On the Staphylinidae (Coleoptera) of Crete, Greece

Volker Assing

Abstract

Approximately 105 species of Staphylinidae collected in spring 2012 are reported from the eastern and central parts of the Greek island Crete. Nine species, seven of Aleocharinae and two of Paederinae, are described and illustrated. Three of them are associated with ants, at least seven are probably locally endemic: *Myrmecopora (Myrmecopora) idana* **n. sp.** (Psiloritis; associated with *Messor* sp.), *Aloconota (Aloconota) brachyptera* **n. sp.** (Dikti Oros, Psiloritis), *Geostiba (Sipalotricha) diktiana* **n. sp.** (Dikti Oros), *Dinusa cretica* **n. sp.** (Dikti Oros; associated with *Messor* sp.), *Oxypoda (Bessopora) idana* **n. sp.** (Psiloritis), *Tectusa diktiana* **n. sp.** (Dikti Oros), *T. thriptica* **n. sp.** (Orno Thriptis), *Astenus (Eurysunius) thripticus* **n. sp.** (Orno Thriptis; associated with *Tetramorium* sp.), and *Sunius diktianus* **n. sp.** (Dikti Oros). The sexual characters of several previously described species are illustrated. A checklist of the 63 named endemic species and subspecies of Crete is provided. The zoogeographic affiliations of the Cretan endemics are discussed.

Keywords: Coleoptera, Staphylinidae, West Palaearctic region, Mediterranean, Greece, Crete, new species, endemism, myrmecophily, zoogeography, taxonomy.

Zusammenfassung

Freilanduntersuchungen in den östlichen und zentralen Regionen der griechischen Insel Kreta ergaben etwa 105 Arten aus der Käferfamilie Staphylinidae. Neun Arten, davon sieben Aleocharinae und zwei Paederinae, werden beschrieben und abgebildet. Drei dieser Arten sind myrmecophil und mindestens sieben sind wahrscheinlich lokalendemisch auf Kreta verbreitet: *Myrmecopora (Myrmecopora) idana* **n. sp.** (Psiloritis; bei *Messor* sp.), *Aloconota (Aloconota) brachyptera* **n. sp.** (Dikti Oros, Psiloritis), *Geostiba (Sipalotricha) diktiana* **n. sp.** (Dikti Oros), *Dinusa cretica* **n. sp.** (Dikti Oros; bei *Messor* sp.), *Oxypoda (Bessopora) idana* **n. sp.** (Psiloritis), *Tectusa diktiana* **n. sp.** (Dikti Oros), *T. thriptica* **n. sp.** (Orno Thriptis), *Astenus (Eurysunius) thripticus* **n. sp.** (Orno Thriptis; bei *Tetramorium* sp.) und *Sunius diktianus* **n. sp.** (Dikti Oros). Die Sexualmerkmale einiger weiterer, bereits beschriebener Arten werden abgebildet. Eine Liste der 63 derzeit von Kreta bekannten endemischen Arten und Unterarten wird erstellt. Die zoogeographischen Beziehungen der Kreta-Endemiten werden diskutiert.

Contents

1 Introduction 83
2 Material and methods 84
3 Results 84
3.1 Staphylinidae recorded from eastern and central Crete in 2012 84
3.2 Endemic species 87
3.3 Descriptions of new species 89
3.3.1 Aleocharinae 89
3.3.2 Paederinae 98
4 References 101

1 Introduction

With an area of approximately 8340 km² and a west-east extension of about 260 km, the Greek island Crete is the fifth-largest island of the Mediterranean Sea. The nearest distance from the peninsulas in the northwest to the southernmost tip of the Pelopónnisos is 100 km, that from the northeast to the nearest parts of mainland Turkey nearly 200 km, to the southernmost tip of the Greek island Rhodos about 150 km, and from the south coast to the coast of Libya nearly 300 km. The topology of Crete features numerous mountain ranges, the four major ones being the Lefka Ori in the west, the Psiloritis in the centre, the Dikti range in the east, and the Orno Thriptis in the extreme east. In the Miocene, before the Zanclean flood near the end of the Miocene (approximately 5.3 ma before the present), what is Crete today was connected to both southern mainland Greece and southwestern Anatolia via land ridges.

Although Crete has had a long tradition of entomological research, there is not a single comprehensive study such as a monograph, catalogue, or checklist of its Staphylinidae fauna. The only more comprehensive faunistic and taxonomic studies specifically dealing with the fauna of Crete

are those by BLATTNÝ & BLATTNÝ (1916), on the Pselaphinae and Scydmaeninae collected by PAGANETTI in 1914, and by SCHEERPELTZ (1964), who lists 70 named species of Staphylinidae (exclusive of Pselaphinae, Scydmaeninae, and Scaphidiinae). Other records from Crete are found either in articles dealing with the fauna of Greece as a whole (e. g., ASSING 2002, 2004a, 2006a), in revisions of species groups or genera (e. g., ASSING 1997, 1999, 2004b, 2005a, 2005b, 2007a, 2007b, LOHSE & STEEL 1961), in taxonomic synopses of higher systematic units (e. g., ASSING 2008b, COIFFAIT 1972, 1978, 1982, 1984, ZERCHE 1990), or in articles containing descriptions of single species (e. g., ASSING 2003, PACE 2002, SABELLA 2002).

According to SMETANA (2004) and an update by SCHÜLKE (unpubl.), 1435 species and subspecies of Staphylinidae have been recorded from Greece as a whole, approximately 55 of which are confined to Crete.

The discovery of various new species of Staphylinidae collected by HEINRICH MEYBOHM during several excursions to Crete, among them a species of *Tectusa* Bernhauer, 1899 from the Lefka Ori, gave rise to the assumption that more undescribed species were present on the island. Previous observations in the Pelopónnisos had shown that virtually all the major mountain ranges in southern Greece are inhabited by at least one locally endemic species of *Tectusa*, suggesting that other Cretan mountain ranges were not unlikely to host species of this genus, too. A field trip conducted to eastern and central Crete in spring 2012 by the author not only confirmed this assumption, but also yielded an unexpected number of other discoveries.

Acknowledgements

I am indebted to VOLKER BRACHAT (Geretsried) and HEINRICH MEYBOHM (Großhansdorf) for identifying the species of Pselaphinae and Scydmaeninae, respectively, and for providing additional information on the Cretan Pselaphinae and Scydmaeninae fauna. GYÖRGY MAKRANCZY (Budapest) identified *Ochthephilus venustulus*, MICHAEL SCHÜLKE (Berlin) *Mycetoporus* spp., *Tachyporus abner*, and *Anotylus complanatus*, and WALTER ROSSI (L'Aquila) the Laboulbeniales on one specimen of *Geostiba*. BENEDIKT FELDMANN (Münster) and HEINRICH TERLUTTER (Billerbeck) reviewed the manuscript.

2 Material and methods

The Pselaphinae and Scydmaeninae referred to in this study are deposited in the private collections of VOLKER BRACHAT and HEINRICH MEYBOHM, respectively. The remaining material is deposited in the following public and private collections:

cAss	author's private collection
cFel	private collection BENEDIKT FELDMANN, Münster
cSch	private collection MICHAEL SCHÜLKE, Berlin
cWun	private collection PAUL WUNDERLE, Mönchengladbach
MNHUB	Museum für Naturkunde der Humboldt-Universtität, Berlin

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). For the photographs a digital camera (Nikon Coolpix 995) was used.

Head length was measured from the anterior margin of the clypeus (Aleocharinae) or from the anterior margin of the frons (Paederinae) to the posterior margin of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra, total length from the anterior margin of the mandibles (in resting position) to the apex of the abdomen, the length of the forebody from the anterior margin of the mandibles to the posterior margin of the elytra, and the length of (the median lobe of) the aedeagus from the apex of the ventral process to the base of the aedeagal capsule. The side of the aedeagus with the sperm duct opening is referred to as the ventral, the opposite side as the dorsal aspect.

The individual labels of type specimens are separated by slashes; they are cited in the original spelling and format, except that the following adaptations were made according to the general format requirements of the journal: names of persons (except authors of species) in small capitals, scientific names of genera and species in italics.

3 Results

3.1 Staphylinidae recorded from eastern and central Crete in 2012

In all, 1922 specimens of Staphylinidae belonging to approximately 105 species were collected. Remarkably, at least ten previously undescribed species were discovered, not counting the species of Pselaphinae and Scydmaeninae that had been collected before, but never described. It was not possible to name some of the species either because the respective genera [e. g., *Hydrosmecta* spp.] or subgenera [*Atheta (Mocyta)* spp., *Atheta (Microdota)* sp., *Oxypoda (Baeoglena)* spp.] are currently in taxonomic confusion and in need of revision, or because the species were represented only by females.

A complete list of species and records from 2012 is given below. The subfamilies are arranged according to SMETANA (2004). The genera and species within the subfamilies are listed in alphabetical order. The number of specimens is given in parentheses after the locality number.

Localities and collection data (all leg. ASSING) corresponding to the sample numbers of the list below are as follows: **1**: Orno Thriptis, SE Thripti, 35°05'N, 25°53'E, 1250 m, partly flooded plateau, under stones, partly near road margin, 25.III.; **2**: same data, but 6.VI.; **3**: Orno Thriptis, SE Thripti, 35°05'N, 25°53'E, 1270 m, E-slope, oak litter and grass near small snowfield sifted, 25.III.; **4**: Orno Thriptis, SE Thripti, 35°05'N, 25°53'E, 1290 m, grass and litter under old oak trees sifted, 25.III.; **5**: Orno Thriptis, SE Thripti, 35°05'N, 25°53'E, 1120 m, grassy N-slope with oak, grass and oak litter sifted, 25.III.; **6**: same locality, but under stones, 6.IV.; **7**: Orno Thriptis, E Thripti, 35°06'N, 25°53'E, 970 m, N-slope, moist pasture, under stones, 6.IV.; **8**: Orno Thriptis, SE Thripti, 35°05'N, 25°53'E, 1300 m, litter and grass sifted, 6.IV.; **9**: WSW Sitia, Orno Oros, 35°09'N, 25°55'E, 545 m, under

stones, 31.III.; **10**: WSW Sitia, Orno Oros, 35°08'N, 25°56'E, 640 m, under stones, 31.III.; **11**: SW Agios Nikolaos, S Neapoli, 35°14'N, 25°17'E, 410 m, road margin, under stones, 26.III.; **12**: NW Agios Nikolaos, 35°13'N, 25°38'E, 290 m, swept from flowering *Sarothamnus*, 30.III.; **13**: NW Ierapetra, Bramanon reservoir, 35°02'N, 25°42'E, 70 m, lakeshore, under stones, 29.III.; **14**: SW Agios Nikolaos, Kroustas, 35°09'N, 25°39'E, 430 m, oak forest, moss, grass, and litter sifted, 29.III.; **15**: WSW Agios Nikolaos, W Kritsa, Katharo plateau, 35°09'N, 25°33'E, 1120 m, arable land, litter and grass under old oak tree sifted, 24.III.; **16**: same data, but 1.IV.; **17**: WSW Agios Nikolaos, W Kritsa, Katharo plateau, 35°09'N, 25°36'21"E, 890 m, calcareous pasture, under stones, 1.IV.; **18**: WSW Agios Nikolaos, W Kritsa, Katharo plateau, 35°08'N, 25°35'E, 1140 m, arable land, grass and litter below old oak trees sifted, 1.IV.; **19**: WSW Agios Nikolaos, W Kritsa, Katharo plateau, 35°08'N, 25°34'E, 1130 m, arable land, under stones, 1.IV.; **20**: NE Lasithi plateau, 35°12'N, 25°31'E, 990 m, W-slope, pasture, under stones, 26.III.; **21**: Lasithi plateau, SE Agios Georgios, 35°03'N, 25°30'E, 900 m, under stones, 26.III.; **22**: Lasithi Plateau, S Mesa Lasithi, 35°11'N, 25°31'E, 840 m, oak forest, sifted, 28.III.; **23**: NW Dikti Oros, N Limnakaro, 35°09'N, 25°29'E, 1090 m, pasture, under stones, 26.III.; **24**: NW Dikti Oros, Limnakaro, 35°08'N, 25°29'E, 1170 m, E-slope with snow fields (Fig. 73), under stones, 26.III.; **25**: same data, but 27.III.; **26**: same data, but 28.III.; **27**: same data, but 30.III.; **28**: same data, but 7.IV.; **29**: NW Dikti Oros, Limnakaro, 35°08'N, 25°29'E, 1170 m, E-slope with snow fields (Fig. 73), sifted, 26.III.; **30**: same data, but 27.III.; **31**: same data, but 30.III.; **32**: NW Dikti Oros, Limnakaro, 35°08'N, 25°29'E, 1140 m, grassland, near snow fields, under stones, 28.III.; **33**: same data, but 30.III.; **34**: NW Dikti Oros, Limnakaro, 35°08'N, 25°29'E, 1140 m, near snow fields, sifted, 28.III.; **35**: NW Dikti Oros, S Limnakaro, 35°08'N, 25°29'E, 1330 m, N-slope, under stones near snowfields, 7.IV.; **36**: NW Dikti Oros, S Limnakaro, 35°08'N, 25°29'E, 1330 m, N-slope, litter and moss near snowfields sifted, 7.IV.; **37**: ESE Perama, N Garazo, 35°21'N, 24°47'E, 130 m, stream bank, gravel floated, 4.IV.; **38**: ca. 7 km NW Anogia, 35°19'N, 24°49'E, 440 m, stream valley, with mixed Mediterranean vegetation, litter sifted, 4.IV.; **39**: S Anogia, Psiloritis, N Nida plateau, 35°16'N, 24°53'E, 1150 m, N-slope, below snowfields, under stones, 2.IV.; **40**: S Anogia, Psiloritis, N Nida plateau, 35°14'N, 24°53'E, 1280 m, litter and grass below shrubs near snowfields sifted, 2.IV.; **41**: S Anogia, Psiloritis, 35°16'N, 24°54'E, 1060 m, road margin, under stones, 3.IV.; **42**: S Anogia, Psiloritis, 35°15'N, 24°53'E, 1180 m, pasture, under stones near snow, 3.IV.; **43**: S Anogia, Psiloritis, 35°15'N, 24°53'E, 1180 m, NE-slope with scattered oak, leaf litter and grass near snow sifted, 3.IV.; **44**: S Anogia, Psiloritis, 35°15'N, 24°53'E, 1170 m, pasture with oak, under stones near snow, 4.IV.; **45**: S Anogia, Psiloritis, 35°15'N, 24°52'E, 1180 m, rocky N-slope with oak, litter and grass near snow sifted, 4.IV.; **46**: S Anogia, Psiloritis, 35°15'N, 24°52'E, 1180 m, rocky N-slope, pasture with oak, under stones, 5.IV.; **47**: S Anogia, Psiloritis, 35°16'N, 24°54'E, 1090 m, N-slope, pasture, under stones, 5.IV.

