

# *Euxoa capsensis* Chrétien, 1911 a new Noctuidae species for Europe and the Maltese Islands, including an updated Noctuoidea checklist for the Maltese Islands (Lepidoptera: Noctuidae, Noctuinae)

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## Abstract

*Euxoa capsensis* Chrétien, 1911 is reported for the first time from Europe and the Maltese Islands. Notes on the distribution and habitat of the adult are included. A Maltese name is proposed for this new record.

**Keywords:** Lepidoptera, Noctuidae, Noctuinae, *Euxoa capsensis*, new record, Malta.

*Euxoa capsensis* Chrétien, 1911 una nueva especie de Noctuidae para Europa y Malta, incluyendo una lista actualizada de Noctuoidea para Malta (Lepidoptera: Noctuidae, Noctuinae)

## Resumen

*Euxoa capsensis* Chrétien, 1911 se cita por primera vez en Europa y para Malta. Se incluyen notas sobre la distribución y el hábitat del adulto. Se propone un nombre maltés para este nuevo registro.

**Palabras clave:** Lepidoptera, Noctuidae, Noctuinae, *Euxoa capsensis*, nuevo registro, Malta.

## Introduction

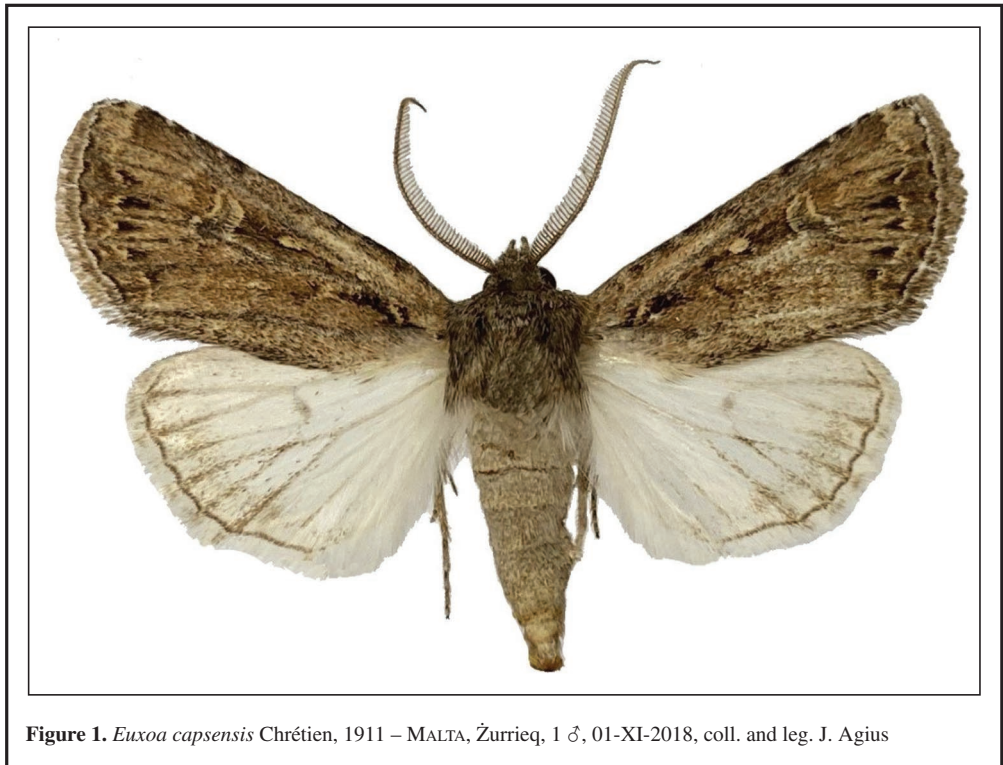
The genus *Euxoa* Hübner, [1821] is considered as the most highly evolved of the Noctuinae with a worldwide distribution which spans from the Nearctic, Palaearctic, Afrotropical, into the Indomalaya ecozones. It is also found in the northern most parts of the Neotropical region too. In the Palaearctic region there are around 130 *Euxoa* species, 43 of which are found in Europe but only a few records from *Euxoa canariensis mauretana* (Bang-Haas, 1910) and *Euxoa distinguenda* (Lederer, 1857) have been recorded from Malta so far.

## Material Studied

MALTA, Żurrieq, 1 ♂, 01-XI-2018 at 18W UV Black light, coll & leg. J. Agius; Żurrieq, 1 ♂, 16-XI-2022 at 18W UV Black light, coll & leg. J. Agius.

The life history of this species is not yet known although in Jordan it is associated with Saharo-Arabian and Sudanian Penetration zones (Kravchenko et al. 2015) in arid and semi-arid areas.

