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Notes on Geometridae of the Maltese Islands with new records (Lepidoptera: Geometridae)

P. Sammut, A. Seguna & A. Catania

Abstract

Nine species from the family Geometridae, *Peribatodes umbraria* (Hübner, [1809]), *Isturgia pulinda*, (Walker, 1860), *Isturgia spodiaria* (Lefèbvre, 1831), *Idaea rainerii* Hausmann, 1994, *Idaea longaria* (Herrich-Schäffer, 1852), *Idaea dimidiata* (Hufnagel, 1767), *Eupithecia oxycetrata* (Rambur, 1833), *Eupithecia ultimaria* Boisduval, 1840 and *Eupithecia unedonata* Mabile, 1868 are recorded for the first time from the Maltese archipelago. Errors in a previous work by the first author (SAMMUT, 2000) are rectified.

KEY WORDS: Lepidoptera, Geometridae, new records, Maltese Islands.

Notas sobre Geometridae de Malta con nuevas citas (Lepidoptera: Geometridae)

Resumen

Nueve especies de la familia Geometridae, *Peribatodes umbraria* (Hübner, [1809]), *Isturgia pulinda*, (Walker, 1860), *Isturgia spodiaria* (Lefèbvre, 1831), *Idaea rainerii* Hausmann, 1994, *Idaea longaria* (Herrich-Schäffer, 1852), *Idaea dimidiata* (Hufnagel, 1767), *Eupithecia oxycetrata* (Rambur, 1833), *Eupithecia ultimaria* Boisduval, 1840 y *Eupithecia unedonata* Mabile, 1868 se citan por primera vez para el archipiélago maltés. Se rectifican errores en un trabajo anterior por el primer autor (SAMMUT, 2000).

PALABRAS CLAVE: Lepidoptera, Geometridae, nuevas citas, Malta.

Introduction

Following the publication, *The Geometridae Moths of Europe*, edited by Dr. Axel Hausmann and correspondence with himself, Mr. Peder Skou and Dr. Vladimir Mironov, the undetermined specimens from this family in the collections of the authors and other collections in Malta were reviewed. At the same time, Dr. Hausmann and Mr. Skou pointed out to us some error of determination in the work of SAMMUT (2000). The results are published hereunder.

Unless otherwise stated, the material examined was collected at various sources of UV light and is deposited in the collections of the authors. For each of the newly recorded species a vernacular name in Maltese is proposed.

Peribatodes umbraria (Hübner, [1809])

Material examined: MALTA, 1 ♀, Pembroke, 4-V-1996, A. Catania leg.

A new species for the Maltese islands. The identity of this species has been confirmed by Dr. Hausmann.

It is known to occur in countries bordering the Mediterranean: the Iberian peninsula, France,

Corsica, Italy, Sicily, Sardegna, Greece, Crete, Cyprus and Albania. Recorded also from Bulgaria, Hungary, Macedonia, Romania, Slovenia, Slovakia, Switzerland, NW Russia and the Ukraine. Outside Europe it is also known from North Africa and the Near East. (HAUSMANN *et al.*, 2004).

Various sites on the internet give *Quercus robur* as the foodplant of the caterpillar. PROUT (1912-1916: 370) writes that the species is two brooded and cites the Olive tree as the larval host plant.

For this species we propose the Maltese name Qejjies tad-Dell.

Isturgia pulinda (Walker, 1860)

Material examined: MALTA, 1 ♂, Armier, 17-XI-2000, A. Seguna leg.; 21♂ ♂, 33 ♀ ♀, Mellieha, Marfa Ridge, Rdum tal-Madonna, 8-VIII-2007, leg. P. Sammut, J. J. Borg and A. Seguna (coll. Sammut & Seguna); 7 ♂ ♂, 13 ♀ ♀, same data but 16-VIII-2007; 8 ♂ ♂, 6 ♀ ♀, same data but 14-IX-2007, bred ex-female; 1 ♀, Mellieha, Marfa Ridge, Red Tower area, 20-VIII-2007, a. Catania leg.; 1 ♀, Naxxar, 2-VIII-2001, A. Seguna leg.; 1 ♀ Rabat, 3-V-1987 [gen. prep. Hausm.14617], leg. P. Sammut.

