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Lepidoptera Tortricidae of the Maltese fauna

Abstract - A list of 68 species of Lepidoptera Tortricidae recorded on the Maltese Islands is reported. *Phtheochroa ochralana* Chrétien, 1915, *Fulvoclysia nerminae* Koçak, 1982, *Cochylis moguntiana* (Rössler, 1864), *Aphelia unitana* (Hübner, [1796-99]), *Lobesia indusiana* (Zeller, 1847), *Lobesia limoniana* (Millière, 1860), *Eucosma fulvana* (Stephens, 1834), *Cydia fagiglandana* (Zeller, 1841) and *Cydia ulicetana* (Haworth, [1811]) are new for the Maltese fauna. *Phtheochroa ochralana* is new for Europe.

Riassunto - *I Lepidotteri Tortricidi dell'Isola di Malta.*

Si riporta un elenco di 68 specie di Lepidoptera Tortricidae trovate nel tempo sulle Isole Maltesi. *Phtheochroa ochralana* Chrétien, 1915, *Fulvoclysia nerminae* Koçak, 1982, *Cochylis moguntiana* (Rössler, 1864), *Aphelia unitana* (Hübner, [1796-99]), *Lobesia indusiana* (Zeller, 1847), *Lobesia limoniana* (Millière, 1860), *Eucosma fulvana* (Stephens, 1834), *Cydia fagiglandana* (Zeller, 1841) e *Cydia ulicetana* (Haworth, [1811]) vengono citate per la prima volta nella fauna di Malta. *Phtheochroa ochralana* è nuova anche per l'Europa.

Key words: Lepidoptera Tortricidae, Malta, fauna.

INTRODUCTION

The Tortricidae from the Maltese Islands have received only sporadic attention by both local and foreign lepidopterists. The first attempt at producing a comprehensive list of Maltese lepidoptera was by the Fleet-Paymaster Gervase Matthew (1898); from a list of 40 species, none are Tortricidae. Thomas Bainbrigge Fletcher, a Royal navy officer serving in Malta, in a list of lepidoptera recorded four tortricid species (Fletcher 1904-05; 1905). The Maltese naturalist Count Alfredo Caruana Gatto (1905) reported also four Tortricidae out of a list of 105 species. From the material collected by Adolf Andres while he was a prisoner of war at Verdala Barracks, out of the 85 recorded species, only 5 belong to Tortricidae. Between the years 1949 and 1970, Anthony Valletta and

Dr Carmelo De Lucca reported most of the tortricids known from the Maltese archipelago. Anthony Valletta (1973) lists 33 species of Tortricidae out of a list of 413 species. Sammut (1984) and Karsholt & Razowski (1996) list 41 and 50 species of Tortricidae respectively. More recently, Sammut (2000) in a catalogue of over 600 species brought the number of known tortricids from Malta to 59. In the latest checklist of lepidoptera, the electronic version of the Fauna Europaea, the number of Tortricidae reported from Malta is 51.

In the present work, the species listed are 68, of which 9 are recorded for the first time from the Maltese archipelago: *Phtheochroa ochralana* Chrétien, 1915, *Fulvoclysia nerminae* Koçak, 1982, *Cochylis moguntiana* (Rössler, 1864), *Aphelia unitana* (Hübner, [1796-99]), *Lobesia indusiana* (Zeller, 1847), *Lobesia limoniana* (Millière, 1860), *Euco-sma fulvana* (Stephens, 1834), *Cydia fagiglandana* (Zeller, 1841) and *Cydia ulicetana* (Haworth, [1811]).

In the compilation of this list we follow the systematic arrangement adopted by Razowski (2002; 2003) with some modifications suggested by Brown (2005). Biology and corotype of the species are largely taken from Trematerra (2003).

LIST OF TAXA

FAMILY TORTRICIDAE

SUBFAMILY TORTRICINAE

Tribe Tortricini

Tortrix viridana Linnaeus, 1758

REFERENCES: *Tortrix viridiana* Linnaeus, 1758 (sic) (Sammut, 2000: 70).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania and Greece), North Africa (Morocco), Asia Minor, Azerbaijan, Transcaucasia, Iran and West Kazakhstan.

CHOROTYPE. W-Palaeartic (WPA).

BIOLOGY. Larva feeds on *Acer* spp.; *Betula* spp.; *Carpinus* spp., *C. betulus*; *Corylus* spp.; *Cotoneaster* spp.; *Ericaceae* spp.; *Fagus* spp., *F. sylvatica*; *Fraxinus* spp.; *Lonicera* spp.; *Mespilus* spp.; *Populus* spp.; *Prunus armeniaca*; *Quercus* spp., *Q. ilex*, *Q. petraea*, *Q. pubescens*, *Q. robur*, *Q. suber*, *Q. virgiliana*; *Rhododendron* spp.; *Salix* spp.; *Sambucus* spp.; *Sorbus* spp.; *Tilia* spp.; *Urtica* spp.; *Vaccinium* spp. Adults can be found during the months of June and July, sometimes till the end of August; in the south, even during May.

COMMENTS. This is a rare species in the Maltese Islands and has only been found on two occasions. It has been recorded from Rabat in June 1999 from a single specimen (Sammut, 2000) and from Qbajjar Bay in Gozo from nine specimens in May 2006 (Sammut, Seguna & Borg, unpublished data)

Acleris variegana ([Denis & Schiffermüller], 1775)

REFERENCES: *Peronea variegana* Treitschke (sic) (De Lucca, 1956: 255); *Acleris variegana* Denis & Schiffermüller, 1775 (Sammut, 1984: 24; Sammut, 1985: 304); *Acleris variegana* (Denis & Schiffermüller, 1775) (Karsholt & Razowski, 1996: 135; Sammut, 2000: 70).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania and Greece), NW Africa, Asia Minor, Caucasus, Transcaucasia, Urals, Kazakhstan, Turkmenistan, Central Asia, Afghanistan, SW Siberia, China, Japan and Nearctic Region (North America).

CHOROTYPE. Holarctic (HOL).

BIOLOGY. Larva feeds on *Berberis vulgaris*; *Colutea* spp.; *Carpinus betulus*; *Corylus* spp.; *C. avellana*; *Cotoneaster* spp.; *Crataegus* spp.; *Lycopersicon esculentum*; *Malus* spp.; *M. domestica*, *M. sylvestris*; *Potentilla fruticosa*; *Pyracantha* spp.; *Prunus* spp., *P. armeniaca*, *P. avium*, *P. domestica*, *P. spinosa*; *Pyrus* spp., *P. communis*; *Rosa* spp.; *Rubus* spp., *R. ursinus*; *Sanguisorba* spp., *S. minor*; *Ulmus* spp.; *Vaccinium* spp., *V. myrtillus*. Adults are on the wing from July to September, probably in two generations; in Italy recorded also during May-June till November.

COMMENTS. A fairly common species, recorded from Buskett in May (De Lucca, 1956) and July (Sammut, unpublished data), from Rabat in July (Sammut, 2000), from Naxxar, Bidnija and Gharghur (Seguna, per. comm.), Bahrija, Dwejra and Mtarfa (Sammut, unpublished data).

Tribe Cochylini

Phtheochroa duponchelana (Duponchel, 1843)

REFERENCES: *Phtheochroa duponcheliana* Dup. (sic) (Fletcher, 1904-05: 20; Fletcher, 1905: -); *Hysterosia duponcheliana* Dup. (sic) (Valletta, 1973: 79); *Trachysmia duponchelana* Duponchel, 1843 (Sammut, 1984: 27); *Phtheochroa duponchelana* (Duponchel, 1843) (Karsholt & Razowski, 1996: 130; Sammut, 2000: 68).

DISTRIBUTION. Europe (ex-USSR countries, France, Malta, Italy, Hungary, ex-Yugoslavia, Albania, Greece and Crete), North Africa (Morocco and Algeria), Asia Minor and the Middle East (Lebanon and Syria).

CHOROTYPE. Mediterranean (MED).

BIOLOGY. The larva feeds on *Acanthus spinosus*. The adults of this bivoltine species can be found from the end of March till mid June and during the month of July.

COMMENTS. A common species. Recorded from Rabat and from Wied Babu in Zurrieq (Sammut, 2000), from Gnejna (Valletta, 1973), from Naxxar and Gharghur (Seguna, pers. comm.) and from Ghar Lapsi, Buskett and Migra Ferha (Sammut, unpublished data)

***Phtheochroa rectangulana* (Chrétien, 1915)**

REFERENCES: *Phalonia rectangulana* Chret. (Valletta, 1953: 9); *Hysterosia rectangulana* Chret. (Valletta, 1973: 78); *Trachysmia rectangulana* Chrétien, 1915 (Sammut, 1984: 27); *Phtheochroa rectangulana* (Chrétien, 1915) (Karsholt & Razowski, 1996: 130; Sammut, 2000: 68).

DISTRIBUTION. Spain, Malta, Algeria and Tunisia.

CHOROTYPE. W-Mediterranean (MEW).

BIOLOGY. Food plant and early stages unknown, moth collected in October.

COMMENTS. This is a very rare species in the Maltese Islands and to date it has only been recorded once, from Mriehel on November 8, 1950 (Valletta, 1953a).

***Phtheochroa ochralana* Chrétien, 1915**

DISTRIBUTION. Algeria, Tunisia, Tripolitania, Central Arabia.

CHOROTYPE. North-African (NAF).

BIOLOGY. The larva feed on *Haloxylon articulatum*, moths observed in October-November.

COMMENTS. This is new record for the Maltese Islands and new record for the European fauna. Known from a specimen collected by Sammut from Rabat in October, a specimen collected by Seguna from Rabat (Dwejra) in November and a third specimen collected also by Seguna from Gozo (Dwejra) in November.

***Cochylimorpha decolorella* (Zeller, 1839)**

REFERENCES: *Conchylis chamomillana* H-S. (Andres, 1916: 50); *Stenodes chamomillana* H-S (Valletta, 1973: 78); *Stenodes chamomillana* Herrich-Schäffer, 1851 (Sammut, 1984: 27); *Stenodes chamomillana* H-S (Zammit, 1984: 76); *Cochylimorpha decolorella* (Zeller, 1839) (Karsholt & Razowski, 1996: 131); *Stenodes chamomillana* (Herrich-Schäffer, 1851) (Razowski, 1996: 187); *Cochylimorpha decolorella* (Zeller, 1839) (Sammut, 2000: 68).

DISTRIBUTION. Europe (France, Spain, Portugal, Corsica, Malta, Italy, Bulgaria and european Turkey), Canary Islands, Morocco and Asia Minor.

CHOROTYPE. Mediterranean (MED).

BIOLOGY. Larval host plant is unknown. Adults are met with from January to May.