Apparently, it could be abundant in certain desert areas close to psammophilous plants. In captivity, larvae were successfully reared on *Hyosyamus muticus* (Solanaceae) (Wiltshire, 1948)



**Figure 1.** *Euxoa capsensis* Chrétien, 1911 – MALTA, Żurrieq, 1 ♂, 01-XI-2018, coll. and leg. J. Agius

## Discussion

The arrival of North African species during mid-autumn is always associated with southern winds (Agius, 2022). In fact, together with *Euxoa capsensis* Chrétien, 1911, several other North African species have been recorded from the same location during the months of October and November of 2018, such as *Agrotis catalaunensis* (Millière, 1873), *Agrotis haifae* Staudinger, 1897, *Agrotis herzogi* Rebel, 1911, *Daphnis nerii* (Linnaeus, 1758) and *Scythocentropus inquinata* (Mabille, [1888]) amongst others.

An interesting point is the lack of reference to this species in the Noctuidae Europaeae series. The checklist found in Noctuidae Europaeae volume 13 (Witt et al. 2011) does not include *Euxoa capsensis* Chrétien, 1911 (Figure 1) as probably this species has always been associated with North Africa and Middle East and there are no confirmed records in Europe. Its distribution is restricted to Algeria, Egypt, Jordan, Israel, and Lebanon (Kravchenko et al. 2006).

*Euxoa capsensis* Chrétien, 1911 – MALTA, Żurrieq, 1 ♂, 01-XI-2018, coll. & leg. J. Agius

## Conclusion

The species is new to the European and Maltese lepidoptero fauna. The author proposes the Maltese name *Euxoa ta' Tunis*, after the country from where the female holotype to describe the

species was collected. With the addition of *Euxoa capsensis* Chrétien, 1911 to the Maltese lepidopteroфаuna, the total Noctuoidea Latreille, 1809 species correctly recorded from Malta as at the 06-I-2023 are 174 species. *Euxoa anarmodia* (Staudinger, 1897) is a synonym of *Euxoa capsensis* Chrétien, 1911.

It is to be noted that *Agrotis desertorum* Boisduval, 1840 was incorrectly reported by Agius (2018). This specimen has now been confirmed to belong to *Euxoa canariensis mauretanicus* (Bang-Haas, 1910) and therefore *Agrotis desertorum* Boisduval, 1840 is being removed from the list of Noctuoidea Latreille, 1809 species reported from the Maltese Islands. The 174 confirmed Noctuoidea Latreille, 1809 species sorted by the phylogenetic relationships among the noctuid lineages confirmed from the Maltese Islands are as follows:

Superfamily Noctuoidea Latreille, 1809

Family Nolidae Bruand, 184

Subfamily Nolinae Bruand, 1847

*Nola cristatula* (Hübner, 1793)

Subfamily Chloephorinae Stainton, 1859

*Earias insulana* (Boisduval, 1833)

*Garella nilotica* (Rogenhofer, 1882)

*Xanthodes albago* (Fabricius, 1794)

Family Erebidae Leach, 1815

Subfamily Rivulinae Grote, 1895

*Zebeeba falsalis* (Herrich-Schäffer, 1839)

Subfamily Hypeninae Herrich-Schäffer, [1851]

*Hypena lividalis* (Hübner, 1790)

*Hypena obsitalis* (Hübner, [1813])

Subfamily Lymantriinae Hampson, 1893

*Casama innotata* (Walker, 1855)

*Euproctis chrysorrhoea* (Linnaeus, 1758)

*Lymantria dispar* (Linnaeus, 1758)

*Orgyia trigotephras* Boisduval, [1828]

Subfamily Arctiinae Leach, 1815

*Arctia konewkaii* (Freyer, [1831])

*Cymbalophora pudica* (Esper, [1785])

*Dysauxes famula* (Freyer, [1836])

*Eilema caniola* (Hübner, [1808])

*Eilema marcida* (Mann, 1859)

*Lithosia quadra* (Linnaeus, 1758)

*Phragmatobia fuliginosa melitensis* Bang-Haas, 1927

*Utetheisa pulchella* (Linnaeus, 1758)

Subfamily Herminiinae Leach, [1815]

*Nodaria nodosalis* (Herrich-Schäffer, [1851])

*Polypogon plumigeralis* (Hübner, [1825])

Subfamily Toxocampinae Guenée, 1852

*Anumeta hilgerti* (Rothschild, 1909)

*Autophila dilucida* (Hübner, [1808])

*Autophila maura* (Staudinger, 1888)

*Autophila rosea* (Staudinger, 1888)