This species must have reached the Maltese Islands with one or more of the various species of *Acacia* imported during the late 1970 as part of an extensive landscaping and afforestation project. After a lapse of 20 years from when the first specimen was recorded, a fairly long series from this species was recorded at light from Rdum tal-Madonna at Marfa Ridge where an extensive grove of mature *Acacia* trees exist and with which the species is generally associated.

Many of the females collected from Rdum tal-Madonna laid eggs which hatched in five days. Larvae ignored *Acacia caryophylla* but fed willingly on *Acacia karroo* growing quite rapidly. They are of two colours, green with white lateral markings, or brown with lighter lateral markings. Pupation takes place loosely on the ground amongst leaf litter or in a very thin cocoon. Pupae hatch in about 7 to 9 days. The larva is also known to feed on *Acacia nilotica* and other species from the same genus.

The species was originally described from Sri Lanka (Ceylon). It is also known from the Oriental and Afro-tropical regions, North Africa, Saudi Arabia and the Yemen. In Europe it has been recorded from the Canary Islands, mainland Spain and Portugal and the Cape Verde Islands.

Note: The specimen recorded from Rabat in May of 1987 has been erroneously attributed to *Idaea manicaria* (Herrich-Schäffer, 1851) (SAMMUT, 2000: fig.273). For this species we propose the Maltese name as Isturgja Cara.

Isturgia spodiaria (Lefèbvre, 1831)

Material examined: MALTA, 1 ♂, Rabat, 8-XI-2000, leg P. Sammut.

Recorded from South Spain, South Italy and Sicily from where it was originally described. It is also from North Africa (PROUT, 1912-1916: 401). The larval host plants are not known, however, SCOBLE & KRÜGER (2002) associate this species with Fabaceae.

The single specimen was taken at UV light from a built up area facing agricultural land. We propose the Maltese name Isturgja Griza.

Cyclophora porata (Linnaeus, 1767)

References: *Cyclophora porata* F. (sic) (VALLETTA, 1973: 51); *Cyclophora porata* L. (SAMMUT, 1983b: 61); *Cyclophora porata* Linnaeus, 1767 (SAMMUT, 1984c: 51); *Cyclophora porata* (Linnaeus, 1767) (MÜLLER, 1996: 231); *Cyclophora porata* (Linnaeus, 1767) (SAMMUT, 2000: 155).

Mr. Skou pointed out to us that the specimen figured in SAMMUT (2000: fig. 262) is not this species but *Cyclophora pupillaria* (Hübner, [1799]). Whether the specimen reported by Valletta, taken in July 1948 (VALLETTA, 1973: 51), belongs to *C. porata* (Linnaeus, 1767) or not, could not be confirmed and the presence of this species in the Maltese Islands should be considered doubtful. In Malta, *Cyclophora pupillaria* is quite frequent and widely distributed.

Idaea attenuaria (Rambur, 1833)

References: *Sterrha attenuaria* Rbr. (VALLETTA, 1951b: 256); *Idaea attenuaria* Rbr.

(VALLETTA, 1973: 51); *Idaea attenuaria* Rambur (SAMMUT, 1983b: 62); *Idaea attenuaria* Rambur, 1833 (SAMMUT, 1984c: 53); *Idaea attenuaria* (Rambur, 1833) (MÜLLER, 1996: 234); *Idaea attenuaria* (Rambur, 1833) (SAMMUT 2000: 157); *Idaea attenuaria* (Rambur, 1833) (HAUSMANN, 2004: 97).

