonjë at Përmet (5 exx.).

Known from Albania, Bulgaria, Greece, Italy, Macedonia, Montenegro, Turkey and Syria (RAKOVIČ & KRÁL 2015, RAKOVIČ et al. 2016). Imagines captured in the daytime under a piece of wood on sandy riverbank and at night on sand.

Rhyssesus vinodolensis Petrovitz, 1963

Localities: Hotolisht at Librazhd (1 ex., det. Ł. Minkina); Llogara, Camping Llogara (1 ex., det. Ł. Minkina).

Recorded from Croatia and Greece (RAKOVIČ et al. 2016). Imagines captured in the daytime on riverbank and in the evening on building wall. First records from Albania.

Subrinus sturmi (Harold, 1870)

Locality: Borsh at Himarë (2 exx.).

Teuchestes fossor (Linnaeus, 1758)

Localities: Lëpushë at Vermosh (7 exx.), Bafa at Topojan (3 exx.).

Reported from most European (also adjoining Albania: Greece, Macedonia, Montenegro, Serbia, Kosovo) as well as many Asian countries, Algeria and Canary Islands. Introduced to Nearctic Region (DELLACASA et al. 2016). Imagines in excrements of cows and horse on extensive pastures. First records from Albania.

Trichonotulus scrofa (Fabricius, 1787)

Localities: Bafa at Topojan (6 exx.), Fushë Studë at Steblevë (5 exx.), Leska at Zvezdë (2 exx.), Radanj at Gërmenj (4 exx.).

Volinus sticticus (Panzer, 1798)

Localities: Lëpushë at Vermosh (22 exx.), Theth at Bogë (7 exx.), Bafa at Topojan (59 exx.), Fushë Studë at Steblevë (13 exx.).

Subfamily Scarabaeinae

Ateuchetus variolosus (Fabricius, 1787)

Localities: Radanj at Gërmenj (6 exx.), Llogara,

Camping Llogara (1 ex.), Llogara, Mts Çikës (10 exx.), Muzinë at Delvinë (2 exx.).

Caccobius histeroides (Ménétrières, 1832)

Locality: Kçirë at Puka (2 exx.).

Caccobius schreberi (Linnaeus, 1767)

Localities: Lëpushë at Vermosh (1 ex.), Theth at Bogë (1 ex.), Gryke Lugje at Bogë (5 exx.), Kçirë at Puka (1 ex.), Gjegjan at Bardhoc (3 exx.), Bafa at Topojan (4 exx.), Fushë Studë at Steblevë (7 exx.), Kostriçan at Rrajcë (9 exx.), Buqezë at Piskupat (1 ex.), Pustec at Diellas (1 ex.), Leska at Zvezdë (1 ex.), Kamnik at Ersekë (1 ex.), Radanj at Gërmenj (19 exx.), Porto Palermo at Himarë (1 ex.), Lëshicë at Përmet (1 ex.).

Chironitis furcifer (P. Rossi, 1792)

Locality: Porto Palermo at Himarë (11 exx.).

Copris hispanus cavolinii (V. Petagna, 1792)

Locality: Barmash at Ersekë (2 exx.).

Copris lunaris (Linnaeus, 1758)

Localities: Gropat e Selcës at Lëpushë (8 exx.), Lëpushë at Vermosh (1 ex.), Theth at Bogë (3 exx.), Kçirë at Puka (1 ex.), Gjegjan at Bardhoc (1 ex.), Bafa at Topojan (3 exx.), Fushë Studë at Steblevë (18 exx.), Kostriçan at Rrajcë (1 ex.), Leska at Zvezdë (4 exx.), Barmash at Ersekë (4 exx.), Gozhdarazhde at Gërmenj (1 ex.), Radanj at Gërmenj (10 exx.), Llogara, Camping Llogara (1 ex.).

Euoniticellus fulvus (Goeze, 1777)

Localities: Theth at Bogë (1 ex.), Gryke Lugje at Bogë (3 exx.), Hani i Hotit at Ivanaj (1 ex.), Kçirë at Puka (3 exx.), Gjegjan at Bardhoc (7 exx.), Bafa at Topojan (5 exx.), Fushë Studë at Steblevë (8 exx.), Kostriçan at Rrajcë (21 exx.), Buqezë at Piskupat (2 exx.), Pustec at Diellas (1 ex.), Kamnik at Ersekë (3 exx.), Barmash at Ersekë (1 ex.), Radanj at Gërmenj (3 exx.), Akerni at Zvërnec (1 ex.), Porto Palermo at Himarë (2 exx.), Borsh at Himarë (3 exx.), Muzinë at Delvinë (1 ex.), Ksamil at Sarandë (5 exx.), Benjë at Përmet (1 ex.), Lëshicë at Përmet (2 exx.).

Euoniticellus pallipes (Fabricius, 1781)

Localities: Akerni at Zvërnec (1 ex.), Borsh at Himarë (6 exx.).

Euonthophagus amyntas alces (Fabricius, 1792)

Localities: Theth at Bogë (1 ex.), Kçirë at Puka (5 exx.), Gjegjan at Bardhoc (1 ex.), Fushë Studë at Steblevë (1 ex.), Kostriçan at Rrajcë (1 ex.), Divjaka at Lushnja (1 ex.), Buqezë at Piskupat (1 ex.), Kamnik at Ersekë (12 exx.), Radanj at Gërmenj (4 exx.), Llogara, Camping Llogara (2 exx.), Llogara, Mts Çikës (1 ex.), Benjë at Përmet (2 exx.), Lëshicë at Përmet (2 exx.).

Euonthophagus gibbosus (Scriba, 1790)

Localities: Gjegjan at Bardhoc (1 ex.), Bafa at Topojan (6 exx.), Fushë Studë at Steblevë (4 exx.), Buqezë at Piskupat (1 ex.), Llogara, Camping Llogara (1 ex.).

