JEWEL BEETLES (COLEOPTERA, BUPRESTIDAE) FROM THE MALTESE ISLANDS (CENTRAL MEDITERRANEAN)

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ABSTRACT

The jewel beetle fauna of the Maltese Islands is reviewed, based on literature records and where possible examination of earlier citations and of recently collected material. A total of seventeen species have been recorded of which seven species are new records for the Maltese Islands. These are Acmaeoderella (Carininota) flavofasciata flavofasciata (Piller & Mitterparcher, 1783), Acmaeoderella (Euacmaeoderella) lanuginosa lanuginosa (Gyllenhal, 1870), Anthaxia (Anthaxia) thalassophila thalassophila Abeille de Perrin, 1900, Agrilus (Agrilus) derasofasciatus Lacordaire, 1835, Agrilus (Agrilus) roscidus Kiesenwetter, 1857, Aphanisticus pygmaeus Lucas, 1849 and Trachys corusca (Ponza, 1805), two of which were previously based on misidentifications.

INTRODUCTION

The Buprestidae is a very large group of beetles comprising approximately 400 genera and over 15,000 described species. About 1,500 species are known from the Palaearctic Region and there are about 200 European species. Most species have a very characteristic form, being rigid and heavily sclerotized, often with a brilliant metallic colouration, hence their common name of jewel beetles or metallic wood-boring beetles.

Larvae of jewel beetles develop in living, dying or dead plants, under the bark or in the wood of trees and shrubs, in twigs or stems of herbaceous plants, in roots and basal parts of trunks of trees, shrubs or perennial herbs, or as leaf miners. Due to the dorso-ventrally flattened larvae, tunnels are always oval in cross section. Larvae usually pupate under the bark, less frequently in the sapwood of their host plants, leaf-miners pupate in a small pupal chamber in the leaf parenchyme. The food of adult buprestids is not usually related to the larval host plants. Many adults are flower visitors feeding on pollen, while other species feed on leaves, exceptionally on bark of young twigs. In spite of the large size of the family and their plant feeding habits, relatively few species are of economic importance. In general, buprestids tend to attack plants which are already damaged, injured, or physiologically stressed. In the Mediterranean and warm temperate zones of the Palaearctic, the larva of Capnodis tenebrionis (Linnaeus, 1761) can be a serious pest of stone fruit trees, where heavy infestations can kill the host plant. Some species, namely from the genus Agrilus Curtis, 1825, can serve as transmitters of tracheomycoses of oaks, elms and fruit trees.

Although, several attempts have been made in recent years to reassess the higher classification of buprestids, this is still in a state of flux. The number of subfamilies recognized vary from five to thirteen depending on the author, whereas Holyňský (1988; 1993) recognized only four main buprestid lineages.

HISTORICAL REVIEW

The first mention of buprestid beetles from the Maltese Islands was by Gulia, who in 1857 delivered a series of lectures on the insect fauna of the Maltese Islands. These lectures were published a year later (Gulia, 1858). Gulia (1858) recorded three species of buprestids, Buprestis tenebricosa Olivier, 1790, B. discoidea Fabricius, 1787 and B. viridis Linnaeus, 1758 of which only Acmaeoderella discoidea (Fabricius, 1787) forms part of the Maltese buprestid fauna. Due to the fact that most identifications cited by Gulia (1858) are now considered to be unreliable (e.g. Mifsud, 2000) the mentioned buprestid records will not be considered further. Besides, in this same work, Gulia mentioned three other buprestid species collected from the Maltese Islands. These buprestids were (fortunately) undetermined and the very brief descriptions furnished do not provide sufficient information to indicate which species Gulia was referring to. In 1907, Cameron & Caruana Gatto published an important work on the Coleoptera of the Maltese Islands, which is still the only faunistic work dealing with all beetle groups. In this work (Cameron & Caruana Gatto, 1907), only four species of buprestids were recorded. In 1916 Andres, published a list of Lepidoptera, Hemiptera and Coleoptera he had collected from these islands during the almost two year period he spent in Malta as a prisoner of war. In this work (Andres,
Besides the localities mentioned above, the species develops in dead wood of apple and pear trees. Levey (1985) revised the Anthaxia umbellatarum species group describing Anthaxia scylla. Levey, 1985 from material collected in Italy and Malta. More recently, Cilia (1989), contributed an annotated list of endemic, rare, threatened and/or scientifically interesting beetles in the Red Data Book for the Maltese Islands. In this work, Cilia included information on six species of buprestid beetles, four of which were previously unrecorded. Curletti (1994), in his buprestid catalogue for Italy, included nine species from the Maltese Islands, four of which were new records.