Omaliinae

Acidota cruentata Mannerheim, 1830 – 30 (1)
Boreaphilus fuelscheri Zerche, 1990 – 30 (1)
Omalium cinnamomeum Kraatz, 1857 – 8 (1), 40 (2), 43 (1), 45 (1)
Omalium excavatum Stephens, 1834 – 29 (1), 30 (1), 31 (2), 40 (3), 43 (3), 45 (3)
Omalium rugatum Mulsant & Rey, 1880 – 5 (1), 45 (1)

Proteininae

Megarthrus bellevoyei Saulcy, 1862 – 31 (1)
Proteinus creticus Assing, 2004 – 3 (5), 4 (1), 5 (23), 8 (1), 14 (1), 22 (3), 31 (6), 34 (7), 43 (23)
Proteinus ovalis Stephens, 1834 – 5 (10), 8 (1), 36 (2), 40 (1), 32 (32), 45 (6)

Pselaphinae

Afropselaphus n. sp. – 32 (1), 34 (5)
Brachygluta ochanensis (Reitter, 1909) – 14 (2)
Brachygluta n. sp. – 20 (1)
Tribatus creticus Reitter, 1884 – 13 (1), 21 (7)
Tychus reitterianus Löbl, 1998 – 5 (1), 15 (1), 16 (1), 37 (1)
Tychus n. sp. – 24 (1), 30 (3), 31 (3), 35 (1)

Tachyporinae

Mycetoporus baudueri Mulsant & Rey, 1875 – 30 (1), 36 (1)
Mycetoporus dispersus Schülke & Kocian, 2000 – 5 (1), 25 (1), 31 (3)
Mycetoporus reichei (Pandellé, 1869) (♀) – 40 (1)
Mycetoporus sp. aff. *bosnicus* Luze, 1901 – 5 (1), 14 (9), 16 (3), 18 (2), 40 (1), 45 (1)
Tachyporus abner Saulcy, 1865– 25 (2), 40 (1), 41 (1), 42 (7)
Tachyporus caucasicus Kolenati, 1846 – 14 (2), 34 (1)
Tachyporus hypnorum (Fabricius, 1775) – 15 (1)
Tachyporus nitidulus (Fabricius, 1781) – 3 (2), 4 (4), 8 (3), 15 (8), 16 (3), 18 (9), 25 (3), 28 (3), 29 (1), 30 (9), 31 (12), 34 (5), 36 (2), 39 (2), 40 (7), 42 (1), 43 (3)

Habrocerinae

Habrocerus pisidicus Korge, 1971 – 14 (5), 16 (1), 22 (45), 31 (1), 38 (3)

Aleocharinae

Aleochara bipustulata (Linnaeus, 1760) – 16 (1)
Aloconota brachyptera n. sp. – 24 (1), 27 (2), 28 (1), 29 (1), 30 (1), 31 (1), 32 (1), 33 (1), 39 (3), 42 (2)
Aloconota minoica Pace, 2002 – 37 (8)
Amischa n. sp. – 7 (2)
Atheta aeneicollis (Sharp, 1869) – 4 (7), 5 (1), 8 (2), 14 (2), 16 (2), 18 (1), 22 (1), 40 (3), 42 (1), 43 (4), 45 (2)
Atheta amicula (Stephens, 1832) – 4 (1), 39 (1)
Atheta cretica Brundin, 1944 (♀) – 7 (1)
Atheta nigra (Kraatz, 1856) – 16 (1)
Atheta oblita (Erichson, 1839) – 22 (1)
Atheta (*Microdota*) sp. – 31 (1)
Atheta (*Mocyta*) spp. – 1 (5), 3 (9), 4 (30), 5 (4), 8 (9), 12 (2), 14 (6), 15 (16), 16 (7), 18 (10), 20 (1), 22 (19), 28 (2), 30 (3), 31 (9), 32 (1), 38 (6), 39 (2), 49 (3), 42 (3), 43 (74), 47 (2)
Atheta sp. – 4 (1)
Cypha graeca Assing, 2004 – 14 (1)
Dinusa cretica n. sp. – 25 (1), 26 (1)
Drusilla cretica Assing, 2005 – 39 (1), 40 (8), 41 (1), 42 (1), 43 (1), 47 (29)
Geostiba diktiana n. sp. – 25 (2), 30 (43), 31 (86), 32 (6), 33 (2), 34 (65)

Geostiba exsecta Assing, 1999 – 40 (1), 42 (1), 43 (37), 45 (2)
Geostiba meybohmi Assing, 2000 – 15 (4), 18 (15)
Geostiba oertzeni (Eppelsheim, 1888) – 4 (5), 5 (2), 8 (3)
Geostiba thryptisensis Assing, 2001 – 5 (7), 8 (5)
Hydrosmecta sp. – 37 (28)
Hydrosmecta sp. – 37 (1)
Hydrosmecta sp. – 37 (42)
Liogluta longiuscula (Gravenhorst, 1802) – 3 (9), 4 (14), 5 (7), 8 (13), 16 (2), 24 (2), 25 (4), 30 (1), 31 (9), 35 (2), 35 (46), 39 (18), 40 (9), 42 (12), 43 (59), 45 (15)
Myrmecopora elisa Assing, 1997 – 24 (1), 25 (3), 28 (1)
Myrmecopora idana n. sp. – 47 (1)
Myrmecopora sp. (♀) – 1 (1)
Ocalea badia Erichson, 1837 – 18 (1), 29 (1), 30 (1), 31 (1), 36 (2), 40 (1)
Oxypoda bimaculata Baudi, 1870 – 25 (1), 27 (1), 31 (1)
Oxypoda cretica Assing, 2006 – 24 (1), 25 (1), 27 (2), 30 (1), 31 (1), 32 (16), 36 (1)
Oxypoda formosa Kraatz, 1856 – 29 (1), 30 (4), 31 (1)
Oxypoda idana n. sp. – 39 (1), 42 (1), 43 (1)
Oxypoda lurida Wollaston, 1857 – 31 (3), 34 (2)
Oxypoda subnitida Mulsant & Rey, 1875 – 43 (1)
Oxypoda (*brachyptera* group) sp. (♀♀) – 25 (2), 27 (1), 42 (1)
Oxypoda (*Baeoglena*) sp. – 40 (1), 45 (1)
Tectusa thriptica n. sp. – 3 (1)
Tectusa diktiana n. sp. – 36 (2)

Oxytelinae

Anotylus complanatus (Erichson, 1839) (♀) – 3 (1)
Anotylus inustus (Gravenhorst, 1806) – 3 (4), 4 (5), 8 (7), 9 (1), 14 (2), 25 (2), 28 (3), 34 (1), 39 (2), 40 (1), 42 (14), 44 (2)
Anotylus sculpturatus (Gravenhorst, 1806) – 14 (3), 39 (1), 42 (2), 43 (4)
Carpelimus corticinus (Gravenhorst, 1806) – 37 (6)
Carpelimus gracilis (Mannerheim, 1830) – 37 (1)
Ochthephilus venustulus (Rosenhauer, 1856) – 37 (6)

Steninae

Stenus cf. *cordatoides* Puthz, 1972 (♀) – 42 (1)
Stenus ochropus Kiesenwetter, 1858 – 31 (3), 34 (6), 36 (3)
Stenus parcior Bernhauer, 1929 – 10 (1), 32 (1), 40 (1)
Stenus subaeneus Erichson, 1840 – 23 (1), 35 (1), 36 (12), 42 (2), 43 (4), 44 (3), 45 (6), 46 (2)

Scydmaeninae

Leptomastax sp. aff. *bisetosa* Reitter, 1884 – 47 (1)
Scydmaenus menozzii Franz, 1966 – 7 (1)
Scydmoraphes minotauri Meybohm, 2008 – 37 (1)
Stenichnus creticus W. Blattný & C. Blattný, 1916 – 24 (1), 25 (1), 30 (4), 31 (5), 34 (8)

Paederinae

Astenus lyonessius (Joy, 1908) – 7 (3), 44 (1), 47 (2)
Astenus procerus (Gravenhort, 1806) – 9 (2), 26 (2), 33 (1), 47 (4)
Astenus thoracicus (Baudi, 1857) – 6 (1), 7 (3), 10 (2), 20 (7), 23 (1), 24 (1), 25 (2), 27 (1), 30 (7), 31 (2), 32 (11), 33 (4), 35 (3), 36 (2), 39 (2), 40 (8), 41 (3), 42 (2), 44 (1), 47 (55)
Astenus thripticus n. sp. – 7 (2)
Domene stilicina (Erichson, 1840) – 3 (1)
Leptobium creticum Coiffait, 1973 – 4 (1), 7 (2), 15 (3), 16 (1), 19 (2), 20 (1), 23 (7), 24 (1), 25 (8), 30 (4), 31 (9), 32 (11), 33 (3), 34 (1), 35 (10), 36 (1), 43 (1)
Leptobium thryptisense Assing, 2005 – 3 (2), 6 (1)
Medon dilutus pythonissa (Saulcy, 1865) – 5 (1), 8 (2), 14 (3), 22 (3), 38 (1), 43 (1), 45 (2)
Platydomene picipes picipes (Erichson, 1840) – 37 (1)
Scopaeus muehlei Frisch, 1994 – 13 (1), 37 (1)
Sunius diktianus n. sp. – 24 (15), 25 (7), 27 (7), 30 (4), 31 (1), 32 (58), 33 (11)
Sunius fallax (Lokay, 1919) – 7 (5), 15 (1), 40 (1), 42 (4), 44 (3)
Sunius sp. (*seminiger* group) (♀♀) – 13 (1), 19 (1)

Staphylininae

Gabrius nigritulus (Gravenhorst, 1802) – 37 (1)
Gabrius cf. *nigritulus* (♀♀) – 41 (1), 42 (2)
Heterothops cf. *minutus* Wollaston, 1860 – 16 (5), 43 (1)
Ocypus mus (Brullé, 1832) – 7 (2), 16 (1)
Ocypus olens (O. Müller, 1764) – 1 (1), 2 (2), 11 (1), 17 (1), 19 (1), 20 (4), 21 (1), 23 (1)
Ocypus picipennis (Fabricius, 1792) – 25 (1), 47 (1)
Othius laeviusculus Stephens, 1833 – 8 (1), 42 (2)
Othius lapidicola Märkel & Kiesenwetter, 1848 – 15 (12), 16 (24), 22 (5), 30 (3), 31 (5), 43 (14), 45 (12)
Philonthus nitidicollis (Lacordaire, 1835) – 42 (2), 43 (1), 47 (2)
Philonthus quisquiliarius (Gyllenhal, 1810) – 37 (2)
Philonthus rufimanus Erichson, 1840 – 37 (6)
Quedius humeralis Stephens, 1832 – 5 (2), 8 (1)
Quedius nemoralis Baudi, 1848 – 14 (1), 15 (1), 16 (3), 22 (1), 45 (1)
Quedius semiobscurus (Marsham, 1802) – 42 (1)
Quedius umbrinus Erichson, 1839 – 37 (1)
Xantholinus minos Assing, 2008 (♀) – 47 (1)

Remarks on some species

Boreaphilus fuelscheri (Figs. 72–73): This species was described based on six specimens from "Kreta Lassithi-Hochebene" (Zerche 1990) and subsequently recorded only once from "Dikti Oros, Selakano, 35°05'N, 25°32'E, 850 m" (Assing 2002). The available evidence suggests that it is endemic to the Dikti range. For photos of the habitat where it was collected see Figs. 72–73.

