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New records of true bugs (Hemiptera, Heteroptera) from the Maltese Islands

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ABSTRACT. A list of 133 species of heteropteran bugs collected from the Maltese Islands is presented; 21 of them are new records for the Maltese archipelago whereas an additional 15 represent new records for individual islands of this archipelago. The new records are of native origin in the Maltese Islands with the exception of *Corythauma ayyari* which is an Oriental species rapidly expanding its distribution range in Europe and Saudi Arabia. Earlier records of *Capsodes gothicus* and *Gonocerus insidiator* from Malta are incorrect and should refer to *C. vittiventris* and *G. imitator* respectively. The presence of *Tuponia breviostris* in Malta is confirmed since this record was previously based only on the catalogue of Palaearctic Heteroptera without original data. A total of 15 species previously reported from the Maltese Islands are considered as doubtful. Considering the results of the present paper with additions and corrections made to the checklist of Maltese Heteroptera, the total number of confirmed records is augmented to 232 (221 in Malta, 74 on Gozo and 38 on Comino).

KEY WORDS. Mediterranean, Malta, *Corythauma ayyari*.

INTRODUCTION

A collection of 133 species of heteropteran bugs collected from the Maltese Islands, revealed the presence of 21 new records for the mentioned territory, in addition to 15 new records for individual islands of this archipelago. For each species we provide the collecting data and for the 21 new records geographical and ecological information is also provided. Finally, based on the material studied during the present work and information in published papers, additions and corrections are effected to the Maltese Heteroptera checklist by CUESTA SEGURA *et al.* (2010), bringing the total number of confirmed species for the Maltese archipelago to 232.

MATERIAL AND METHODS

Unless otherwise specified, all material examined in the present work was collected by David Mifsud and is preserved in his private collection whereas most identifications were carried out by Attilio Carapezza. Family sequence follows the Catalogue of the Heteroptera of the Palaearctic Region (AUKEMA & RIEGER, 1995; 1996; 1999; 2001; 2005) with the exception of the Superfamily Lygaeoidea for which it follows HENRY (1997) who subdivided the traditional paraphyletic Lygaeidae (*sensu lato*) into 15 families, 7 of which (Lygaeidae, Geocoridae, Artheneidae, Heterogastridae, Cymidae, Oxycarenidae, and Rhyparochromidae) occur on the Maltese Islands (CUESTA SEGURA *et al.*, 2010). The species in each family are treated alphabetically; those marked with an asterisk (*) are new for the Maltese archipelago.

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Acronyms used in the present work: AC – Attilio Carapezza; AS – Anthony Seguna; BMNH – Natural History Museum, London, United Kingdom; DM – David Mifsud; ex – specimen; exx – specimens; GL – Guido Lanfranco; MCSN – Museo Civico di Storia Naturale di Genova, Italy; MNHN – Muséum national d'Histoire naturelle, Paris, France; NMWC – National Museum Cardiff, Amgueddfa Genedlaethol Caerdydd, Cardiff, United Kingdom; PS – Paul Sammut; ZMHB – Zoologisches Museum, Humboldt Universität, Berlin, Germany.

ANNOTATED SPECIES LIST

Infraorder **NEPOMORPHA** Popov, 1968
Family **Corixidae** Leach, 1815

Corixa affinis Leach, 1817

Material examined: Malta, Ghajn Rihana, 20.viii.1989, 2 exx., DM; Qrendi, 19.vii.2003, 1 ex., DM.

Sigara (Vermicorixa) lateralis (Leach, 1817)

Material examined: Malta, Qattara, near Ta' Baldu, 19.v.2003, 1 ex., DM.

Family **Notonectidae** Latreille, 1802

Anisops sardeus sardeus Herrich-Schäffer, 1849

Material examined: Malta, Ghajn Rihana, 25.viii.1989, 1 ex., DM; Qrendi, 19.vii.2003, 3 exx., DM.

Notonecta (Notonecta) maculata Fabricius, 1794

Material examined: Malta, Ghajn Rihana, 20.viii.1989, 2 exx., DM.

Infraorder **GERROMORPHA** Popov, 1971
Family **Mesoveliidae** Douglas & Scott, 1867

Mesovelia vittigera Horváth, 1895

Material examined: Malta, Ghajn Rihana, 20.viii.1989, 3 exx., DM; Marsaskala, Il-Maghluq, 9.viii.2003, 1 ex., DM.

Family **Veliidae** Brullé, 1836

Microvelia (Picaultia) pygmaea (Dufour, 1833)

Material examined: Malta, Buskett, 24.vi.2003, 1 ex., attracted to light in mixed woodland of *Pinus/Cupressus*, DM.

***Velia (Plesiovelia) muelleri* Tamanini, 1947**

Material examined: Malta, Ghadira, 4.vi.1994, 1 ex., on surface of brackish water pool, DM; Buskett, Wied il-Luq, 18.v.2003, 2 exx., on surface of freshwater pool, DM.

Infraorder **LEPTOPODOMORPHA** Popov, 1971
Family **Saldidae** Amyot & Serville, 1843

***Saldula pallipes* (Fabricius, 1794)**

Material examined: Malta, Ghajn Rihana, 20.viii.1989, 1 ex., DM.

Family **Leptopodidae** Brullé, 1836

***Patapius spinosus* (Rossi, 1790)**

Material examined: Malta, Fomm ir-Rih, 29.x.2014, 1 ex., DM.

Infraorder **CIMICOMORPHA** Leston, Pendergrast & Southwood, 1954
Family **Tingidae** Laporte, 1832

****Corythauma ayyari* (Drake, 1933)**

Material examined: Malta, Buskett, Verdala Palace, 1–23.viii.2014, 1 ex., Malaise trap, DM.

Notes: The primary distribution range of the species is restricted to the Oriental region; in recent years it has been reported as introduced in France, Israel, UAE and Sicily (CARAPEZZA, 2014; CARAPEZZA *et al.*, 2014). It has been reported on several plants belonging to different families such as *Alcea* (Malvaceae), *Daedalacanthus nervosus* (Acanthaceae), *Hedychium* (Zingiberaceae), *Jasminum* (Oleaceae), *Lantana* and *Volkameria inermis* (Verbenaceae), *Musa* (Musaceae) and *Ocimum* (Lamiaceae); it is regarded as a serious pest of cultivated ornamental plants, to which larvae and adults cause severe damages.

***Dictyla echii* (Schrank, 1782)**

Material examined: Malta, Bahrija, 20.iv.2002, 1 ex., DM.

***Monosteira unicastata* (Mulsant & Rey, 1852)**

Material examined: Malta, Buskett, 9.vii.1997/20.vi.2012, 3 exx., DM; Bahrija, 20.iv.2002, 2 exx., DM; Mtaħleb, Wied il-Buzbies, 19.vi.2012, 1 ex., DM. Comino, Il-Hazina, 13.viii.2002, 2 exx., DM.

