

Pselaphinae (Coleoptera Staphylinidae) from Sicily and Calabria (Italy). Results from a short entomological expedition in April, 2015

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ABSTRACT

The study presents the results from an entomological expedition in Southern Italy. Two rare species, *Batrissodes adnexus* (C. Hampe, 1863) and *Chennium siculum* Fiori, 1914, were collected in Sicily and three species, *Panaphantus atomus* Kiesenwetter, 1858, *Biblopectus pusillus* (Denny, 1825), and *Biblopectus delhermi* (Guillebeau, 1888), are recorded for the first time from Calabria.

KEY WORDS

Italy; Pselaphinae; faunistics; taxonomy; new record.

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INTRODUCTION

A short entomological expedition was conducted in April 2015 as a result of the collaboration between Catania University (Italy), National Museum of Natural History of Sofia (NMNHS) and Sofia University (Bulgaria). While the region of Sicily is relatively well studied about Pselaphinae fauna (Sabella, 1998), in the contrary the coastal region of Calabria is still poorly investigated. The aim of this expedition was to collect material from specific habitats for Southern Italy with scarce information about the Pselaphinae species composition.

MATERIAL AND METHODS

The material was collected from 01 to

08.IV.2015 in the region of Sicily and from 09 to 12.IV.2015 in the region of Calabria. The main visited habitats were mountain and plane forests so as wet zones in Sicily and mainly coastal dunes in Calabria (Figs. 1–5).

The following collection methods were used: 1. Sifting with litter reducer (mesh diameter 6x6 mm). The beetles were sorted up manually directly from the sifted leaf litter or rotten wood or were extracted using Winkler/Moczarski selectors from 2.5–3 kg soil samples; 2. Light trap with a 160W MBTF lamp and a F8T5 - 365 nm black light tube; 3. Sweeping on the vegetation with an entomological net and with a one-hand blower (Partner GBV 325). 4. Collection at sight under stones and among the roots of herbaceous vegetation.

Determination of the species was made by dissections using standard techniques: genitalia and

small parts were mounted in Euparal on acetate labels which were pinned with the specimens.

The material used for this study is deposited in the National Museum of Natural History, Sofia, Bulgaria (NMNHS) and in the Department of Biological, Geological and Environmental of Catania University (DBUC).

The general distribution of the species is given according to Poggi & Sabella (2005) and Schülke & Smetana (2015). In references all authors of the mentioned species are listed. The map was produced with SimpleMapp (Shorthouse, 2010).

RESULTS

In total, 186 specimens belonging to 23 Pselaphinae species were collected during the study (12 species from Sicily and 12 species from Calabria), with one species, *Bryaxis italicus* (Baudi di Selve, 1870), common for both regions.

List of the identified Pselaphinae species from the studied regions

SICILY

Trimium zoufali Krauss, 1900

EXAMINED MATERIAL. NEBRODI - San Fratello (Messina), N37.94540 E14.62729, 05.IV.2015, sifting litter, 1 male and 1 female (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Endemic of mainland Italy (from Emilia to Calabria) and Sicily. Widespread in Sicily. Sylvicolous species that lives in litter and rotten wood.

Batrisodes adnexus (C. Hampe, 1863)

EXAMINED MATERIAL. NEBRODI. San Teodoro (Cesarò, Messina), N37.87024 E14.67808, 05.IV.2015, 1 male (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).



Figure 1. Map of the main points of the studied area in South Italy.

REMARKS. Widespread in Europe. Reported for mainland Italy and Sicily. Not very common in Sicily where is known only to the northern districts (Peloritani, Etna, Nebrodi, Madonie and Sicani). In literature it is mentioned as myrmecophilous species (generally hosted in nests of *Lasius brunneus* (Latreille, 1798), but it was collected also with car net, entomological net and sifting of rotten wood.

Bryaxis siculus Fiori, 1913

EXAMINED MATERIAL. IBLEI. Villa Vela (Noto, Siracusa), N36.98767 E15.02672, sifting litter, 04.IV.2015, 3 males and 1 female (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS). IBLEI. Cassaro (Noto, Siracusa), N37.10304 E14.96445, 06.IV.2015, sifting litter, 2 females (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Endemic to Sicily (Iblei, Madonie and Sicani districts). Sylvicolous species living in

litter and sometimes also under big stones in forest.