Proteinus creticus: This species was described based on three specimens from the Katharo plateau (Assing 2004a) and subsequently recorded from western Anatolia by Anlaş & Tezcan (2008) (specimen identified by A. Zanetti). As can be inferred from the localities and specimen numbers above, the species seems to be common in Crete and apparently replaces *P. brachypterus* (Fabricius, 1792) on the island.

Aloconota minoica (Figs. 20–23): The specimens listed represent the first record since the original description, which is based on a single female from "Kreta, Kato Zakros Schlucht" (Pace 2002). The species is fully winged and probably distributed in suitable habitats (stream banks) across Crete. The spermatheca of the recently collected material is in agreement with the

illustration provided by PACE (2002), suggesting that these specimens are conspecific with the holotype. The previously unknown male sexual characters are as follows: tergite VII with pronounced oblong median tubercle posteriorly; posterior margin of tergite VIII with two median teeth and with distinct lateral projection on either side (Fig. 20); ventral process of aedeagus (Figs. 21, 22) with rather broadly rounded apex in lateral view. The spermatheca is illustrated in Fig. 23.

Cypha graeca: The male listed above represents the first record since the original description, which is based on specimens from Levkás, Crete, and the Pelopónnisos (ASSING 2004a).

Drusilla cretica: The original description of this species is based on a male from the Lefka Ori (ASSING 2005b). Subsequent records (ASSING 2008c) and the material listed above are from the Psiloritis range. Females from the Lefka Ori are required to confirm that both populations are indeed conspecific.

Geostiba exsecta: This species has been recorded only from several localities in the Psiloritis range (ASSING 1999, 2007b), where it is probably endemic. However, it is unclear if the distributions of this species and *G. idaea*, another endemic of the same mountain range, are parapatric or overlap.

Geostiba meybohmi: This species is currently known from some localities in or near the Katharo and Lassithi plateaus (ASSING 2000, 2001b) and evidently endemic to the Dikti range. The specimens listed above were collected near the type locality.

Geostiba thryptisensis: The distribution of *G. thryptisensis* is confined to the Orno Thriptis (ASSING 2001b). The specimens listed above represent the first records since the original description.

Oxypoda cretica (Figs. 45–46, 72–73): The original description of *O. cretica* is based on a single male from "Kreta Lassithi, Selia Afhin 1000 m" (ASSING 2006a). The records listed above, the reduced wings, and the discovery of a closely related species (*O. idana* n. sp.) in the Psiloritis range suggest that *O. cretica* is endemic to the Dikti Oros. Numerous specimens were collected in the habitat shown in Figs. 72–73. The median lobe of the aedeagus and the previously unknown spermatheca are illustrated in Figs. 45–46.

Oxypoda subnitida: This species is widespread in the western Mediterranean and was recently also reported from Corfu and Cyprus (ASSING 2012, TRONQUET 2004). The previously known distribution is mapped by ASSING (2012).

Leptobium creticum (Figs. 72–73): Unlike the following species, *L. creticum* is widespread in Crete and subject to a remarkable colour polymorphism (ASSING 2005a). Interestingly, all the specimens from Limnakaro and the Lasithi plateaus (altogether 56 specimens) have the head reddish, whereas in the ten specimens from other localities (including the Katharo plateau), the head is blackish. Numerous specimens were collected in the locality shown in Figs. 72–73.

Leptobium thryptisense: This species is a local endemic of the Orno Thriptis (ASSING 2005a). The three specimens listed above represent the first records since the original description.

Scopaeus muehlei: According to FRISCH (2003), this species was previously known only from "Chania, Kavallos" and from Plakias in the western half of Crete. The two specimens listed above considerably expand the known distribution of this Cretan endemic towards the east of the island.

3.2 Endemic species

Owing to its isolated geographic situation for more than five million years, its size, and its topology (presence of several high mountain ranges separated by deep valleys), the number of endemic Staphylinidae species in Crete is greater than in other eastern Mediterranean islands such as Cyprus and Rhodos. Moreover, the easternmost portion of Crete has been separated from the main body of the island during warm periods with higher sealevels, which would, for instance, account for the presence of a locally endemic species of *Leptobium* Casey, 1905 in the Orno Thriptis.

Including the newly described species, 63 named endemic species and subspecies are now known from Crete, the distribution of *Medon cerrutii* also including the neighbouring island Kárpathos. The taxonomic status of three specific and subspecific names is doubtful; it does not seem unlikely that they may turn out to represent synonyms. Five unnamed endemic species of Scydmaeninae and ten to eleven of Pselaphinae are known from the island, but have not been described (BRACHAT pers. comm., MEYBOHM pers. comm.). One unnamed species of *Amischa* will be described in the context of a more comprehensive study of West Palaearctic *Amischa* Thomson, 1858 (ASSING in prep.).

The endemic Staphylinidae fauna of Crete is composed of taxa of both southern Balkans and southwestern Anatolian affiliations. Several genera are represented in Crete either by only one species (see list chapter 3.1) or by several, but not particularly closely related species (i. e., non-monophyletic assemblages), e. g., *Aloconota minoica* and *A. brachyptera*, *Atheta cretica* and *A. biroi*, *Medon beroni* and *M. cerrutii*, *Xantholinus minos* and *X. creticus*. On the other hand, some species groups of Cretan endemics are evidently monophyletic and are the result of speciation on the island.

The genus with the greatest number of endemic species is *Geostiba* Thomson, 1858, which is represented in Crete

by a total of eight species. One of them, *G. oertzeni* (Eppelsheim, 1888) of the subgenus *Sibiota* Casey, 1906, is widespread in the Balkans (including numerous Mediterranean islands), Turkey, and the Black Sea region (Assing 2006b). The remaining seven species, all of them belonging to the subgenus *Sipalotricha* Scheerpeltz, 1931, are locally endemic in Crete. The three major mountain ranges (Lefka Ori, Psiloritis, Dikti) each host two species, and the Thriptis one. The available evidence suggests that they form a monophylum and that their closest relative may be *G. rhodiensis*, a species distributed in Rhodos and in southwestern Anatolia. This would indicate that speciation occurred on the island.

The genus *Tectusa* is particularly speciose in the southern Balkans. In mainland Greece and particularly in the Pelopónnisos, it is represented by numerous locally endemic, mostly undescribed species. The genus is unknown from Rhodos and from southwestern Anatolia. The species inhabit the higher montane and the alpine zones of mountain ranges and are almost exclusively found near snow. The presence of *Tectusa* in Crete confirms the previously hypothesised zoogeographic relationship with the fauna of the southern Balkans (Assing 2008b). Moreover, the discovery of two additional species in Crete, one them in the Dikti Oros and the other in the Orno Thriptis, suggests that other mountain ranges, too, particularly the Psiloritis range, may host additional *Tectusa* species.

The nominate subgenus of *Myrmecopora* Saulcy, 1864 now comprises eleven species, all of them associated with harvester ants of the genus *Messor* Forel, 1890 and distributed in the eastern Mediterranean from Greece to the Middle East. The diversity is greatest in southern Anatolia (6 species) and Crete (4 species) (Assing 1997). Only one species, *M. pygmaea* (Sachse, 1852), is known from southern Greece. The reason why the subgenus is represented in Crete by so many species is unknown; all of them are fully winged and probably capable of flight. Unfortunately, a revision of Cretan *Messor* species is not available. According to formicidae.org (retrieved on 2.VII.2012), eight species of *Messor* have been recorded from Crete. The Thriptis range may host yet another species of *Myrmecopora*, but so far only one female has become available from there.

Two myrmecophilous species of *Astenus* Dejean, 1833, subgenus *Eurysunius* Reitter, 1909, are now known from Crete, two species have been recorded from mainland Greece and six from Turkey. All of them are associated with ants of the genus *Tetramorium* Mayr, 1855, which, according to formicidae.org (retrieved on 2.VII.2012), is represented in Crete by six species. This figure, however, should be regarded as highly tentative, since most species groups of *Tetramorium* are in need of taxonomic revision and the genus probably includes numerous cryptic, yet undescribed species. One of the two myrmecophilous Cretan *Astenus* species is known from the west (Lefka Ori), the other from the extreme east (Thriptis), suggesting that additional species may be present also in other mountain ranges.

The paederine genus *Sunius* Stephens, 1829 was previously represented in Crete only by one recorded species, *S. fallax* (Lokay, 1919) of the *S. melanocephalus* species group, a species that is widespread from the southeast of Central Europe to Crete and to the south of European Russia (Assing 2008a). In view of the long tradition of entomological research in Crete, the discovery of *S. diktiana* came as quite a surprise. The species belongs to the *S. seminiger* group, which has a circum-Mediterranean distribution and comprises approximately 55 locally endemic species (Assing 2008a, 2011a, 2011b). This species group is particularly speciose in southwestern Anatolia and represented in southern Greece by only two species. Since practically every mountain range with suitable geological conditions (limestone) in southwestern Anatolia hosts its own species of the *S. seminiger* group, the same may be true also of Crete. Therefore, it would not seem unlikely that yet undescribed species are present also in the Psiloritis and Lefka Ori ranges.

The genus *Oxypoda* Mannerheim, 1830 is represented in the Cretan fauna by two endemic species (plus additional widespread taxa), *O. cretica* from the Dikti and *O. idana* from the Psiloritis range. Both species are undoubtedly adelphotaxa, suggesting that speciation has occurred on the island. The nearest relative is currently unknown. It does not seem unlikely that at least the Lefka Ori may host an additional representative of this species group.

The following list gives the named endemic (sub-)species of Crete with the distribution of local endemics and – if necessary – remarks (in square brackets). According to Feldmann (in prep.), *Domene lohseiana* Bordoni, 1977, which is listed as a Cretan endemic in Smetana (2004), is a synonym of a widespread species and omitted in the list.

Boreaphilus fuelscheri Zerche, 1990 – Psiloritis
Boreaphilus meybohmi Assing, 2002 – Lefka Ori
Lesteva longoelytrata cretica Lohse & Steel, 1961 – [doubtful status]
Lesteva brondeeli Lohse & Steel, 1961
Lesteva nitidicollis Lohse & Steel, 1961
Lesteva szekessyi Lohse & Steel, 1961
Amauronyx paganettii W. Blattný & C. Blattný, 1916
Batrisodes paganettii W. Blattný & C. Blattný, 1916
Brachygluta gnosiaca Besuchet, 2004
Claviger oertzeni Reitter, 1885
Tychus creticus Reitter, 1885
Tychus lagrecai Sabella, 2002 – Psiloritis
Tychus reitterianus Löbl, 1998
Alevonota cretica Assing & Wunderle, 2008
Aloconota brachyptera n. sp. – Dikti Oros, Psiloritis
Aloconota minoica Pace, 2002
Atheta biroi Scheerpeltz, 1964

Atheta cretica Brundin, 1944
Dinusa cretica n. sp.
Drusilla cretica Assing, 2005 – Lefka Ori
Geostiba albimontis Assing, 2007 – Lefka Ori
Geostiba diktiana n. sp. – Dikti Oros
Geostiba exsecta Assing, 1999 – Psiloritis
Geostiba icaria Pace, 1996 – Lefka Ori
Geostiba idaea Pace, 1996 – Psiloritis
Geostiba meybohmi Assing, 2000 – Dikti Oros
Geostiba thryptisensis Assing, 2001 – Orno Thriptis
Myrmecopora elisa Assing, 1997 – Dikti Oros
Myrmecopora fornicata Assing, 1997 – "Crete"
Myrmecopora idana n. sp. – Psiloritis
Myrmecopora plana Assing, 1997 – Lefka Ori
Ocalea cretica Coiffait, 1976
Oxypoda cretica Assing, 2006 – Dikti Oros
Oxypoda idana n. sp. – Psiloritis
Phytosus holtzi Bernhauer, 1935
Pronomaea wunderlei Assing, 2007
Tectusa callicera Assing, 2002 – Lefka Ori
Tectusa diktiana n. sp. – Dikti Oros
Tectusa thriptica n. sp. – Orno Thriptis
Stenus ariadne Puthz, 1977
Eutheia paganettii Franz, 1971
Scydmoraphes fuelscheri Meybohm, 2008
Scydmoraphes minotauri Meybohm, 2008
Scydmoraphes ziegleri Meybohm, 2008
Stenichnus basimpressus W. Blattný & C. Blattný, 1916
Stenichnus creticus W. Blattný & C. Blattný, 1916
Stenichnus hummleri W. Blattný & C. Blattný, 1916
Astenus minos Assing, 2003 – Lefka Ori
Astenus thripticus n. sp. – Orno Thriptis
Leptobium creticum Coiffait, 1973
Leptobium thryptisense Assing, 2005 – Orno Thriptis
Lobrathium candicum Bordoni, 2009
Medon beroni Coiffait, 1970
Medon cerrutii Coiffait, 1976 – [also in Kárpathos]
Pseudolathra cretensis Bordoni, 1986 – [doubtful status]
Scopaeus creticus Frisch, 1994
Scopaeus muehlei Frisch, 1994
Sunius diktianus n. sp. – Dikti Oros
Quedius candicus Coiffait, 1976
Quedius fulgidus creticus Mařan, 1935 – [doubtful status]
Quedius sigwalti Coiffait, 1972
Xantholinus creticus Assing, 2008
Xantholinus minos Assing, 2008

3.3 Descriptions of new species

3.3.1 Aleocharinae

3.3.1.1 Falagriini

Myrmecopora (Myrmecopora) idana **n. sp.**
(Figs. 1–6)

Type material

Holotype ♂ [with three workers of *Messor* sp. attached to the pin]: "GR – Crete [33], S Anogia, Psiloritis, 35°15'59"N, 24°53'57"E, 1090 m, under stones, 5.IV.2012, V. Assing / Holotypus ♂ *Myrmecopora idana* n. sp. det. V. Assing 2012" (cAss).