The specimens figured in SAMMUT (2000: fig. 271) is not this species but *Idaea manicaria* (Herrich-Schäffer, 1852) (Hausmann, per. comm.). The records of *attenuaria* by VALLETTA (1951: 256; 1973: 51) although not examined during this study, very probably are correct. All other references to *attenuaria* in Malta by later authors are on the authority of VALLETTA (1951: 256).

Idaea rainerii Hausmann, 1994

References: *Idaea fatimata* (Staudinger, 1895) – mis-identification – (SAMMUT, 2000: 159).

Material examined: MALTA, 1 ex., Pembroke, 23-V-1996, leg. A. Catania (coll. Catania)

This species has been erroneously recorded and figured as *Idaea fatimata* Staudinger, 1895 by the first author (SAMMUT, 2000: 159, fig. 275). *Idaea fatimata* is now placed in synonymy with *Idaea manicaria* (Herrich-Schäffer, 1851) (HAUSMANN, 2004: 149). Records of *fatimata* and *manicaria* in VALLETTA (1973: 50, 51) and DE LUCCA (1965: 513) are to be taken as correct.

In Europe *Idaea rainerii* has been found in SE Spain, Balearic Island, Southern Italy, Sardegna and Sicily. Outside Europe it is known from the North African coast in Algeria and Tunisia (HAUSMANN, 2004: 111).

It is reported as being uni- or bivoltine from May to mid-July and from late July to late August. The larval host plant is not known (HAUSMANN, 2004: 111).

We propose the Maltese name: Idja ta' Raineri.

Idaea obsoletaria (Rambur, 1833)

References: *Acidalia obsoletaria* Rbr. (CARUANA-GATTO, 1905: 21); *Acidalia obsoletaria* Rbr. (BORG, 1932: 16); *Idaea obsoletaria* Rbr. (SAMMUT, 1983b: 62); *Idaea obsoletaria* Rbr., 1833 (SAMMUT 1984c: 53); *Idaea obsoletaria* (Rambur, 1833) (SAMMUT, 2000: 158); *Idaea obsoletaria dierli* Hausmann, 1991 (HAUSMANN, 2004: 126).

Material examined: GOZO, 5 exx., Sannat, Ta' Cenc, 18-VII-2007, A. Seguna leg.; MALTA, 1 ex., Bahrija, Fomm ir-Rih, 24-VII-2002, P. Sammut leg.; 1 ex., Bahrija, Wied tal-Bahrija, 2-VII-1991 [gen. slide ZSM G12604], 2-VII-1991, P. Sammut leg.; 2 exx., Buskett, 6-VII-2004, A. Seguna leg.; 5 exx., Dingli, Dingli Cliffs, 13-VII-2001, A. Seguna leg.; 4 exx., Ghajn Tuffieha, 18-VI-1999, A. Seguna leg.; 1 ex., Mellieha, il-Kortin, 24-VII-2004, H. Borg-Barthet leg.; 1 ex., Naxxar, 29-VI-2001, A. Seguna leg.; 1 ex., same data but 8-VI-2002, A. Seguna leg.; 2 exx., Rabat, Dwejra, 25-VI-1999, A. Seguna leg.; 2 ex., same data but 21-VI-2002, P. Sammut and A. Seguna leg.; 1 ex., same data but 30-VI-2003, A. Seguna leg.; 1 ex., same data but 13-VII-2004, P. Sammut leg.; 2 exx., same data but 21-VII-2004, A. Seguna leg.; 3 exx., same data but 27-VII-2007, A. Seguna leg.; 1 ex., Siggiewi, Ghar Lapsi, 16-VII-1999, P. Sammut leg.; 3 exx., same data but 15-VI-1999, A. Seguna leg.; 3 exx., same data but 3-VIII-2001, A. Seguna leg.

Until very recently this species had been recorded only by CARUANA GATTO (1905: 21) and BORG (1932: 16). VALLETTA (1973) does not list this species, not even in the appendix of doubtful species. SAMMUT (2000: 158) listed this species as a probable error of identification. MIRONOV (2003) included Malta in the distribution of the species, most probably on the records in the literature.