COMMENTS. A common species. First recorded by Adolf Andres from Verdala Barracks during his stay in Malta as a prisoner of war from June 1915 to February of 1916. It has also been recorded from Gnejna (Valletta, 1973) and from Naxxar, Rahal Gdid and Rabat (Sammut, 2000)

Cochylimorpha straminea (Haworth, [1811])

REFERENCES: *Euxanthia straminea* Hw. (Fletcher, 1904-05: 20); (Fletcher, 1905: -); *Euxanthia straminea* Hue. (sic) (Caruana Gatto, 1905: 28); *Euxanthia straminea* Hw. (Valletta, 1950: 307); Valletta, 1973: 78); *Stenodes straminea* Haworth, 1811 (Sammut, 1984: 27); *Cochylimorpha straminea* (Haworth, 1811) (Karsholt & Razowski, 1996: 131); *Cochylimorpha straminea* (Haworth, 1811) (Sammut, 2000: 68).

DISTRIBUTION. Europe (Denmark, Sweden, ex-USSR countries, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxembourg, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania, Greece and european Turkey), North Africa, Asia Minor, Middle East, Transcaucasia, Turkmenistan, Iran, Ural Mts., Kazakhstan, W-Turkestan and Central Asia.

CHOROTYPE. Centralasiatic-European-Mediterranean (CEM).

BIOLOGY. Larva feeds on *Artemisia* spp.; *Centaurea* spp., *C. nigra*; *Chrysanthemum* spp.; *Scabiosa* spp. A bivoltine species, the adults fly from April-May to July and again from August till October.

COMMENTS. A common species. Recorded from numerous localities over the Maltese Islands from March to May and again between September and November.

Phalonidia contractana (Zeller, 1847)

REFERENCES: *Phalonia contractana* Zeller (sic) (De Lucca, 1950b: 250; Valletta, 1951: 65); *Phalonidea contractana* Zell. (Valletta, 1973: 78); *Phalonidea contractana* Zeller, 1847 (Sammut, 1984: 21); *Phalonidea contractana* (Zeller, 1847) (Karsholt & Razowski, 1996: 132); *Phalonidea contractana* (Zeller, 1847) (Sammut, 2000: 69).

DISTRIBUTION. Europe (Czech Republic, Slovakia, France, Spain, Portugal, Malta, Italy, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania, Greece and european Turkey), North Africa, Asia Minor, Israel, Transcaucasia, Iran, S-Urals, Kazakhstan, Uzbekistan, Turkmenistan, Central-Southern Asia, Tagikistan, Afghanistan, mountains of India and Kashmir.

CHOROTYPE. Centralasiatic-European-Mediterranean (CEM).

BIOLOGY. Larvae feed on *Anthemis* spp.; *Artemisia* spp., *A. maritima*; *Cichorium* spp.; *Dittrichia graveolens*, *D. viscosa*; *Lactuca* spp. Multi-voltine species. Adults fly from May till October.

COMMENTS. This fairly frequent species has been recorded from Gharghur during August (De Lucca, 1950b), from Birkirkara and Mriehel (Valletta, 1951a) and from Rabat (Sammuto, 2000). It has been taken at light also from Naxxar, Bahrija, Ghajn Tuffieha, Buskett and Dingli (Sammuto & Seguna, unpublished data).

Fulvoclysia nerminae Koçak, 1982

DISTRIBUTION. Europe (ex-USSR countries, Poland, Czech Republic, Slovakia, Germany, Luxemburg, France, Spain, Italy, Austria, Hungary, ex-Yugoslavia, Romania and Bulgaria) and Asia Minor.

CHOROTYPE. European (EUR2).

BIOLOGY. Larva feeds on *Scabiosa* spp. Adults are on the wing from April-May to July.

COMMENTS. This is new record for the Maltese fauna. The species has been recorded from Rabat in April by Sammut and from Bahrija and Rabat (Dwejra) also during April.

Eupoecilia ambiguella (Hübner, [1796-1799])

REFERENCES: *Conchylis amibiguella* (Borg, 1922: 602); *Clysia ambiguella* Hübner, 1796 (Vella, 1991: 74); *Eupoecilia ambiguella* (Hübner, 1796) (Sammuto, 2000: 69); *Clysia ambiguella* (Borg, 2001: 73).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Belgium, Luxemburg, France, Spain, Corsica, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria and Albania), Asia Minor, Transcaucasia, Kazakhstan, Central Asia, S-Siberia, Mongolia, China, Russian Far East, Corea, Japan, Oriental Region (India, Birmania and Sumatra) and Neotropical Region (Brasil).

CHOROTYPE. Asiatic-European (ASE, SCO*).

BIOLOGY. Larva feeds on *Acer campestre*; *Cornus mas*; *Cuscuta* spp.; *Euonymus* spp.; *Frangula* spp., *F. alnus*; *Fraxinus* spp.; *Galium* spp.; Grossulariaceae; *Hedera* spp., *H. helix*; *Juniperus* spp.; *Ligustrum* spp., *L. vulgare*; *Lonicera* spp., *L. periclymenum*, *L. ramosissima*; *Partenocissus quinquefolia*; *Prunus* spp.; *Ribes* spp.; *Sambucus* spp.; *Symphoricarpos racemosus*; *Syringa persica*; *Viburnum* spp.; *Vitis* spp., *V. vinifera*. Adults are met with from mid-April to May and from July to August.

COMMENTS. This species has been first recorded for Malta by the botanist Prof. John Borg (1922) as the most serious lepidopterous pest of the vine. Vella (1991) and Joseph Borg (2001) also regard *E. ambiguella* as a locally common species.

Aethes deaurana (Peyerimhoff, 1877)

REFERENCES: *Aethes deaurana* H. de Peyerimhoff, 1794 (sic) (Sammut, 1984: 27); *Aethes deaurana* H. de Peyerimhoff, 1870 (sic) (Sammut, 1985: 304); *Aethes deaurana* (Peyerimhoff, 1877) (Karsholt & Razowski, 1996: 133); *Aethes deaurana* (Peyerimhoff, 1877) (Sammut, 2000: 69).

DISTRIBUTION. Europe (France, Spain, Portugal, Malta, Italy and ex-Yugoslavia), N-W Africa and the Middle East.

CHOROTYPE. Mediterranean (MED5).

BIOLOGY. Larva feeds on *Ferula communis*; *Smyrniolum olusatrum*. Adults can be met with from March to June and in September.

COMMENTS. Common. Recorded from Rabat in March and April (Sammut, 2000) and from Naxxar and Gharghur (Seguna, pers. comm.).

Aethes francillana (Fabricius, 1794)

REFERENCES: *Lozopera francillana* F. (De Lucca, 1956: 285); *Aethes francillana* Fab. (Valletta, 1973: 78); *Aethes francillana* Fabricius, 1794 (Sammut, 1984: 27); *Aethes francillana* (Fabricius, 1794) (Karsholt & Razowski, 1996: 133; Sammut, 2000: 69).

DISTRIBUTION. Europe (Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Ireland, Belgium, Luxembourg, France, Spain, Portugal, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria and Greece), Canary Islands, North Africa, Asia Minor, Middle East, Transcaucasia, Kazakhstan, Turkmenistan, Central Asia, Tajikistan, Afghanistan and W-Siberia.

CHOROTYPE. W-Palaearctic (WPA).

BIOLOGY. Larval host plants include *Angelica* spp., *A. sylvestris*; *Astydamia canariensis*; *Crithmum maritimum*; *Daucus* spp., *D. carota*; *Elaeoselinum meoides*; *Eryngium campestre*; *Ferula communis*; *Pastinaca* spp.; *Peucedanum* spp., *P. officinale*. The adults of this bivoltine species fly from April till early September, reaching peak abundance during July-August. In the southern regions of its distribution, the species probably has three generations.

COMMENTS. Known from the Maltese Islands from a single specimen collected by De Lucca from Anchor Bay on September 27, 1953 (De Lucca, 1956). In the introductory part of this work, the Author states that the microlepidoptera have been determined by M.H. Marion, Dr. H.G. Amsel and M. Mariani.

Aethes bilbaensis (Rössler, 1877)

REFERENCES: *Phaloria loxopteroides* Walsingham (sic) (De Lucca, 1951b: 259); *Phalonia loxopteroides* Walsingham (sic) (Valletta, 1973: 78); *Aethes bilbaensis* Rössler, 1877 (Sammuto, 1984: 27); *Aethes bilbaensis* (Rössler, 1877) (Karsholt & Razowski, 1996: 133); *Aethes bilbaensis* (Rössler, 1877) (Sammuto, 2000: 69).

DISTRIBUTION. Europe (ex-USSR countries, Czech Republic, Slovakia, France, Spain, Portugal, Corsica, Malta, Italy, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania, Greece and Crete), NW-Africa, Asia Minor, Middle East (Palestine), Transcaucasia, Iran, Kazakhstan, Turkmenistan, Central Asia, Afghanistan and Pakistan.

CHOROTYPE. Centralasiatic-European-Mediterranean (CEM).

BIOLOGY. Larva feeds on *Carum verticillatum*; *Crithmum maritimum*; *Daucus carota*. Bivoltine, the adults fly from Aprile till July and again during August and September.

COMMENTS. A frequent species. Recorded from Naxxar and Gharghur during May, June and July (Sammuto, 2000) and Rabat and Marsalforn in Gozo during May (Sammuto, Borg, Catania & Seguna, unpublished data).

Cochylidia heydeniana (Herrich-Schäffer, 1851)

REFERENCES: *Phalonia pudorana* Staudinger (De Lucca, 1951b: 259); *Cochylis pudorana* Staud. (Valletta, 1973: 78); *Cochylidea heydeniana* Herrich-Schäffer, 1851 (Sammuto, 1984: 28); *Cochylidea heydeniana* (Herrich-Schäffer, 1851) (Karsholt & Razowski, 1996: 134); *Cochylidea heydeniana* (Herrich-Schäffer, 1851) (Sammuto, 2000: 70).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Great Britain, Belgium, Luxemburg, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania and Greece), Middle East (Lebanon, Syria), Kazakhstan, SW-Siberia, Mongolia, China, Russian Far East, Korea and Japan.

CHOROTYPE. Asiatic-European (ASE).

BIOLOGY. Larva feeds on *Anthemis* spp.; *Artemisia* spp.; *Conyza* spp., *C. canadensis*; *Erigeron* spp., *E. acer*; *Solidago* spp., *S. virgaurea*. A bivoltine species. The moth is on the wing during May-June and from the end of July to the beginning of September. In Spain the moth flies uninterruptedly from February till April.

COMMENTS. Common. Known from all over the Island. On the wing from March to June and again during September and October.

Cochylis molliculana Zeller, 1847

REFERENCES: *Cochylis molliculana* Zeller, 1847 (Karsholt & Razowski, 1996: 134; Sammut, 2000: 70; Trematerra & Baldizzone, 2004: 30).