Etymology

The specific epithet (adjective) is derived from Ida, a synonym of Psiloritis, the mountain range where the type locality is situated.

Description

Body length 4.0 mm; length of forebody 1.7 mm. Habitus as in Fig. 1. Coloration: head dark-brown; pronotum and elytra brown; abdomen blackish-brown, with the anterior segments and the apex slightly paler; legs yellowish-brown; antennae dark-reddish, with antennomeres I–II yellowish-red.

Head (Fig. 2) strongly transverse and wedge-shaped; punctation moderately dense and very fine; interstices with shallow microsculpture. Eyes approximately as long as postocular region in dorsal view. Antenna (Fig. 3) approximately 1.5 mm long; antennomere III approximately twice as long as broad, longer than II; IV–X approximately 1.5 times as long as broad and of subequal length; XI slender, slightly longer than the combined length of IX and X.

Pronotum (Fig. 2) 1.25 times as broad as long and 1.1 times as broad as head; punctation dense, fine, but distinct.

Elytra (Fig. 2) approximately 0.9 times as long as pronotum; posterior margin sinuate near postero-lateral angles; punctation fine and dense. Hind wings fully developed. Legs very long and slender; metatarsus almost as long as metatibia; metatarsomere approximately as long as the combined length of II–IV.

Abdomen narrower than elytra; punctation fine, but distinct, somewhat denser on anterior than on posterior tergites; interstices glossy; posterior margin of tergite VII with palisade fringe.

♂: almost all of dorsal surface of head distinctly and extensively impressed (Figs. 1–2); pronotum with pronounced and extensive median impression (Figs. 1–2); posterior margins of tergite VIII and sternite VIII broadly convex; median lobe of aedeagus 0.54 mm long; ventral process rather broad basally and weakly incised apically in ventral view (Figs. 4–6).

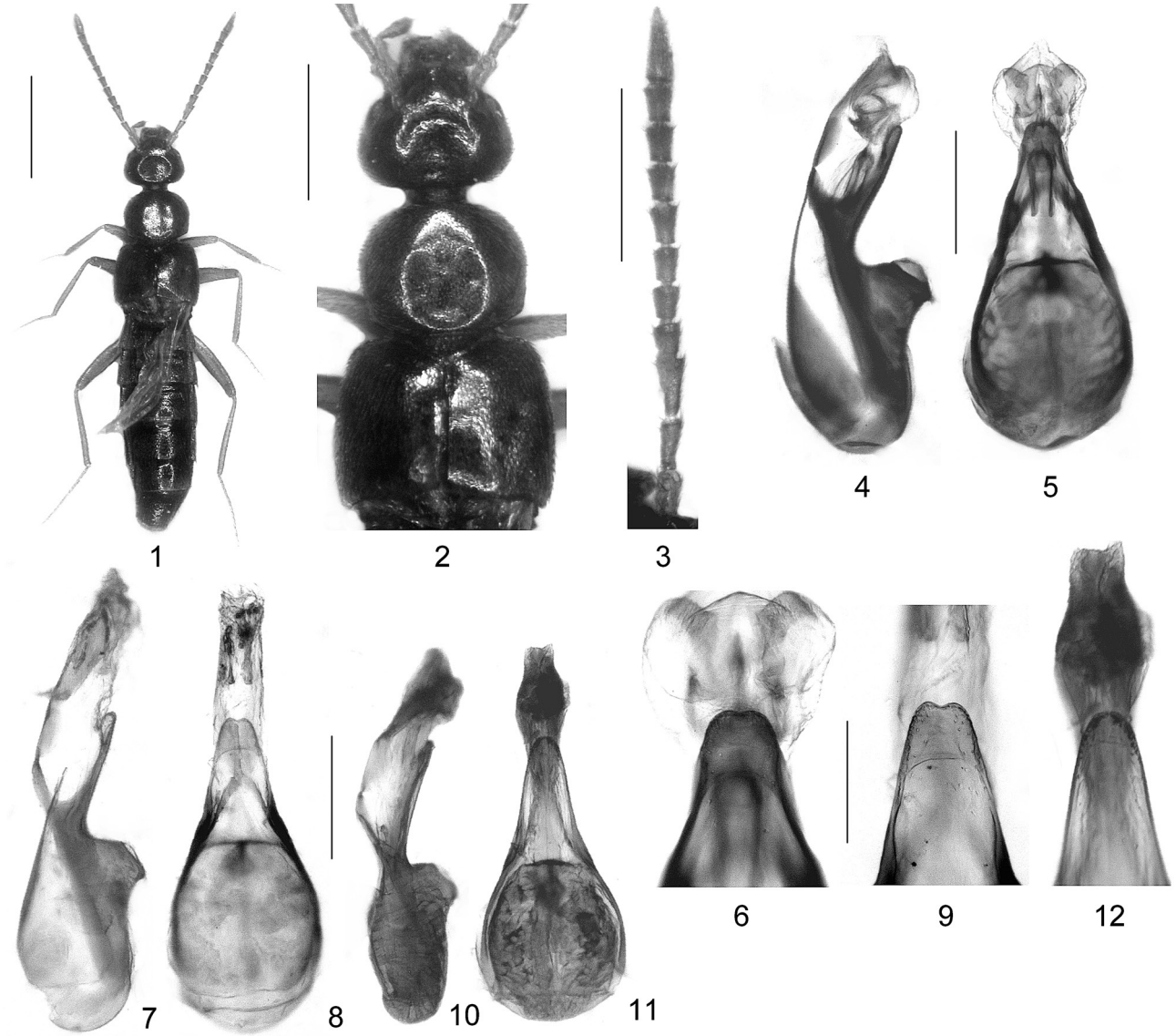
♀: unknown.

Comparative notes

The new species is distinguished from the three previously known Cretan representatives of the subgenus *Myrmecopora* as follows:

from *M. elisa* (Dikti range) by the slightly more slender habitus, the more even impression on the male head, and by the completely different shape of the ventral process of the aedeagus (particularly in ventral view);

from *M. fornicata* (exact locality unknown) by the much more distinct and extensive impressions on the male head and pronotum, the less slender antennomere IV, and



Figs. 1–12. *Myrmecopora idana* (1–6), *M. plana*, holotype (7–9), and *M. fornicata*, holotype (10–12). – **1**. Habitus. **2**. Forebody. **3**. Antenna. **4**–**5**, **7**–**8**, **10**–**11**. Median lobe of aedeagus in lateral and in ventral view. **6**, **9**, **12**. Apical portion of ventral process of aedeagus in ventral view. – Scale bars: 1.0 mm (1), 0.5 mm (2–3), 0.2 mm (4–5, 7–8, 10–11), 0.1 mm (6, 9, 12).

by the shape of the ventral process of the aedeagus (*M. fornicata*: much more slender and apically not excised in ventral view);

from *M. plana* (Lefka Ori) by the less slender antennae (*M. plana*: antennomeres IV–X almost twice as long as broad), the more pronounced and more extensive impressions on the male head and pronotum, and by the shape of the ventral process of the aedeagus (*M. plana*: ventral process slightly shorter, basally narrower in ventral view; "angle" between ventral process and crista apicalis more obtuse in lateral view; crista apicalis less pronounced).

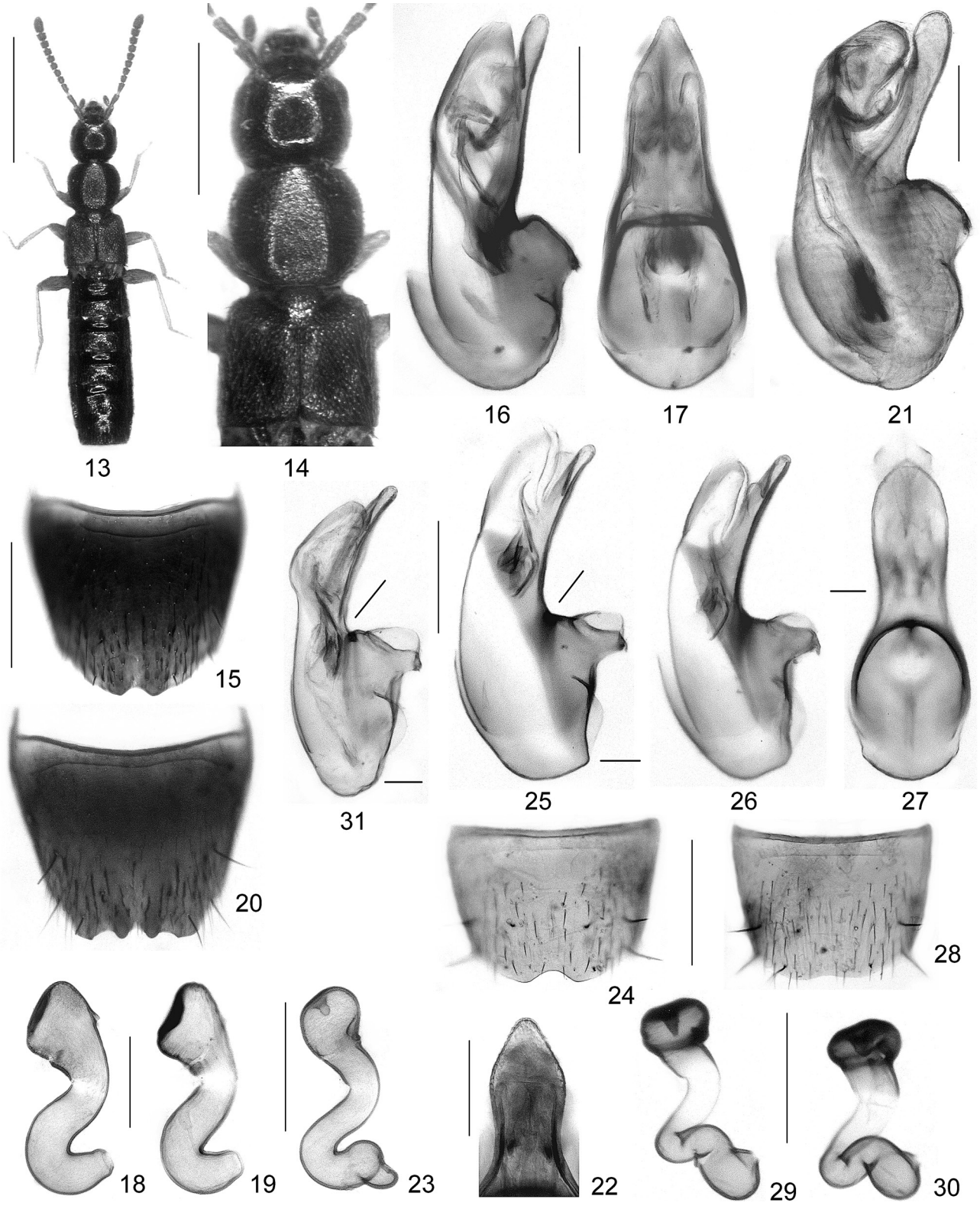
For illustrations of the sexual characters of *M. elisa*, *M. fornicata*, and *M. plana* see Assing (1997) and Figs. 7–12.

Distribution and natural history

The type locality is situated in the Psiloritis range at an altitude of nearly 1100 m. The holotype was collected from a nest of *Messor* sp. in a rocky pasture.

3.3.1.2 Geostibini

Together with several other genera previously attributed to the Athetini, *Aloconota* Thomson, 1858 and *Geostiba* Thomson, 1958 were recently placed in the tribe Geostibini (Elven et al. 2012).



Figs. 13–31. *Aloconota brachyptera* (13–19), *A. minoica* (20–23), *Geostiba diktiana* (24–30), and *G. meybohmi* (31). – **13**. Habitus. **14**. Forebody. **15**, **20**, **24**. Male tergite VIII. **16**–**17**, **21**, **25**–**27**, **31**. Median lobe of aedeagus in lateral and in ventral view. **18**–**19**, **23**, **29**–**30**. Spermatheca. **22**. Apical portion of ventral process of aedeagus in ventral view. **28**. Female tergite VIII. – Scale bars: 1.0 mm (13), 0.5 mm (14), 0.2 mm (15, 20, 24, 28), 0.1 mm (16–19, 21–23, 25–27, 29–31).

Aloconota (Aloconota) brachyptera **n. sp.**
(Figs. 13–19, 56, 72–73)

Type material

Holotype ♂: "GR – Crete [10a], NW Dikti Oros, Limnakaro, 35°08'08"N, 25°29'00"E, 1170 m, sifted, 26.III.2012, V. Assing / Holotypus ♂ *Aloconota brachyptera* sp. n. det. V. Assing 2012" (cAss).