From material sent to Dr. Hausmann by the authors for determination, the presence of this species on the Maltese archipelago is confirmed.

This Mediterranean-Turanian species occurs in all countries bordering the north Mediterranean, Austria and southern Czech Republic, southern Slovakia across the Balkan peninsula to Crimea. Outside Europe it is known from western Morocco, northern Algeria, Turkey, Cyprus, across Transcaucasia and northern Iran to northern Afghanistan and the central Asian mountains (HAUSMANN, 2004: 127). It is known in a number of subspecies. In Malta and Sicily, and reputedly

on Lampedusa (ROMANO & ROMANO, 1995) flies the ssp. *dierli* Hausmann, 1991 (HAUSMANN, 2004: 126).

The species is univoltine and on the Maltese Islands it appears to fly during July. The larva is said to be polyphagous on herbaceous plants (Hausmann 2004: 127).

For this species we propose the vernacular name Idja ta' Rambur.

Idaea dimidiata (Hufnagel, 1767)

References: *Idaea dimidiata* (Hufnagel, 1767) (HAUSMANN, 2004: 181).

Material examined: MALTA, 1 ex., Naxxar, 16-V-2003, A. Seguna leg. (coll. Sammut).

This West-Palaeractic and North American species is a new record for the Maltese Islands. The examined material has been identified by Dr. Hausmann. It is widely distributed in western, southern and central Europe, and to the north to southern Scandinavia. It is present on most of the Mediterranean islands (HAUSMANN, 2004: 182) Outside Europe it occurs in North Africa in Morocco (RUNGS, 1981) and from NW Turkey, Caucasus, Transcaucasia, N. Iran, Afghanistan and mountains in central Asia. It is also widespread in Canada and north United State (HAUSMANN, 2004: 182).

The species is said to be bivoltine (multivoltine in certain hot localities) and flies from late May to late September.

Larva polyphagous such as on *Prunus*, *Salix*, *Plantago*, *Galium*, *Polygonum*, *Rumex*, *Lactuca* and others (HAUSMANN, 2004: 182).

For this species we propose the Maltese name Idja Qsajra.

Idaea longaria (Herrich-Schäffer, 1852)

References: *Idaea longaria* (Herrich-Schäffer, 1852) (HAUSMANN, 2004: 146).

Material examined: MALTA, 1 ex., Mosta, 31-III-2002, J. Caruana leg. (coll. Sammut); 1 ex., Naxxar, 30-I-2001, A. Seguna leg.; 1 ex., Rabat, 10-V-1984, P. Sammut leg.

New species for Malta. Recorded in HAUSMANN (2004: 146) on the strength of the above three specimens.

This Mediterranean species is known from the southern Iberian peninsula, NE Spain and central Italy in isolated populations and from most of the Mediterranean islands. Outside of Europe it occurs on Fuerteventura (Canary Is.), across all of North Africa to the Levant (HAUSMANN, 2004: 147).

The species is known to be bi- or trivoltine, from early March to early May and again from late September to early December (HAUSMANN, 2004: 147).

Larva polyphagous on herbaceous plants such as *Taraxacum*, *Lactuca*, *Polygonum* and others (HAUSMANN, 2004: 147).

We propose the Maltese name Idja Mtawla Rari.

Eupithecia oxycedrata (Rambur, 1833)

Material examined: MALTA, 2 ♀ ♀, Mgarr, Gnejna Bay, 28-X-2004 leg. P. Sammut; Naxxar, 1 ex., 23-X-2003, A. Seguna leg.; 1 ex., same data but 10-IV-2006, A. Seguna leg.; Rabat, 1 ♀, 25-X-1991, leg. P. Sammut.