Gymnopleurus geoffroyi (Fuessly, 1775)

Localities: Kçirë at Puka (7 exx.), Leska at Zvezdë (2 exx.), Kamnik at Ersekë (3 exx.), Barmash at Ersekë (1 ex.), Radanj at Gërmenj (20 exx.), Llogara, Mts Çikës (2 exx.), Porto Palermo at Himarë (1 ex.), Benjë at Përmet (1 ex.), Lëshicë at Përmet (1 ex.).

Gymnopleurus mopsus mopsus (Pallas, 1781)

Localities: Kçirë at Puka (3 exx.), Gjegjan at Bardhoc (1 ex.), Barmash at Ersekë (1 ex.), Radanj at Gërmenj (5 exx.).

Onthophagus andalusicus andalusicus Waltl, 1835

Localities: Kçirë at Puka (2 exx.), Leska at Zvezdë (1 ex.), Muzinë at Delvinë (2 exx.).

The subspecies known from Italy, Malta, Portugal, Spain, Algeria, Morocco and Tunisia (ZIANI & BEZDĚK 2016), recently reported from Macedonia (BYK & MARCZAK 2016). According to KABAKOV (2006) widely distributed in southern Europe from Portugal to European Russia; occurs also in Armenia, Georgia, Israel, Kazakhstan, Lebanon, Syria, Turkey, Algeria, Morocco and Tunisia. In the light of studies on the distribution of *O. andalusicus* and *O. marginalis* (Gebler, 1817) (KABAKOV 2006), their co-occurrence on the Balkan Peninsula needs verification. Imagines in fresh excrements of cows on extensive pastures. First records from Albania.

Onthophagus coenobita (Herbst, 1783)

Localities: Bafa at Topojan (3 exx.), Fushë Studë at Steblevë (1 ex.), Llogara, Camping Llogara (1 ex.).

Onthophagus dellacasai Pittino & Mariani, 1981

Localities: Llogara, Mts Çikës (1 ex.), Muzinë at Delvinë (1 ex.).

Known from Balkan Peninsula: Albania, Bulgaria, Greece, Macedonia and European Turkey (ZIANI & BEZDĚK 2016). Imagines in fresh excrements of cows on small sunny pastures.

Onthophagus fissicornis (Steven, 1809)

Localities: Kçirë at Puka (5 exx.), Gjegjan at Bardhoc (20 exx.), Kostriçan at Rrajcë (7 exx.), Pustec at Diellas (2 exx.), Leska at Zvezdë (21 exx.), Kamnik at Ersekë (5 exx.), Barmash at Ersekë (4 exx.), Radanj at Gërmenj (3 exx.), Porto Palermo at Himarë (2 exx.), Muzinë at Delvinë (3 exx.), Lëshicë at Përmet (4 exx.).

Onthophagus fracticornis (Preyssler, 1790)

Localities: Lëpushë at Vermosh (12 exx.), Theth at Bogë (1 ex.), Kroni i T'thores at Bogë (3 exx.), Gryke Lugje at Bogë (3 exx.), Bafa at Topojan (19 exx.), Llogara, Mts Çikës (1 ex.).

Onthophagus furcatus (Fabricius, 1781)

Localities: Gryke Lugje at Bogë (5 exx.), Hani i Hotit at Ivanaj (2 exx.), Bërdicë at Trush (6 exx.), Oblikë at Zus (1 ex.), Kçirë at Puka (5 exx.), Gjegjan at Bardhoc (8 exx.), Bafa at Topojan (3 exx.), Pustec at Diellas (3 exx.), Leska at Zvezdë (9 exx.), Kamnik at Ersekë (4 exx.), Barmash at Ersekë (5 exx.), Radanj at Gërmenj (1 ex.), Akerni at Zvërnec (1 ex.), Porto Palermo at Himarë (4 exx.), Borsh at Himarë (6 exx.), Benjë at Përmet (1 ex.), Badëlonjë at Përmet (1 ex.), Lëshicë at Përmet (4 exx.).

Onthophagus grossepunctatus Reitter, 1905

Localities: Theth at Bogë (2 exx.), Gryke Lugje at Bogë (3 exx.), Bafa at Topojan (37 exx.), Buqezë at Piskupat (1 ex.), Pustec at Diellas (1 ex.), Leska at Zvezdë (2 exx.), Kamnik at Ersekë (1 ex.), Barmash at Ersekë (3 exx.), Radanj at Gërmenj (1 ex.), Llogara, Mts Çikës (1 ex.), Lëshicë at Përmet (3 exx.).

Onthophagus illyricus (Scopoli, 1763)

Localities: Theth at Bogë (4 exx.), Gryke Lugje at Bogë (2 exx.), Kçirë at Puka (7 exx.), Bafa at Topojan (6 exx.), Fushë Studë at Steblevë (8 exx.), Kamnik at Ersekë (2 exx.), Radanj at Gërmenj (9 exx.), Llogara, Camping Llogara (1 ex.), Llogara, Mts Çikës (2 exx.), Benjë at Përmet (1 ex.), Lëshicë at Përmet (2 exx.).

Onthophagus lemur (Fabricius, 1781)

Localities: Theth at Bogë (8 exx.), Kroni i T'thores at Bogë (13 exx.), Gryke Lugje at Bogë (2 exx.), Kçirë at Puka (1 ex.), Bafa at Topojan (1 ex.), Fushë Studë at Steblevë (2 exx.), Kostriçan at Rrajcë (2 exx.), Pustec at Diellas (1 ex.), Kamnik at Ersekë (8 exx.), Barmash at Ersekë (1 ex.), Llogara, Camping Llogara (2 exx.), Llogara, Mts Çikës (8 exx.), Muzinë at Delvinë (6 exx.).