Paratypes: 1 ♂: same data as holotype, but "[10] … under stones" (cAss); 1♀: same data as holotype, but "[11a] … 27.III.2012" (cAss); 1 ♂: same data as holotype, but "[17a] … 30.III.2012" (cAss); 2 ♀♀: same data as holotype, but "[17] … under stones, 30.III.2012" (cAss); 1 ♂: same data as holotype, but "[38] … *Messor* nests, 7.IV.2012" (cAss); 1 ♂: "GR – Crete [12], NW Dikti Oros, Limnakaro, 35°08'16"N, 25°28'52"E, 1140 m, under stones, 28.III.2012, V. Assing" (cAss); 1 ♀: same data, but "[16] … 30.III.2012" (cAss); 2 ♂♂, 1 ♀: "GR – Crete [25], S Anogia, Psiloritis, 35°15'41"N, 24°53'16"E, 1150 m, under stones, 2.IV.2012, V. Assing" (cAss); 1 ♂, 1 ♀: "GR – Crete [28], S Anogia, Psiloritis, 35°14'59"N, 24°53'95"E, 1180 m, under stones, 3.IV.2012, V. Assing" (cAss).

Etymology

The specific epithet (Greek adjective) refers to the short elytra and hind wings.

Description

Body length 2.8–3.4 mm; length of forebody 1.2–1.4 mm. Habitus as in Fig. 13. Coloration: head blackish-brown; pronotum brown to blackish-brown; elytra reddish-brown, with weak bronze hue; abdomen blackish-brown; legs dark-yellowish to yellowish-brown; antennae dark-brown, with antennomeres I and II slightly paler.

Head (Fig. 14) weakly transverse, 1.05–1.10 times as broad as long; punctation moderately dense and extremely fine, barely noticeable in the distinct microreticulation; genal carinae not distinctly visible in lateral view. Eyes as long as, or slightly longer than postocular region in dorsal view. Antennae slender; antennomeres I–III distinctly oblong; III slightly shorter than II; IV approximately as long as broad; V–X of gradually increasing width and increasingly transverse; X approximately 1.5 times as broad as long.

Pronotum (Fig. 14) 1.05–1.10 times as broad as long and 1.10–1.15 times as broad as head; punctation extremely fine, barely visible in the pronounced microreticulation; pubescence depressed and fine, directed laterad in lateral portions, caudad in anterior ⅘–⅚ of midline and cephalad in the posterior ⅙–⅕ of pronotum.

Elytra short, 0.75–0.85 times as long as pronotum (Fig. 14); disc often with more or less extensive impression; surface practically matt due to the pronounced microsculpture; punctation fine and indistinctly granulose. Hind wings of reduced length, less than twice as long as elytra. Metatarsomere I slightly shorter than the combined length of II and III.

Abdomen approximately as broad as elytra; punctation fine and moderately dense; microsculpture shallow on anterior tergites, distinct on posterior tergites; posterior margin of tergite VII with palisade fringe; tergites VII and VIII with sexual dimorphism.

♂: tergite VII posteriorly with oblong median tubercle; tergite VIII with granules, posterior margin excised in the middle (Fig. 15); sternite VIII with strongly convex posterior margin (Fig. 56); aedeagus shaped as in Figs. 16–17.

♀: tergite VIII finely punctate and without posterior excision; sternite VIII with broadly convex posterior margin; spermatheca as in Figs. 18–19.

Comparative notes

The new species is distinguished from other West Palaearctic *Aloconota* species by the short elytra and hind wings, the modifications of the male tergite VIII, and by the shape of the aedeagus and the spermatheca. Based on the morphology of the primary sexual characters, *A. brachyptera* is closely related to the widespread and common *A. gregaria* (Erichson, 1839), from which it is additionally separated by the modified male tergite VII and by the pubescence pattern of the pronotum.

Distribution and natural history

As can be inferred from the reduced elytra and hind wings, *A. brachyptera* is most likely endemic to Crete. Since it was found in both the Dikti and the Psiloritis ranges, it may be more widespread in the island. The specimens were collected on slopes with shrubs and scattered trees, as well as in a pasture by turning stones and sifting grass roots and leaf litter, mostly near snow, at altitudes of 1140–1180 m (Figs. 72–73). One specimen was sifted from a *Messor* nest.

Geostiba (Sipalotricha) diktiana **n. sp.**
(Figs. 24–30, 72–73)

Type material

Holotype ♂: "GR – Crete [11a], NW Dikti Oros, Limnakaro, 35°08'08"N, 25°29'00"E, 1170 m, sifted, 27.III.2012, V. Assing / Holotypus ♂ *Geostiba diktiana* sp. n. det. V. Assing 2012" (cAss).

Paratypes: 30 ♂♂, 13 ♀♀: same data as holotype; 1 ♂, 1 ♀: same data as holotype, but "[11a] … under stones"; 50 ♂♂, 36 ♀♀: same data as holotype, but "[17a] … 30.III.2012"; 3 ♂♂, 3 ♀♀: "GR – Crete [12], NW Dikti Oros, Limnakaro, 35°08'16"N, 25°28'52"E, 1140 m, under stones, 28.III.2012, V. Assing"; 42 ♂♂, 33 ♀♀: same data, but "[12a]"; 1 ♂, 1 ♀: same data, but "[16] … 30.III.2012". – Paratypes in MNHUB, cAss, cFel, cSch, cWun.

Etymology

The specific epithet (adjective) is derived from the name of the mountain range where the species is probably endemic.

Description

Body length 2.5–3.0 mm; length of forebody 1.1–1.2 mm.

External characters as in other Cretan species of the subgenus *Sipalotricha*. Distinguished only by the primary and secondary sexual characters.

♂: posterior margin of tergite VIII excised in the middle (Fig. 24); sternite VIII posteriorly convex; median lobe of aedeagus approximately 0.3 mm long and shaped as in Figs. 25–27, with a pair of minute semi-transparent spines basally.

♀: posterior margin of tergite VIII weakly concave in the middle (Fig. 28); posterior margin of sternite VIII broadly convex and with row of stout marginal setae; spermatheca as in Figs. 29–30.

Comparative notes

Six locally endemic species of *Sipalotricha* were previously known from Crete. The only other representative of the subgenus in the Dikti range is *Geostiba meybohmi*, which was originally described based on material from the Katharo plateau (Assing 2000), subsequently reported from the Lassithi plateau and the environs of Selakano (Assing 2001b), and recorded from the Katharo plateau again in 2012 (chapter 3.1). The new species is distinguished from *G. meybohmi* by the deeper posterior excision of the male tergite VIII, the basally angular median lobe of the aedeagus (lateral view; see line in Fig. 25), the straight outline between the crista apicalis and the base of the ventral process in lateral view (*G. meybohmi*: angular; see line in Fig. 31), the basally somewhat narrowed ventral process (ventral view; see line in Fig. 27), the presence of only two indistinct short spines in the internal sac (*G. meybohmi*: more numerous longer and more distinct spines), and by the more strongly dilated distal portion of the spermathecal capsule. For a key separating the previously known *Sipalotricha* species from Crete see Assing (2009), for illustrations of the sexual characters of these species see Assing (1999, 2000, 2001b, 2007b), Pace (1996), and Fig. 31.

Distribution and natural history

The species is currently known only from one valley to the northwest of the Dikti Oros, where numerous specimens were collected from under stones and sifted from grass roots, leaf litter, and moss, mostly near snow, at altitudes of 1140–1170 m (Figs. 72–73). *Aloconota brachyptera*, *Dinusa cretica*, *Sunius diktianus*, and other endemic species were collected in the same locality. One specimen was infested with *Monoicomyces homalotae* (Laboulbeniales; det. W. Rossi).

3.3.1.3 Oxypodini

Dinusa cretica **n. sp.**
(Figs. 32–35, 72–73)

Type material

Holotype ♂ [with three workers of *Messor* sp. attached to the pin]: "GR – Crete [11], NW Dikti Oros, Limnakaro, 35°08'08"N, 25°29'00"E, 1170 m, under stones, 27.III.2012, V. Assing / Holotypus ♂ *Dinusa cretica* sp. n. det. V. Assing 2012" (cAss).

Paratype ♀ [with three specimens of *Messor* sp. attached to the pin]: same data as holotype, but "[11c] … *Messor* nest, 28.III.2012" (cAss).

Etymology

The specific epithet (adjective) denotes that the species is probably endemic to Crete.

Description

Body length 4.7–5.0 mm; length of forebody 2.3 mm. Habitus as in Fig. 32. Coloration: head blackish-brown; pronotum dark-brown in the middle, lateral margins broadly, anterior and posterior margins narrowly pale-reddish; elytra reddish, scutellar region and lateral portions slightly darker; abdomen blackish-brown, with segments VIII–X and posterior third of segment VII yellowish-red; legs and antennae pale-reddish.

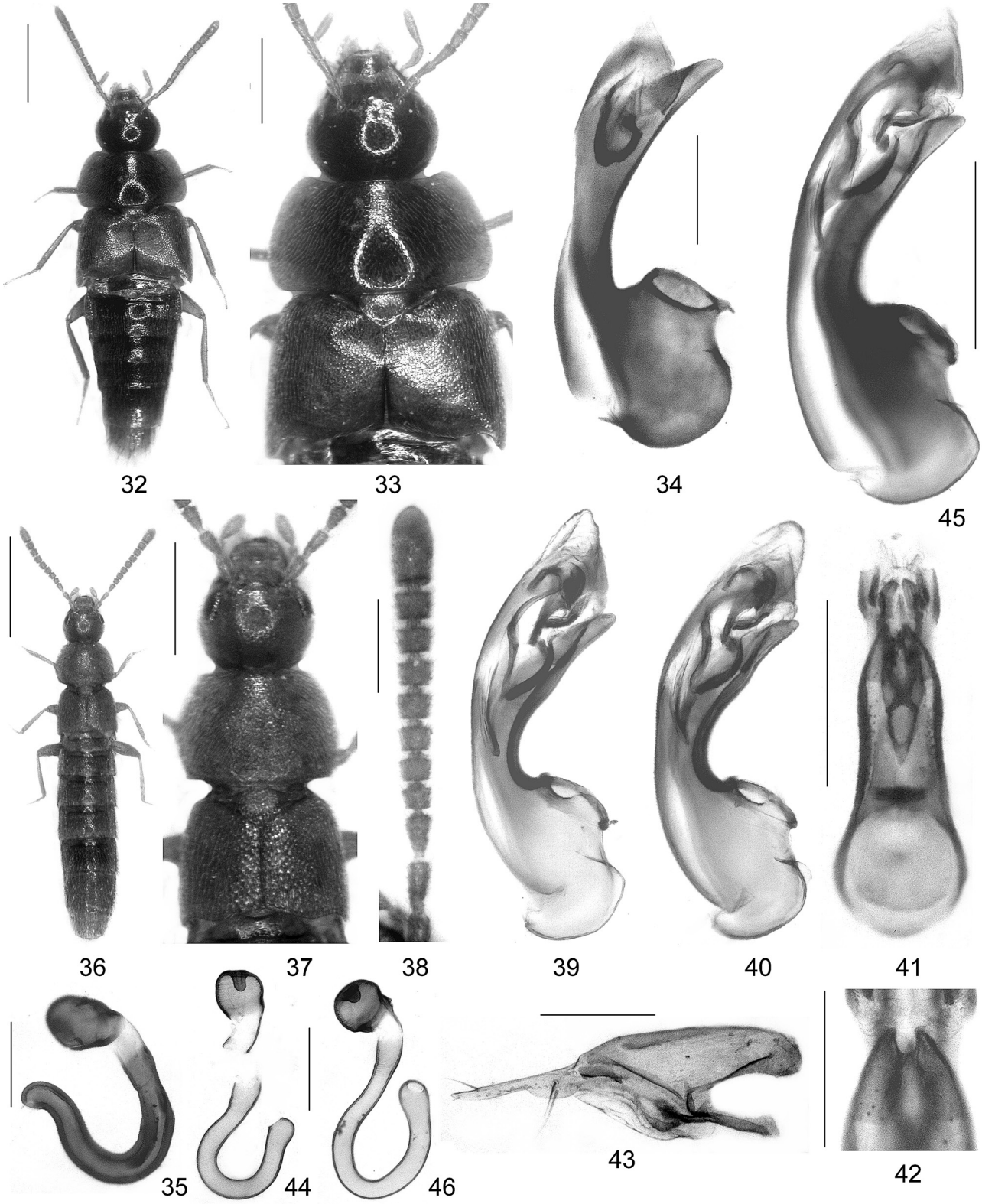
Head (Fig. 33) strongly transverse, wedge-shaped; punctation sparse and very fine; interstices only with traces of microsculpture. Eyes weakly convex, not projecting from lateral contours of head, approximately as long as postocular region in dorsal view. Antenna approximately 1.5 mm long and somewhat depressed; antennomeres I–III distinctly oblong; III distinctly longer than II; IV oblong and shorter than III; XI somewhat longer than the combined length of IX and X.