MATERIAL AND METHODS

Material was examined or is cited from the following institutions and private collections:

BMNH The Natural History Museum, London, UK  
CEM private collection - Ebejer, Malta  
CMM private collection - Mifsud, Malta  
CMDM private collection - Magro, Malta  
NHMM Natural History Museum, Mdina, Malta  
NMPC National Museums & Galleries of Wales, Cardiff, UK  
NMGW National Museums & Galleries of Wales, Cardiff, UK  

The present work was undertaken to provide an overview of the buprestid fauna of the Maltese Islands. Where possible we have undertaken the examination of previously cited material. Additional collections were carried out throughout the Maltese Islands. The classification and species sequence follows the checklist of the Italian fauna (Gobbi & Plata, 1995). For each species earlier citations are provided, excluding those of Luigioni (1929) which were entirely based on the records of Cameron & Curletti (1994), in his buprestid catalogue for Italy, included nine species from the Maltese Islands, four of which were new records.

CATALOGUE OF MALTESE BUPRESTIDAE

Acmaeoderella (Acmaeoderella) discoidea (Fabricius, 1787)  
Acmaeoderella (Carinina) flavofasciata flavofasciata (Piller & Mitterparcher, 1783)  
Acmaeoderella (Euacmaeoderella) lanuginosa lanuginosa (Gyllenhaal, 1817)  
Pitosima flavoguttata flavoguttata (Illiger, 1803)  
Buprestis (Buprestis) novemmaculata novemmaculata Linnaeus, 1767  
Melanophila cuspidata (Klug, 1829)  
Anthaxia (Haplanthaxia) aprutiliana Gerini, 1955  
Anthaxia (Haplanthaxia) millefoli polychioros Abeille de Perrin, 1894  
Anthaxia (Anthaxia) lucens lucens Küster, 1852  
Anthaxia (Anthaxia) manca (Linnaeus, 1767)

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Acmaeoderella (Euacmaeoderella) lanuginosa lanuginosa (Gyllenhaal, 1817)


Notes - New record for the Maltese Islands. The subspecies reducta Schaefer occurs only in Corsica and Sardinia.

Host plants - The species is known to develop in species is known to develop in Cynara sp., Euphorbia beaumeriana, Ferula communis, Thapsia gargarica and Thapsia villosa. Adults are commonly found on flowers.

Distribution - Israel, Syria, Greece, Italy (including Sicily), Malta, Spain, Tunisia, Algeria and Morocco.

Pentesima flavoguttata flavoguttata (Illiger, 1803)
Pentesima undecimmaculata (Herbst, 1784); Cilia, 1989: 116.


Notes - The correct identity Cilia's record (Cilia, 1989), is here confirmed.

Host plants - The species is known to develop in trunks and thick branches of Ceratonia siliqua, Crataegus oxyacantha, Malus domestica, Prunus armeniaca, Prunus avium, Prunus domestica, Prunus dulcis, Prunus mahaleb, Prunus persica, Prunus spinosa, Prunus vulgaris and Pyrus communis.