Notes: New record for the island of Comino.

****Tingis (Tingis) auriculata* (A. Costa, 1847)**

Material examined: Malta, St. Thomas Bay, Munxar, 28.iv.2002, 1 ex., DM. Gozo, Qbajjar, 26.xii.2002, 2 exx., DM; Ramla, 28.i.1997, 1 ex., DM.

Notes: This species is present in the entire Mediterranean region except Libya and Egypt; its range extends eastwards to Central Asia (Afghanistan, Tajikistan and Uzbekistan). It is a phytophagous species feeding on Apiaceae (*Daucus*, *Caucalis*, *Cnidium*, *Torilis*, etc.) (PÉRICART, 1983).

Family **Miridae** Hahn, 1833

***Calocoris nemoralis* (Fabricius, 1787)**

Material examined: Malta, Rabat, 27.iii.1989, 1 ex., DM; Wied Babu, 26.iii.2010, 1 ex., DM. Gozo, Ramla, 30.iii.2002, 2 exx., DM.

***Campyloneura virgula* (Herrich-Schäffer, 1835)**

Material examined: Malta, Birkirkara, 15.vi.2011, 1 ex., DM; Buskett, 20.vi.2012, 1 ex., DM; Fiddien, 20.vi.2012, 1 ex., DM.

***Capsodes vittiventris* (Puton, 1883)**

Material examined: Malta, Bahrija, 20.iv.2002, 1 ♀, DM.

Notes: The distribution of this species is restricted to the Maghreb countries (Morocco, Algeria and Tunisia) and Sicily (including Aeolian Islands). It is a phytophagous species feeding on several plants belonging to different families (Apiaceae, Asteraceae, Lamiaceae, Liliaceae, etc). The species had already been reported from Malta under *Capsodes gothicus* (L.) (SCHEMBRI, 1993; CUESTA SEGURA *et al.*, 2010).

***Closterotomus trivialis* (A. Costa, 1853)**

Material examined: Malta, Buskett, 27.iii.1989, 1 ex., DM; Siggiewi, 7.iv.2010, 1 ex., DM.

***Conostethus venustus venustus* (Fieber, 1858)**

Material examined: Gozo, Dwejra, 26.xii.2002, 1 ex., DM.

****Creontiades pallidus* (Rambur, 1839)**

Material examined: Comino, Il-Hazina, 13.viii.2002, 4 exx., around artificial freshwater pool, DM.

Notes: Eremian species, widely distributed in Mediterranean, Near East, Iran, Arabian Peninsula (UAE, Saudi Arabia, Yemen), and tropical Africa; it was reported as introduced in Brazil (LINNAVUORI, CARAPEZZA & KMENT, 2014). It is a polyphagous species and it is known as a serious pest of cotton, hence its common name “boll shedder bug”.

***Deraeocoris (Camptobrochis) serenus* (Douglas & Scott, 1868)**

Material examined: Malta, Wied Babu, 3.vii.2002, 1 ex., DM.

***Deraeocoris (Deraeocoris) punctum* (Rambur, 1839)**

Material examined: Malta, Fiddien, 27.vi.1989, 1 ex., DM.

***Dicyphus (Dicyphus) errans* (Wolff, 1804)**

Material examined: Malta, Buskett, 20.vi.2012, 2 exx., DM.

****Dicyphus (Dicyphus) tamaninii* Wagner, 1951**

Material examined: Gozo, Dwejra, 25.iv.2003, 1 ex., DM.

Notes: Mediterranean species known from Spain, South France, Italy, Croatia, Bosnia Hercegovina, Greece (Crete), Tunisia and Israel. It is a zoophytophagous species generally found on *Hyoscyamus niger* L. but reported also on cultivated Solanaceae as preying on whiteflies (GOULA & ALOMAR, 1994).

****Eurystylus bellevoeyi* (Reuter, 1879)**

Material examined: Malta, Siggiewi, 20.x.2013, 1 ex., reared from *Diplotaxis* flowers and shoots, DM.

Notes: Widely distributed in all the warm areas of the Old World. It feeds mainly on halophytes of the families Amaranthaceae (Chenopodioidae) and Zygophyllaceae, but it has been recorded also on plants of other families (Brassicaceae, Capparaceae, Solanaceae, etc.) (LINNAVUORI, CARAPEZZA & KMENT, 2014).

****Heterotoma planicornis* (Pallas, 1772)**

Material examined: Malta, Buskett, 20.vi.2012, 1 ex., DM.

Notes: Distributed in most European countries, introduced in North America (USA and Canada) and Hawaii islands. It is a zoophytophagous species living on various shrubby and bushy plants where, in addition to sucking sap from plant tissues, preys upon small insects, mainly aphids; it is known also as an egg predator (KERZHNER & JOSIFOV, 1999; KMENT & BRYJA, 2006).

***Horistus (Primihoristus) orientalis* (Gmelin, 1790)**

Material examined: Malta, Buskett, 27.iii.1989, 1 ex., DM; Ballut tal-Mgiebah, l/o Selmun, 23.ii.2000, 1 ex., DM.

***Liocoris tripustulatus* (Fabricius, 1781)**

Material examined: Malta, Fiddien, 20.vi.2012, 2 exx., DM. Gozo, Dwejra, 26.xii.2002, 1 ex., DM.

***Macrolophus melanotoma* (A. Costa, 1853)**

Material examined: Malta, St. Thomas Bay, 19.ii.1998, 2 exx., DM. Comino, Il-Hazina, 13.viii.2002, 3 exx., around artificial freshwater pool, DM.

Notes: New record for the island of Comino.

***Macrolophus pygmaeus* (Rambur, 1839)**

Material examined: Malta, Buskett, 20.vi.2012, 3 exx., DM. Gozo, Ramla, 28.i.1997, 1 ex., DM.

Notes: New record for the island of Gozo.

***Macrotylus (Alloeonycha) nigricornis* Fieber, 1864**

Material examined: Gozo, Dwejra, 25.iv.2003, 3 exx., DM.

****Orthops (Orthops) campestris* (Linnaeus, 1758)**

Material examined: Malta, Buskett, 24.vi.2003, 1 ex., attracted to light in mixed woodland of *Pinus/Cupressus*, DM; Buskett, 20.vi.2012, 1 ex., DM.

Notes: The species is present in almost all European countries, in North Africa (Morocco, Algeria and Tunisia), Turkey, Iran and Transcaucasia; its range extends eastwards to West Siberia. It is a phytophagous species feeding on several plants of the family Apiaceae; overwintering adults are often found on conifers.