Pronotum (Fig. 33) strongly transverse, 1.85–1.95 times as broad as long and 1.6–1.7 times as broad as head; posterior angles broadly rounded; posterior margin weakly bisinuate; punctation sparse and fine, but much more distinct than that of head; interstices only with indistinct traces of microsculpture.

Elytra approximately 0.9 times as long as pronotum (Fig. 33), somewhat dilated posteriorly; posterior margin distinctly sinuate near postero-lateral angle; punctation dense, fine, and distinct; interstices without appreciable microsculpture. Hind wings apparently fully developed. Metatarsomere I slightly longer than combined length of II–IV.

Abdomen distinctly wedge-shaped; punctation fine, but distinct, rather dense on tergites III–VI and somewhat sparser on tergites VII–VIII; posterior margin of tergite VII with palisade fringe; tergites VIII–X with long black setae.

♂: posterior margin of tergite VIII pointed in the middle; sternite VIII posteriorly produced and acutely pointed;



Figs. 32–46. *Dinusa cretica* (32–35), *Oxypoda idana* (36–44), and *O. cretica* (45–46). – **32**, **36**. Habitus. **33**, **37**. Forebody. **34**, **39**–**40**, **45**. Median lobe of aedeagus in lateral view. **35**, **44**, **46**. Spermatheca. **38**. Antenna. **41**. Median lobe of aedeagus in ventral view. **42**. Apical portion of ventral process of aedeagus in ventral view. **43**. Paramere. – Scale bars: 1.0 mm (32, 36), 0.5 mm (33, 37), 0.2 mm (34, 38–41, 43, 45), 0.1 mm (35, 42, 44, 46).

median lobe of aedeagus 0.72 mm long and shaped as in Fig. 34.

♀: posterior margin of sternite VIII weakly concave in the middle; spermatheca as in Fig. 35.

Comparative notes

The oxypodine genus *Dinusa* Saulcy, 1865 is distributed in the southern West Palaearctic region and previously comprised ten species, all of them extremely rare and rather similar in external characters. The currently available evidence suggests that they are associated with harvester ants (*Messor* spp.). The geographically closest species are *D. taygetana* Eppelsheim, 1880 from the Pelopónnisos, *D. smyrnensis* Assing, 2007 from western Anatolia, and *D. taurica* Assing, 2001. The new species is distinguished from *D. smyrnensis* by the much shorter duct of the spermatheca, from *D. taurica* by the less slender median lobe of the aedeagus and the differently shaped spermatheca, and from *D. taygetana* (type material examined), whose male sexual characters are unknown, by the less distinct punctation of the pronotum, the more transverse pronotum, and the differently shaped spermatheca. For illustrations of *D. smyrnensis* and *D. taurica* see Assing (2001a, 2007c).

Distribution and natural history

The type locality is situated in the Dikti mountain range. Both specimens were collected from the same nest of *Messor* sp. on two consecutive days. Several days later one second-instar and one third-instar larvae probably belonging to this species were found in the nest, which was situated at the foot of an east slope at an altitude of 1170 m (Figs. 72–73) and which hosted also a specimen of *Myrmecopora elisa*.

Oxypoda (Bessopora) idana **n. sp.**
(Figs. 36–44)

Type material

Holotype ♂: "GR – Crete [28], S Anogia, Psiloritis, 35°14'59"N, 24°53'05"E, 1180 m, under stones, 3.IV.2012, V. Assing / Holotypus ♂ *Oxypoda idana* sp. n. det. V. Assing 2012" (cAss).

Paratypes: 1 ♂ [without elytra; one antenna missing]: same data as holotype, but "[28a] … sifted" (cAss); 1 ♀: "GR – Crete [25], S Anogia, Psiloritis, 35°15'41"N, 24°53'16"E, 1150 m, under stones, 2.IV.2012, V. Assing" (cAss).

Etymology

The specific epithet (adjective) is derived from Ida, a synonym of Psiloritis, the mountain range where the species is probably endemic.

Description

Body length 3.1–3.5 mm; length of forebody 1.2–1.4 mm. Habitus as in Fig. 36. Coloration: whole body reddish, only median portion of tergite VI blackish.

Head (Fig. 37) approximately 1.1 times as broad as long; punctation dense, shallow, and moderately fine; interstices with shallow microsculpture. Eyes of moderate size, approximately as long as postocular region in dorsal view. Antenna (Fig. 38) rather massive and approximately 1 mm long; antennomeres IV–X moderately transverse and of gradually increasing width; XI massive and almost as long as the combined length of VIII–X. Preapical palpomere of maxillary palpus approximately twice as long as broad.

Pronotum (Fig. 37) 1.35–1.40 times as broad as long and approximately 1.4 times as broad as head, widest approximately in the middle; posterior angles obtusely marked; punctation very dense, fine, and somewhat asperate.

Elytra short, approximately 0.7 times as long as pronotum (Fig. 37); surface somewhat more glossy than that of pronotum; punctation dense and fine, but less so than that of pronotum. Hind wings completely reduced. Metatarsus long and slender, almost as long as metatibia; metatarsomere I approximately as long as the combined length of II–IV.

Abdomen approximately as broad as elytra, with relatively long and mostly depressed yellowish pubescence; punctation moderately dense, very fine on anterior and moderately fine on posterior tergites; interstices without microsculpture and glossy; posterior margin of tergite VII without palisade fringe.

♂: posterior margin of sternite VIII strongly, convexly produced in the middle; median lobe of aedeagus approximately 0.35 mm long, shaped as in Figs. 39–41; apex of ventral process distinctly excised in ventral view (Fig. 42); apical lobe of paramere very long (Fig. 43).

♀: posterior margin of sternite VIII weakly convex; spermatheca as in Fig. 44.

Comparative notes

Oxypoda idana is undoubtedly most closely related to *O. cretica* from the Dikti range, as can be inferred from the similar external and sexual characters. It is distinguished from that species by the somewhat smaller and more slender body, less transverse antennomeres IV–X, the less densely punctate abdomen, the distinctly smaller and differently shaped median lobe of the aedeagus, and by the smaller and differently shaped spermatheca. For illustrations of *O. cretica* see Assing (2006a) and Figs. 45–46.

Distribution and natural history

The reduced wings and palisade fringe of the abdominal tergite VII, as well as the evidently restricted distribu-

tion of the closely related *O. cretica* suggest that *O. idana* is endemic to the Psiloritis range. The type specimens were found near snow, under stones and by sifting leaf litter and grass roots, in a pasture and on slopes with shrubs and scattered trees at altitudes of 1150 and 1180 m.

Tectusa diktiana **n. sp.**
(Figs. 47–52)

Type material

Holotype ♂: "GR – Crete [39a], NW Dikti Oros, S Limnakaro, 35°07'33"N, 25°29'00"E, 1330 m, N-slope, sifted, 7.IV.2012, V. Assing / Holotypus ♂ *Tectusa diktiana* sp. n. det. V. Assing 2012" (cAss).

Paratype ♀: same data as holotype (cAss).

Etymology

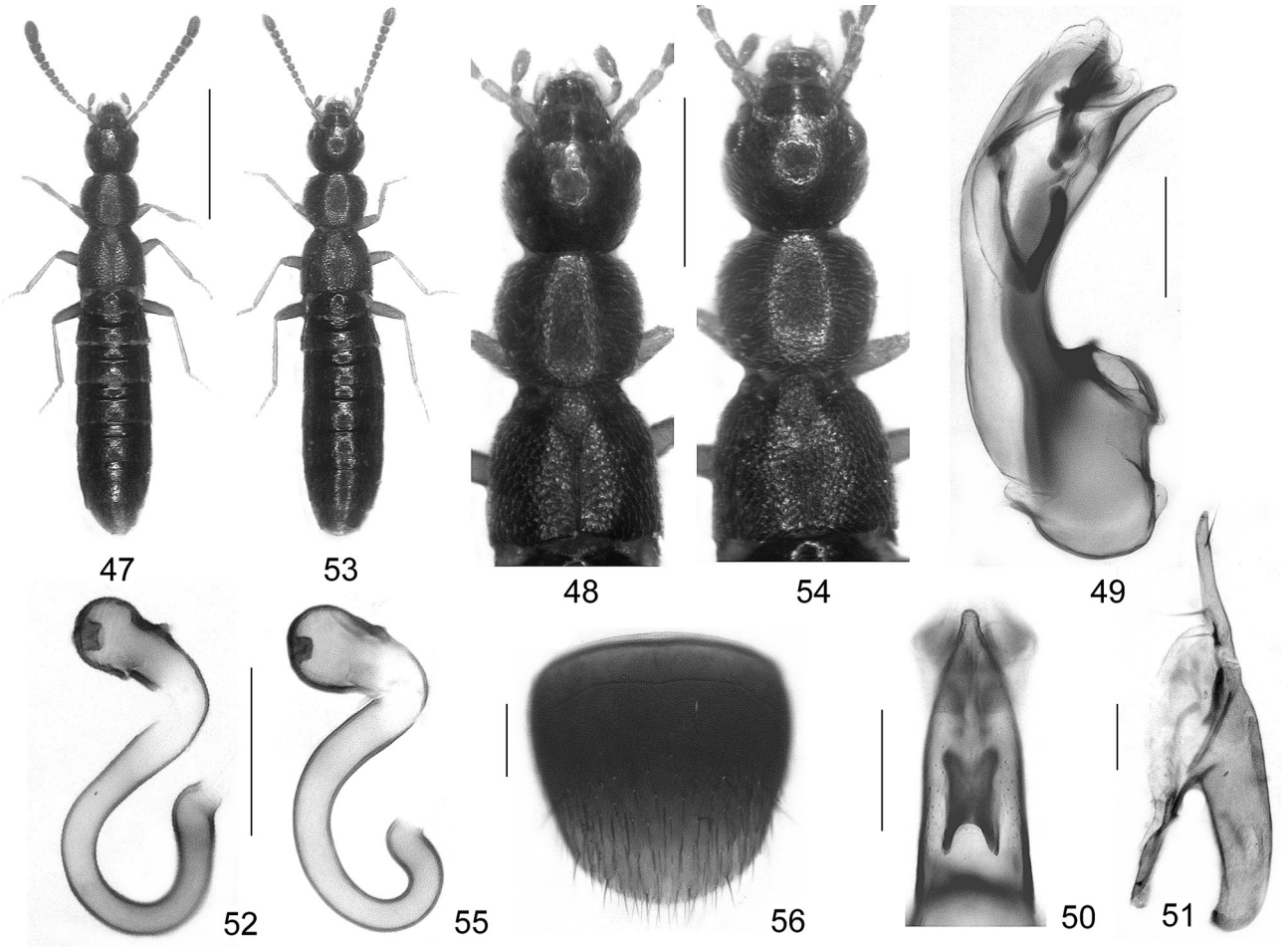
The specific epithet (adjective) is derived from the Dikti Oros, the mountain range where the species is probably endemic.

Description

Body length 3.5–3.7 mm; length of forebody 1.4–1.5 mm. Habitus as in Fig. 47. Coloration: head blackish-brown; pronotum and elytra dark-brown to blackish-brown; abdomen blackish; legs pale-reddish to yellowish-brown; antennae dark-brown with yellowish base (antennomeres I–III or I–IV).

Head (Fig. 48) approximately as broad as long; punctation fine, shallow, moderately dense, sparser in median dorsal portion, barely noticeable in the microreticulations. Eyes weakly convex, shorter than postocular region in dorsal view. Antenna approximately 1 mm long; antennomere IV approximately as long as broad; V–X of increasing width and increasingly transverse; X less than twice as broad as long; XI longer than the combined length of IX and X.

Pronotum (Fig. 48) slender, approximately 1.1 times as broad as long and 1.05–1.10 times as broad as head, widest near anterior angles, and distinctly tapering caudad; punc-



Figs. 47–56. *Tectusa diktiana* (47–52), *T. thriptica* (53–55), and *Aloconota brachyptera* (56). – **47**, **53**. Habitus. **48**, **54**. Forebody. **49**. Median lobe of aedeagus in lateral view. **50**. Ventral process of aedeagus in ventral view. **51**. Paramere. **52**, **55**. Spermatheca. **56**. Male sternite VIII. – Scale bars: 1.0 mm (47, 53), 0.5 mm (48, 54), 0.1 mm (49–52, 55–56).

tation dense and fine, but more distinct than that of head; interstices with distinct microsculpture.

Elytra short, 0.65–0.70 times as long as pronotum (Fig. 48); punctation dense and weakly granulose; interstices with distinct microreticulation and practically matt. Hind wings completely reduced. Metatarsomere I slightly longer than the combined length of II and III.

Abdomen broader than elytra, broadest at the posterior margin of segment VI; tergites III–VI with anterior impressions, that of tergite VI noticeably shallower than those of tergites III–V; punctation fine and moderately dense; interstices with microreticulation; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII distinctly convex.

♂: posterior margin of sternite VIII strongly convex; median lobe of aedeagus 0.40 mm long, shaped as in Fig. 49; apex of ventral process pointed in ventral view (Fig. 50); apical lobe of paramere very long (Fig. 51).

♀: posterior margin of sternite VIII indistinctly concave in the middle; spermatheca as in Fig. 52.