Distribution - Southern Russia, Iran, Syria, Turkey, Greece, Albania, Romania, Moldova, Bulgaria, Yugoslavia, Bosnia, Croatia, Slovenia, Czech Republic, Slovakia, Hungary, Germany, Switzerland, Italy (including Sardinia and Sicily), Malta, France (including Corsica), Spain, Portugal, Egypt, Algeria and Morocco.

Capnodis tenebrionis (Linnaeus, 1761)

Capnodis tenebrionis (Linnaeus, 1761); Cameron & Caruana Gatto, 1907: 397; Saliba, 1963: 12; Cilia, 1989: 116; Curletti, 1994: 55-56.


Notes - Cameron & Caruana Gatto (1907) state that this species is rare in the Maltese Islands giving only Girgenti as locality where found. Saliba (1963) indicates that the species is a very common pest on apricot and plum trees and less common on almond, apple and pear trees. In the Red Data Book for the Maltese Islands, Cilia (1989) assigned the status of this species as locally vulnerable, stating "Sometimes found on fruit trees but never common; persecuted because mistakenly considered a pest". Curletti (1994) recorded the species from Buskett. At present, the status of this species locally can be better defined as an infrequent pest of stone-fruit trees.

Host plants - The species is known to develop in roots and the basal parts of trunks of Cotoneaster ramiflora, Cotoneaster sp., Crataegus monogyna, Crataegus oxyacantha, Cydonia oblonga, Malus domestica, Mespilus germanica, Prunus armeniaca, Prunus avium, Prunus cerasus, Prunus dulcis, Prunus domestica, Prunus mahaleb, Prunus mariana, Prunus padus, Prunus persica, Prunus spinosa and Pyrus communis. Adults are commonly found on the mentioned host plants.

Distribution - Russia, Armenia, Azerbaijan, Georgia, Turkmenistan, Iran, Iraq, Israel, Lebanon, Jordania, Syria, Turkey, Cyprus, Greece, Albania, Yugoslavia, Croatia, Bosnia, Slovenia, Moldova, Bulgaria, Romania, Hungary, Czech Republic, Slovakia, Ukraine, Austria, Switzerland, Italy (including Sardinia and Sicily), Malta, France (including Corsica), Spain, Portugal, Morocco, Algeria and Tunisia.

Buprestis (Buprestis) novemmaculata novemmaculata Linnaeus, 1767

Buprestis novemmaculata Linnaeus, 1767; Curletti, 1994: 79-80.

Material examined - None.

Notes - This species was recorded by Curletti (1994) from Malta (Buskett).

Host plants - The species is known to develop in wood of dead or dying trunks of the following trees: Larix decidua, Picea abies, Pinus halepensis, Pinus laricio, Pinus leucodermis, Pinus nigra, Pinus piniaster, Pinus pinea, Pinus salzmanni and Pinus sylvestris. Adults are found on sawed wood of pine and on logs. Development lasts for at least two years.

Distribution - Russia (including Siberia), Sweden, Finland, Denmark, Poland, Germany, Czech Republic, Slovakia, Ukraine, Belarus, Hungary, Romania, Moldova, Bulgaria, Yugoslavia, Bosnia, Croatia, Slovenia, Turkey, Greece, Albania, Austria, Switzerland, France (including Corsica), Italy (including Sardinia and Sicily), Malta, Spain, Portugal and Algeria. The species was also introduced to South America (Chile).

Melanophila cuspidata (Klug, 1829)

Melanophila aequatus Marshal [sic]; Andres, 1916: 58.

Notes - This species was recorded for the first time from the Maltese Islands by Andres (1916), whose record was based on a single specimen collected during the month of October from the Verdala barracks (Cospicua) which at that time served as prisons.

Host plants - This species is known to develop in fire-damaged branches and stems of *Cupressus sempervirens, Ficus carica, Juniperus macrocarpa, Juniperus oxycedrus, Juniperus phoenicea, Phyllirea angustifolia, Pinus halepensis, Pinus pinea, Pistacia lentiscus, Quercus ilex, Quercus pubescens, Quercus suber, Salix alba, Spartium junceum* and *Ulmus minor*. Adults are usually found on the mentioned host plants.