DISTRIBUTION. Europe (Great Britain, France, Spain, Corsica, Malta, Italy, ex-Yugoslavia and Greece).

CHOROTYPE. S-European (EUS).

BIOLOGY. The larva feeds on *Picris* spp. The adult flies from May till July-August.

COMMENTS. A frequent species. Known from Dingli, Ghajn Rihana and Bahrija (Sammut, 2000) and from Naxxar, Dwejra, Fomm ir-Rih and Ghajn Tuffieha and Rabat (Sammut & Seguna, unpublished data).

Cochylis moguntiana (Rössler, 1864)

DISTRIBUTION. Europe (Denmark, Sweden, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Spain, Italy, Austria, Hungary, ex-Yugoslavia and Romania), Southern Siberia, W-Afghanistan, NW-Pakistan, China and Korea.

CHOROTYPE. Asiatic-European (ASE).

BIOLOGY. The larva feeds on *Artemisia campestris*. The moth flies during the months of July and August.

COMMENTS. This is new record for the Maltese Islands. At present it is known only from a single specimen collected by Sammut from Dwejra, Rabat on April 30, 2006.

Tribe Cnephasiini

Oxypteron sp.

REFERENCES: *Oxypteron* sp. (Sammut, 2000: 70).

COMMENTS. One female specimen belonging to this genus collected by the second Author, is in the British Museum (Natural History). According to the correspondence with Dr. K. Tuck at the time when the specimen was sent to London, it was a species new to science but could not be described because it was a female.

Cnephasia longana (Haworth, [1811])

REFERENCES: *Ephaleroptera ictericana* (sic) (De La Garde, 1892: 134); *Sphaleroptera ictericana* (De La Garde, 1898: 8, 11); *Cnephasia longana* Hw. (Fletcher, 1904-05: 20; Fletcher, 1905; Andres, 1916: 50); *Cnephasia longana* Haw. (Valletta, 1973:

76); *Cnephasia longana* Haworth, [1811] (Sammut, 1984: 23); *Cnephasia longana* (Haworth, 1811) (Karsholt & Razowski, 1996: 138; Sammut, 2000: 71).

DISTRIBUTION. Europe (Denmark, Sweden, ex-USSR countries, Estonia, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Greece and Crete), Canary Islands, NW-Africa, Asia Minor and Nearctic Region (North America) (introduced).

CHOROTYPE. European (EUR3, OLA*).

BIOLOGY. The larvae feed on *Anthemis* spp., *A. cotula*; *Armeria maritima*; *Artemisia campestris*; *Aster* spp., *A. tripolium*; *Bellis* spp.; *Centaurea* spp.; *Chrysanthemum* spp.; *Cerastium* spp.; *Cirsium* spp.; *Collinsia franciscana*, *C. multicolor*; *Convolvulus* spp., *C. arvensis*; *Eriogonum latifolium*; *Eschscholzia californica*; *Fagonia* spp.; *Fragaria* spp.; *Hypochoeris* spp.; *Leucanthemum vulgare*; *Ligularia* spp.; *Limonium* spp.; *Linum* spp.; *Lychnis* spp.; *Picris* spp.; *Plantago lanceolata*; *Prunus armeniaca*; *Psoralea* spp.; *Ranunculus* spp., *R. bulbosus*; *Ribes* spp.; *Rumex* spp.; *Scrophularia californica*; *Selinum* spp.; *Sempervivum tectorum*; *Senecio jacobaea*; *Sinapis* spp.; *Sonchus arvensis*; *Stachys* spp.; *Vicia* spp., *V. americana*; *Wyethia angustifolia*. Adults fly during May-June and in July.

COMMENTS. Not a rare species in the Maltese Islands. It has been recorded from Verdala Barracks (Andres, 1916), Gnejna and Wied il-Ghasel (Valletta, 1973) and Mgarr in Gozo (Sammut, 2000). During the present study the species was also recorded from Rabat in May, from Rabat (Dwejra) in June, from Dingli during July, from Naxxar during April-May and from Migra Ferha, also in May.

Cnephasia bizensis Réal, 1953

REFERENCES: *Cnephasia bizensis* Razowski, 1956 (Karsholt & Razowski, 1996: 138; Sammut, 2000: 71).

DISTRIBUTION. France, Spain (?) Malta and Italy.

CHOROTYPE. W-Mediterranean (MEW).

BIOLOGY. Early stages unknown, adults cited by Trematerra (2003a) from Pantelleria Island (Italy) associated with *Cnephasia amseli* (D. Lucas, 1942) in a field with *Limonium* plants-community (ranged in *Chritmo-Limonietea* class). Imago was observed at end of April and in June.

COMMENTS. A rare species in Malta. Recorded by Catania from Ghajn Rihana in May (Sammut, 2000). During the present study has been recorded also from Rabat during May and from Cirkewwa during April.

Cnephasia gueneana (Duponchel, 1836)

REFERENCES: *Cnephasia gueneana* Duponchel (De Lucca, 1951a: 205; Sammut, 1984: 28); *Cnephasia gueneana* Dup. (Valletta, 1973: 76; Bonett, 1976: 6); *Cnephasia gueneana* (Duponchel, 1836) (Karsholt & Razowski, 1996: 138; Sammut, 2000:

71); *Cnephasia gueneana* (Mifsud, 1999: 112); *Cnephasia gueneana* (Duponchel, 1836) (Razowski, 2002: 91).

DISTRIBUTION. Europe (Great Britain, Spain, Malta, Italy, Greece, Crete), Canary Islands, NW-Africa (Morocco) and Cyprus.

CHOROTYPE. Mediterranean (MED5).

BIOLOGY. Larva feeds on *Anemone* spp. and *Narcissus jonquilla*; the moth is on the wing from March till June. The biology of this species has been described in detail by De Lucca (1955).

COMMENTS. Very common. Known from all over the Maltese Islands.

Cnephasia orientana (Alpheraky, 1877)

REFERENCES: *Cnephasia oxientana* Alph. (sic) (Valletta, 1984: 47); *Cnephasia orientana* Alpheraky, 1876 (Sammut, 1984: 23); *Cnephasia orientana* (Alpheraky, 1876) (Karsholt & Razowski, 1996: 138; Sammut, 2000: 71).

DISTRIBUTION. Europe (ex USSR countries, Malta, Romania), Cyprus, Transcaucasia, Kazakhstan, Turkmenia, Uzbekistan, Tadjikistan, Asia Minor, Iran, Iraq and Afghanistan.

CHOROTYPE. Turanicon-Europeo (TUE).

BIOLOGY. Larva in spun leaves of *Chenopodium album*, probably polyphagous; moths bivoltine flies from March to August.

COMMENTS. A very rare species. Known from only two specimens in the collection of the second Author and collected by S. Schembri from Forti San Lucjan in Marsaxlokk on October 10, 1975. Determination has been carried out by Dr. J.D. Bradley of the British Museum, London.

Cnephasia amseli (D. Lucas, 1942)

REFERENCES: *Cnephasia amseli* (D. Lucas, 194) (Razowski, 2002: 91).

DISTRIBUTION. Europe (Malta and Italy) and Tunisia.

CHOROTYPE. North African (NAF9).

BIOLOGY. The larval foodplant is unknown. Adults fly from April to June.

COMMENTS. An uncommon species. Early stages unknown, adults recorded by TREMATERRA (2003a) in Pantelleria Island (Italy) associated with *Cnephasia bizensis* in a field with *Limonium* plants-community (ranged in *Chritmo-Limonietea* class). Moths collected in April-May. In the collection of the second Author are two specimens collected from Rabat in April, and determined as *C. taurominana* Razowski, by Dr. Willi Sauter. During the present study three males belonging to this species, collected from Buskett in April 1970 by Sammut have been discovered in the Sammut collection. Further specimens have been collected from Rabat (coll. Sammut) and from Armier Bay (coll. Seguna). It seems that on the Maltese Islands the species flies earlier than on the continent.

Tribe Archipini

Avaria hyerana (Millière, 1858)

REFERENCES: *Hastula hyerana* Mill. (Valletta, 1973: 76); *Hastula hyerana* Millière, 1858 (Sammut, 1984: 23); *Avaria hyerana* (Millière, 1858) (Karsholt & Razowski, 1996: 139; Sammut, 2000: 71).

DISTRIBUTION. Europe (Great Britain!, France, Spain, Portugal, Malta, Italy, ex-Yugoslavia and Greece), Canary Islands, NW-Africa (Morocco).

CHOROTYPE. South European (EUS1).

BIOLOGY. Larvae on *Asphodelus* spp.; *Magydaris* spp. Adults can be found from June till October.

COMMENTS. Frequent. Valletta (1973) recorded this species as rare and localized to areas where *Pinus halepensis* grows. Known from Rabat and Mtahleb (Sammut, 2000) and from Dwejra, Buskett, Naxxar and Ghajn Tuffieha (Sammut & Seguna, unpublished data). Additionally, during this present study, material from Bahrija, collected as larvae was discovered in the Sammut collection.

Archips rosanus (Linnaeus, 1758)

REFERENCES: *Tortrix rosana* Hubn. (sic) (Borg P., 1932: 21); *Tortrix rosana* (De Lucca, 1965: 513); *Tortrix rosaria* Hubn. (sic) (Valletta, 1973: 96); *Archips rosana* Linnaeus, 1758 (Sammut, 1984: 22); *Archips rosana* (Linnaeus, 1758) (Karsholt & Razowski, 1996: 139; Sammut, 2000: 72).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania, Greece and European Turkey), North Africa, Asia Minor, Middle East, Caucasus, Iraq, Iran, Urals, Kazakhstan, SE-Turkmenistan, Central Asia, South and Western Siberia, Russian Far East and Neartic Region (introduced).

CHOROTYPE. Palaearctic (PAL, OLA*).

BIOLOGY. Larvae feed on *Acer* spp., *A. circinnatum*, *A. rubrum*; *Alnus* spp., *A. incana*, *A. rhombifolia*, *A. rubra*; *Betula* spp.; *Caragana arborescens*; *Carya* spp.; *Citrus* spp.; *Cornus nuttalli*, *C. candidissima*; *Corylus* spp., *C. avellana*; *Crataegus* spp.; *Cydonia* spp.; *Hippophae* spp.; *Jasminum* spp.; *Ligustrum* spp., *L. vulgare*; *Lonicera* spp.; *Malus* spp., *M. sylvestris*; *Myrica* spp.; Pinaceae; *Populus* spp.; *Prunus* spp., *P. armeniaca*, *P. avium*, *P. domestica*, *P. persica*, *P. virginiana*; *Pyrus* spp.; *Quercus* spp., *Q. rubra*; *Ribes* spp., *R. nigrum*; *Rosa* spp.; *Rubus* spp., *R. idaeus*; *Salix* spp.; *Syringa* spp.; *Tilia* spp.; *Ulmus* spp.; *Urtica* spp.; *Vaccinium* spp.; *Viburnum* spp. The adult moth flies from June till early September; in Italy it has also been recored in February, March and May.