Comparative notes

From *T. callicera*, the only previously known *Tectusa* species from Crete, *T. diktiana* is distinguished by the different coloration and shape of the antennae (*T. callicera*: apically not distinctly infuscate and more massive), the less distinct punctation of the pronotum, the shorter elytra (*T. callicera*: 0.75–0.80 times as long as pronotum), the paler coloration of the legs (*T. callicera*: at least femora brown), the shorter metatarsomere I (*T. callicera*: almost as long as combined length of II–IV), the more densely punctured and more distinctly microsculptured abdomen, the different morphology of the median lobe of the aedeagus, the very weakly convex and in the middle indistinctly concave posterior margin of the female sternite VIII (*T. callicera*: distinctly convex, not concave in the middle), and the different shape of the spermatheca. For illustrations of *T. callicera* see Assing (2002).

Distribution and natural history

As can be inferred from the adaptive reductions of the wings and the palisade fringe of the abdominal tergite VII, as well as from the restricted distributions of other *Tectusa* species from the southern Balkans, *T. diktiana* is probably endemic to the Dikti range. The type locality is situated to the south of the Lasithi plateau and of Limnakaro, close to the trail leading to the summit of the Dikti Oros. The specimens were sifted from shrub litter and moss near snowfields on a north slope at an altitude of 1330 m.

Tectusa thriptica **n. sp.**

(Figs. 53–55)

Type material

Holotype ♀: “GR – Crete [3], Thriptis Mt., SE Thripti, 1270 m, 35°04'56"N, 25°52'45"E, sifted near snowfield, 25.III.2012, V. Assing / Holotypus ♀ *Tectusa thriptica* sp. n. det. V. Assing 2012” (cAss).

Etymology

The specific epithet (adjective) is derived from Orno Thriptis, the name of the mountain range where the species is probably endemic.

Description

Body length 3.5 mm; length of forebody 1.5 mm. Habitus as in Fig. 53. Coloration: forebody blackish-brown; abdomen blackish; legs dark-yellowish; antennae dark-brown with dark-yellowish antennomeres I–III.

Head (Fig. 54) approximately as broad as long; punctation fine, shallow, moderately dense, slightly less dense in median dorsal portion, barely noticeable in the microreticulation. Eyes weakly convex, shorter than postocular region in dorsal view. Antenna approximately 1 mm long; antennomere IV approximately as long as broad; V–X of increasing width and increasingly transverse; X less than twice as broad as long; XI longer than the combined length of IX and X.

Pronotum (Fig. 54) slender, 1.12 times as broad as long and 1.12 times as broad as head, widest near anterior angles, and distinctly tapering caudad; punctation dense and fine, but more distinct than that of head; interstices with distinct microsculpture.

Elytra short, 0.7 times as long as pronotum (Fig. 54); punctation dense and weakly granulose; interstices with distinct microreticulation and practically matt. Hind wings completely reduced. Metatarsomere I almost as long as the combined length of II–IV.

Abdomen broader than elytra, broadest at the posterior margin of segment VI; tergites III–VI with anterior impressions, that of tergite VI noticeably shallower than those of tergites III–V; punctation fine and moderately dense; interstices with microreticulation; posterior margin of tergite VII without palisade fringe; posterior margin of tergite VIII distinctly convex.

♂: unknown.

♀: posterior margin of sternite VIII convex; spermatheca as in Fig. 55.

Comparative notes

Tectusa thriptica is distinguished from *T. diktiana* by the anteriorly slightly broader pronotum, the somewhat finer antennae, the longer metatarsomere I, the more distinctly convex posterior margin of the female sternite

VIII, and by the different shape of the spermatheca. It is separated from *T. callicera* by the much finer and apically infuscate antennae, the finer punctation of the pronotum, the shorter elytra (*T. callicera*: 0.75–0.80 times as long as pronotum), the paler coloration of the legs (*T. callicera*: at least femora brown), the more densely punctured and more distinctly microsculptured abdomen, and the different shape of the spermatheca. For illustrations of *T. callicera* see Assing (2002).

Distribution and natural history

Tectusa thriptica is probably endemic to the Triptis range in eastern Crete. The holotype was found at the margin of a plateau by sifting oak litter and grass roots near a small snowfield at an altitude of 1270 m.

3.3.2 Paederinae

Astenus (Eurysunius) thripticus **n. sp.**
(Figs. 57–61)

Type material

Holotype ♂ [with five workers of a pale-coloured (forebody dark-yellowish; abdomen dark-brown) *Tetramorium* sp. attached to the pin]: "GR – Crete [34], Orno Thriptis, E Thripti, 35°05'35"N, 25°52'36"E, 970 m, under stones, 6.IV.2012, V. Assing / Holotypus ♂ *Astenus thripticus* sp. n. det. V. Assing 2012" (cAss).

Paratype ♂ [with five workers of *Tetramorium* sp. attached to the pin]: same data as holotype (cAss).

Etymology

The specific epithet (adjective) is derived from Orno Thriptis, the name of the mountain range where the type locality is situated.

Description

Body length 4.4–4.8 mm; length of forebody 2.0–2.1 mm. Habitus as in Fig. 57. Coloration: head reddish-brown; pronotum reddish; elytra yellowish; abdomen dark-brown with reddish apex; legs yellowish; antennae yellowish-red.

Head (Fig. 58) approximately 1.25 times as broad as long; punctation very dense and shallowly umbilicate, rather weakly defined; interstices reduced to narrow ridges; dorsal surface almost matt. Eyes as long as, or slightly longer than postocular region in dorsal view. Antennae (Fig. 59) short, approximately 1 mm long; antennomere III approximately twice as long as broad and distinctly longer than II; IV much shorter than III and weakly transverse; V–X transverse; XI shorter than the combined length of IX and X.

Pronotum (Fig. 58) of transversely rectangular shape, approximately 1.1 times as broad as long and 0.9 times as broad as head; lateral margins straight or indistinctly concave in dorsal view; punctation shallow, relatively fine, and not umbilicate; interstices glossy; disc without distinct impressions, except for a very shallow impression in posterior median portion; anterior and posterior angles each with one long seta of approximately ⅔ the length of lateral margins.

Elytra slightly broader than, and approximately 0.6 times as long as pronotum (Fig. 58); punctation somewhat granulose; interstices without microsculpture; pubescence short, pale, and depressed. Hind wings reduced. Metatarsomere I slightly shorter than combined length of II–IV.

Abdomen approximately as broad as elytra; punctation distinct, dense on anterior and somewhat less dense on posterior tergites; tergite VII without palisade fringe.

♂: sternite VII with short and basally acute posterior excision; aedeagus 0.63 mm long, shaped as in Figs. 60–61.

Comparative notes

In external characters, *A. thripticus* is highly similar to *A. minos* from western Crete, the only other myrmecophilous species of the subgenus *Eurysunius* previously recorded from Crete. Both species are reliably distinguished only based on the shape of the apex of the ventral process of the aedeagus. For illustrations of the aedeagus of *A. minos* see Figs. 62–63.

Distribution and natural history

The type locality is situated in the Orno Thriptis in the extreme east of Crete. The two type specimens were found in a nest of *Tetramorium* sp. under a stone on a moist meadow at an altitude of 970 m.

Sunius diktianus **n. sp.**
(Figs. 64–73)

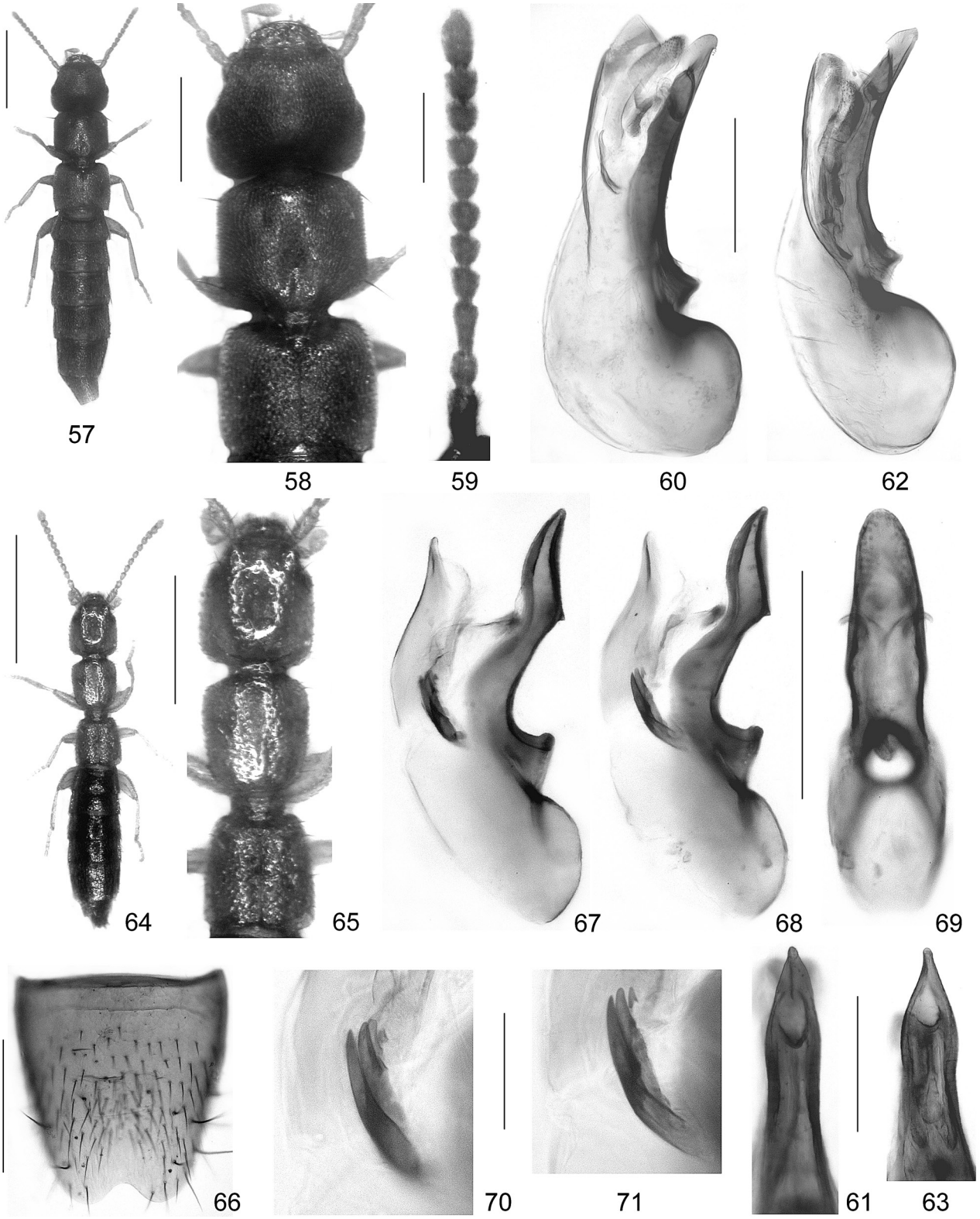
Type material

Holotype ♂: "GR – Crete [10], NW Dikti Oros, Limnakaro, 35°08'08"N, 25°29'00"E, 1170 m, under stones, 26.III.2012, V. Assing / Holotypus ♂ *Sunius diktianus* sp. n. det. V. Assing 2012" (cAss).

Paratypes: 3 ♂♂, 11 ♀♀: same data as holotype; 4 ♂♂, 3 ♀♀: same data as holotype, but "[11] … 27.III.2012"; 2 ♂♂, 2 ♀♀: same data as holotype, but "[11a] … sifted, 27.III.2012"; 7 ♀♀: same data as holotype, but "[17] … 30.III.2012"; 1 ♀: same data as holotype, but "[17a] … sifted, 30.III.2012"; 19 ♂♂, 39 ♀♀: "GR – Crete [12], NW Dikti Oros, Limnakaro, 35°08'16"N, 25°28'52"E, 1140 m, under stones, 28.III.2012, V. Assing"; 4 ♂♂, 7 ♀♀: same data, but "[16] … 30.III.2012". – Paratypes in cAss, cFel, and MNHUB.

Etymology

The specific epithet (adjective) is derived from Dikti Oros, the mountain range where the type locality is situated.



Figs. 57–71. *Astenus thripticus* (57–61), *A. minos*, holotype (62–63), and *Sunius diktianus* (64–71; 67, 70: holotype). – **57**, **64**. Habitus. **58**, **65**. Forebody. **59**. Antenna. **60**, **62**, **67**–**68**. Aedeagus in lateral view. **61**, **63**. Ventral process of aedeagus in ventral view. **66**. Male sternite VIII. **69**. Aedeagus in ventral view. **70**–**71**. Internal structures of aedeagus in lateral view. – Scale bars: 1.0 mm (57, 64), 0.5 mm (58, 65), 0.1 mm (59–63, 66–69), 0.05 mm (70–71).

Figs. 72-73. Sample plots in Crete, 2012. – **72**. Limnakaro plateau (sample numbers 23–36) to the northwest of the Dikti Oros (to be seen in the background). **73**. Slope S Limnakaro (sample numbers 24–28; four new species were collected in this locality).

Description

Body length 2.5–3.1 mm; length of forebody 1.3–1.4 mm. Habitus as in Fig. 64. Coloration: forebody yellowish-red; abdomen blackish-brown to blackish with slightly paler apex; legs and antennae yellowish.