Onthophagus medius (Kugelann, 1792)

Localities: Kçirë at Puka (2 exx.), Gjegjan at Bardhoc (6 exx.), Fushë Studë at Steblevë (14 exx.), Kostriçan at Rrajcë (13 exx.), Buqezë at Piskupat (2 exx.), Leska at Zvezdë (1 ex.), Kamnik at Ersekë (1 ex.), Radanj at Gërmenj (3 exx.), Muzinë at Delvinë (2 exx.).

From most European countries (including Greece, Macedonia, Montenegro and Serbia) as well as Azerbaijan, Georgia, Iran, Kazakhstan and Turkey (ZIANI & BEZDĚK 2016). Imagines in excrements of cows and horses on pastures. First records from Albania.

Onthophagus opacicollis Reitter, 1892

Localities: Bërdicë at Trush (9 exx.), Akerni at Zvërnec (2 exx.), Llogara, Camping Llogara (2 exx.), Llogara, Mts Çikës (2 exx.), Porto Palermo at Himarë (3 exx.), Ksamil at Sarandë (11 exx.).

Onthophagus ovatus (Linnaeus, 1767)

Localities: Fushë Studë at Steblevë (1 ex.), Kamnik at Ersekë (1 ex.).

Onthophagus panici Petrovitz, 1964

Localities: Lëpushë at Vermosh (21 exx.), Bafa at Topojan (61 exx., ver. S. Ziani).

Recorded from Balkan Peninsula: Albania, Bosnia Herzegovina, Greece, Macedonia and Montenegro (ZIANI 2009, ZIANI et al. 2015, ZIANI & BEZDĚK 2016). Imagines have been gathered from sheep excrements on two mountain pastures: one with numerous molehills, another (overgrown with *Juniperus* sp.) inhabited by sousliks *Spermophilus* sp.

Onthophagus ruficapillus Brullé, 1832

Localities: Theth at Bogë (12 exx.), Hani i Hotit at Ivanaj (1 ex.), Bërdicë at Trush (1 ex.), Kçirë at Puka (1 ex.), Gjegjan at Bardhoc (8 exx.), Bafa at Topojan (1 ex.), Fushë Studë at Steblevë (17 exx.), Kostriçan at Rrajcë (7 exx.), Buqezë at Piskupat (1 ex.), Leska at Zvezdë (19 exx.), Barmash at Ersekë (1 ex.), Radanj at Gërmenj (22 exx.), Akerni at Zvërnec (3 exx.), Llogara, Mts Çikës (1 ex.), Muzinë at Delvinë (1 ex.), Benjë at Përmet (2 exx.).

Onthophagus sericatus Reitter, 1892

Localities: Kostriçan at Rrajcë (1 ex.), Kamnik at Ersekë (1 ex.), Radanj at Gërmenj (1 ex.), Muzinë at Delvinë (4 exx.), Lëshicë at Përmet (1 ex.).

Onthophagus taurus (Schreber, 1759)

Localities: Theth at Bogë (3 exx.), Gryke Lugje at Bogë (11 exx.), Kçirë at Puka (1 ex.), Fushë Studë at Steblevë (4 exx.), Buqezë at Piskupat (13 exx.), Pustec at Diellas (2 exx.), Kamnik at Ersekë (1 ex.), Barmash at Ersekë (2 exx.), Akerni at Zvërnec (1 ex.), Llogara, Mts Çikës (5 exx.), Porto Palermo at Himarë (2 exx.), Borsh at Himarë (3 exx.), Ksamil at Sarandë (5 exx.), Benjë at Përmet (1 ex.).

Onthophagus vacca (Linnaeus, 1767)

Localities: Gryke Lugje at Bogë (2 exx.), Bafa at Topojan (7 exx.), Fushë Studë at Steblevë (1 ex.), Buqezë at Piskupat (2 exx.), Muzinë at Delvinë (3 exx.), Lëshicë at Përmet (3 exx.).

Onthophagus verticicornis (Laicharting, 1781)

Localities: Gropat e Selcës at Lëpushë (2 exx.), Lëpushë at Vermosh (1 ex.), Theth at Bogë (1 ex.), Kroni i T'hores at Bogë (3 exx.), Gryke Lugje at Bogë (2 exx.), Bafa at Topojan (6 exx.), Fushë Studë at Steblevë (30 exx.), Kamnik at Ersekë (1 ex.), Radanj at Gërmenj (1 ex.), Llogara, Camping Llogara (2 exx.), Lëshicë at Përmet (2 exx.).

Scarabaeus pius (Illiger, 1803)

Localities: Kçirë at Puka (1 ex.), Leska at Zvezdë (5 exx.).

Scarabaeus sacer Linnaeus, 1758

Locality: Akerni at Zvërnec (1 ex., dead).

Scarabaeus typhon Fischer von Waldheim, 1823

Locality: Muzinë at Delvinë (1 ex.).

Sisyphus schaefferi schaefferi (Linnaeus, 1758)

Localities: Buqezë at Piskupat (7 exx.), Pustec at Diellas (1 ex.), Radanj at Gërmenj (1 ex.), Llogara, Mts Çikës (1 ex.).

Subfamily Melolonthinae

Aplidia transversa transversa (Fabricius, 1801)

Localities: Hani i Hotit at Ivanaj (1 ex.), Hotolisht at Librazhd (1 ex.), Porto Palermo at Himarë (1 ex.).

Holocheilus vernus (Germar, 1824)

Localities: Kostricën at Rrajcë (1 ex.), Leska at Zvezdë (1 ex., det. A. Bezdëk), Llogara, Mts Çikës (1 ex.).

Hoplia argentea (Poda von Neuhaus, 1761)

Localities: Theth at Bogë (5 exx.), Qafe Malit at Fushë-Arrëz (32 exx.), Fushë Studë at Steblevë (1 ex.), Barmash at Ersekë (1 ex.), Radanj at Gërmenj (24 exx.), Llogara, Mts Çikës (1 ex.).