****Orthops (Orthops) kalmii* (Linnaeus, 1758)**

Material examined: Malta, St. Thomas Bay, 19.ii.1998, 1 ex., DM; Gharghur, Wied id-Dis, 13.vi.2002, 1 ex., DM; Buskett, 20.vii.2002, 1 ex., DM.

Notes: Distribution and bionomics of this species coincide with those of *O. campestris*.

****Orthotylus (Melanotrichus) pusillus* Reuter, 1883**

Material examined: Malta, St. Thomas Bay, Munxar, 15.iii.2003, 2 exx., on *Suaeda vera*, DM.

Notes: Its distribution range includes southern Europe (southern Spain, Sicily, Greece), North Africa (Morocco, Algeria, Libya, Tunisia and Egypt), Near East (Jordan, Iraq, Israel, Syria), Iran and the Arabian Peninsula (UAE, Saudi Arabia, Yemen). It feeds on halophyte plants of the genera *Salsola* and *Suaeda* (Amaranthaceae: Salsoloideae) (LINNAVUORI, CARAPEZZA & KMENT, 2014).

***Pachyomella passerinii* (A. Costa, 1842)**

Material examined: Malta, Wied Babu, 2.ii.1997, 1 ex., DM.

***Pilophorus cinnamopterus* (Kirschbaum, 1856)**

Material examined: Malta, Buskett, 20.vi.2012, 1 ex., DM.

****Pilophorus perplexus* Douglas & Scott, 1875**

Material examined: Malta, Fiddien, 19.vi.2012, 1 ex., DM.

Notes: Widely distributed Euro-Mediterranean species, introduced into North America. It is a zoophytophagous species reported from a variety of different trees belonging to the families Araliaceae, Betulaceae, Fabaceae, Fagaceae, Juglandaceae, Rosaceae and Salicaceae (SCHUH & SCHWARTZ, 1988).

****Pinalitus conspurcatus* (Reuter, 1875)**

Material examined: Malta, St. Thomas Bay, Munxar, 25.v.2002, 1 ex., DM; Dingli, 5.i.1998, 1 ex., DM.

Notes: South-Mediterranean species (Portugal, South Spain, Principality of Monaco, Sicily, North Africa, Madeira, Canary Islands, Turkey, Cyprus and Israel) whose range extends to Yemen and Sudan (CARAPEZZA & CUSIMANO, 2014). Polyphagous species feeding on various plants; in Tunisia it was collected on *Tamarix* spp., *Rhus tripartitum*, *Ceratonia siliqua* and *Mimosa* (CARAPEZZA, 1997), in Spain on cultivated tangerine trees (RIBES *et al.*, 2008).

***Polymerus (Poeciloscytus) cognatus* (Fieber, 1858)**

Material examined: Malta, St. Thomas Bay, 22.xi.1989, 1 ex., DM. Gozo, Ramla, 9.viii.2002, 1 ex., DM.

***Taylorilygus apicalis* (Fieber, 1861)**

Material examined: Malta, St. Thomas Bay, 19.ii.1998, 1 ex., DM; Marsaskala, 15.vi.2012, 3 exx., DM; Mtahleb, 19.vi.2012, 1 ex., DM.

***Trigonotylus pulchellus* (Hahn, 1834)**

Material examined: Malta, Buskett, 15.vii.1997/24.vi.2003, 2 exx., attracted to light, DM; Mtahleb, Wied il-Buzbies, 19.vi.2012, 1 ex., DM.

***Tuponia (Chlorotuponia) brevirostris* Reuter, 1883**

Material examined: Malta, Birzebbugia, 15.vi.2012, 1 ex., DM.

****Tuponia (Tuponia) mixticolor* (A. Costa, 1862)**

Material examined: Malta, Birzebbugia, 15.vi.2012, 1 ex., DM.

Notes: Widely distributed in southern Europe, Macaronesia, northern areas of Africa, Near East, Arabian Peninsula (UAE, Saudi Arabia, Yemen), Iran and Central Asia; introduced to western and central Europe (Germany, Hungary, United Kingdom). As most species of the genus *Tuponia*, it feeds exclusively on tamarisks (*Tamarix* spp.) (LINNAVUORI, CARAPEZZA & KMENT, 2014).

***Zanchius breviceps* (Wagner, 1951)**

Material examined: Malta, Paola, Addolorata Cemetery, 18.viii.2011, 14 exx., under leaves of *Ficus carica*, DM.

Notes: MIFSUD *et al.* (2012) reported this mirid in a study on the arthropods associated with *Ficus* in the Maltese Islands. Malta is the sole European country for the distribution range of *Z. breviceps* which was previously known only from the Middle East and the northern Afrotropical region.

Family **Nabidae** A. Costa, 1853

***Himacerus (Anaptus) major* (A. Costa, 1842)**

Material examined: Gozo, Dwejra, 16.x.1997, 1 ex., DM.

Notes: New record for the island of Gozo.

***Nabis (Aspilaspis) viridulus* Spinola, 1837**

Material examined: Malta, Marsaskala, 15.vi.2012, 1 ex., DM. Gozo, Marsalforn, 16.vii.1989, 1 ex., piercing humans in coastal area, DM.

Notes: New record for the island of Malta.

***Nabis (Tropiconabis) capsiformis* Germar, 1838**

Material examined: Malta, Wied tal-Isqof, 16.vii.2002, 1 ex., DM; Qrendi, 1.iv.2004, 1 ex., DM; Birzebbugia, 15.vi.2012, 2 exx., DM.

Family **Anthocoridae** Fieber, 1836

***Anthocoris nemoralis* (Fabricius, 1794)**

Material examined: Malta, Wardija, 23.ii.2000, 8 exx., on *Lycium intricatum*, DM; Buskett, 20.vii.2002/20.vi.2012, 4 exx., DM; Mtaħleb, 19.vi.2012, 1 ex., DM.

***Cardiastethus nazarenus* Reuter, 1884**

Material examined: Comino, Il-Hazina, 13.viii.2002, 1 ex., around artificial freshwater pool, DM.

Notes: New record for the island of Comino.

****Elatophilus (Euhadrocerus) crassicornis* (Reuter, 1875)**

Material examined: Malta, Buskett, 20.vii.2002, 1 ex., DM.

Notes: W-Mediterranean species known only from few localities in Southern Spain (including Mallorca), Italy (Liguria, Sicily and Pantelleria), Algeria and Tunisia. *Elatophilus crassicornis* is known to live on Aleppo pine (*Pinus halepensis*) (CARAPEZZA, 1988).

***Lyctocoris (Lyctocoris) campestris* (Fabricius, 1794)**

Material examined: Malta, Buskett, 12.ii.2000, 1 ex., in decaying vegetation, DM; Qormi, Hal-Farrug, 26.ii.2003, 4 exx., under bark of *Ceratonia siliqua*, DM. Gozo, Ramla, 30.iii.2002, 2 exx., in coastal sand dunes, DM.