Distribution - Southern Russia, Iran, Syria, Turkey, Greece, Albania, Yugoslavia, Croatia, Italy (including Sardinia and Sicily), Malta, France (including Corsica), Spain, Egypt, Sudan, Algeria and Morocco.

**Anthaxia (Haplanthaxia) aprutiana** Gerini, 1955 (Fig. 1)

**Anthaxia umbellatarum** (Fabricius, 1787); Cameron & Caruana Gatto, 1907: 397; Curletti, 1994: 108-110.


**Anthaxia nitidula** (Linnaeus, 1758); Cilia, 1989: 117.

**Anthaxia aprutiana** Gerini, 1955; Curletti, 1994: 110-111.


Notes - This species was originally recorded as *A. umbellatarum* by Cameron & Caruana Gatto (1907). Through examination of this and additional material, Levey (1985), in his revision of the *A. umbellatarum* species group described this taxon as *Anthaxia scylla*. Levey (1985), perhaps overlooked the description of *A. aprutiana* provided by Gerini (1955). Cilia (1989) recorded *A. nitidula*, but examination of this material concluded that this has to refer to *A. aprutiana*. Curletti (1994) mentioned *A. umbellatarum* from Malta, but this citation is based on the original records of Cameron & Caruana Gatto (1907). Thus, even though, the possible presence of *A. umbellatarum* in the Maltese Islands is not excluded, the material so far collected is all attributed to *A. aprutiana*. Besides the localities listed above, the species has also been recorded from the following localities in Malta: Birzebbugia, Chadwick Lakes, Wied il-Ghasel and Wied Qirda (Levey, 1985; Curletti, 1994).

**Host plants** - The species is known to develop in branches of *Castanea sativa* (Curletti, 1994) and probably also in *Pistacia* spp. Adults are found on flowers. *Castanea sativa* is lacking from the Maltese flora, and all attempts to grow this tree locally have invariably failed (Borg, 1922).

Distribution - So far, *A. aprutiana* is known to occur in Italy (Friuli-Venezia Giulia, Abruzzo, Molise, Basilicata and Sicily) and the Maltese Islands (Curletti, 1994).

**Anthaxia (Haplanthaxia) millefolii** polychloros Abeille de Perrin, 1894

**Anthaxia millefolii** ssp. polychloros Abeille de Perrin, 1894; Curletti, 1994: 112-114.


Notes - This species was recorded from the Maltese Islands by Curletti (1994) from the following localities in Malta: Buskett, Chadwick Lakes and Wied Incita. The larva is known to develop in several unrelated host plants including *Acer obtusatum, Castanea sativa, Ceratonia siliqua, Nerium oleander, Pistacia lentiscus, Prunus avium, Prunus domestica, Prunus dulcis, Pyrus amygdaliformis, Quercus cerris, Quercus coccifera, Quercus ilex, Quercus pubescens, Quercus robur* and *Sorbus* sp. (Curletti, 1994). *A. millefolii* is probably the most polyphagous species within the genus *Anthaxia* Eschscholtz, 1829. Adults are commonly found on flowers.

**Host plants** - The larva is known to develop in several unrelated host plants including *Acer obtusatum, Castanea sativa, Ceratonia siliqua, Nerium oleander, Pistacia lentiscus, Prunus avium, Prunus domestica, Prunus dulcis, Pyrus amygdaliformis, Quercus cerris, Quercus coccifera, Quercus ilex, Quercus pubescens, Quercus robur* and *Sorbus* sp. (Curletti, 1994). *A. millefolii* is probably the most polyphagous species within the genus *Anthaxia* Eschscholtz, 1829. Adults are commonly found on flowers.
Sardinia and Sicily), Malta, France (including Corsica), Spain, Portugal, Morocco, Algeria and Tunisia.