Hoplia nigrina Reitter, 1885

Localities: Llogara, Camping Llogara (54 exx.), Llogara, Mts Çikës (14 exx.).

From Albania and Greece (BEZDËK 2016b). Abundant in Mts Çikës. Collected on hawthorn (*Crataegus* sp.) flowers.

Maladera apfelbecki Petrovitz, 1969

Localities: Hotolisht at Librazhd (1 ex.), Llogara, Mts Çikës (1 ex.).

Melolontha pectoralis Megerle von Mühlfeld, 1812

Localities: Fushë Studë at Steblevë (5 exx.), Hotolisht at Librazhd (1 ex.), Gërmenj at Leskovik (12 exx.), Radanj at Gërmenj (1 ex.), Llogara, Camping Llogara (13 exx.).

Omaloplia corcyrae (Baraud, 1965)

Locality: Benjë at Përmet (2 exx., det. E. Rössner).

Omaloplia illyrica (Baraud, 1965)

Locality: Leska at Zvezdë (1 ex., det. E. Rössner).

Omaloplia lonae (Schatzmayr, 1923)

Locality: Muzinë at Delvinë (2 exx.).

Subfamily Rutelinae

Anisoplia agricola (Poda von Neuhaus, 1761)

Localities: Oblikë at Zus (1 ex.), Mirakë at Librazhd (1 ex.), Hotolisht at Librazhd (4 exx.).

Anisoplia flavipennis Brullé, 1832

Localities: Porto Palermo at Himarë (6 exx.), Benjë at Përmet (48 exx.), Badëlonjë at Përmet (8 exx.), Lëshicë at Përmet (14 exx., det. A. Bezdëk).

Anisoplia tempestiva Erichson, 1847

Locality: Divjaka at Lushnja (1 ex.).

Anomala dubia (Scopoli, 1763)

Localities: Gryke Lugje at Bogë (1 ex., dead), Mirakë at Librazhd (1 ex., dead, det. D. Král).

Anomala matzenaueri Reitter, 1918 (Fig. 2c)

Locality: Darëzezë e Re at Levan (3 exx., det. D. Král)

Known from Albania and Montenegro (NIKČEVIĆ 2010, ZORN & BEZDËK 2016). Imagines collected on sand of seashore dunes.

Anomala vitis (Fabricius, 1775)

Localities: Bërdicë at Trush (1 ex.), Oblikë at Zus (12 exx.).

Blitopertha lineolata (Fischer von Waldheim, 1824)

Localities: Kçirë at Puka (32 exx.), Fushë Studë at Steblevë (1 ex.), Llogara, Mts Çikës (10 exx.), Porto Palermo at Himarë (2 exx.).

Chaetopteroptia segetum (Herbst, 1783)

Localities: Mirakë at Librazhd (3 exx.), Hotolisht at Librazhd (8 exx.), Akerni at Zvërnec (1 ex.), Badëlonjë at Përmet (13 exx.).

Exomala adriatica (Petrovitz, 1968) (Fig. 2d)

Localities: Oblikë at Zus (1 ex.), Mirakë at Librazhd (33 exx., det. A. Bezdëk), Hotolisht at Librazhd (6 exx.), Badëlonjë at Përmet (1 ex.).

Reported from Albania, Greece and Montenegro (ZORN & BEZDËK 2016). Imagines on herbaceous plants and on leaves of young plane-trees at riverbanks.

Exomala hirtella (Brullé, 1832)

Localities: Qafe Malit at Fushë-Arrëz (1 ex.), Llogara, Mts Çikës (1 ex.), Muzinë at Delvinë (1 ex.).

Mimela aurata (Fabricius, 1801)

Localities: Mirakë at Librazhd (3 exx.), Hotolisht at Librazhd (1 ex.).

Subfamily Dynastinae

Oryctes nasicornis kuntzeni Minck, 1914

Locality: Mirakë at Librazhd (1 ex., dead).

Pentodon bidens punctatus (Villers, 1789)

Locality: Darëzezë e Re at Levan (1 ex., dead).

Pentodon idiota idiota (Herbst, 1789)

Locality: Oblikë at Zus (1 ex.).

Subfamily Cetoniinae

Cetonia aurata aurata (Linnaeus, 1758)

Localities: Theth at Bogë (3 exx.), Fushë Studë at Steblevë (2 exx.), Pustec at Diellas (1 ex.), Barmash at Ersekë (2 exx.), Radanj at Gërmenj (3 exx.), Llogara, Camping Llogara (21 exx.), Llogara, Mts Çikës (7 exx.), Porto Palermo at Himarë (3 exx.), Ksamil at Sarandë (1 ex.), Badëlonjë at Përmet (1 ex.), Petran at Përmet (1 ex.).

Gnorimus nobilis macedonicus Baraud, 1992

Locality: Qafe Malit at Fushë-Arrëz (6 exx.).

The subspecies hitherto known only from Macedonia (BEZDĚK 2016a), while from Albania only the nominotypical *Gnorimus nobilis nobilis* (Linnaeus, 1758) was recorded. Imagines on inflorescences of goats beard *Aruncus* sp.

Oxythyrea cinctella (Schaum, 1841)

Localities: Hani i Hotit at Ivanaj (6 exx.), Porto Palermo at Himarë (3 exx.), Benjë at Përmet (4 exx.).

Oxythyrea funesta (Poda von Neuhaus, 1761)

Localities: Hani i Hotit at Ivanaj (1 ex.), Divjaka at Lushnja (2 exx.), Pustec at Diellas (1 ex.), Radanj at Gërmenj (2 exx.), Akerni at Zvërnec (2 exx.), Porto Palermo at Himarë (1 ex.), Humelicë at Gjirokaster (2 exx.), Benjë at Përmet (14 exx.), Badëlonjë at Përmet (1 ex.), Petran at Përmet (1 ex.).