Bryaxis italicus (Baudi di Selve, 1870)

EXAMINED MATERIAL. NEBRODI. San Fratello (Messina), N37.94540 E14.62729, 05.IV.2015, sifting litter, 3 males (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Reported from southern France (Var, Alpes Maritimes), Switzerland (Ticino), mainland Italy, Elba and Giglio islands, and Sicily. In Sicily it is known only to the northeastern regions (Peloritani, Etna, Nebrodi and Erei districts). Very common in sifting of vegetal debris, litter and potting soil.

Tychus opuntiae (Schmidt-Goebel, 1836)

EXAMINED MATERIAL. IBLEI. Villa Vela (Noto, Siracusa), N36.98767 E15.02672, 04.IV.2015, sifting litter, 1 male (R. Bekchiev, G. Sabella, R.



Figures 2–5. Typical habitats: Vendicari, Sicilia (Fig. 2); Nebrodi, San Fratello, Sicilia (Fig. 3); Marina di Strongoli, Calabria (Fig. 4); Santa Severina, Calabria (Fig. 5).

Kostova) (NMNHS). NEBRODI. San Teodoro (Cesarò, Messina), N37.87024 E14.67808, 05.IV.2015, under stones, 2 females (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Endemic of Sicily and Malta. Widespread in Sicily. Very common under stones in wet and clay meadows, in sifting of litter and vegetal debris, among the roots of plants in swampy areas; collected also by net car, window traps and entomological net at sunset on herbaceous vegetation in wet meadows.

Brachygluta aubei (Tournier, 1868)

EXAMINED MATERIAL. IBLEI. Granelli (Pachino, Siracusa), N36.70844 E15.00519, 03.04.2015, sifting and sweeping, 11 ex. (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS). IBLEI. Vendicari (Noto, Siracusa), N36.78723 E15.09456, 01.IV.2015, sifting and sweeping, 3 males (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Known of coasts of Portugal and Spain, atlantic coast of France, Sardinia and circumsardinians islands, Sicily, Malta, islands of Favignana, Pantelleria and Galita, and Maghreb (Tunisia, Algeria and Morocco). Widespread in all coasts of Sicily and also in the central regions along riversides of salty streams or rivers. Halophilous species, common in coastal marshes and also along the riversides of salty rivers among the roots of plants. It was collected also with net car and entomological net on the riparian vegetation.

Brachygluta dentiventris (Saulcy, 1876)

EXAMINED MATERIAL. IBLEI. Granelli (Pachino, Siracusa), N36.70844 E15.00519, 03.IV.2015, sweeping, 1 male (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Widespread in the western Mediterranean basin, mentioned of Portugal, Spain, southern France, Corsica, islands of Elba and Giglio, Sardinia and circumsardinians islands, Italy mainland (Liguria, Tuscany, Basilicata and Apulia) Sicily, Malta, islands of Pantelleria and Galita, and Maghreb (Tunisia, Algeria and Morocco). Not very common but widespread in Sicily. It is found under stones in wet and clay meadows and among the roots of plants in swampy areas.

Brachygluta ragusae (Saulcy, 1876)

EXAMINED MATERIAL. NEBRODI. San Fratello (Messina), N37.94540 E14.62729, 05.IV.2015, under stones, 10 ex. (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS). San Teodoro (Cesarò, Messina), N37.87024 E14.67808, 05.IV.2015, under stones, 3 males and 2 females (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Reported of mainland Italy (from Tuscany to Calabria), Sicily and Pantelleria island and also mentioned by Gridelli (1950: 22) of Dalmatia. Very common and widespread in Sicily. Generally under stones in wet and clay meadows, sometimes sifting vegetal debris along the riversides of streams.

Trissemus antennatus antennatus (Aubé, 1833)

EXAMINED MATERIAL. IBLEI. Villa Vela (Noto, Siracusa), N36.98767 E15.02672, 04.IV.2015, sifting litter, 1 male and 4 females (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Subspecies reported of Germany, Switzerland, Austria, France, Corsica, mainland Italy, Elba island, Sardinia and Sicily. Very common and widespread in Sicily. It lives in many habitat: marshes, swampy areas, riversides of streams, under stones in wet meadows, in litter and vegetal debris and it is also caught by net car, window traps and entomological net.

Pselaphogenius peloritanus (Holdhaus, 1910)

EXAMINED MATERIAL. IBLEI. Canicattini Bagni (Siracusa), N37.03649 E15.07537, 06.IV.2015, sifting litter, 1 female (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS). NEBRODI. San Fratello (Messina), N37.94540 E14.62729, 05.IV.2015, sifting litter, 2 males and 2 females (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS). San Fratello (Messina), N37.93678 E14.63943, 05.IV.2015, sifting litter, 2 males and 1 female (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Endemic of Sicily, where it is widespread in the forestal habitat. Generally in sifting of litter, sometimes under big stones in forest and in sifting of vegetal debris.