Head (Fig. 65) weakly oblong; punctation coarse and rather sparse. Eyes small, not distinctly protruding from lateral contours of head, less than one third as long as postocular region.

Pronotum (Fig. 65) approximately 1.1 times as long as broad and 0.90–0.95 times as broad as head; punctation similar to that of head, but denser.

Elytra short, approximately 0.75 times as long as pronotum (Fig. 65); punctation rather irregular and ill-defined. Hind wings completely reduced.

Abdomen somewhat broader than elytra; punctation moderately dense and fine; interstices with shallow microsculpture; posterior margin of tergite VII without palisade fringe.

♂: sternite VII unmodified; sternite VIII with indistinct median elevation with diagonal pubescence, posterior excision small and basally rounded (Fig. 66); aedeagus 0.36–0.38 mm long, shaped as in Figs. 67–69; internal sac with series of a few sclerotised spines of different lengths (Figs. 70–71).

Comparative notes

As can be inferred from the external and particularly from the male sexual characters, *S. diktianus* belongs to the *S. seminiger* group, which comprises numerous micropterous and locally endemic species distributed in the Mediterranean (Assing 2008a). The species of the *S. seminiger* group are reliably distinguished only by the male sexual characters. The aedeagus and the male sternite VII of *S. diktianus* somewhat resemble those of *S. menalonicus* Assing, 2008 from the Pelopónnisos, but the apical portion of the ventral process is distinctly shorter, the internal spines of the aedeagus are much longer and more sclerotised, and the posterior excision of the male sternite VIII is smaller. For illustrations of *S. menalonicus* see Assing (2008a), for a recent key to the *Sunius* species of the Palaearctic region see Assing (2011a). The only other named *Sunius* species known from Crete is *S. fallax*, which is much larger (length of forebody at least approximately 2 mm), usually has a blackish head and extensively infuscate elytra, distinctly longer elytra, either fully developed or less strongly reduced hind wings, a palisade fringe at the posterior margin of the male tergite VII, and completely different male sexual characters.

Distribution and natural history

Sunius diktianus is probably endemic to the Dikti Oros. In all, 103 specimens were found in two adjacent localities to the south of Limnakaro at an altitude of 1140–1170 m, but not in other nearby localities, although the area was investigated for several days, suggesting that the distribution of *S. diktianus* may be patchy and local. Two additional females of the *S. seminiger* group were found in the Katharo plateau and at the Bramanon reservoir near Ierapetra, the latter at an unusually low altitude (70 m). Whether or not these females are conspecific with *S. diktianus* is uncertain and can be clarified only based on males from these localities.

Most of the type specimens were collected from under stones in grassy patches near snowfields (Figs. 72–73), some were sifted from shrub litter and grass roots near snow.

4 References

Anlaş, S. & Tezcan, S. (2008): New records of Proteininae (Staphylinidae) from Turkey. – Linzer biologische Beiträge **40** (1): 405–408.

Assing, V. (1997): A revision of the Western Palaearctic species of *Myrmecopora* Saulcy, 1864, sensu lato and *Eccoptoglossa* Luze, 1904 (Coleoptera, Staphylinidae, Aleocharinae, Falagriini). – Beiträge zur Entomologie, Berlin **47**: 69–151.

Assing, V. (1999): A revision of the species of *Geostiba* Thomson 1858 from Greece and Cyprus (Coleoptera, Staphylinidae, Aleocharinae). – Linzer biologische Beiträge **31** (2): 845–928.

Assing, V. (2000): A revision of the species of *Geostiba* Thomson 1858 and *Paraleptusa* Peyerimhoff 1901 of Greece: Supplement I, including some species from Albania, Macedonia, Bulgaria, and Turkey (Coleoptera: Staphylinidae, Aleocharinae). – Linzer biologische Beiträge **32** (2): 1007–1031.

Assing, V. (2001a): The first record of *Dinusa* Saulcy 1864 from Turkey (Coleoptera: Staphylinidae, Aleocharinae). – Linzer biologische Beiträge **33** (1): 187–190.

Assing, V. (2001b): A revision of the species of *Geostiba* Thomson of the Balkans and Turkey. V. New species, a new synonym, new combinations, and additional records (Coleoptera: Staphylinidae, Aleocharinae). – Linzer biologische Beiträge **33** (2): 689–707.

Assing, V. (2002): New species of Staphylinidae from Greece (Insecta: Coleoptera). – Reichenbachia **34**: 277–284.

Assing, V. (2003): The first species of the subgenus *Eurysunius* Reitter, genus *Astenus* Dejean, from Crete (Insecta: Coleoptera: Staphylinidae: Paederinae). – Entomologische Abhandlungen **60**: 121–123.

Assing, V. (2004a): New species and records of Staphylinidae from Greece (Insecta: Coleoptera). – Linzer biologische Beiträge **36** (2): 593–613.

Assing, V. (2004b): A revision of the *Medon* species of the Eastern Mediterranean and adjacent regions (Insecta: Coleoptera: Staphylinidae: Paederinae). – Bonner zoologische Beiträge **52**: 33–82.

Assing, V. (2005a): A revision of the genus *Leptobium* Casey (Coleoptera: Staphylinidae: Paederinae). – Stuttgarter Beiträge zur Naturkunde, Serie A (Biologie) **673**: 182 pp.

Assing, V. (2005b): On the western Palaearctic species of *Drusilla* Leach, with special reference to the species of the eastern Mediterranean (Coleoptera: Staphylinidae, Aleocharinae). – Koleopterologische Rundschau **75**: 111–149.

Assing, V. (2006a): New species and records of Staphylinidae from Greece, with two new synonymies (Insecta: Coleoptera). – Linzer biologische Beiträge **38** (1): 333–379.

Assing, V. (2006b): Thirteen new species and additional records of Eastern Mediterranean *Geostiba* Thomson (Coleoptera: Staphylinidae, Aleocharinae). – Linzer biologische Beiträge **38** (2): 1179–1215.

ASSING, V. (2007a): A revision of the species of *Pronomaea* Erichson of the Western Palaearctic region, including Middle Asia (Coleoptera: Staphylinidae: Aleocharinae: Pronomaeini). – Beiträge zur Entomologie, Keltern **57** (2): 367–396.

ASSING, V. (2007b): Four new species and additional records of *Geostiba* from Turkey and Crete, and a new synonymy (Coleoptera: Staphylinidae, Aleocharinae). – Linzer biologische Beiträge **39** (2): 777–790.

ASSING, V. (2007c): New species and additional records of Staphylinidae from Turkey V (Coleoptera). – Stuttgarter Beiträge zur Naturkunde, Serie A (Biologie) **700**: 64 pp.

ASSING, V. (2008a): A revision of the *Sunius* species of the Western Palaearctic region and Middle Asia (Coleoptera: Staphylinidae: Paederinae). – Linzer biologische Beiträge **40** (1): 5–135.

ASSING, V. (2008b): On the taxonomy and zoogeography of some Palaearctic Paederinae and Xantholinini (Coleoptera: Staphylinidae). – Linzer biologische Beiträge **40** (2): 1237–1294.

ASSING, V. (2008c): A revision of the Western Palaearctic and Middle Asian species of *Drusilla* Leach. IV. A new species from Iran and additional records (Coleoptera: Staphylinidae, Aleocharinae, Lomechusini). – Entomologische Blätter **103/104**: 51–58.

ASSING, V. (2009): A revision of *Geostiba* of the Western Palaearctic region. XIX. New species from Turkey and Iran and additional records, with an updated key and catalogue of the species of the Eastern Mediterranean, the Caucasus, and adjacent regions (Coleoptera: Staphylinidae: Aleocharinae). – Linzer biologische Beiträge **41** (2): 1191–1246.

ASSING, V. (2011a): The *Sunius* species of the Palaearctic region (Coleoptera: Staphylinidae: Paederinae). – Linzer biologische Beiträge **43** (1): 151–193.

ASSING, V. (2011b): A revision of Palaearctic *Sunius* XIV. Three new species from Turkey and additional records (Coleoptera: Staphylinidae: Paederinae). – Linzer biologische Beiträge **43** (2): 1159–1168.

ASSING, V. (2012): On the taxonomy and zoogeography of some *Oxypoda* species of the West Palaearctic region (Coleoptera: Staphylinidae: Aleocharinae). – Linzer biologische Beiträge **44** (1): 365–399.

BLATTNÝ, W. & BLATTNÝ, C. (1916): Die von PAGANETTI-HUMMLER im Jahre 1914 auf einer Forschungsreise in Kreta gesammelten Pselaphiden und Scydmaeniden. – Zeitschrift für wissenschaftliche Insektenbiologie. Beilage: Neue Beiträge zur systematischen Insektenkunde **1**: 1–6.

COIFFAIT, H. (1972): Coléoptères Staphylinidae de la région paléarctique occidentale. I. Généralités, sous-familles: Xantholininae et Leptotyphlinae. – Supplément à la Nouvelle Revue d'Entomologie **2** (2): 1–651.

COIFFAIT, H. (1978): Coléoptères staphylinides de la région paléartique [sic] occidentale. III. Sous famille Staphylininae, Tribu Quediini. Sous famille Paederinae, Tribu Pinophilini. – Supplément à la Nouvelle Revue d'Entomologie **8** (4): 364 pp.

COIFFAIT, H. (1982): Coléoptères Staphylinidae de la région paléarctique occidentale. IV. Sous famille Paederinae. Tribu Paederini 1 (Paederi, Lathrobii). – Supplement à la Nouvelle Revue d'Entomologie **12** (4): 1–440.

COIFFAIT, H. (1984): Coléoptères Staphylinidae de la région paléarctique occidentale. V. Sous famille Paederinae Tribu Paederini 2, Sous famille Euaesthetinae. – Supplement à la Nouvelle Revue d'Entomologie **13** (4): 1–424.

ELVEN, H., BACHMANN, L. & GUSAROV, V. I. (2012): Molecular phylogeny of the Athetini-Lomechusini-Ecitocharini clade of aleocharine rove beetles (Insecta). – Zoologica Scripta **41**: 617–636.

FRISCH, J. (2003): A revision of the *Scopaeus laevigatus* species group, with descriptions of ten new species from the East Palaearctic, the Oriental and the Australian regions (Coleoptera, Staphylinidae, Paederinae). – In: CUCCODORO, G. & LESCHEN, R. A. B. (eds.): Systematics of Coleoptera: Papers celebrating the retirement of IVAN LÖBL. – Memoirs on Entomology International **17**: 649–725; Gainesville, Florida (Associated Publishers).

LOHSE, G. A. & STEEL, W. (1961): New species of *Lesteva* Latreille from the eastern Mediterranean (Coleoptera: Staphylinidae). – Proceedings of the Royal Entomological Society of London (B) **30**: 72–76.

PACE, R. (1996): Descrizione di nuove specie e sottospecie del genere *Geostiba* (Coleoptera, Staphylinidae). – Bollettino dell'Associazione Romana di Entomologia **50** (1995): 7–43.

PACE, R. (2002): *Aloconota minoica* n. sp., eine neue Art von der Insel Kreta (Griechenland) (Coleoptera, Staphylinidae). – Veröffentlichungen Naturkundemuseum Erfurt **21**: 205–208.

SABELLA, G. (2002): Description of *Tychus lagrecai* sp. n. (Coleoptera, Staphylinidae, Pselaphinae) from Crete Island (Greece). – Bollettino dell'Accademia Gioenia di Scienze Naturali in Catania **35**: 611–616.

SCHEERPELTZ, O. (1964): Staphyliniden von der Insel Kreta (Coleoptera). – Annales Historico-Naturales Musei Nationalis Hungarici Zoologica **56**: 297–308.

SMETANA, A. (2004): Staphylinidae, subfamilies Omaliinae–Dasycerinae, Phloeocharinae–Apaticinae, Piestinae–Staphylininae. – In: LÖBL, I. & SMETANA, A. (eds.): Catalogue of Palaearctic Coleoptera. II. Hydrophiloidea – Histeroidea – Staphylinoidea, pp. 237–272, 329–495, 505–698; Stenstrup (Apollo Books).

TRONQUET, M. (2004): *Oxypoda subnitida* Mulsant & Rey, 1874 (Coleoptera, Staphylinidae Aleocharinae) redescription. – Nouvelle Revue d'Entomologie (N. S.) **20** (4) (2003): 361–365.

ZERCHE, L. (1990): Monographie der paläarktischen Coryphiini (Coleoptera, Staphylinidae, Omaliinae), 413 pp.; Berlin (Akademie der Landwirtschaftswissenschaften der Deutschen Demokratischen Republik).

Author's address:

Dr. VOLKER ASSING, Gabelsbergerstraße 2, 30163 Hannover, Germany;
e-mail: vassing.hann@t-online.de

Manuscript received: 19.VII.2012, accepted: 10.IX.2012.

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: Stuttgarter Beiträge Naturkunde Serie A [Biologie]

Jahr/Year: 2013

Band/Volume: NS_6_A

Autor(en)/Author(s): Assing Volker

Artikel/Article: On the Staphylinidae (Coleoptera) of Crete, Greece 83-102