Notes: New record for the island of Gozo.

***Orius (Orius) laevigatus laevigatus* (Fieber, 1860)**

Material examined: Malta, St. Thomas Bay, 19.ii.1998, 1 ex., DM; Buskett, 12.ii.2000, 1 ex., in decaying vegetation, DM. Gozo, Ramla, 30.iii.2002, 1 ex., in coastal sand dune, DM.

Notes: New record for the island of Gozo.

***Orius (Orius) niger* (Wolff, 1811)**

Material examined: Malta, Marsaskala, 15.vi.2012, 1 ex., DM.

****Scoloposcelis pulchella angusta* Reuter, 1876**

Material examined: Malta, Delimara, 25.x.1989, 1 ex., under bark of *Acacia* sp., DM.

Notes: Central Asian-European species whose distribution extends from western Spain to Mongolia; in the Mediterranean region the nominate subspecies is substituted by the ssp. *angusta* Reuter, 1876. Malta is the southernmost limit in the distribution of the species. It lives on the bark of trees, mainly conifers, entering the galleries of Scolytidae to prey on their larvae (PÉRICART, 1972).

***Xylocoris (Proxylocoris) galactinus* (Fieber, 1836)**

Material examined: Malta, Buskett, 12.ii.2000, 1 ex., in decaying vegetation, DM.

Family **Cimicidae** Latreille, 1802

***Cimex lectularius* Linnaeus, 1758**

Material examined: Malta, Hal-Safi (detention centre), 1.vi.2012, 2 exx., DM.

Family **Reduviidae** Latreille, 1807

Coranus (Coranus) griseus (Rossi, 1790)

Material examined: Gozo, Ramla, 29.xii.2002, 1 ex., DM.

Ectomocoris (Ectomocoris) ululans (Rossi, 1790)

Material examined: Malta, Rabat, 4.vi.1999, 1 ex., PS.

****Empicoris brevispinus (Puton, 1889)***

Material examined: Malta, Buskett, 20.vi.1971, 1 ♀, AC.

Notes: W-Mediterranean-Macaronesian species known from Azores, Madeira and Canary Islands, Morocco, Algeria, Spain, France (including Corsica) and Italy (including Sardinia and Sicily). Its bionomics is unknown (PUTSHKOV & MOULET, 2009).

****Empicoris mediterraneus Hoberlandt, 1956***

Material examined: Malta, Mellieha Bay, 25.vi.1971, 1 ♂, AC.

Notes: Turanic-Mediterranean species whose distribution extends from Portugal to Uzbekistan and in Western Europe northwards to northern France, Great Britain and Ireland. It favours dry grassy areas where it lives on the ground and under vegetation (PUTSHKOV & MOULET, 2009).

Peirates strepitans Rambur, 1839

Material examined: Malta, Ghajn Rihana, 20.viii.1989, 2 exx., DM; Qrendi, 19.vii.2003, 1 ex., DM; Rabat, 20.viii.2001, 1 ex., light trap, PS.

Ploiaria domestica Scopoli, 1786

Material examined: Gozo, Ramla, 16.x.1997, 1 ex., DM.

Reduvius pallipes Klug, 1830

Material examined: Malta, Wied Babu, 3.vii.2002, 1 ex., DM.

Reduvius personatus (Linnaeus, 1758)

Material examined: Malta, St. Thomas Bay, Munxar, 25.v.2002, 1 ex., DM.

Rhynocoris (Rhynocoris) erythropus (Linnaeus, 1767)

Material examined: Malta, St. Thomas Bay, 24.iii.1989/6.vii.1989, 2 exx., DM; Wied Babu, 24.vi.1989, 1 ex., DM; Qrendi, 19.vii.2003, 1 ex., DM.

Infraorder **PENTATOMOMORPHA** Leston, Pendergrast & Southwood, 1954
Family **Aradidae** Brullé, 1836

****Aradus flavicornis* Dalman, 1823**

Material examined: Malta, Wied tal-Isqof, 2.viii.2002, 6 exx., DM.

Notes: Holomediterranean species whose distribution extends to Canary Islands, northern tropical Africa (Sierra Leone and Nigeria) and Arabian Peninsula (Saudi Arabia and Yemen); its biology is unknown since most specimens were collected at light (HEISS & PÉRICART, 2007).

Family **Lygaeidae** Schilling, 1829

***Apterola (Apterola) kuenckeli kuenckeli* Mulsant & Rey, 1866**

Material examined: Malta, St. Thomas Bay, Tal-Munxar, 13.v.2002, 1 ex., on flowers of *Cynara cardunculus*, DM. Gozo, Qolla l-Bajda, 30.vii.1989, 2 exx., DM.

***Caenocoris nerii* (Germar, 1847)**

Material examined: Malta, Mellieħa Bay, 3.iii.2002, 1 ex., DM; Buskett, 8.vii.2011, 2 exx., on *Populus alba*, DM.

****Graptostethus servus servus* (Fabricius, 1787)**

Material examined: Malta, Wied iz-Zurrieq, 20.ii.1990, 1 ex., L. Fancello leg., MCSN.

Notes: Distributed worldwide in tropics and subtropics and in scattered localities of the Mediterranean region. It is a polyphagous species; in the past it was regarded as injurious to cotton and other cultivations (PÉRICART, 1999a) but those economic host plant records seem rather doubtful (SCHAEFER & PANIZZI, 2000).

***Horvathiolus gibbicollis* (A. Costa, 1882)**

Material examined: Malta, St. Thomas Bay, Munxar, 1.ix.2010, 3 exx., DM.

***Lygaeosoma sardeum* Spinola, 1837**

Material examined: Gozo, Marsalforn, 29.vii.1989, 1 ex., DM.

***Lygaeus creticus* Lucas, 1854**

Material examined: Malta, Msida, 2.v.2002, 1 ex., DM; St. Thomas Bay, 20.vi.2010, 1 ex., DM; Marsa, Ghammieri, 13.v.2002, 1 ex., DM.

Nysius ericae ericae (Schilling, 1829)

Material examined: Malta, St. Thomas Bay, 19.ii.1998, 1 ex., DM; Mtahleb, 19.vi.2012, 1 ex., DM. Gozo, Ramla, 29.xii.2002, 2 exx., DM.

Notes: New record for the island of Gozo.

Nysius graminicola graminicola (Kolenati, 1845)

Material examined: Malta, St. Thomas Bay, 23.vii.1989, 1 ex., DM; Mellieha Bay, 3.iii.2002, 1 ex., DM. Comino, Il-Hazina, 13.viii.2002, 2 exx., around artificial freshwater pool, DM.