COMMENTS. This species, which is very similar to the next, has been recorded only by Borg (1932). Valletta (1973) and Sammut (2000) list this species as doubtful. During the present study, the presence of this species in Malta could not be confirmed.

***Cacoecimorpha pronubana* (Hübner, [1796-1799])**

REFERENCES: *Tortrix pronubana* (Fletcher, 1904-05: 20; Fletcher, 1905: -); *Tortrix pronubana* Hb. (Caruana Gatto, 1905: 28; Andres, 1916: 50); *Tortrix pronubana* Hubn. (Borg, 1932: 21; Valletta, 1950: 307; Valletta, 1973: 77); *Cacoecimorpha pronubana* Hübner, [1799] (Sammut, 1984: 22); *Cacoecimorpha pronubana* (Hübner, 1799) (Karsholt & Razowski, 1996: 140; Sammut, 2000: 72).

DISTRIBUTION. Europe (Denmark, ex-USSR countries, Netherlands, Great Britain, Eire, Belgium, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Romania, Albania and Greece), North Africa (Morocco), Asia Minor, Middle East, Japan, Nearctic Region (North America) and Afro-Tropical Region (Sud-Africa).

CHOROTYPE. European-Mediterranean (EUM, SCO*).

BIOLOGY. The larva feeds on a large number of herbaceous plants and trees, both ornamental, orchard and fruit trees, including the olive tree. Also *Aegopodium podagraria*; *Arbutus* spp.; *Aristolochia* spp.; *Asphodelus* spp.; *Aster* spp.; *Brassica* spp.; *Capsicum* spp.; *Chamaecyparis pisifera*; *Citrus deliciosa*; *Cupressocyparis leylandii*; *Daphne* spp., *D. gnidium*; *Datura* spp.; *Dianthus* spp.; *Euonymus* spp., *E. japonicus*; *Euphorbia* spp., *E. amygdaloides*; *Fragaria* spp.; *Fuchsia* spp.; *Hedera* spp.; *Helleborus* spp.; *Hieracium* spp.; *Hippophae rhamnoides*; *Juniperus scopulorum*; *Laurus nobilis*; *Ligustrum* spp.; *Lycopersicon esculentum*; *Medicago sativa*; *Narcissus* spp.; *Nepeta* spp.; *Nerium* spp.; *Pelargonium* spp.; *Pinus halepensis*; *Pistacia* spp.; *Punica granatum*; *Rhododendron praecox*; *Rhus* spp.; *Robinia* spp.; *Rosa* spp.; *Rosmarinus* spp.; *Rubus* spp.; *Rumex crispus*; *Ruscus* spp.; *Satureja* spp.; *Saxifraga* spp.; *Silene* spp.; *Smilax* spp.; *Tamarix* spp.; *Thymus* spp.; *Vaccinium corymbosum*; *Viburnum* spp.; *Vitis* spp. The adult of this bivoltine species can be met with from March till July and from the end of August till October, sometimes even during November.

COMMENTS. Very common. Known from all over the Maltese Islands. Flies from March till April and again between June and October.

***Aphelia peramplana* (Hübner, [1825] 1816)**

REFERENCES: *Tortrix amplana* Hübner (Valletta, 1951a: 65); *Tortrix amplana* Hübner. Form. *vallettai* f.nov. (Bradley, 1953: 67); *Tortrix amplana vallettai* (De Lucca, 1965: 514); *Tortrix amplana* Hubn. (Valletta, 1972: 4; Valletta, 1973: 77); *Aphelia peramplana* Hübner (Valletta, 1978: 289); *Aphelia peramplana* Hbn. (Sammut, 1982: 140; Sammut, 1982c: 147); *Aphelia amplana* Hübner, [1825] f. *vallettai* (Sammut,

1984a: 67); *Aphelia peramplana* Hbn. (Sammut, 1984b: 74); *Aphelia amplana* Hübner, [1813] (Sammut, 1984: 22); *Aphelia amplana* Hübner, [1813] f. *vallettai* Bradley, 1953 (Sammut, 1984: 22); *Aphelia amplana* Hübner, 1825 f. *vallettai* Bradley, 1953 (Sammut, 1989: 132); *Aphelia amplana* Hübner, f. *vallettai* Bradley (Sammut & Valletta, 1989: 99); *Aphelia amplana* (Hübner) (Trematerra, 1994: 499); *Aphelia amplana* (Hübner, 1799) (Karsholt & Razowski, 1996: 140; Sammut 2000: 72); *Aphelia peramplana* (Hübner, [1825]) (Razowski 2002: 111).

DISTRIBUTION. Europe (Spain, Portugal, Malta and Italy), NW-Africa (Morocco) and Iran.

CHOROTYPE. Turanic-European-Mediterranean (TEM).

BIOLOGY. Larva feeds on *Asphodelus* spp.; *Corylus* spp.; *Juglans* spp.; *Quercus* spp.; *Urginea* spp., *U. maritima*. Adults fly from January till April-May.

COMMENTS. This formerly common species has become quite rare today due to the destruction of the habitat of its foodplant, *Urginea maritima*. Both the typical form and the form *vallettai* Bradley, 1953 are widely distributed on garrigue hosting *U. maritima*.

Aphelia unitana (Hübner, [1796-99])

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Great Britain, Eire, France, Italy, Switzerland, Austria and ex-Yugoslavia), Caucasus, W-Kazakhstan, Siberia and Russian Far East.

CHOROTYPE. Sibirian-European (SIE).

BIOLOGY. Larva feeds on a variety of plants, including *Allium* spp.; *Alchemilla glabra*; *Angelica* spp., *A. sylvestris*; *Centaurea nigra*; *Fragaria* spp.; *Heracleum* spp.; *Mercurialis* spp.; *Rubus* spp.; *Rumex acetosa*; *Teucrium scorodonia*; *Viola riviniana*. Adults fly from June to September.

COMMENTS. This is new record for the Maltese Islands. Very rare. Known from a single specimen collected by Anthony Seguna from Naxxar on May 5, 1993. The specimen is in the Seguna collection.

Clepsis unicolorana (Duponchel, 1835)

REFERENCES: *Clepsis unicolorana* Duponchel, 1835 (Sammut, 1984: 23); *Aphelia unicolorana* Dup. (Valletta, 1984: 47); *Clepsis unicolorana* (Duponchel, 1835) (Karsholt & Razowski, 1996: 141; Sammut, 2000: 72).

DISTRIBUTION. Europe (Belgium, France, Spain, Portugal, Malta, Italy and Switzerland), NW-Africa (Morocco) and Mongolia.

CHOROTYPE. Centralasiatic-European-Mediterranean (CEM).

BIOLOGY. The larva feeds on *Asphodelus* spp.; *Cytisus scoparius*. The moth flies during April-May and again in June.

COMMENTS. Very rare. This species is known from the Maltese Islands from a single specimen collected by Valletta from Benghisa on April 14, 1953 (Valletta, 1984).

Clepsis spectrana (Treitschke, 1830)

REFERENCES: *Tortrix costana* Fabricius (Valletta, 1953: 201); *Clepsis spectrana* (Treitschke, 1830) (Karsholt & Razowski, 1996: 141; Sammut, 2000: 73).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Malta, Italy, Switzerland, Austria, Hungary, Romania, Bulgaria and european Turkey), Caucasus, Transcaucasia, W Kazakhstan and W-Siberia.

CHOROTYPE. European (EUR).

BIOLOGY. Amongst the larval host plants are *Acer pseudoplatanus*; *Artemisia maritima*; *Aster tripolium*; *Capsicum* spp.; *Cicuta* spp.; *Cyclamen* spp.; *Epilobium* spp., *E. hirsutum*; *Euphorbia* spp., *E. palustris*; *Filipendula* spp., *F. ulmaria*; *Fragaria* spp.; *Glyceria maxima*; *Humulus lupulus*; *Ilex* spp.; *Iris* spp., *I. pseudacorus*; *Limonium vulgare*; *Pelargonium* spp.; *Picea sitchensis*; *Phragmites* spp., *P. australis*; *Potentilla* spp., *P. palustris*; *Quercus* spp.; *Rorippa* spp., *R. palustris*; *Rumex* spp.; *Scirpus* spp., *S. lacustris*; *Spiraea* spp.; *Symphytum* spp.; *Urtica* spp.; *Vitis vinifera*. The adults of this bivoltine species can be found from May to July and from August till September; in Italy the species has also been recorded during October.

COMMENTS. Very rare. Recorded for the Maltese Islands from a single specimen collected by Valletta from Mriehel on April 1, 1952.

Clepsis neglectana (Herrich-Schäffer, 1851)

REFERENCES: *Clepsis neglectana* Herrich-Schäffer, 1851 (Sammut, 1984: 23; Sammut, 1985: 304); *Clepsis neglectana* (Herrich-Schäffer, 1851) (Karsholt & Razowski, 1996: 141; Sammut, 2000: 73).

DISTRIBUTION. Europe (Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Germany, Netherlands, Belgium, France, Spain, Portugal, Malta, Italy, Switzerland, Austria, Romania and Bulgaria), North Africa (Morocco), Asia Minor, Cyprus, Middle East, (Libanon), Transcaucasia, Urals, Kazakhstan, Uzbekistan, Kirghizistan, western and southern Siberia, NW-China.

CHOROTYPE. Centralasiatic-European-Mediterranean (CEM).

BIOLOGY. Larva feeds on *Fragaria* spp.; *Vaccinium* spp. The adult flies during April and from June till July.

COMMENTS. An uncommon species. Recorded from Rabat in June and October (Sammut, 2000). During this study additional material collected from Naxxar, Dingli Cliffs and Rabat (Dwejra and Wied ta' l-Isqof) have been discovered in the Seguna collection. All this recently recored material has been collected during May.

***Clepsis consimilana* (Hübner, [1814-1817])**

REFERENCES: *Tortrix unifasciana* Duponchel (De Lucca, 1950: 233); *Clepsis consimilana* Hb. (= *unifasciana* Dup) (Valletta, 1973: 76); *Clepsis consimilana* Hübner, [1817] (Sammut, 1984: 23); *Clepsis consimilana* (Hübner, 1817) (Karsholt & Razowski, 1996: 141; Sammut, 2000: 73).

DISTRIBUTION. Europe (Denmark, Sweden, Finland, ex-USSR countries, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania, Greece and Crete), NW-Africa (Morocco), Asia Minor, Lebanon, Nearctic Region (North America) (introduced) and Ethiopian Region (Madagascar) (introduced).

CHOROTYPE. W-Palaearctic (WPA, SCO*).