Protaetia affinis affinis Andersch, 1797

Localities: Mirakë at Librazhd (1 ex.), Porto Palermo at Himarë (2 exx.), Ksamil at Sarandë (1 ex.).

Protaetia angustata angustata (Germar, 1817)

Localities: Hani i Hotit at Ivanaj (4 exx.), Porto Palermo at Himarë (31 exx.), Muzinë at Delvinë (1 ex.).

Protaetia cuprea obscura (Andersch, 1797)

Localities: Gryke Lugje at Bogë (1 ex.), Pustec at Diellas (2 exx.), Porto Palermo at Himarë (34 exx.).

Protaetia speciosissima (Scopoli, 1786)

Locality: Porto Palermo at Himarë (2 exx.).

Trichius sexualis Bedel, 1906

Localities: Qafe Malit at Fushë-Arrëz (5 exx.), Buqezë at Piskupat (1 ex.), Gozhdarazhde at Gërmenj (2 exx.), Badëlonjë at Përmet (2 exx.).

Tropinota hirta hirta (Poda von Neuhaus, 1761)

Localities: Qafe Malit at Fushë-Arrëz (7 exx.), Oblikë at Zus (1 ex.), Fushë Studë at Steblevë (1 ex.), Hotolisht at Librazhd (3 exx.), Kostriçan at Rrajcë (1 ex.), Pustec at Diellas (1 ex.), Gozhdarazhde at Gërmenj (1 ex.), Radanj at Gërmenj (1 ex.), Muzinë at Delvinë (1 ex.), Ksamil at Sarandë (4 exx.), Humelicë at Gjirokaster (2 exx.), Benjë at Përmet (2 exx.).

Tropinota squalida squalida (Scopoli, 1763)

Localities: Oblikë at Zus (1 ex.), Pustec at Diellas (2 exx.), Radanj at Gërmenj (2 exx.), Porto Palermo at Himarë (1 ex.), Benjë at Përmet (2 exx.).

Valgus hemipterus hemipterus (Linnaeus, 1758)

Localities: Theth at Bogë (6 exx.), Qafe Malit at Fushë-Arrëz (7 exx.), Bërdicë at Trush (1 ex.), Hotolisht at Librazhd (2 exx.), Radanj at Gërmenj (1 ex.).

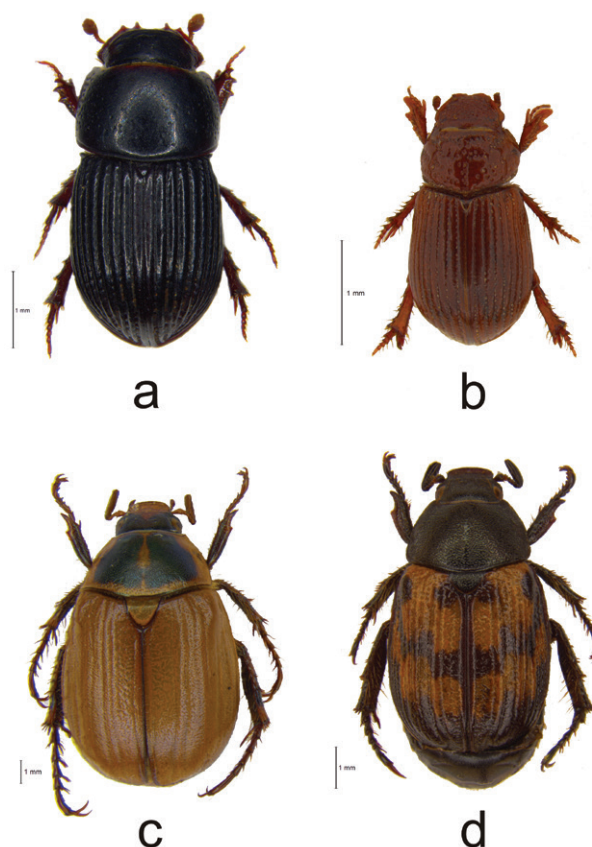


Fig. 2. Species recorded in the course of the present study: a – *Ahermodontus bischoffi*, b – *Leiopsammodius belloii*, c – *Anomala matzenaueri*, d – *Exomala adriatica*.

Discussion

The occurrence of three species in Albania – *Plagiogonus arenarius*, *Pleurophorus caesus* (MIKŠIĆ 1957, 1959) and *Gnorimus variabilis* (Linnaeus, 1758) (SCHULZE 1963) have been omitted in the second edition of the „Catalogue of Palaearctic Coleoptera” (LÖBL & LÖBL 2016).

CHEHLAROV et al. (2016), in the publication concerning the beetles of the Balkan Peninsula supplemented the list of Albanian scarabaeoids with a three more species: *Bodiloides ictericus ictericus* (Laicharting, 1781), *Subrinus sturmi* and *Trichonotulus scrofa*, while MÜHLFEIT (2017) provided the first record of *Hoplia laconiae* Petrovitz, 1958. Thus, up to 188 species of Scarabaeoidea have been identified in Albania.

The 17 days (between May 22nd and June 8th) of faunistic study resulted in confirming the occurrence in Albania of 61.2% of the scarabaeoid species hitherto known from this country and added 13 species that had not been previously recorded: *Odonteus armiger*, *Trox sabulosus*, *Acrossus depressus*, *Agrilinus*

convexus, *Amidorus obscurus*, *Aphodius fimetarius*, *Biralus satellitius*, *Eupleurus subterraneus*, *Leiopsammodius belloii*, *Rhyssemus vinodolensis*, *Teuchestes fossor*, *Onthophagus andalusicus* and *O. medius*. Thus, the number of currently known scarabaeoid species in Albania increases to 201.