In Europe is species is found in countries bordering the Mediterranean, in Spain, southern Portugal, the Balearics, southern France, Corsica, Sardegna, Sicily, Italy, Slovenia, Croatia, Herzegovina, Montenegro, Macedonia, Bulgaria, Greece and Crete. Known also from western Romania and Crimea. Outside Europe it is known from North Africa from Morocco to Tunisia and from Turkey (MIRONOV, 2003: 150).

The species is known to be bivoltine, from early April to late June and again from early September to mid-October, depending on locality. Found on dry maquis, especially where junipers grow. The larva is known to feed on the needles and flowers of *Juniperus oxycedrus* (MIRONOV, 2003: 150). No *Juniperus* species are known to be native to the Maltese Islands and the very few that exist have been planted by man. It is very probable that, unless the presence of the species is purely migratory, locally the larval are utilizing an alternative host plant.

We propose the Maltese name Qejjies tal-nibru.

Note: The specimen recorded from Rabat in October 1991 and figured in SAMMUT (2000: fig. 295) has been determined by genitalia by Dr. Hausmann as belonging to this species and not to *Gymnoscelis rufifasciata* (Haworth, 1809)

Eupithecia ultimaria Boisduval, 1840.

Material examined: GOZO, 1 ex., Ramla l-Hamra, sand dunes, 9-VIII-2002 P. Sammut leg; MALTA, 1 ex., Bahrija, Fomm ir-Rih, 2-IV-2001, P. Sammut leg.; 1 ex., Melliha, il-Kortin, 21-X-2004, H. Borg-Barthet leg.; Naxxar, 1 ex., 19-X-2001, A. Seguna leg.; 1 ex., same data but 2-X-2003; 4 exx., same data but 10/30-IX-2004; 1 ex., Paradise Bay, 18-V-1997, A. Seguna leg.

This species is listed as occurring in Malta (MIRONOV, 2003). A small number of specimens of what appears to be a recently introduced species have been recorded, both from the island of Malta and the smaller sister island Gozo.

This Mediterranean-Turanian species occurs in Portugal and Spain, coastal western and Southern France, Italy, the Mediterranean islands including Cyprus, and Greece (MIRONOV, 2003). Recently also discovered in southern England and the Channel Islands (RILEY, 1985). Outside Europe it is known from North Africa: Morocco, Algeria, Tunisia, Libya, Egypt, Lebanon and Israel. Also known from Iraq and Iran (MIRONOV, 2003).

The species is bivoltine and is on the wing from late April to June and again from August till late October. The larvae are known to feed on the leaves and flowers of *Tamarix gallica*, a species which is quite common on the Maltese Islands.

For this species we propose the Maltese name Idja Ahharija, after the transliteration of the species name.

Eupithecia unedonata Mabilie, 1868

Material examined: MALTA, 1 ♀, Qrendi, San Niklaw, 25-X-2003, A. Seguna leg.

The identity of this new addition to the lepidoptero fauna of the Malta has been confirmed by Dr. Hausmann and Dr. Mironov.

This widespread Mediterranean species is found in Spain, France, Italy, Corsica, Sardegna, Sicily, Greece, Crete and the island of Rhodos. Outside Europe it is known from North Africa: Morocco, Algeria, Tunisia, Libya, Egypt, Israel, the Lebanon, Turkey and Transcaucasia (MIRONOV, 2003: 204).

The species is bivoltine and the pupa overwinters in a cocoon in the ground. The larva is known to feed on *Arbutus unedo*, *Thymelaea hirsuta* and *Rhus tripartita* (MIRONOV, 2003: 304). However none of these three species are native to the Maltese Islands, and if any of them exists here, it is in very small numbers in private or public gardens.

For this species we propose the Maltese name Qejjies tat-Tikka Sewda

Additional notes

Both Dr. Hausmann and Mr. Skou have pointed out to us (pers. comm.) that figures 256 and 257 (SAMMUT, 2000) represent the same species, namely *Aspitates ochrearia* (Rossi, 1794), and that the names for figure 284 and 285 are misplaced. Figure 284 is *Larentia malvata* and not *clavaria* while figure 285 is *clavaria* and not *malvata*.