Spilostethus pandurus (Scopoli, 1763)

Material examined: Malta, St. Thomas Bay, 6.vii.1989, 1 ex., DM; Ghar Lapsi, 12.v.2002, 2 exx., on flowers of *Cynara cardunculus*, DM.

Family **Geocoridae** Dahlbom, 1851

Geocoris (Geocoris) megacephalus (Rossi, 1790)

Material examined: Malta, Ghajn Rihana, 20.viii.1989, 2 exx., DM; Birzebbugia, 15.vi.2012, 1 ex., DM; Hagar Qim, 22.x.1989, 1 ex., DM. Gozo, Ramla, 18.x.2001, 1 ex., DM.

Notes: New record for the island of Gozo.

Henestaris laticeps laticeps (Curtis, 1836)

Material examined: Malta, Mellieha Bay, 3.iii.2002, 1 ex., DM.

Family **Artheneidae** Stål, 1872

Artheneis foveolata Spinola, 1837

Material examined: Gozo, Ramla, 28.iii.2010, 2 exx., DM.

Notes: New record for the island of Gozo.

Family **Heterogastridae** Stål, 1872

Heterogaster urticae (Fabricius, 1775)

Material examined: Malta, Buskett, 12.ii.2000, 1 ex., in decaying vegetation, DM; Wardija, 27.iii.2010, 1 ex., in leaf litter under *Quercus ilex*, DM; Marsaskala, 15.vi.2012, 3 exx., DM.

Family **Oxycarenidae** Stål, 1862

**Brachyplax tenuis* (Mulsant & Rey, 1852)

Material examined: Malta, Mtahleb, 2.v.1997, 1 ex., under *Cystus monspeliensis*, DM.

Notes: Central Asian-Mediterranean species whose distribution extends from Spain and Morocco to Kirghizistan; it is also known from Lampedusa (CARAPEZZA, 1995). It is a phytophagous species feeding on several Papaveraceae.

****Macroplox fasciata fasciata* (Herrich-Schäffer, 1835)**

Material examined: Malta, Mtahleb, 2.v.1997, 1 ex., under *Cystus monspeliensis*, DM.

Notes: The nominotypical subspecies is widely distributed in southern and Central Europe, North Africa, Near East (Israel, Jordan, Lebanon, Syria), Transcaucasia, north-western and south-western parts of Iran; a separate subspecies, *Macroplox fasciata blancae* Hoberlandt, 1943, is known from Iraq, central and southern Iran, UAE and Turkmenistan (PÉRICART, 2001; LINNAVUORI, KMENT & CARAPEZZA, 2014). It feeds on various genera of the family Cistaceae (*Cistus*, *Helianthemum*, *Tuberaria*, *Fumana*, etc.) (PÉRICART, 1999b).

***Metopoplax ditomoides* (A. Costa, 1847)**

Material examined: Malta, Wied Babu, 3.vii.2002, 1 ex., DM; Buskett, 20.vii.2002, 1 ex., DM; Zejtun, 8.v.2002, 1 ex., DM.

***Oxycarenus (Oxycarenus) hyalinipennis* (A. Costa, 1843)**

Material examined: Malta, Mtahleb, 19.vi.2012, 1 ex., DM.

***Oxycarenus (Oxycarenus) lavaterae* (Fabricius, 1787)**

Material examined: Malta, Salina, 19.vii.1989, 1 ex., DM.

Family **Rhyparochromidae** Amyot & Serville, 1843

***Aellopus atratus* (Goeze, 1778)**

Material examined: Malta, Hagar Qim, 22.x.1989, 1 ex., DM.

***Aphanus rolandri* (Linnaeus, 1758)**

Material examined: Malta, Zejtun, 22.ii.1989/8.v.2002, 2 ex., DM.

***Beosus maritimus* (Scopoli, 1763)**

Material examined: Malta, Fiddien, 27.vi.1989, 1 ex., DM. Gozo, Wied tax-Xlendi, 15.vii.1989, 1 ex., DM.

***Dieuches armatipes* (Walker, 1872)**

Material examined: Malta, Buskett, private grounds of Verdala Palace, 5.iv.2002, 2 ex., DM; Delimara, 22.xi.1989, 1 ex., DM; Chadwick Lakes, 20.i.2002, 1 ex., DM; Marsa, Ghammieri, 19.ii.2000, 1 ex., DM.

Emblethis griseus (Wolff, 1802)

Material examined: Malta, Xorb il-Ghagin, 2.vii.1989, 1 ex., DM; St. Thomas Bay, 6.vii.1989, 1 ex., DM.

Emblethis verbasci (Fabricius, 1803)

Material examined: Malta, St. Thomas Bay, 6.vii.1989, 1 ex., DM.

Hyalochilus ovatulus (A. Costa, 1853)

Material examined: Malta, Buskett, 19.ii.2002/20.vi.2012, 2 exx., DM; Bahrija, 20.iv.2002, 1 ex., DM; Fiddien, 20.vi.2012, 1 ex., DM.

Lamprodema maura (Fabricius, 1803)

Material examined: Malta, Siggiewi, 5.x.2001, 1 ex., DM. Gozo, Marsalforn, 29.vii.1989, 1 ex., DM.

Notes: New record for the island of Gozo.

Liolobus walkeri (Saunders, 1876)

Material examined: Gozo, Wied tax-Xlendi, 26.xi.1989, 2 exx., DM.

Notes: New record for the island of Gozo.

Microtomideus leucodermus (Fieber, 1861)

Material examined: Malta, Delimara, Tas-Silg, 20.vii.1989, 1 ex., DM.

Xanthochilus saturnius (Rossi, 1790)

Material examined: Malta, Mosta, 4.viii.1989, 1 ex., DM; Ghajn Rihana, 20.viii.1989, 1 ex., DM.

Family **Berytidae** Fieber, 1851*Berytinus (Lizinus) montivagus* (Meyer-Dür, 1841)

Material examined: Malta, Mtahleb, 2.v.1997, 1 ex., DM. Gozo, Ramla, 8.xii.2002, 1 ex., DM; Qbajjar, 26.xii.2002, 1 ex., DM.

Notes: New record for the island of Gozo.

Family **Pyrrhocoridae** Amyot et Serville, 1843***Scantius aegyptius aegyptius* (Linnaeus, 1758)**

Material examined: Malta, Zejtun, 3.vii.1989, 1 ex., DM; St. Thomas Bay, 6.vii.1989, 1 ex., DM.

Family **Stenocephalidae** Dallas, 1852***Dicranocephalus agilis* (Scopoli, 1763)**

Material examined: Malta, St. Thomas Bay, 7.vii.1989, 1 ex., DM; Paradise Bay, 17.ii.2002, 1 ex., DM.

***Dicranocephalus albipes* (Fabricius, 1781)**

Material examined: Malta, Mtahleb, 19.vi.2012, 1 ex., DM.