The diversity of scarabaeoid fauna on the Balkan Peninsula suggests that this number may be further increased. KULUNDŽIĆ et al. (2014) estimated that more than 400 species occur in Croatia, although only 240 of them have been actually recorded (LÖBL & LÖBL 2016). In the first (2006) edition of the „Catalogue of Palaearctic Coleoptera” (LÖBL & SMETANA 2006) there are ca. 235 scarabaeoid species mentioned from Bulgaria, while ten years later its second edition (LÖBL & LÖBL 2016) already lists 273.; GUÉORGUIEV et al. (2011) estimated the real species number at 335–345. As regards the adjoining countries, 403 scarabaeoid species are currently known from Greece, 214 from Kosovo and Serbia, 209 from Macedonia, and 162 from Montenegro (LÖBL & LÖBL 2016). Despite their commonness in the vicinities and presence of appropriate habitats, many species have not yet been found in Albania, whereas some others, although neither small-bodied nor rare or clandestine – e.g. *Acrossus rufipes* (Linnaeus, 1758), *Dorcus parallelipedus*, *Platycerus caraboides* (ZIANI et al. 2015) – were recorded only in the last years. In contrast, rare species of scarabaeoid beetles are reported from neighboring countries, e.g. *Trox perrisii* Fairmaire, 1868 from Croatia (KOREN 2015, ZIANI et al. 2015), Bulgaria (CHEHLAROV et al. 2016), and Greece (BYK et al. 2019). The discovery, within less than three weeks of field work, of as many as 13 species new to Albania also points the insufficient state of knowledge of its scarabaeoid fauna, and consequently to the need of continuation and intensification of faunistic studies, especially in the hitherto less explored areas.

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References

- BAGATUROV M.F. & NIKOLAJEV G.V. 2015. Overview of distribution of the genus *Lethrus* Scopoli, 1777 (Coleoptera: Geotrupidae). *Caucasian Entomological Bulletin* 11 (2): 303–314 (in Russian).
- BALTHASAR V. & HRUBANT M. 1960. Ein Beitrag zur Kenntnis der Scarabaeiden Albanien's. *Časopis Československé Společnosti Entomologické* 57 (2): 146–153.
- BEZDĚK A. 2016a. Cetoniinae. In: LÖBL I. & LÖBL D. (Eds): *Catalogue of Palaearctic Coleoptera. Scarabaeoidea, Scirtoidea, Dascilloidea, Buprestoidea and Byrrhoidea. Volume 3. Revised and Updated Edition. Leiden-Boston: Brill*, pp. 367–412.
- BEZDĚK A. 2016b. Hopliini. In: LÖBL I. & LÖBL D. (Eds): *Catalogue of Palaearctic Coleoptera. Scarabaeoidea, Scirtoidea, Dascilloidea, Buprestoidea and Byrrhoidea. Volume 3. Revised and Updated Edition. Leiden-Boston: Brill*, pp. 216–224.
- BYK A., BEZDĚK A., GAZUREK T., KRÁL D. & TYLKOWSKI S. 2018. *Ahermodontus bischoffi* – rediscovery of an endemic dung beetle species (Coleoptera: Scarabaeidae: Aphodiinae) in Albania after more than 80 years. *Zootaxa* 4370 (3): 283–288.
- BYK A., GAZUREK T. & TYLKOWSKI S. 2019. Keratin Beetle *Trox perrisii* Fairmaire, 1868 (Coleoptera: Trogidae): First Records for Greece and Poland, with a Review of its Distribution and Ecology. *Acta Zoologica Bulgarica* 71 (1): 37–46.
- BYK A. & MARCZAK D. 2016. New Data on the Occurrence of Scarabaeoid Beetles (Coleoptera: Scarabaeoidea) in the Republic of Macedonia. *Acta Zoologica Bulgarica* 68 (4): 491–496.
- BYK A., MOKRZYCKI T., DWORAKOWSKI M. & BIDAS M. 2012. Rozmieszczenie *Odonteus armiger* (SCOPOLI, 1772) (Coleoptera: Scarabaeoidea: Bolboceratidae) w Polsce z uwagami o jego bionomii. *Wiadomości entomologiczne* 31 (2): 100–112.
- BYK A., MOKRZYCKI T., ROSA-GRUSZECKA A., TYLKOWSKI S. & ZAMOJSKI M. 2016. Grzybolcowate (Bolboceratidae) i wygonakowate (Ochodaeidae) – aktywność, wymagania ekologiczne i metody obserwacji. *Studia i Materiały Centrum Edukacji Przyrodniczo-Leśnej* 49a (4): 124–141.
- BYK A. & RUTKIEWICZ A. 2017. Liczebność i skład gatunkowy koprofagicznych poświętników w cyklu odtworzeniowym drzewostanów sosnowych w Lasach Człuchowskich (Pojezierze Pomorskie). *Sylvan* 161 (9): 781–792.
- BYK A. & WĘGRZYNOWICZ P. 2015. The Structure and Seasonal Dynamics of Coprophagous Scarabaeoidea (Coleoptera) Communities in Later Developmental Stages of Pine Stands in NW Poland. *Journal of the Entomological Research Society* 17 (3): 39–57.
- CHEHLAROV E., GUÉORGUIEV B., HRISTOVSKI S., FANCELLO L., CVETKOVSKA-GORGIEVSKA A. & PRELIĆ D. 2016. New country records and rare and interesting species of Coleoptera from the Balkan Peninsula. *Acta Zoologica Bulgarica* 68 (3): 331–338.
- DELLACASA M., DELLACASA G., KRÁL D. & BEZDĚK A. 2016. Aphodiini. In: LÖBL I. & LÖBL D. (Eds): *Catalogue of Palaearctic Coleoptera. Scarabaeoidea, Scirtoidea, Dascilloidea, Buprestoidea and Byrrhoidea. Volume 3. Revised and Updated Edition. Leiden-Boston: Brill*, pp. 98–155.
- FERY H. 2016. Scarabaeidae: Aphodiinae: Aphodiini – Notes on the *Aphodius fimetarius* complex. In: LÖBL I. & LÖBL D. (Eds): *Catalogue of Palaearctic Coleoptera. Scarabaeoidea, Scirtoidea, Dascilloidea, Buprestoidea and Byrrhoidea. Volume 3. Revised and Updated Edition. Leiden-Boston: Brill*, p. 13.