Epirrhoe alternata (Müller, 1764), recorded by SEGUNA (2005: 167) from Dwejra from a single specimen collected during November of 2004 appears to have found its ideal habitat. Numerous specimens have recorded from Dwejra (more than 50 on a single night), Rabat, Naxxar, Gharghur, Simar Nature Reserve at Xemxija, Ghadira Bay, Melliha, Zurrieq, Qrendi, Mosta and Buskett. From Gozo Island it has been recorded from Dwejra Bay, Nadur, Ghajnsielem and Kercem. It has also been recorded from the small island of Comino.

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BIBLIOGRAPHY

- BORG, P., 1932.– *The Lepidoptera of the Maltese Islands*: 1-25 Government Printing Press, Malta.
- CARUANA GATTO, A., 1895.– Seconda Contribuzione alla Fauna Lepidotterologica dell'Isola di Malta - Eteroceri. Tipografia del "Malta": 1-32.
- DE LUCCA, C., 1965.– The place of the Lepidoptera in the Zoogeography of the Maltese Islands. - *Extrait des rapports et procès-verbaux de réunions de la C. I. E. S. M. M.*, **18** (2): 511-515
- HAUSMANN, A., 2004.– Sterrhinae.– In A. HAUSMANN (ed.).– *The Geometrid Moths of Europe*, **2**: 600 pp., Apollo Books, Stenstrup.
- HAUSMANN, A., MIRONOV, V., & VIIDALEP, J., 2004.– Fauna Europaea Geometridae.– *Fauna Europaea ver 1.1*, <http://www.faunaeur.org>
- MIRONOV, V., 2003.– Larentiinae II (Perizomini and Eupitheciini).– In A. HAUSMANN (ed.).– *The Geometrid Moths of Europe*, **4**: 463 pp. Apollo books, Stenstrup.
- MÜLLER, G., 1996.– In O. KARSHOLT & J. RAZOWSKI (eds).– *The Lepidoptera of Europe* : 218-249.
- PROUT, L. B., 1912-1916.– Geometridae. In A. SEITZ (ed.).– *The Macrolepidoptera of the World. The Palaearctic Geometridae*, **4**. 479 pp. Alfred Kernen, Stuttgart.
- ROMANO, F. P. & ROMANO, M., 1995.– Lepidoptera. In B. MASSA. Arthropoda di Lampedusa, Linosa e Pantelleria (canale di Sicilia, mar Mediterraneo).– *Il Naturalista Siciliano*, **19**. Suppl. (ser. 4): 714-716.
- SAMMUT, P., 2000.– Kullana Kulturali. 12 - Il-Lepidoptera.– *Pubblikazzjonijiet Indipendenza*: 246 pp. Malta.
- SEGUNA, A., 2005.– *Epirrhoe alternata* (O. F. Muller, 1764) new to the lepidopterofauna of the Maltese Islands (Lepidoptera: Geometridae).– *SHILAP Revta. lepid.*, **33**(130): 167-168.
- SCOBLE, M. J., & KRÜGER, M., 2002.– A review of the genera of Macariini with a revised classification of the tribe (Geometridae: Ennominae).– *Zool. J. Linn. Soc.*, **134**: 257-315.
- VALLETTA, A., 1951.– Additions to the list of Lepidoptera Heterocera of the Maltese Islands.– *Entomologist*, **84** (1054): 64-66.
- VALLETTA, A., 1973.– *The Moths of the Maltese Islands*: 120 pp. Progress Press, Valletta.

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1-4-1. *Pribatosdes umbraria* (Hb.). Malta, Pembroke. **2.** *Isturgia pulinda* (Wlk.). Malta, Armier. **3.** *Isturgia pulinda* (Wlk.). larve. **4.** *Eupithecia unedonta* Mab. Malta, Qrendi.