***Dicranocephalus setulosus* (Ferrari, 1874)**

Material examined: Gozo, Wied tax-Xlendi, 26.xi.1989, 1 ex., DM.

Family **Rhopalidae** Amyot et Serville, 1843***Agraphopus lethierryi* Stål, 1872**

Material examined: Malta, Ghajn Rihana, 20.viii.1989, 1 ex., DM.

***Liorhyssus hyalinus* (Fabricius, 1794)**

Material examined: Gozo, Dwejra, 25.iv.2003, 1 ex., DM.

***Maccevethus corsicus corsicus* Signoret, 1862**

Material examined: Malta, Xorb il-Ghagin, 2.vii.1989, 1 ex., DM.

***Stictopleurus pictus* (Fieber, 1861)**

Material examined: Comino, Il-Hazina, 13.viii.2002, 1 ex., around artificial freshwater pool, DM.

Family **Alydidae** Amyot et Serville, 1843***Camptopus lateralis* (German, 1817)**

Material examined: Malta, Fomm ir-Rih, 1.vii.1989, 1 ex., DM; Bahrija, 20.iv.2002, 1 ex., DM; Zejtun, 31.viii.1989, 1 ex., 1989, DM.

****Heegeria tangirica* (Saunders, 1877)**

Material examined: Malta, Pellegrin, 11.ii.1990, 1 ex., DM.

Notes: Widely distributed in tropical Africa, Mediterranean region (Greece, Italy, Spain, Egypt, Morocco, Israel), Arabian Peninsula (Oman, Yemen), Iran and Pakistan (DOLLING, 2006). It is reported to live on Fabaceae of the genus *Retama* (BAENA in MOULET, 1995) but probably it can feed also on other plants since, as in the case of Malta, the species occurs also in areas where *Retama* is missing.

***Micrelytra fossularum* (Rossi, 1790)**

Material examined: Malta, Mosta, 4.viii.1989, 1 ex., DM; Wied Babu, 2.ii.1997, 2 exx., in copulation, DM.

Family **Coreidae** Leach, 1815

***Anoplocerus luteus* (Fieber, 1861)**

Material examined: Malta, Zejtun, 9.vi.1989, 1 ex., DM.

***Centrocoris variegatus* Kolenati, 1845**

Material examined: Malta, St. Thomas Bay, 25.vi.1989, 1 ex., on *Foeniculum vulgare*, DM; Armier, 18.vi.1989, 1 ex., DM.

***Plinachtus imitator* Reuter, 1891**

Material examined: Malta, Wied Babu, 5.i.1998, 2 exx., DM; Fomm ir-Rih, 29.x.2014, 2 exx., beating *Pistacia lentiscus*, DM.

Notes: This holo-mediterranean species is recorded from Greece (including Crete), Italy (Naples and Sardinia), Spain (including Mallorca), Portugal, Madeira, Canary Islands, Morocco, Algeria, Tunisia, Libya, Israel, Cyprus and Turkey (MOULET, 1995; KMENT & JINDRA, 2005); it lives exclusively on *Pistacia lentiscus* (Anacardiaceae) (MOULET, 1995). This species had already been recorded from Malta under the name of *Gonocerus insidiator* (Fabricius, 1787) by SCIBERRAS & SCIBERRAS (2010). Figure 5 of their paper depicts in lateral view a specimen photographed at Simar Nature Reserve; the image shows very clearly the most important diagnostic character of *Gonocerus imitator*, i.e. the presence of two black longitudinal bands along the external dorsal margins of the head, starting from the posterior margin, crossing the ocelli, running parallel to the inner margins of the eyes and interrupted before the antennal tubercles (MOULET, 1995).

***Strobilotoma typhaecornis* (Fabricius, 1803)**

Material examined: Malta, Wied Babu, 1.ii.1997, 1 ex., DM.

Family **Cydnidae** Billberg, 1820***Byrsinus albipennis* (A. Costa, 1853)**

Material examined: Gozo, Ramla, 21.ii.2000, 1 ex., in sand dune with associated vegetation, DM; Ramla, 29.xii.2002, 1 ex., DM.

Notes: New record for the island of Gozo.

***Crocistethus waltlianus* (Fieber, 1837)**

Material examined: Malta, Zejtun, 23.ii.1989, 1 ex., DM.

***Cydnus aterrimus* (Forster, 1771)**

Material examined: Malta, Delimara, Tas-Silg, 20.vii.1989, 1 ex., DM; Birkirkara, 27.v.2010, hundreds of specimens observed along sides of roads, DM.

***Geotomus punctulatus* (A. Costa, 1847)**

Material examined: Malta, Chadwick Lakes, 26.ii.1997, 2 exx., DM; Marsaxlokk, Balluta saltmarsh, 15.ix.1989/26.i.1990, 2 exx., DM.

***Macroscytus brunneus* (Fabricius, 1803)**

Material examined: Gozo, Wied tax-Xlendi, 15.vii.1989, 1 ex., DM.

Family **Scutelleridae** Leach, 1815***Odontotarsus caudatus* (Burmeister, 1835)**

Material examined: Malta, Wied Qirda, 2.iii.1986, 1 ex., AS; Siggiewi, 7.iv.2010, 1 ex., DM.

***Odontoscelis signata* Fieber, 1861**

Material examined: Malta, Ghadira, 15.vi.1999, 1 ♂, J.C. Deeming, NMWC.

***Psacasta (Psacasta) exanthematica cerinthe* (Fabricius, 1787)**

Material examined: Malta, Wied il-Ghasel, 12.vi.1969, 1 ex., GL; Wied Qirda, 5.iv.1988, 1 ex., AS.

Notes: Despite the fact that this species was previously recorded from Malta (RIEGER, 1986; SCHEMBRI, 1993), such record was not included in AUKEMA & RIEGER (2006) or in AUKEMA *et al.* (2013).

***Solenosthedium bilunatum* (Lefèbvre, 1827)**

Material examined: Malta, Wied Qirda, 20.iii.1986, 1 ex., AS.

Family **Pentatomidae** Leach, 1815*Acrosternum millierei* (Mulsant & Rey, 1866)

Material examined: Malta, Wied Babu, 24.vi.1989, 1 ex., DM; Ta' Qali, 13.ii.2000, 1 ex., under bark of *Eucalyptus*, DM. Comino, Il-Hazina, 13.viii.2002, 1 ex., around artificial freshwater pool, DM.

Aelia acuminata (Linnaeus, 1758)

Material examined: Malta, Marsaxlokk, Balluta, 15.ix.1989, 2 exx., DM; Mtaħleb, Wied il-Busbies, 20.vi.2012, 1 ex., DM.