BIOLOGY. Larval host plants include *Carpinus* spp., *C. betulus*; *Cotoneaster horizontalis*; *Crataegus* spp.; *Hedera* spp., *H. helix*; *Ligustrum* spp., *L. vulgare*; *Lonicera* spp., *L. periclymenum*; *Malus* spp., *M. sylvestris*; *Polygonum* spp.; *Syringa* spp.; *Ulmus* spp. The moth can be found from May till October; in Italy it has also been recorded during April.

COMMENTS. A frequent species in the Maltese Islands. Recorded by De Lucca from various localities as a common species. Additional we have also discovered material in the Seguna collection, taken from Naxxar (in October) and Buskett (in August).

SUBFAMILY OLETHREUTINAE

Tribe Bactrini***Bactra lancealana* (Hübner, [1796-1799])**

REFERENCES: *Bactra lanceolana* Hubn. (sic) (Valletta, 1973: 79); *Bactra lanceolana* Haworth, [1799] – (sic) (Sammut, 1984: 24); *Bactra lancealana* (Hübner, 1799) (Karsholt & Razowski, 1996: 142; Sammut, 2000: 73).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania, Greece and Crete), North Africa, Asia Minor, Transcaucasia, Kazakhstan, Iran, Central Asia, Afghanistan, Siberia, Mongolia, China, Russian Far East, Kamchatka, Nearctic Region (Canada and United States) and Oriental Region (Sri Lanka).

CHOROTYPE. Subcosmopolitan (SCO).

BIOLOGY. Larva feeds on *Carex* spp., *C. riparia*; *Cyperus longus*; *Eriophorum* spp., *E. angustifolium*; *Juncus* spp., *J. conglomeratus*, *J. effusus*; *Scirpus* spp., *S. cespitosus*,

S. lacustris. The adult of this bivoltine species can be met with from April-May till early July and from the end of July till early October.

COMMENTS. Very rare. Recorded from the Maltese Islands by Valletta (1973) from a single specimen collected from Birkirkara on October 19, 1949. Not recorded again.

***Bactra furfurana* (Haworth, [1811])**

REFERENCES: *Bactra furfurana* Haworth (De Lucca, 1956: 255); *Bactra furfurana* Haw. (Valletta, 1973: 80); *Bactra furfurana* Haworth, [1811] (Sammut, 1984: 25); *Bactra furfurana* (Haworth, 1811) (Karsholt & Razowski, 1996: 142; Sammut, 2000: 73).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania and Greece), North Africa, Asia Minor, Urals, Central-south Siberia, Himalaya, Mongolia, Russian Far East, Kamchatka, Korea, Japan and Neartic Region (North America).

CHOROTYPE. Holarctic (HOL).

BIOLOGY. Larva feeds on *Cyperus* spp.; *Eleocharis* spp.; *Juncus* spp., *J. conglomeratus*, *J. effusus*, *J. subuliflorus*; *Scirpus lacustris*, *S. maritimus*. A bivoltine species. The moth flies from May till September; in Italy it has also been recorded during March.

COMMENTS. A rare species. Recorded from Wardija and Salina Bay (De Lucca, 1956). During the present study additional material collected from Rabat (Wied ta' l-Isqof) in August has been discovered in the Sammut collection.

***Bactra robustana* (Christoph, 1872)**

REFERENCES: *Bactra robustana* Chretien (sic) (Valletta, 1950a: 255); *Bactra robustana* Chret. (Valletta, 1973: 80); *Bactra robustana* Christoph, 1872 (Sammut, 1984: 24); *Bactra robustana* (Christoph, 1872) (Karsholt & Razowski, 1996: 142; Sammut, 2000: 74).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR, Estonia, Latvia, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, France, Spain, Malta, Italy, Austria, Hungary, Romania, Bulgaria and Albania), North Africa (Morocco), Asia Minor, Caucasus, Transcaucasia, Iran, Urals, Kazakhstan, Afghanistan, S-Siberia, Mongolia, Russian Far East and Japan.

CHOROTYPE. Palaearctic (PAL).

BIOLOGY. Larva feeds on *Scirpus* spp., *S. maritimus*; Cyperaceae. Adult fly from April till August.

COMMENTS. A rare species. Recorded from Gnejna by Valletta and from Rabat by Sammut (Sammut, 2000).

***Bactra venosana* (Zeller, 1847)**

REFERENCES: *Bactra venosana* Zeller (Valletta, 1951a: 65); *Bactra venosana* Zell. (Valletta, 1973: 79); *Bactra venosana* Zeller, 1847 (Sammuto, 1984: 25); *Bactra venosana* (Zeller, 1847) (Karsholt & Razowski, 1996: 142; Sammut, 2000: 74).

DISTRIBUTION. Europe (France, Spain, Portugal, Corsica, Malta, Italy, Switzerland and Greece), Canary Islands, North Africa (Morocco, Algeria), Saudi Arabia, Japan, Ethiopian Region (Madeira, Sudan), Oriental Region (India, Sri Lanka, Thailand, Philippines, Indonesia, North and South Vietnam, S-China, Taiwan, Indonesia) and Australasian Region (Marianne Is., Caroline Is., Australia, Hawaii, Fiji).

CHOROTYPE. Subcosmopolitan (SCO).

BIOLOGY. Larval host plants include *Cyperus* spp., *C. alopecuroides*, *C. rotundus*; *Kyllinga brevifolia*, *K. macrocephala*, *K. monocephala*; *Fimbristylis ferruginea*. The adult is met with during April-May and again from July to September-October.

COMMENTS. Rare. Recorded from Mriehel in August (Valletta, 1949) and from Rabat also in August (Sammuto, 2000).

***Bactra bacrana* (Kennel, 1901)**

REFERENCES: *Bactra bacrana* (Kennel, 1901) (Sammuto 2000: 74); *Bactra bacrana* (Kennel, 1901) (Razowski, 2003: 16).

DISTRIBUTION. Europe (ex-USSR countries, France, Spain, Portugal, Corsica, Malta, Italy and Greece), Canary Islands, North Africa, Asia Minor, Caucasus, Transcaucasia, Turkmenistan, Arabia, Iraq, Iran, Caspian Sea, Uzbekistan, Central Asia, Tagikistan, Afghanistan, Pakistan, Russian Far East, Ethiopian Region (Madagascar) and Oriental Region (India).

CHOROTYPE. Subcosmopolitan (SCO).

BIOLOGY. Larva feeds on Poaceae; *Cynodon dactylon*; *Cyperus rotundus*. The adult of this bivoltine species can be found from May till September.

COMMENTS. Rare. Recorded from Rabat, Zebbug and Pembroke (Sammuto, 2000). During the present study the species has also been recorded from Ta' l-Ghezien and Qbajjar Bay near Marsalforn in Gozo during May and from Rabat (Fiddien) in August.

Tribe Olethreutini***Endothenia marginana* (Haworth, [1811])**

REFERENCES: *Endothenia marginana* Haworth, 1811 (Sammuto, 1984: 80; Sammut, 1985: 304); *Endothenia marginana* (Haworth, 1811) (Karsholt & Razowski, 1996: 142; Sammut, 2000: 74).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxembourg, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania and Albania), W-Africa, Transcaucasia, Urals, Kazakhstan, Siberia, Russian Far East, Mongolia and China.

CHOROTYPE. Palaearctic (PAL).

BIOLOGY. Larva feeds on *Betonica* spp.; *Cirsium* spp.; *Dipsacus fullonum*; *Galeopsis* spp.; *Pedicularis* spp., *P. sylvatica*; *Rhinanthus* spp., *R. minor*; *Stachys* spp., *S. officinalis*. The adult can be found from May till September.

COMMENTS. Rare. Known from the Maltese Islands from two specimens collected from Rabat in May (Sammut, 2000). Determination of the specimens has been carried out by genitalia by Dr. W. Sauter. Recorded also from Naxxar (Seguna, unpublished data).

Lobesia botrana ([Denis & Schiffermüller], 1775)

REFERENCES: *Polychrosis botrana* (Borg, 1922: 604); *Polychrosis botrana* Schiffermüller (De Lucca, 1950: 233; Amsel, 1955: 23); *Polychrosis botrana* Schiff. (Saliba, 1963: 10; Valletta, 1973: 79); *Lobesia botrana* Denis & Schiffermüller, 1775 (Sammut, 1984: 24); *Lobesia botrana* Schiff. (Vella, 1991: 74); *Lobesia botrana* (Denis & Schiffermüller, 1775) (Karsholt & Razowski, 1996: 145; Sammut, 2000: 75); *Lobesia botrana* (Borg, 2001: 73).

DISTRIBUTION. Europe (Denmark, Sweden, Ex-USSR countries, Lithuania, Poland, Czech Republic, Slovakia, Germany, Great Britain, Belgium, Luxembourg, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, Romania, Bulgaria, Greece and Crete), North Africa, Asia Minor, Middle East, Caucasus, Transcaucasia, Turkmenistan, Iraq, Iran, Kazakhstan, Central Asia, Japan and Nearctic Region (North America).

CHOROTYPE. Holarctic (HOL).

BIOLOGY. Larval host plants include *Actinidia chinensis*; *Amorpha* spp.; *Arbutus* spp.; *Berberis* spp., *B. vulgaris*; *Clematis* spp., *C. vitalba*; *Cornus* spp.; *Crataegus* spp.; *Daphne gnidium*; *Hedera* spp.; *Ligustrum* spp., *L. vulgare*; *Liriodendron* spp.; *Lonicera* spp.; *Myrtus* spp.; *Olea europaea*; *Rhamnus* spp.; *Ribes* spp.; *Rosmarinus* spp.; *Serratula tinctoria*; *Tanacetum vulgare*; *Viburnum* spp., *V. lantana*; *Vitis* spp., *V. vinifera*; *Ziziphus* spp.; mycelium of *Botrytis cinerea*. In central Europe the species is bivoltine and with three generations in the warmer regions. The moth flies from March till August; in Italy it has also been recorded during October.

COMMENTS. Very common. Widespread over all of the Maltese Islands. Locally the adults fly from May to June and again from August till September (Sammut, 2000)

Lobesia porrectana (Zeller, 1847)

REFERENCES: *Lobesia porrectana* Zeller, 1847 (Sammut, 1984: 24; Sammut, 1985: 304); *Lobesia porrectana* Zeller, 1847 (Karsholt & Razowski, 1996: 146; Sammut, 2000: 75); *Lobesia porrectana* (Zeller, 1847) (Razowski, 2002: 24).

DISTRIBUTION. Europe (France, Spain, Corsica, Malta and Italy) and Asia Minor.

CHOROTYPE. S-European (EUS2).

BIOLOGY. Larval host plant is still unknown. Adults fly from April till June.

COMMENTS. Uncommon. Recorded from Rabat in June. During the present study we also discovered material collected from Naxxar in April (coll. Seguna) and from Buskett, also in April (coll. Sammut)

Lobesia indusiana (Zeller, 1847)

DISTRIBUTION. Europe (Ex-USSR countries, France, Spain, Italy, ex-Yugoslavia and Bulgaria) and Dagestan.