**Anthaxia (Anthaxia) lucens lucens** Küster, 1852  


**Notes** - This species was recorded from the Maltese Islands by Curletti (1994) from the following localities on Malta: Hamrun and Wied il-Ghasel.

**Host plants** - This species is known to develop in branches of *Prunus dulcis* (Gobbi, 1986); other species of *Prunus*, *Cerasus* and *Amygdalus* are also used as host plants of this species. Adults are found on flowers.

**Distribution** - Turkey, Crete, Greece, Yugoslavia, Albania, Italy (including Sicily) and Malta.

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

**Material examined** - Malta: Buskett, 12.iii.1977, 2 exs., on *Rhamnus* sp., leg. J. Cilia (CMM).

**Notes** - The species was recorded from Malta by Cilia (1989) on the basis of the above mentioned material.

**Host plants** - The species is known to develop in branches of *Ulmus minor*, *Ulmus laevis*, *Ulmus carpinifolia*, *Castanea sativa*, *Populus tremula*, *Prunus mahaleb*, *Rhamnus alaternus*, *Robinia pseudoacacia* and *Tilia cordata* (Curletti, 1994) with a preference to *Ulmus* spp. Adults are usually seen on leaves of the host plants, quite exceptionally also on flowers (e.g. of *Crataegus*). The development lasts from two to three years.

**Distribution** - Iran, Turkey, Southern Russia, Turkmenia, Armenia, Georgia, Tadjiikistan, Ukraine, Moldova, Poland, Germany, Czech Republic, Slovakia, Romania, Bulgaria, Yugoslavia, Greece, Bosnia, Croatia, Slovenia, Albania, Austria, Italy (including Sardinia and Sicily), Malta, France (including Corsica), Spain, Portugal, Morocco and Algeria.

**Table 1 Chorotype ranges of the species following Vigna Tagliani et al., 1992.**

<table>
<thead>
<tr>
<th>Species list</th>
<th>Chorotype range</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Acmaeoderella (Acmaeoderella) discoidea</em> (Fabricius, 1787)</td>
<td>TEM</td>
</tr>
<tr>
<td><em>Acmaeoderella (Carininota) flavofasciata flavofasiata</em> (Piller &amp; Mitterparcher, 1783)</td>
<td>CAE</td>
</tr>
<tr>
<td><em>Acmaeoderella (Euacmaeoderella) lanuginosa lanuginosa</em> (Gyllenhal, 1817)</td>
<td>WME</td>
</tr>
<tr>
<td><em>Ptosima flavoguttata flavoguttata</em> (Illiger, 1803)</td>
<td>CEM</td>
</tr>
<tr>
<td><em>Capnodis tenebrionis</em> (Linnaeus, 1788)</td>
<td>CEM</td>
</tr>
<tr>
<td><em>Buprestis (Buprestis) novemmaculata novemmaculata</em> Linnaeus, 1767</td>
<td>PAL</td>
</tr>
<tr>
<td><em>Melanophila cuspidata</em> (Klug, 1829)</td>
<td>TEM</td>
</tr>
<tr>
<td><em>Anthaxia (Haplanthaxia) millefolii polychloros</em> Abeille de Perrin, 1894</td>
<td>Sub-Endemic</td>
</tr>
<tr>
<td><em>Anthaxia (Haplanthaxia) millefolii polychloros</em> Abeille de Perrin, 1894</td>
<td>WME</td>
</tr>
<tr>
<td><em>Anthaxia (Anthaxia) lucens lucens</em> Küster, 1852</td>
<td>TUE</td>
</tr>
<tr>
<td><em>Anthaxia (Anthaxia) manca</em> (Linnaeus, 1767)</td>
<td>CEM</td>
</tr>
<tr>
<td><em>Anthaxia (Anthaxia) thalassophila thalassophila</em> Abeille de Perrin, 1900</td>
<td>TUE</td>
</tr>
<tr>
<td><em>Chrysobothris (Chrysobothris) solieri</em> Gory &amp; Laporte, 1839</td>
<td>CEM</td>
</tr>
<tr>
<td><em>Agrilus (Agrilus) derasofasciatus</em> Lacordaire, 1835</td>
<td>MED*</td>
</tr>
<tr>
<td><em>Agrilus (Agrilus) roscedus</em> Kiesenwetter, 1857</td>
<td>CEM</td>
</tr>
<tr>
<td><em>Aphanisticus pygmaeus</em> Lucas, 1846</td>
<td>CAM</td>
</tr>
<tr>
<td><em>Trachys corusca</em> (Ponza, 1805)</td>
<td>WPA</td>
</tr>
</tbody>
</table>