- FERY H. & RÖSSNER E. 2015. Notes on the *Aphodius* (s. str.) *finetarius*-complex – morphology, taxonomy, nomenclature and worldwide distribution (with emphasis on the Iberian Peninsula, Austria and Germany) (Scarabaeoidea: Scarabaeidae: Aphodiinae). *Linzer Biologische Beiträge* 47 (1): 459–489.
- GUÉORGUIEV B.V., LOBO J.M. & CHEHLAROV E. 2011. The Scarabaeoid Beetles (Insecta: Coleoptera: Scarabaeoidea) in the Bulgarian Section of the Western Rhodopes. In: BERON P. (ed.): Biodiversity of Bulgaria. 4. Biodiversity of Western Rhodopes (Bulgaria and Greece) II. Sofia: Pensoft & Nat. Mus. Natur. Hist., pp. 237–265.
- KABAKOV O.N. 2006. Lamellicorn Beetles of the Subfamily Scarabaeinae (Insecta: Coleoptera: Scarabaeidae) from the Fauna of Russia and Adjacent Countries. Moscow: KMK Press, 374 pp. (in Russian)
- KAMIŃSKI M.J., BYK A. & TYKARSKI P. 2015. Seasonal and diel activity of dung beetles (Coleoptera: Scarabaeoidea) attracted to European bison dung in Białowieża Primeval Forest, Poland. *The Coleopterists Bulletin* 69 (1): 83–90.
- KOREN T. 2015. The first record of *Trox perrisii* Fairmaire, 1868 in Croatia. *Entomologia Croatica* 19 (1–2): 31–35.
- KOREN T., BURIĆ I., LAUŠ B., ROJKO I., SVOBODA P. & ŠERIĆ JELASKA L. 2010. Carabidae, Cerambycidae and Scarabaeoidea (Insecta: Coleoptera) fauna of Kornat, Lavsa and Žut islands, Croatia. *Entomologia Croatica* 14 (3–4): 53–62.
- KRÁL D. & MALÝ V. 1993. New records of Scarabaeoidea (Coleoptera) from Bulgaria. *Acta Societatis Zoologicae Bohemicae* 57: 17–29.
- KULUNDŽIĆ K., TURIĆ N., VIGNJEVIĆ G. & MERDIĆ E. 2014. Research into Scarab Beetles (Scarabaeoidea) in Kopački Rit Nature Park. *Entomologia Croatica* 18 (1–2): 37–47.
- LELO S. 2006. Popis Balegara (Insecta: Scarabaeoidea) Bosne i Hercegovine. *Prilozi fauni Bosne i Hercegovine* 2: 8–31.
- LOBO J.M., JIMÉNEZ-RUIZ Y., CHEHLAROV E., GUÉORGUIEV B., PETROVA Y., KRÁL D., ALONSO-ZARAZAGA M.Á. & VERDÚ J.R. 2015. The classification and phylogenetic status of *Jekelius (Reitterius) punctulatus* (Jekel, 1866) and *Jekelius (Jekelius) brullei* (Jekel, 1866) (Coleoptera: Geotrupidae) using molecular data. *Zootaxa* 4040 (2): 187–203.
- LÖBL I. & SMETANA A. (Eds) 2006. Catalogue of Palaearctic Coleoptera. Scarabaeoidea, Scirtoidea, Dascilloidea, Buprestoidea, Byrrhoidea. Volume 3. Stenstrup: Apollo Books, 690 pp.
- LÖBL I. & LÖBL D. (Eds) 2016. Catalogue of Palaearctic Coleoptera. Scarabaeoidea, Scirtoidea, Dascilloidea, Buprestoidea and Byrrhoidea. Volume 3. Revised and Updated Edition. Leiden-Boston: Brill, 983 pp.
- MIKŠIĆ R. (1953) 1956. Fauna Insectorum Balcanica – Scarabaeoidea. *Godišnjak Biološkog Instituta u Sarajevu* 6 (1–2): 49–281.
- MIKŠIĆ R. 1957. Zweiter Nachtrag zur „Fauna Insectorum Balcanica – Scarabaeidae“. *Acta Musei Macedonici Scientiarum Naturalium* 4 (7–9): 139–214.
- MIKŠIĆ R. 1959. Dritter Nachtrag zur „Fauna Insectorum Balcanica – Scarabaeidae“. 30. Beitrag zur Kenntnis der Scarabaeiden. *Godišnjak Biološkog Instituta Univerziteta u Sarajevu* 12 (1–2): 47–136.
- MIQUEL M.E. & VASKO B.N. 2014. A study of the association of *Ondoteus armiger* (Scopoli, 1772) (Coleoptera: Geotrupidae) with the European rabbit. *Journal of Entomology and Zoology Studies* 1 (6): 138–146.
- MÜHLFEIT M. 2017. First records of 16 beetles to the fauna of Albania (Coleoptera: Staphylinidae, Biphyllidae, Colydiidae, Melandryidae, Scarabaeidae, Rhynchitidae and Curculionidae). *Elateridarium* 11: 13–16.
- NIKČEVIĆ J. 2010. Some ecological data of Coleoptera in a beach dune system of Long Ulcinj Beach in Montenegro. *Natura Montenegrina – Podgorica* 10 (1): 41–48.
- NIKOLAJEV G.V. & BEZDĚK A. 2016. Ochodaeidae. In: LÖBL I. & LÖBL D. (Eds): Catalogue of Palaearctic Coleoptera. Scarabaeoidea, Scirtoidea, Dascilloidea, Buprestoidea and Byrrhoidea. Volume 3. Revised and Updated Edition. Leiden-Boston: Brill, pp. 84–85.
- NIKOLAJEV G.V., KRÁL D. & BEZDĚK A. 2016. Geotrupidae. In: LÖBL I. & LÖBL D. (Eds): Catalogue of Palaearctic Coleoptera. Scarabaeoidea, Scirtoidea, Dascilloidea, Buprestoidea and Byrrhoidea. Volume 3. Revised and Updated Edition. Leiden-Boston: Brill, pp. 33–52.
- PETROVITZ R. 1969. Ergebnisse der Albanien-Expedition 1961 des Deutschen Entomologischen Institutes. 77. Beitrag. Coleoptera: Scarabaeidae II (Glaphyrinae, Sericinae, Melolonthinae, Rutelinae, Hopliinae, Cetoniinae, nebst Nachträgen zu Trichiinae und Valginae). *Beiträge zur Entomologie* 19 (7–8): 861–885.
- PITTINO R. & BEZDĚK A. 2016. Trogidae. In: LÖBL I. & LÖBL D. (Eds): Catalogue of Palaearctic Coleoptera. Scarabaeoidea, Scirtoidea, Dascilloidea, Buprestoidea and Byrrhoidea. Volume 3. Revised and Updated Edition. Leiden-Boston: Brill, pp. 53–58.
- PITTINO R. & MARIANI G. 1993. *Aphodius (Agrilinus) convexus* ERICHSON: A misinterpreted valid species from the Western Palearctic fauna (Coleoptera: Scarabaeoidea: Aphodiidae). *Bollettino della Società Entomologica Italiana* 125: 131–142.
- RAKOVIČ M. 1986. Complementary notes to my revision of Old World *Psammodytes* Fallén species (Coleoptera, Scarabaeidae, Aphodiinae). *Annotationes Zoologicae et Botanicae – Bratislava* 174: 1–19.
- RAKOVIČ M. & KRÁL D. 2015. Psammodytini (Coleoptera: Scarabaeidae: Aphodiinae): Supplementary contributions to the first and second editions of the Catalogue of Palaearctic Coleoptera. *Folia Heyrovskyana – series A* 23 (2): 112–132.
- RAKOVIČ M., KRÁL D. & BEZDĚK A. 2016. Psammodytini. In: LÖBL I. & LÖBL D. (Eds): Catalogue of Palaearctic Coleoptera. Scarabaeoidea, Scirtoidea, Dascilloidea, Buprestoidea and Byrrhoidea. Volume 3. Revised and Updated Edition. Leiden-Boston: Brill, pp. 158–165.
- RÖSSNER E. & FERY H. 2014. *Aphodius (Biralus) mahunkaorum* (ÁDÁM, 1983) in Europe (Coleoptera: Scarabaeidae, Aphodiinae). *Entomologische Zeitschrift – Schwanfeld* 124 (2): 113–122.
- SCHULZE J. 1963. Ergebnisse der Albanien-Expedition 1961 des Deutschen Entomologischen Institutes. 13. Beitrag. Coleoptera: Scarabaeidae I (Dynastinae, Valginae und Trichiinae). *Beiträge zur Entomologie* 13 (7–8): 819–825.
- SHOKHIN I.V. 2016. Contribution to the fauna of lamellicorn beetles (Coleoptera: Scarabaeoidea) of Southern Russia. Addition 1. *Caucasian Entomological Bulletin* 12 (1): 75–79.
- TARASOV S.I. 2008. A revision of *Aphodius* Illiger, 1798 subgenus *Amidorus* Mulsant et Rey, 1870 with description of the new subgenus *Chittius* (Coleoptera: Scarabaeidae). *Russian Entomological Journal* 17 (2): 177–192.