CHOROTYPE. S-European (EUS).

BIOLOGY. Larva feeds on *Limonium vulgare*. The moth can be met with from June till August.

COMMENTS. This is new record for the Maltese Islands. To date it is known only from specimens collected from Ta' l-Ghezien near Marsalforn in Gozo, on May 31, 2006 and from Qbajjar Bay, also near Marsalforn (Gozo) on June 8, 2006 by the second Author.

Lobesia limoniana (Millière, 1860)

DISTRIBUTION. Europe (France, Spain and Italy).

CHOROTYPE. W-Mediterranean (MEW).

BIOLOGY. Larva feeds on *Limonium vulgare*. The adult has been collected in October.

COMMENTS. This is a new species for the Maltese fauna. During the present study a specimen collected from Fomm ir-Rih on July 24, 2002 has been discovered in the Sammut collection.

Hedya nubiferana (Haworth, [1811])

REFERENCES: *Hedya nubiferana* Hb. (= *variegana* Hb.) (sic) (Valletta, 1973: 79); *Hedya nubiferana* Haworth, 1811 (Sammut, 1984: 24; Sammut, 2000: 74).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, Ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Italy, Switzerland,

Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania, Greece and Crete), Asia Minor, Caucasus, Transcaucasia, Iraq, Iran, Urals, Kazakhstan, Turkmenistan, West and South Siberia, and the Nearctic Region (North America) (introduced).

CHOROTYPE. Centralasiatic-European (CAE, OLA*).

BIOLOGY. The larva feeds on a variety of trees including *Alnus* spp.; *Betula* spp.; *Crataegus* spp.; *Fraxinus excelsior*; *Malus* spp., *M. domestica*, *M. sylvestris*; *Mespilus germanica*; *Myrica* spp., *M. gale*; *Prunus* spp., *P. avium*; *Pyrus* spp.; *Quercus* spp.; *Rosa* spp.; *Salix* spp.; *Sorbus* spp., *S. aucuparia*. The adult is on the wing from May till August.

COMMENTS. Very rare. Recorded from two specimens collected in May 1953 from Buskett (Valletta, 1973). Not recorded again.

Hedya dimidiana (Clerck, 1759)

REFERENCES: *Hedya dimidiana* (Clerck, 1759) (Karsholt & Razowski, 1996: 145; Sammut, 2000: 75).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, France, Spain, Malta, Italy, Austria, Hungary and Romania), Transbaikal, SE Asia, West and South Siberia, China, Russian Far East, Korea, Japan and Oriental Region (Sri Lanka).

CHOROTYPE. Asiatic-European (ASE).

BIOLOGY. The larvae feed on *Alnus* spp.; *Betula* spp., *B. pubescens*; *Fagus* spp.; *Myrica gale*; *Prunus* spp., *P. avium*, *P. padus*; *Quercus serrata*; *Sorbus commixta*; *Tilia* spp.; *Zanthoxylum schinifolium*. The moth flies from May till July.

COMMENTS. This species is listed for Malta only in Karsholt & Razowski (1996). In the work of Sammut (2000) the species is listed on the authority of Karsholt and Razowski.

Enarmonia formosana (Scopoli, 1763)

REFERENCES: *Enarmonia formosiana* Dup. (sic) (Saliba, 1963: 10); *Enarmonia formosana* (Scopoli, 1763) (Karsholt & Razowski, 1996: 152; Sammut, 2000: 77).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Corsica, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria and Albania), South Africa, Asia Minor, Trans-Ural, Kazakhstan, Russian Far East, Japan and the Nearctic Region (Canada).

CHOROTYPE. Holarctic (HOL).

BIOLOGY. Larva feeds on *Malus* spp., *M. sylvestris*; *Prunus armeniaca*, *P. avium*, *P. cerasus*, *P. domestica*, *P. dulcis*, *P. laurocerasus*, *P. persica*; *Pyrus* spp., *P. commu-*

nis; *Sorbus* spp.; also on ornamental cherries and other Rosaceae. The adult can be found from May-June to July, sometimes even later.

COMMENTS. The presence of this species from Malta could not be confirmed. It is recorded only by Saliba (1963) as a pest on roses. Subsequent listings are on the same authority.

Tribe Eucosmini

Spilonota ocellana ([Denis & Schiffermüller], 1775)

REFERENCES: *Grapholitha ocellana* Schiff. (Borg, 1922: 247); *Laspeyresia ocellana* Schiff. (Borg, 1932: 22; Valletta, 1973: 96); *Spilonota ocellana* Denis & Schiffermüller, 1775 (Sammut, 1984: 25); *Spilonota ocellana* (Denis & Schiffermüller, 1775) (Karsholt & Razowski, 1996: 146; Sammut, 2000: 75).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania and Greece), North Africa (Morocco), Asia Minor, Caucasus, Transcaucasia, Iran, Kazakhstan, Uzbekistan, Tadgikistan, Siberia, China, Russian Far East, Corea, Japan and Neartic Region (North America).

CHOROTYPE. Holarctic (HOL).

BIOLOGY. The larva is polyphagous on *Alnus* spp., *A. glutinosa*; *Betula* spp., *B. alba*, *B. pubescens*; *Carpinus* spp., *C. betulus*; *Chaenomeles speciosa*; *Corylus* spp.; *Crataegus* spp., *C. rhipidophylla*; *Cydonia* spp.; *Euphorbia paralias*; *Hippophae* spp., *H. rhamnoides*; *Juglans* spp.; *Kalmia* spp.; *Larix* spp., *L. decidua*, *L. kaempferi*; *Malus* spp., *M. domestica*, *M. sylvestris*; *Myrica* spp., *M. gale*; *Prunus* spp., *P. mume*, *P. paniculata*, *P. pensylvanica*, *P. persica*, *P. saliChina*; *Pyracantha* spp.; *Pyrus* spp., *P. communis*, *P. domestica*; *Quercus* spp., *Q. garryana*; *Rhus* spp.; *Rubus* spp.; *Rumex obtusifolius*; *Salix* spp.; *Sorbus* spp.; *Sphagnum* spp.; *Vaccinium myrtillus*, *V. uliginosum*, *V. vitis-idaea*; also on other Rosaceae trees and shrubs and moss. The moth is on the wing from April-May till August.

COMMENTS. This species is either another doubtful record or else the species has become extinct from the Maltese Islands. Recorded only by Borg (1922). All subsequent listings are on the same authority.

Acroclita subsequana (Herrich-Schäffer, 1851)

REFERENCES: *Acroclita consequana* H-S. (= *hawkerana* Staint.) (sic) (Valletta, 1953: 9); *Acroclita subsequana* HS. (= *consequana* HS) (Valletta, 1973: 79); *Acroclita*

subsequana Herrich-Schäffer, 1851 (Sammut, 1984: 28); *Acroclita subsequana* (Herrich-Schäffer, 1851) (Karsholt & Razowski, 1996: 147; Sammut, 2000: 75).

DISTRIBUTION. Europe (Great Britain, France, Spain, Portugal, Malta and Italy), Canary Islands and Morocco.

CHOROTYPE. SW-European (ESW5).

BIOLOGY. The larva feeds on *Euphorbia biumbellata*, *E. esula*, *E. paralias*, *E. portlandica*, *E. pubescens*, *E. terracina*. The adult of this bivoltine species can be found during the months of May and June and from July to September; in Italy the species has been collected also during December.

COMMENTS. Very rare. Previously recorded only by Valletta (1953). Valletta writes that he found larvae of this species feeding on *Anemone coronaria* and *Ranunculus*. During the present study we have discovered two specimens collected from Rabat (Dwejra) by Seguna during October and November. Adults fly during November and December.

Epinotia thapsiana (Zeller, 1847)

REFERENCES: *Epinotia thapsiana* (Zeller, 1847) (Sammut, 2000: 75).

DISTRIBUTION. Europe (ex-USSR countries, Czech Republic, Netherlands, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Albania, Greece and Crete), Canary Islands, Morocco, Asia Minor, Transcaucasia, Iran, Kazakhstan, Turkmenistan, Tagikistan, Central Asia and WS-Siberia.

CHOROTYPE. Centralasiatic-European-Mediterranean (CEM5).

BIOLOGY. Larvae feed on *Crithmum maritimum*; *Ferula communis*; *Foeniculum vulgare*; *Laserpitium gallicum*; *Ligusticum lucidum*; *Thapsia villosa*. The moth flies from May till August; in Italy it has also been taken in March.

COMMENTS. Very rare. Up to the present study, the species was known from the Maltese Islands from a single specimen collected in July 1991 from Bahrija by the second Author. Determination has been carried out by genitalia by Dr. W. Sauter. We discovered a second specimen collected from Birzebbugia (Wied Dalam) by Seguna on March 12, 1999 (coll. Seguna).

Crocidosema plebejana Zeller, 1847

REFERENCES: *Crocidosema plebejana* Z. (Caruana Gatto, 1905: 29; Andres, 1916: 50; Valletta, 1950: 307); *Crocidosema plebejana* Zell. (Valletta, 1973: 79); *Crocidosema plebejana* Zeller, 1847 (Sammut, 1984: 28; Karsholt & Razowski, 1996: 148; Sammut, 2000: 76).

DISTRIBUTION. Europe (Denmark, ex-USSR countries, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania,

Bulgaria, Albania, Greece and Crete), North Africa (Morocco), Asia Minor, Middle East, Arabia, Caucasus, Transcaucasia, Iran, Turkmenistan, Nearctic Region (North America), Oriental Region (India, Taiwan, Australia) and the Neotropical Region (South America).

CHOROTYPE. Cosmopolitan (COS).

BIOLOGY. Larval host plants include *Abelmoschus esculentus*; *Abutilon* spp., *A. indicum*, *A. theophrasti*; *Alcea rosea*; *Althaea* spp.; *Anoda lavaterioides*; *Crataegus* spp.; *Eucalyptus* spp.; *Gossypium* spp., *G. hirsutum*; *Hibiscus* spp., *H. arboreus*, *H. militaris*, *H. rosa-sinensis*; *Kosteletzkya* spp.; *Lavatera* spp.; Malvaceae; *Malva* spp., *M. moschata*, *M. parviflora*, *M. sylvestris*; *Malvastrum tricuspidatum*; *Malvaviscus arboreus*; *Salix safsaf*; *Wissadula amplissima*. The adult can be met with from April to October-November, probably in two generations.

COMMENTS. Very common. Recorded from all over the island of Malta. In the present study its presence on the island of Gozo has been confirmed.

Pelochrista mollitana (Zeller, 1847)

REFERENCES: *Pelochrista mollitana* (Zeller, 1847) (Karsholt & Razowski, 1996: 148; Sammut, 2000: 76).