Abbreviations: CAE: Central Asiatic-European; CAM: Central Asiatic Mediterranean; CEM: Central Asiatic-European-Mediterranean; MED: Mediterranean; MED*: originally Mediterranean but now widespread in Palaearctic and introduced in USA; PAL: Palaearctic; TEM: Turranic-European-Mediterranean; TUE: Turranic-European; WME: W-Mediterranean; WPA: W-Palaearctic.
**Anthaxia (Anthaxia) thalassophila thalassophila** Abeille de Perrin, 1900


**Notes** - New record for the Maltese Islands. The record of *A. scutellaris* by Cilia (1989) should refer to this species.

**Host plants** - The species is known to develop in drying branches of *Castanea sativa*, *Fraxinus excelsior*, *Fraxinus ornus*, *Pistacia lentiscus*, *Pistacia terebinthus* and *Quercus pubescens* (Contarini, 1983). Adults are usually found on these host plants and on flowers.

**Distribution** - Albania, Croatia, Yugoslavia, France (including Corsica), Italy (including Sardinia and Sicily) and Malta.

**Chrysobothris (Chrysobothris) solieri** Gory & Laporte, 1839


**Material examined** - None.

**Notes** - This species was recorded by Curletti (1994) from Malta (Buskett).

**Host plants** - This species is known to develop in *Pinus halepensis*, *Pinus laricio*, *Pinus nigra*, *Pinus pinaster*, *Pinus pinea*, *Pinus salzmanni* and *Pinus sylvestris*.

**Distribution** - Albania, Bosnia, Croatia, Slovenia, Yugoslavia, Romania, Bulgaria, Turkey, Greece, Austria, Switzerland, France (including Corsica), Italy (including Sardinia and Sicily), Malta, Spain, Portugal, Tunisia and Algeria.

**Agrilus (Agrilus) dersasofasciatus** Lacordaire, 1835


**Material examined** - Malta: (no other data), 3 exs., Dr. Cameron; 'Boschetto', v.1903, 3 exs., Dr. Cameron; Dingli, 13.VI.1994, 1 ex., leg. D. Mifsud (CMM).

**Notes** - New record for the Maltese Islands. The record of *Agrilus obscuricollos* by Cameron & Caruana Gatto (1907) should refer to this species. Curletti's record of *A. obscuricollos* (1994) was based on that of Cameron & Caruana Gatto (1907).

**Host plants** - This species is known to develop in branches of *Vitis sylvestris* and *Vitis vinifera*.

**Distribution** - Southern Russia, Armenia, Azerbaijan, Georgia, Turkey, Ukraine, Moldova, Poland, Germany, Czech Republic, Slovakia, Hungary, Romania, Bulgaria, Bosnia, Croatia, Slovenia, Yugoslavia, Albania, Greece, Austria, Switzerland, Italy (including Sardinia and Sicily), Malta, France (including Corsica), Spain, Egypt, Tunisia, Algeria and Morocco. The species is nowadays widespread in Europe and was also introduced in USA, following vine cultivation.