- VŠETEČKA K. 1939. *Aphodius (Ammonoecius) bischoffi* n. sp. Časopis České Společnosti Entomologické 36: 31.
- WILSON C.J. 2001. *Aphodius pedellus* (DeGeer), a species distinct from *A. fimetarius* (Linnaeus) (Coleoptera: Aphodiidae). Tijdschrift voor Entomologie 144: 137–143.
- ZIANI S. 2009. Nuovi dati sulla distribuzione geografica di alcune specie di *Onthophagus* appartenenti al gruppo *ovatus* (Insecta Coleoptera Scarabaeidae: Onthophagini). Bollettino del Museo civico di storia naturale di Venezia 59: 45–50.
- ZIANI S. & BEZDĚK A. 2016. Onthophagini. In: LÖBL I. & LÖBL D. (Eds): Catalogue of Palaearctic Coleoptera. Scarabaeoidea, Scirtoidea, Dascilloidea, Buprestoidea and Byrrhoidea. Volume 3. Revised and Updated Edition. Leiden-Boston: Brill, pp. 180–204.
- ZIANI S., BEZDĚK A., BRANCO T., HILLERT O., JÁKL S., KRÁL D., MANTIČ M., RÖSSNER E. & SEHNAL R. 2015. New country records of Scarabaeoidea (Coleoptera) from the Palaearctic Region. Insecta Mundi 0409: 1–36.
- ZÍDEK J. 2013. Checklist and bibliography of the Trogidae (Coleoptera: Scarabaeoidea). Insecta Mundi 0314: 1–38.
- ZORN C. & BEZDĚK A. 2016. Rutelinae. In: LÖBL I. & LÖBL D. (Eds): Catalogue of Palaearctic Coleoptera. Scarabaeoidea, Scirtoidea, Dascilloidea, Buprestoidea and Byrrhoidea. Volume 3. Revised and Updated Edition. Leiden-Boston: Brill, pp. 317–358.

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