Chennium siculum Fiori, 1914 (Fig. 6)

EXAMINED MATERIAL. NEBRODI. San Teodoro (Cesarò, Messina), N37.87024 E14.67808, 05.IV.2015, entomological net, 1 male (I. Gjonov) (NMNHS).

REMARKS. Endemic of northern Sicily (Sicani and Nebrodi districts). Myrmecophilous species, generally hosted in nests of *Tetramorium caespitum* (Linnaeus, 1758) and *Lasius brunneus* (Latreille, 1798), but also collected at sunset by entomological net on herbaceous vegetation in wet meadows.

Ctenistes kiesenwetteri Saulcy, 1874

EXAMINED MATERIAL. NEBRODI. San Fratello (Messina), N37.94540 E14.62729, 05.IV.2015, under stones, 11 ex. (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Reported of Algeria, Tunisia and Sicily. Very common and widespread in Sicily. Generally collected under stones in wet and clay



Figure 6. Habitus of *Chennium siculum* Fiori, 1914.

meadows but also among the roots of plants in swampy areas, rarely in sifting of litter and vegetal debris.

CALABRIA

Panaphantus atomus Kiesenwetter, 1858

EXAMINED MATERIAL. CROTONESE. Mouth of Neto river (Marina di Strongoli, Crotona), N39.19115 E17.13858, 09–10.IV.2015, sifting litter, 2 ex. (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Localised but widespread in Mediterranean basin: Maghreb (Tunisia, Algeria and Morocco), southern France, Corsica, mainland Italy (Veneto, Liguria, Emilia, Tuscany, Umbria and Latium), Sardinia, Sicily, Croatia, Bosnia-Herzegovina, Greece, islands of Corfu and Crete, Georgia, Azerbaijan, Israel and northwestern Iran. New record from Calabria. It lives in marshes and swampy areas among the roots of plants or under vegetal debris.

Euplectus bonvouloiri narentinus Reitter, 1882

EXAMINED MATERIAL. CROTONESE. Verzino (Crotona), N39.35211 E16.80282, 10.IV.2015, sifting, 1 male and 1 female (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS); same data, 1 female (R. Bekchiev, G. Sabella, R. Kostova) (DBUC).

REMARKS. This subspecies is widespread in central and southern Europe and it is mentioned for all mainland Italy. It lives in litter and rotten wood.

Euplectus verticalis Reitter, 1884

EXAMINED MATERIAL. CROTONESE. Mouth of Neto river (Marina di Strongoli, Crotona), N39.19115 E17.13858, 09–10.IV.2015, sweeping and sifting, 2 males (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Distributed in the regions of south-eastern of Mediterranean basin (Slovenia, Macedonia, Italy, Greece, islands of Corfu, Zante, Crete and Rodi, Israel and Turkey). In Italy is reported for Tuscany, Latium, Calabria and Sicily. Generally it is collected by sifting litter, vegetal debris and

rotten wood, alongside the riversides of streams and rivers and in swampy areas.

Biblopectus delhermi Guillebeau, 1888

EXAMINED MATERIAL. CROTONESE. Mouth of Neto river (Marina di Strongoli, Crotona), N39.19115 E17.13858, 09–10.IV.2015, sifting litter, 1 male and 1 female (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Reported of Great Britain, Germany, Switzerland, southern Austria, France, mainland Italy (Veneto, Emilia, Tuscany, Latium and Basilicata), Giglio island, Sicily, Greece, Slovakia, Hungary and Turkey. New record from Calabria. It lives in marshes and swampy areas among the roots of plants or under vegetal debris.

Biblopectus pusillus (Denny, 1825)

EXAMINED MATERIAL. CROTONESE. Mouth of Neto river (Marina di Strongoli, Crotona), N39.19115 E17.13858, 09–10.IV.2015, sweeping and sifting, 10 males and 14 females (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Widespread in Europe and mentioned also from Turkey. In Italy is mentioned of the mainland (Piemonte, Lombardia, Friuli Venezia-Giulia, Veneto, Emilia, Liguria, Tuscany, Latium, Umbria and Basilicata), Sardinia and Sicily. New record from Calabria. Same habitat of the previous species.