**Agrilus (Agrilus) roscidus** Kiesenwetter, 1857


**Notes** - New record for the Maltese Islands.

**Host plants** - An extremely polyphagous species developing in branches of *Ceratonia silica*, *Crateagus oxycantha*, *Cydonia oblonga*, *Crateagus spp.*, *Euonymus europaeus*, *Malus domestica*, *Mespilus germanica*, *Prunus armeniaca*, *Prunus avium*, *Prunus domestica*, *Prunus dulcis*, *Prunus mahaleb*, *Prunus persica*, *Prunus vulgaris*, *Populus spp.*, *Pyrus amygdaliformis*, *Pyrus communis*, *Salix spp.*, *Sorbus aria* and *Ulmus spp.* Adults are usually found on these host plants.

**Distribution** - Southern Russia, Moldova, Ukraine, Israel, Lebanon, Cyprus, Syria, Turkey, Germany, Czech Republic, Slovakia, Hungary, Romania, Bulgaria, Bosnia, Croatia, Slovenia, Yugoslavia, Greece, Austria, Switzerland, Italy (including Sardinia and Sicily), Malta, France (including Corsica), Spain, Portugal, Egypt, Algeria and Morocco.

**Aphanisticus pygmaeus** Lucas, 1849


**Notes** - New record for the Maltese Islands.

**Host plants** - Unknown.

**Distribution** - Southern Russia, Azerbaijan, Afghanistan, Israel, Kazakhstan, Tadjikistan, Turcmenistan, Uzbekistan, Mongolia, Turkey, Bulgaria, Moldova, Croatia, Yugoslavia, Greece, Italy (including Sardinia and Sicily), Malta, France (including Corsica), Spain, Algeria, Egypt, Tunisia and Morocco.

**Trachys corusca** Ponza, 1805

Notes - New record for the Maltese Islands.

Host plants - The species is known to develop in leaves of Althea officinalis, Althea rosea, Hibiscus roseus, Lavatera alba, Malva alcea, Malva narbonensis, Malva officinalis, Malva rotundifolia and Malva sylvestris. Adults are usually found on the mentioned host plants.

Distribution - Albania, Algeria, Austria, Bosnia, Bulgaria, Croatia, Czech Republic, Finland, France, Germany, Greece, Hungary, Italy, Malta, Libya, Morocco, the Netherlands, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tunisia, Turkey, Ukraine, Yugoslavia.

CONCLUSIONS

In general, buprestid beetles are rather infrequent in the Maltese Islands. This may be due to several reasons, among which the scarcity of trees and habitat destruction are worth mentioning. Thus, though species which develop on shrubs and leaf miners may eventually prove to be more common and widespread in the Maltese Islands, species which are directly associated with trees are rare. In fact, records in this latter category are often based on single captures.

Table 1 shows the chorotype ranges of each species following Vigna Tagliani et al., 1992. Such chorotypes give an indication of the distributional range of a particular species, however, this is a dynamic process and such ranges may change accordingly to future studies.

As indicated in Table 1, most species have wide geographical ranges. The most interesting species from a biogeographical point of view are Anthaxia lucens lucens and Anthaxia thalassosphila thalassosphila both of which represent eastern elements and Anthaxia aprutiana which is so far known only from Southern Italy and the Maltese Islands.

The buprestid fauna of the Maltese Islands, with 17 species recorded, is much more diverse than that of the other islands in the Sicilian channel (Lampedusa and Pelagis islands) with a total of 9 recorded species. From the Pelagis islands only 4 buprestid species are recorded, whereas 6 species are recorded from Pantelleria (Sparacio & Ratti, 1995). It is worth mentioning however, that only 3 species of buprestids are common to Pantelleria and the Maltese Islands, whereas no species are common to the Pelagis and the Maltese Islands. Also, there is a lack of North African affinities in the buprestid fauna of the Maltese Islands in comparison with the other islands, as indicated by the presence of Julodis onopordi lampedusanus Tassi, 1966 in Lampedusa and Acmaeodera bipunctata romanoi Sparacio, 1992 in Pantelleria (Sparacio & Ratti, 1995).

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REFERENCES


Gulia, G. (1858) Corso elementare di Entomologia Maltese.