Ancyrosoma leucogrammes (Gmelin, 1790)

Material examined: Malta, Wied Babu, 24.vi.1989, 1 ex., DM; Buskett, 20.vi.2012, 1 ex., DM.

Bagrada (Bagrada) hilaris (Burmeister, 1835)

Material examined: Malta, Zejtun, 20.x.1989, 1 ex., DM.

Brachynema cinctum (Fabricius, 1775)

Material examined: Malta, St. Thomas Bay, 20.ii.1998, 1 ex., DM; Salina, 11.vii.2002, 1 ex., DM.

Carpocoris mediterraneus atlanticus Tamanini, 1958

Material examined: Malta, Armier, 18.vi.1989, 1 ex., DM; Wied Babu, 24.vi.1989, 1 ex., DM; Wied Qirda, 14.ix.1989, 1 ex., DM; Birzebbugia, Wied Has-Sabtan, 21.xii.2002, 1 ex., DM.

Notes: *Carpocoris mediterraneus* Tamanini, 1958 was synonymized with *Carpocoris fuscispinus* (Boheman, 1851) by RIBES *et al.* (2007) and was restored to validity together with its two subspecies, *Carpocoris mediterraneus mediterraneus* Tamanini, 1958 and *Carpocoris mediterraneus atlanticus* Tamanini by LUPOLI *et al.* (2013).

Eurydema (Eurydema) ornata (Linnaeus, 1758)

Material examined: Malta, St. Thomas Bay, 20.vi.2010, 1 ex., DM; Marsaskala, 16.vi.2012, 1 ex., DM.

Eysarcoris ventralis (Westwood, 1837)

Material examined: Malta, Delimara, Tas-Silg, 20.vii.1989, 1 ex., DM; Buskett, 20.vii.2002, 1 ex., DM; Mtaħleb, 19.vi.2012, 1 ex., DM; Bidnija, 20.ii.1998, 1 ex., DM.

***Graphosoma lineatum* (Linnaeus, 1758)**

Material examined: Malta, St. Thomas Bay, 6.vii.1989, 1 ex., on *Foeniculum vulgare*, DM; Bahrija, 20.iv.2002, 1 ex., DM.

***Holcostethus (Holcostethus) albipes* (Fabricius, 1781)**

Material examined: Malta, Zejtun, 21.ii.1989, 1 ex., DM; Chadwick Lakes, 19.iii.2002, 1 ex., DM.

***Nezara viridula* (Linnaeus, 1758)**

Material examined: Malta, Zejtun, 5.ix./20.xii.1989, 2 exx., DM; Paradise Bay, 17.ii.2002, 1 ex., DM.

***Rhaphigaster nebulosa* (Poda, 1761)**

Material examined: Malta, Girgenti Valley, 17.iii.1990, 1 ex., DM; Ghajn Hadid, 11.iii.1990, 1 ex., DM; Marfa, 20.iii.1999, 1 ex., at light, AS.

***Sciocoris (Sciocoris) helferii* Fieber, 1851**

Material examined: Malta, Zejtun, 13.vi.1989, 1 ex., DM; Ghajn Rihana, 20.viii.1989, 1 ex., DM.

***Sciocoris (Neosciocoris) sideritidis* Wollaston, 1858**

Material examined: Malta, Fiddien, 19.vi.2012, 1 ex., DM; Birzebbugia, 15.vi.2012, 1 ex., DM.

DISCUSSION

In the present work 21 species of Heteroptera are recorded for the first time, in addition to 15 additional new records for individual islands within the Maltese archipelago. Earlier records of *Capsodes gothicus* (Linnaeus, 1758) and *Gonocerus insidiator* (Fabricius, 1787) from Malta are incorrect and should refer to *C. vittiventris* (Puton) and *G. imitator* Reuter respectively. The possible presence in Malta of *Leptoglossus phyllopus* (Linnaeus) based on observations made by previous authors is excluded.

Even though CUESTA SEGURA *et al.* (2010) produced an excellent work in critically evaluating the checklist of Maltese Heteroptera, we cannot simply add the new records found in the present work to this list in order to get a total number of recorded species. In fact, more work is required in order to make this checklist more reliable (e.g. *Odontotarsus caudatus* (Burmeister, 1835) was counted twice in the checklist, once among Scutelleridae where it correctly belongs and by mistake in Pentatomidae). In recent years, several revisions on different groups of Heteroptera have been published and a more reliable checklist can only be produced when there will be the possibility to re-examine material on which several problematic records were based. For the present work, we suggest that for various reasons the following 15 species should be excluded from the Maltese heteropteran fauna or at least regarded as doubtful. These include the following 11 species for which

there is no original record: *Anthocoris nemorum* (Linnaeus, 1761); *Byrsinus fuscipes* (Mulsant & Rey, 1866); *Kalama tricornis* (Schrank, 1801); *Kleidocerys resedae resedae* (Panzer, 1797); *Nepa cinerea* Linnaeus, 1758; *Notonecta (Notonecta) glauca glauca* Linnaeus, 1758; *Piesma (Piesma) maculatum* (Laporte de Castelnau, 1833); *Plea minutissima minutissima* Leach, 1817; *Ranatra (Ranatra) linearis* (Linnaeus, 1758); (*Trigonotylus caelestialium* (Kirkaldy, 1902) and *Xylocoris (Xylocoris) cursitans* (Fallen, 1807); two species without a reliable record: *Sciocoris (Neosciocoris) conspurcatus* Klug, 1845 and *Sciocoris (Neosciocoris) pallens* Klug, 1845 and one species which is a probable misidentification of *Odontoscelis signata*: *Odontoscelis (Odontoscelis) lineola* Rambur, 1839. The species *Peritrechus angusticollis* (Sahlberg, 1848) should also be excluded (see PÉRICART, 1999c). In the list of CUESTA SEGURA *et al.* (2010), three additional species were recorded from the Maltese Islands only on the basis of AUKEMA & RIEGER (2001). However, these are not regarded as doubtful because their presence in Malta was already highlighted in other publications. *Cosmopleurus fulvipes* (Dallas, 1852) was recorded by PÉRICART (1999a) on the basis of one Maltese specimen from the Ernst Heiss collection, Innsbruck, Austria; *Geocoris acuticeps* Signoret, 1881 was also recorded by PÉRICART (1999a) based on an old Maltese specimen in Puton's collection, MNHN; and *Megalonotus puncticollis* (Lucas, 1849) was recorded by PÉRICART (1999c) on the basis of a Maltese specimen housed in the BMNH.