Trimium paganettii Reitter, 1906

EXAMINED MATERIAL. CROTONESE. Santa Severina (Crotona), N39.13331 E16.90204, 10.IV.2015, sifting litter, 2 males and 2 females (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS), same data, 1 male and 2 females (R. Bekchiev, G. Sabella, R. Kostova) (DBUC).

REMARKS. Endemic of southern Italy, until now known from Campania, Apulia, Basilicata, Calabria and Sicily. Sylvicolous species that lives in litter and rotten wood.

Tychobythinus glabratus (Rye, 1870)

EXAMINED MATERIAL. CROTONESE. Santa

Severina (Crotona), N39.13331 E16.90204, 10.IV.2015, sifting litter, 2 males and 2 females (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS); same data, 2 females (R. Bekchiev, G. Sabella, R. Kostova) (DBUC).

REMARKS. Reported of southern England, Germany, Belgium, France, Switzerland, Italy, Slovenia, and Croatia (Dalmatia). Known of mainland Italy, islands of Elba, Palmarola, Zannone and San Domino, and Sicily, where it seems confined only in the Peloritani district. In Italy the species was collected under very big stones or sifting litter and vegetal debris, while in the northernmost regions of its distribution area it is mentioned as myrmecophilous species.

Bryaxis italicus (Baudi di Selve, 1870)

EXAMINED MATERIAL. CROTONESE. Mouth of Neto river (Marina di Strongoli, Crotona), N39.19115 E17.13858, 09–10.IV.2015, sifting litter, 14 ex. (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. For information on this species, refer to the discussion made earlier.

Tychus pullus Kiesenwetter, 1858

EXAMINED MATERIAL. CROTONESE. Mouth of Neto river (Marina di Strongoli, Crotona), N39.19115 E17.13858, 09–10.IV.2015, sifting litter, 1 male and 4 females (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Species distributed in eastern Mediterranean basin, known for Italy, Slovenia, Croatia, Serbia, Montenegro, Bosnia-Herzegovina, Albania, Macedonia, Bulgaria, Greece, Slovakia, Hungary and Turkey. In Italy is reported for Veneto, Emilia, Tuscany, Umbria, Tuscany, Apulia, Basilicata and Calabria. It is found in marshes and swampy areas among the roots of plants, under vegetal debris and under stones.

Rybaxis longicornis (Leach, 1817)

EXAMINED MATERIAL. CROTONESE. Mouth of Neto river (Marina di Strongoli, Crotona), N39.19115 E17.13858, 09–10.IV.2015, sifting and swipping, 21 ex. (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Species widespread in all Europe (including England and Ireland), Thyrrenians islands, North Africa, Minor Asia and Central Asia. It is present throughout Italy mainland, Sardinia and circumsardinians islands and Sicily. It lives in marshes, swampy areas, riversides of streams and rivers and wet meadows, among the roots of plants, under vegetal debris and under stones. It seems to prefer salty soils.

***Pselaphus parvus* Karaman, 1940**

EXAMINED MATERIAL. CROTONESE. Mouth of Neto river (Marina di Strongoli, Crotona), N39.19115 E17.13858, 09–10.IV.2015, sifting and swipping 22 ex. (R. Bekchiev, G. Sabella, R. Kostova) (NMNHS).

REMARKS. Known of Austria (Eastern Tirol); Switzerland, France (Maritime Alps), Corse, Italy, Slovenia, and Croatia (Istria). In Italy only in the mainland. It is found in marshes, swampy areas, riversides of streams and rivers, among the roots of plants or under vegetal debris.

Pselaphogenius* sp. gr. *fiorii

EXAMINED MATERIAL. CROTONESE. Verzino (Crotona), N39.35211 E16.80282, 10.IV.2015, sifting litter, 1 male and 1 female (R. Bekchiev, G. Sabella, R. Kostova) (DBUC).

REMARKS. The specimens are still being studied. Based on the exoskeletal morphology and aedeagal features character, they are attributable with certainty to the *Pselaphogenius fiorii* group (Sabella, 1992) and are closely related to *Pselaphogenius aspromontanus* (Reitter, 1910).

CONCLUSIONS

A first result of this entomological expedition in Sicily and Calabria, two rare Pselaphinae species, *Chennium siculum* and *Batrisodes adnexus*, were collected from Sicily, while three species, *Panaphantus atomus*, *Biblopectus pusillus*, and *Biblopectus delhermi*, are recorded for the first time from Calabria.

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