DISTRIBUTION. Europe (Sweden, ex-USSR countries, Estonia, Latvia, Czech Republic, Slovakia, France, Spain, Portugal, Malta, Italy, Switzerland, Austria, Hungary, Romania and Bulgaria), Mediterranean, Caucasus and Kazakhstan.

CHOROTYPE. Turanic-European-Mediterranean (TEM).

BIOLOGY. The larva feeds on *Inula salicina*. The moth flies during the months of May, June and July.

COMMENTS. Not common. Recorded from Dingli (Sammut, 2000). Additional material, collected during May from Migra Ferha (Sammut collection) has been discovered during this study.

Pelochrista hepatariana (Herrich-Schäffer, 1851)

REFERENCES: *Pelochrista hepatariana* (Herrich-Schäffer, 1851) (Karsholt & Razowski, 1996: 149; Sammut, 2000: 76; Trematerra & Baldizzzone, 2004: 38).

DISTRIBUTION. Europe (Czech Republic, Slovakia, Germany, France, Malta, Italy, Austria, Hungary and Romania) and Asia Minor.

CHOROTYPE. European (EUR2).

BIOLOGY. The larva has been recorded on *Inula conyza*. The adult can be found during May-June and from July to August.

COMMENTS. Not common. Recorded from Pembroke in June (Sammut, 2000). Additionally during the present study we recored material from Fomm ir-Rih and from Qbajjar in Marsalforn, Gozo (Sammut collection).

Eucosma cana (Haworth, [1811])

REFERENCES: *Eucosma cana* (Haworth, 1811) (Karsholt & Razowski, 1996: 149; Sammut, 2000: 76).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania and Greece), Asia Minor, Caucasus, Transcaucasia, Kazakhstan, Central Asia, West and South Siberia, China, Russian Far East and Japan.

CHOROTYPE. Asiatic-European (ASE).

BIOLOGY. The larva feeds on *Carduus* spp., *C. nutans*; *Centaurea* spp., *C. nigra*; *Cirsium arvense*, *C. oleraceum*. *C. vulgare*; *Hypericum* spp.; *Senecio jacobea*. The adult flies from June to August; in Italy it has been taken also during April.

COMMENTS. Not common. Recorded from Pembroke (Sammut, 2000) and from Rabat, Naxxar, Dwejra, Wied Qannotta, Armier and from Wied il-Ghasri in Gozo, (Sammut & Seguna, unpublished data)

Eucosma fulvana (Stephens, 1834)

COMMENTS. Widespread in Europe, but exact biology and distribution is unclear because of former confusion with *Eucosma hohenwartiana* ([Denis & Schiffermüller], 1775) (Agassiz and Langmaid, 2004).

New record for the Maltese lepidopteroфаuna. It has been recorded from Rabat during early April by Sammut, from Rabat (Dwejra) and from Bahrija (Fomm ir-Rih) during late April by Sammut, Borg, Catania and Seguna.

Gypsonoma dealbana (Frölich, 1828)

REFERENCES: *Gypsonoma dealbana* Frölich (= *incarnana* Haworth) (De Lucca, 1950: 233); *Gypsonoma dealbana* Frölich (Valletta, 1973: 80); *Gypsonoma dealbana* Frölich, 1828 (Sammut, 1984: 24); *Gypsonoma dealbana* (Frölich, 1828) (Karsholt & Razowski, 1996: 150; Sammut, 2000: 76).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria and Greece), Caucasus, Transcaucasia, N-Kazakhstan, Siberia, China, Russian Far East and Japan.

CHOROTYPE. Asiatic-European (ASE).

BIOLOGY. Larvae feed on *Alnus* spp.; *Corylus* spp., *C. avellana*; *Crataegus* spp.; *Populus* spp., *P. tremula*; *Prunus* spp.; *Pyrus* spp.; *Quercus* spp.; *Salix* spp., *S. safsaf*. The moth flies from the end of May to August-September.

COMMENTS. Up to the present study, this species was recorded from the Maltese Islands only once, by De Lucca from Gharghur on August 29, 1949 (De Lucca, 1950). We have recorded additional material from Fomm ir-Rih, Dwejra and from Rabat. All this recent material has been collected during April.

***Epiblema prae fractana* (Kennel, 1901)**

REFERENCES: *Pseudeucosma prae fractana* Kennel (sic) (De Lucca, 1953: 129; Valletta, 1973: 79); *Pelochrista prae fractana* Kennel, 1901 (Sammut, 1984: 25); *Pelochrista prae fractana* (Kennel, 1901) (Sammut, 2000: 77).

DISTRIBUTION. Europe (Hungary, Malta) and Asia Minor (Pontus).

CHOROTYPE. E-Mediterranean (MEE)

BIOLOGY. Unknown.

COMMENTS. Very rare. Recorded from the Maltese Islands only once, from a male collected by De Lucca from Salina Bay on June 26, 1949 (De Lucca, 1953).

***Blastesthia tessulatana* (Staudinger, 1871)**

REFERENCES: *Evetria tessulatana* Staud. (De Lucca, 1949a: 149); *Evetria tessulatana* Staudinger (Amsel, 1955: 23); *Rhyacionia tessulatana* Staud. (Valletta, 1973: 78); *Pseudococcyx tessulatana* Staudinger, 1871 (Sammut, 1984: 25); *Blastesthia tessulatana* (Staudinger, 1871) (Karsholt & Razowski, 1996: 152; Sammut, 2000: 77).

DISTRIBUTION. Europe (ex-USSR countries, France, Spain, Portugal, Malta, Italy, Switzerland, ex-Yugoslavia, Bulgaria, Albania and Greece), North Africa (Morocco), Asia Minor and from the Caucasian shores of the Black Sea.

CHOROTYPE. S-European-Mediterranean (MES).

BIOLOGY. The larva feeds on *Cupressus* spp.; *Tetraclinis articulata*; *Thuya orientalis*. The moth has been recorded from March till September.

COMMENTS. Not a rare species in the Maltese Islands. It has been recorded from Birki-rkara (De Lucca, 1949a), Buskett (De Lucca, 1955a) and Naxxar (Sammut, 2000). Known also from Rabat and Dwejra (Sammut, unpublished data)

***Rhyacionia buoliana* ([Denis & Schiffermüller], 1775)**

REFERENCES: *Evetria buoliana* Schiff. (Borg, 1922: 402; Borg 1932: 21); *Rhyacionia buoliana* Schiffer. (Valletta, 1973: 77); *Rhyacionia buoliana* Denis & Schiffermüller, 1775 (Sammut, 1984: 25); *Rhyacionia buoliana* (Denis & Schiffermüller, 1775 Karsholt & Razowski, 1996: 15; Sammut, 2000: 77).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands,

Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, Romania, Bulgaria and Greece.), North Africa, Asia Minor, Near East (Israel), Caucasus, Transcaucasia, Urals, Corea, China, Japan, Nearctic Region (North America) and the Neotropical Region (Argentina and Uruguay) (introduced).

CHOROTYPE. Holarctic (HOL, SCO*).

BIOLOGY. The larva is known to feed on *Abies alba*; *Picea breweriana*; *Pinus* spp., *P. banksiana*, *P. contorta*, *P. halepensis*, *P. mugo*, *P. nigra*, *P. pinaster*, *P. pinea*, *P. ponderosa*, *P. radiata*, *P. resinosa*, *P. strobus*, *P. sylvestris*. The moth is on the wing from May-June to August.

COMMENTS. Not common. Recorded from Rabat (Sammut, 2000), Buskett and Dwejra and Naxxar (Sammut & Seguna, unpublished data).

TRIBE GRAPHOLITINI

Cydia compositella (Fabricius, 1775)

REFERENCES: *Laspeyresia compositella* F. (Valletta, 1950: 307); *Laspeyresia compositella* Fabricius (De Lucca, 1950: 233); *Enarmonia compositella* Fabricius (Valletta, 1951a: 65); *Cydia compositella* Fab. (Valletta, 1973: 80); *Cydia compositella* Fabricius, 1775 (Sammut, 1984: 26); *Cydia compositella* (Fabricius, 1775) (Karsholt & Razowski, 1996: 153; Sammut, 2000: 77).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, Romania and Greece), Asia Minor, Caucasus, Transcaucasia, Kazakhstan, Siberia, Mongolia, China, Russian Far East and Nearctic Region (North America).

CHOROTYPE. Holarctic (HOL).

BIOLOGY. Larval host plants include *Cannabis sativa*; *Glycine max*; *Lotus corniculatus*; *Medicago sativa*; *Melilotus* spp.; *Trifolium* spp., *T. pratense*. The adult of this bivoltine species can be found from April-May to June and from July to August-September.

COMMENTS. Uncommon species. Known from Salina Bay (De Lucca, 1950), Mriehel (Valletta, 1951a), Pembroke & Buskett (Sammut, 2000). Recorded also from Dwejra, Naxxar and Ghadira Bay (Sammut & Seguna, unpublished data).

Cydia lunulana ([Denis & Schiffermüller], 1775)

REFERENCES: *Laspeyresia dorsana* F. (Borg, 1932: 22); *Laspeyresia dorsana* Fab. (Saliba, 1963: 10); *Cydia dorsana* Fab. (Valletta, 1973: 81); *Cydia dorsana* Fabricius, 1775 (Sammut, 1984: 26; Sammut, 2000: 78); *Cydia lunulana* (Denis & Schiffermüller, 1775) (Karsholt & Razowski, 1996: 153; Sammut, 2000: 78).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, France, Spain, Portugal, Malta, Italy, Switzerland, Austria, ex-Yugoslavia, Romania and Albania), North Africa (Morocco), Asia Minor, Transcaucasia, Turkmenistan and Central Asia.

CHOROTYPE. Centralasiatic-European-Mediterranean (CEM).

BIOLOGY. The larva feeds on *Lathyrus* spp., *L. montanus*; *Phaseolus* spp.; *Pisum* spp., *P. sativum*; *Trifolium* spp.; *Vicia cracca*. The moth flies from March to July.

COMMENTS. Sammut (2000) recorded both *dorsana* and *lunulana* as two separate species. As *dorsana* it was recorded by Saliba (1963) and Valletta (1973) as a common pest of the pea.

Cydia molesta (Busck, 1916)

REFERENCES: *Cydia molesta* Busck (Saliba, 1963: 10); *Cydia molesta* (Busck, 1916) (Karsholt & Razowski, 1996: 154; Sammut, 2000: 78); *Cydia molesta* (Borg, 2001: 73).

DISTRIBUTION. Europe (Denmark, Sweden, Latvia, Lithuania, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Belgium, France, Spain, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria and Greece), Morocco, Middle East, Transcaucasia, China, Corea, Japan, Nearctic Region (North America), Australasian Region (SW-Australia and New Zealand) and the Neotropical Region (South America).