Finally, the following two species were recorded from Malta after the publication of CUESTA SEGURA *et al.* (2010): (i) *Leptoglossus occidentalis* Heidemann, 1910 [Coreidae] – This invasive species, accidentally imported from Italy, was recorded from Malta by SCIBERRAS & SCIBERRAS (2010). The same authors, noticing the morphological diversity exhibited by different specimens of *L. occidentalis*, conjectured the possible presence in Malta of one additional species of the same genus, i.e. *Leptoglossus phyllopus* (Linnaeus, 1767), a taxon never observed outside the American continent; in absence of sound evidence, this assumption should be regarded as groundless; and (ii) *Ventocoris (Astirocoris) falcatus* (Cyrillus, 1791) [Pentatomidae] – A female of this species collected in Malta by Ruhmer (ZMHB), without indications of precise locality or date, was reported by DURSUN & FENT (2013). The same or another specimen, preserved in the same Museum, was recorded also by AUKEMA *et al.* (2013). Gustav Ferdinand Ruhmer was a German botanist who visited Malta on his way to Tripoli in December 1882 and collected some plants and insects now preserved in the Museum of Berlin. Since the species has not been collected in Malta for more than 130 years, it could be extinct from the island. *Ventocoris falcatus* is a W-Mediterranean species recorded from Italy (southern regions, Sardinia, Sicily, Aegadian and Pantelleria Islands), South France, Spain, Portugal (?), Morocco, Algeria, Tunisia, Libya and Malta. Wherever found it is often localised; in France it is probably extinct since it has never been found since 1928. Its biology is poorly known; it is reported to live on *Hirschfeldia incana* and other Brassicaceae (LUPOLI, 1997; PÉRICART, 2010).

The number of species for the Maltese archipelago and for the individual islands of Malta, Gozo and Comino are summarized in table 1, where they are subdivided into families and compared with the Heteroptera occurring in Sicily and on Sicilian southern islands.

Table 1: Distribution of species among heteropteran families in the Maltese Islands, Sicily and Sicilian southern islands (Abbreviations: Ma = Malta; Go = Gozo; Co = Comino; Ma Is = Maltese Islands; Si = Sicily; Pa= Pantelleria; La = Lampedusa; Li = Linosa). Numbers followed by “?” refer to doubtful records.

	Ma	Go	Co	Ma Is	Si	Pa	La	Li
Ceratocombidae					1			
Nepidae				2?	2			
Ochteridae					1			
Corixidae	3		1	3	14	2	3	
Naucoridae					1			
Notonectidae	2	2	2	2+1?	6		1	
Pleidae				1?	1			
Mesoveliidae	1	1		1	1			
Hebridae					1			
Hydrometridae					1			
Veliidae	2	2		2	5	1		
Gerridae	1			1	8			
Saldidae	1	1		1	10	2		
Leptopodidae	1			1	4		1	
Tingidae	8	4	1	9+1?	32+2?	3	3	1
Microphysidae					2	1		
Miridae	43+1?	13	5	48+1?	236	27	22	1
Nabidae	6	2	1	6	14	2	3	
Anthocoridae	14	2	1	14+2?	28	8+1?	5	2
Cimicidae	1			1	1			
Reduviidae	13	4	2	13	36+2?	4	3	1
Aradidae	1			1	7	1		
Lygaeidae	15	7	4	15+1?	25	7	6	1
Blissidae					3			
Cymidae	1			1	3	1		
Geocoridae	4	1		4	8	2	3	
Artheneidae	1	1		1	3			
Heterogastridae	1	1		1	4		2	1
Oxycarenidae	6	2		6	17	3+1?	2	
Rhyparochromidae	29	10	2	29+1?	95	18+1?	5	1
Piesmatidae				1?	3			
Berytidae	2	1	1	2	14	2	2	
Pyrrhocoridae	1	1	1	1	2	1	2	1
Stenocephalidae	4	2	2	4	4	2	1	
Rhopalidae	8	4	4	10	18	2	1	
Alydidae	3		1	3	4			
Coreidae	11	3	2	12	32	9+1?	3	
Cydnidae	9	4	2	10+1?	24	4	6	1
Plataspidae					1			
Acanthosomatidae					2			
Scutelleridae	6+1?	1+1?	2	7+1?	17	2	1	1
Pentatomidae	23+2?	5	4	23+2?	70	16	8	1
	221+4?	74+1?	38	232+15?	761+4?	120+4?	83+1?	12

An interesting datum which can be deduced from the table confirms an observation made by RIEGER (1995) on Santorini Island (Aegean Sea) when comparing its heteropteran fauna with that of Greece. He noticed an increase in soil-inhabiting species (Lygaeoidea (excl. Berytidae and Piesmatidae) and Cydnidae), generally feeding on seeds or roots and a corresponding decrease of phytophagous species (mainly Miridae). Lygaeoidea (excl. Berytidae and Piesmatidae) and Cydnidae, which constitute 24.9% of Heteroptera in Sicily, rise to 30.2% in Malta, 32.8% on Gozo, 29.1% on Pantelleria and 28.9% on Lampedusa. On the contrary Miridae, which are 30.8% of Heteroptera in Sicily, drop to 18.4% in Malta, 18.7% on Gozo, 22.5% on Pantelleria and 26.5% on Lampedusa.

It is difficult to predict how many more species of Heteroptera can be found in the Maltese Islands, since the faunas of isolated territories are the results of extinction/colonization processes affected by several factors such as total surface area, altitude, degree of insularity (i.e. distance from the mainland), diversity of biotopes, plant species richness, etc. Looking at the relationship between number of species and surface area of the main islands of the Maltese archipelago in comparison with those of Pantelleria and Lampedusa (Table 2), whose Heteroptera may be regarded as well known, one can immediately notice a lower species richness in Malta and Gozo, particularly in the latter. If the number of Heteroptera known from Malta is probably not far from the final one, this could at least double for the island of Gozo.

Table 2: Area and number of species of Heteroptera in Malta, Gozo, Pantelleria and Lampedusa

	Malta	Gozo	Pantelleria	Lampedusa
Surface area	246 km ²	67 km ²	83 km ²	20.2 km ²
Number of species	221	74	120	83

The Maltese Heteroptera are of Sicilian origin, considering that the species which are not present in Sicily are only 3% of the total (*Scoloposcelis pulchella angusta* Reuter, 1876; *Gonocerus imitator* Reuter, 1891; *Cosmopleurus fulvipes* (Dallas, 1852); *Geocoris (Geocoris) acuticeps* Signoret, 1881; *Dicyphus (Brachyceroea) albonasutus* Wagner, 1951; *Zanichus breviceps* Wagner, 1951 and *Kalama lugubris* (Fieber, 1861)). On the other hand, the species of Maltese Heteroptera not occurring in Tunisia are 46, i.e. 20% of the total. The single case of a North African taxon present in Malta but not in Sicily is that of the subspecies *Scantius aegyptius aegyptius* (Linnaeus, 1758) which in Sicily is substituted by the European subspecies *S. aegyptius rossii* Carapezza, Kerzhner & Rieger, 1999.

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