CHOROTYPE. Palaearctic (PAL, SCO*).

BIOLOGY. The larva feeds on *Chaenomeles* spp.; *Crataegus* spp.; *Cydonia* spp., *C. oblonga*; *Diospyros kaki*; *Eriobotrya japonica*; *Eugenia edulis*; *Malus* spp.; *M. domestica*, *M. sylvestris*; *Photinia glabra*; *Prunus* spp., *P. armeniaca*, *P. avium*, *P. domestica*, *P. dulcis*, *P. ilicifolia*, *P. mume*, *P. paniculata*, *P. persica*, *P. salicina*, *P. serotina*; *Psidium guajava*; *Pyracantha* spp.; *Pyrus* spp., *P. communis*, *P. domestica*, *P. pyraster*; *Rosa* spp., and other Rosaceae. The moth flies from March to September in two, three or four generations.

COMMENTS. During the present study the presence of this species from Malta could not be confirmed. It is recorded only by Saliba (1963) as a pest on peach. Subsequent listings are on the same authority.

Cydia succedana ([Denis & Schiffermüller], 1775)

REFERENCES: *Cydia succedana* (Denis & Schiffermüller, 1775) (Karsholt & Razowski, 1996: 154; Sammut, 2000: 78).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Corsica, Malta, Italy,

Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania, Greece and Crete), North Africa (Morocco), Asia Minor, Transcaucasia, Iran, Kazakhstan, Central Asia, Afghanistan, North Siberia and Mongolia.

CHOROTYPE. Centralasiatic-European-Mediterranean (CEM).

BIOLOGY. Larva feeds on *Cytisus* spp., *C. scoparius*; *Genista* spp.; *Lotus* spp.; *Ononis* spp.; *Ulex* spp., *U. europaeus*. The moth flies from May-June and from July to September.

COMMENTS. Rare. Recorded from Mgarr and Wied il-Ghasri in Gozo. At present the species is not known from the island of Malta.

Cydia pomonella (Linnaeus, 1758)

REFERENCES: *Carpocapsa pomonella* L. (Borg J., 1898: - ; Caruana Gatto, 1905: 29); *Grapholitha pomonella* HS (sic) (Borg, 1922: 244, 284); *Laspeyresia pomonella* Lin. (Borg, 1932: 22); *Cydia pomonella* L. (Saliba, 1963: 10); *Cydia pomonella* Zell. (Valletta, 1973: 80); *Cydia pomonella* Linnaeus, 1758 (Sammut, 1984: 26); *Cydia pomonella* (Linnaeus, 1758) (Karsholt & Razowski, 1996: 154; Sammut, 2000: 78); *Cydia pomonella* (Borg, 2001: 82).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania, Greece, Crete and European Turkey), North Africa, Asia Minor, Caucasus, Transcaucasia, Turkmenistan, Kazakhstan, S-Siberia, Central Asia, Pakistan, China, Russian Far East, Nearctic Region (North America), Afrotropical Region (South Africa), Australasian Region (South Australia and New Zealand) and Neotropical Region (South America).

CHOROTYPE. W-Palaearctic (WPA, COS*).

BIOLOGY. Larva feeds on *Castanea* spp., *C. sativa*; *Citrus* spp.; *Cydonia* spp., *C. oblonga*; *Ficus* spp., *F. carica*; *Juglans* spp., *J. regia*; *Malus* spp., *M. domestica*; *Prunus* spp., *P. armeniaca*, *P. persica*, *P. domestica*; *Pyrus* spp., *P. communis*, *P. domestica*; *Quercus* spp.; Rosaceae; *Sorbus aria*. The adult of this bivoltine species can be met with from April-May to June and from July to August-October.

COMMENTS. Uncommon. Formerly very common. Widely distributed in the Maltese Islands, especially where apple and pear trees are planted.

Cydia sammuti Diakonoff, 1986

REFERENCES: *Cydia (Kenneliola) sammuti* spec. nov. (Diakonoff, 1986: 170); *Cydia (Kenneliola) sammuti* Diakonoff (Sammut & Valletta, 1989: 99; Sammut, 1989:

133); *Cydia sammuti* Diakonoff, 1986 (Karsholt & Razowski, 1996: 155; Sammut, 2000: 78); *Cydia sammuti* Diakonoff, 1986 (Razowski, 2003: 119).

DISTRIBUTION. Malta.

CHOROTYPE. Endemic.

BIOLOGY. Unknown.

COMMENTS. Very rare. Known only from a single male collected from Buskett in June 1981 by the second Author (Diakonoff, 1986).

Cydia amplana (Hübner, [1796-99])

REFERENCES: *Laspeyresia molybdana* Constant (Amsel, 1955: 23; De Lucca, 1956: 255); *Cydia molybdana* Constant (Valletta, 1973: 80); *Cydia molybdana* Constant, 1884 (Sammut, 1984: 26; Sammut, 2000: 78).

DISTRIBUTION. Europe (Denmark, Sweden, ex-USSR countries, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Belgium, France, Spain, Portugal, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria and Greece), Asia Minor, Syria and Transcaucasia.

CHOROTYPE. Turanic-European (TUE).

BIOLOGY. Larval host plants include *Castanea* spp., *C. sativa*; *Corylus* spp., *C. avellana*; *Fagus* spp.; *Juglans* spp., *J. regia*; *Quercus* spp., *Q. petraea*, *Q. robur*, *Q. rubra*. The moth flies from June to the first half of September; in Italy it has been recorded as early as April and as late as mid-November.

COMMENTS. Very rare. Recorded only once, on October 1, 1953 from Buskett by De Lucca (Amsel, 1955). Has not been recorded again.

Cydia fagiglandana (Zeller, 1841)

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Corsica, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria, Albania, Greece and Crete), Madeira, North Africa (Morocco), Asia Minor, Syria, Caucasus, Transcaucasia and Turkestan.

CHOROTYPE. W-Palaearctic (WPA).

BIOLOGY. The larva is known to feed on *Castanea* spp., *C. sativa*; *Corylus avellana*; *Fagus* spp., *F. sylvatica*; *Phaseolus* spp.; *Quercus* spp., *Q. ilex*, *Q. ilex rotundifolia*, *Q. robur* and *Q. suber*. The moth can be found from May to July, sometimes in two generations; in Italy it has been recorded also during August and September.

COMMENTS. This is a new species for the Maltese Islands. During the present study, we record material collected from Rabat (Wied ta' Liemu) during August and September, and Buskett during May (coll. Sammut) and from Naxxar (coll. Seguna), also in May.

Cydia ulicetana (Haworth, [1811])

DISTRIBUTION. Europe (ex-USSR countries, Germany, France, Spain, Portugal, Italy, Switzerland? and Bulgaria?) and North Africa.

CHOROTYPE. European-Mediterranean (EUM).

BIOLOGY. The larva feeds on *Genista* spp.; *Lotus* spp.; *Ulex europeus*; other Leguminosae. The moth is on the wing from April to July.

COMMENTS. This is new species for the Maltese Islands. In the Sammut collection is a specimen collected from the island of Comino on March 13, 1980 and another recorded from Rabat on August 8.2001.

Selania leplastriana (Curtis, 1831)

REFERENCES: *Laspeyresia leplastriana* Curt. (Borg, 1932: 22); *Laspeyresia (Grapholitha) leplastriana* (Borg 1935: 34); *Laspeyresia leplastriana* Curt. (Saliba, 1963: 10); *Cydia leplastriana* Curt. (Valletta, 1973: 81); *Selania leplastriana* Curtis, 1831 (Sammut, 1984: 155); *Selania leplastriana* (Curtis, 1831) (Karsholt & Razowski, 1996: 155); ?*Selania leplastriana* (Curtis, 1831) (sic) (Farrugia, 1997: 157); *Selania leplastriana* (Mifsud, 1997: 78); *Selania leplastriana* (Curtis, 1831) (Sammut, 2000: 79).

DISTRIBUTION. Europe (Sweden, ex-USSR countries, Slovakia, Great Britain, France, Spain, Portugal, Corsica, Malta, Italy, Austria, Hungary, ex-Yugoslavia and Romania), North Africa (Morocco) and Asia Minor.

CHOROTYPE. European-Mediterranean (EUM).

BIOLOGY. Larva feeds on *Brassica* spp., *B. oleracea*; *Capparis* spp.; *Lobularia maritima*; *Malcolmia littorea*; *Matthiola* spp.; *Moricandia suffruticosa*; other Cruciferae. The moth is found from April to June-July and from the second half of August to September.

COMMENTS. Recorded by Borg (1932) and Saliba (1963) as a common pest of the cauliflower and cabbage. Due to the heavy use of pesticides, this moth has become quite rare.

Selania capparidana (Zeller, 1847)

REFERENCES: *Grapholitha capparidana* Z. (Andres, 1916: 50); *Cydia capparidana* Zell. (Valletta, 1973: 80); *Selania capparidana* Zeller, 1844 (Sammut, 1984: 26); *Selania capparidana* (Zeller, 1844) (Karsholt & Razowski, 1996: 155; Sammut, 2000: 79).

DISTRIBUTION. Europe (Spain, Malta, Italy, ex-Yugoslavia and Greece).

CHOROTYPE. Mediterranean (MED).

BIOLOGY. The larva is known to feed on *Capparis spinosa*. The adult can be met with

during the months of July and August; in Italy it is on the wing from the end of June to the first half of September and in the early parts of December.

COMMENTS. Common. Widely distributed in the Maltese Islands.

Pammene fasciana (Linnaeus, 1761)

REFERENCES: *Pammene fasciana* Linnaeus (De Lucca, 1951b: 259); *Pammene fasciana* L. (= *jubiana* Curtis) (Valletta, 1973: 81); *Pammene fasciana* Linnaeus, 1761 (Sammut, 1984: 26); *Pammene fasciana* (Linnaeus, 1761) (Karsholt & Razowski, 1996: 155; Sammut, 2000: 79).

DISTRIBUTION. Europe (Norway, Denmark, Sweden, Finland, ex-USSR countries, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Germany, Netherlands, Great Britain, Eire, Belgium, Luxemburg, France, Spain, Portugal, Corsica, Malta, Italy, Switzerland, Austria, Hungary, ex-Yugoslavia, Romania, Bulgaria and Greece), Asia Minor, Caucasus, Transcaucasia and Iran.

CHOROTYPE. Turanic-European (TUE).

BIOLOGY. Larva feeds on *Acer* spp.; *Castanea* spp., *C. sativa*; *Fagus* spp., *F. sylvatica*; *Quercus* spp., *Q. suber*. The moth flies from May till August; in Italy it has been recorded also in September.

COMMENTS. A very rare species. Recorded only once by De Lucca from Birkirkara on May 22, 1949 (De Lucca, 1951b). It has not been observed in the Maltese Islands since.

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