*Tathorhynchus exsiccata* (Lederer, 1855)

Subfamily Hypenodinae Forbes, 1954

*Schranksia costaestrigalis* (Stephens, 1834)

Subfamily Boletobiinae Guenée, [1858]

- Araeopteron ecphaea* (Hampson, 1914)  
*Eublemma cochylionides* (Guenée, 1852)  
*Eublemma deleta* (Staudinger, 1901)  
*Eublemma deserta* (Staudinger, 1900)  
*Eublemma ostrina* (Hübner, [1808])  
*Eublemma parva* (Hübner, [1808])  
*Eublemma scitula* (Rambur, 1833)  
*Metachrostis velocior* (Staudinger, 1892)  
*Metachrostis velox* (Hübner,  
*Odice pergrata* (Rambur, 1858)  
*Odice suava* (Hübner, [1813])  
 Subfamily Erebininae Leach, [1815]  
*Drasteria philippina* (Austaut, 1880)  
*Pandesma robusta* (Walker, [1858])  
 Subfamily Catocalinae Boisduval, 1828  
*Catocala coniuncta* (Esper, [1787])  
*Catocala elocata* (Esper, [1787])  
*Catocala nymphaea* (Esper, [1787])  
*Catocala nymphagoga* (Esper, [1787])  
*Cerocala algiriae* Oberthür, 1876  
*Clytie illunaris* (Hübner, [1813])  
*Clytie sancta* (Staudinger, 1898)  
*Dysgonia algira* (Linnaeus, 1767)  
*Dysgonia torrida* (Guenée, 1852)  
*Grammodes bifasciata* (Petagna, 1786)  
*Grammodes stolidia* (Fabricius, 1775)  
*Heteropalpia acrosticta* (Püngeler, 1904)  
*Ophiusa tirhaca* (Cramer, [1777])  
 Family Euteliidae Grote, 1882  
 Subfamily Euteliinae Grote, 1882  
*Eutelia adulatrix* (Hübner, [1813])  
 Family Noctuidae Latreille, 1809  
 Subfamily Plusiinae Boisduval, 1829  
*Abrostola triplasia* (Linnaeus, 1758)  
*Autographa gamma* (Linnaeus, 1758)  
*Chrysodeixis chalcites* (Esper, 1789)  
*Cornutiplusia circumflexa* (Linnaeus, 1758)  
*Ctenoplusia accentifera* (Lefèbvre, 1827)  
*Thysanoplusia circumscripta* (Freyer, 1831)  
*Thysanoplusia daubei* (Boisduval, 1840)  
*Thysanoplusia orichalcea* (Fabricius, 1775)  
*Trichoplusia ni* (Hübner, [1803])  
 Subfamily Pantheinae Smith, 1898  
*Chloantha hyperici* ([Denis & Schiffermüller], 1775)  
 Subfamily Dilobinae Aurivillius, 1889  
*Diloba caeruleocephala* (Linnaeus, 1758)  
 Subfamily Metoponiinae Herrich-Schäffer, 1851  
*Aegle semicana* (Esper, [1798])  
*Synthymia fixa* (Fabricius, 1787)  
*Tyta luctuosa* ([Denis & Schiffermüller], 1775)  
 Subfamily Eustrotiinae Grote, 1882  
*Pseudozarba bipartita* (Herrich-Schäffer, [1850])

- Subfamily Acontiinae Guenée, 1841  
*Acontia lucida* (Hufnagel, 1766)  
*Acontia trabealis* (Scopoli, 1763)  
*Aedia leucomelas* (Linnaeus, 1758)
- Subfamily Cuculliinae Herrich-Schäffer, 1850  
*Cucullia biskrana* (Oberthür, 1918)  
*Cucullia calendulae* (Treitschke, 1835)  
*Cucullia lychnitis* (Rambur, 1833)  
*Cucullia syrtana* (Mabille, 1888)  
*Cucullia thapsiphaga* Treitschke, 1826  
*Cucullia verbasci* (Linnaeus, 1758)
- Subfamily Oncocnemidinae Forbes & Franclemont, 1954  
*Calophasia platyptera* (Esper, 1788)  
*Cleonymia chabordis* (Oberthür, 1876)  
*Rhabinopteryx subtilis* (Mabille, 1888)
- Subfamily Amphipyrinae Guenée, 1838  
*Amphipyra tragopoginis* (Clerck, 1759)
- Subfamily Psaphidinae Grote, 1896  
*Valeria oleagina* ([Denis & Schiffermüller], 1775)
- Subfamily Heliiothinae Boisduval, 1829  
*Helicoverpa armigera* (Hübner, [1808])  
*Heliothis nubigera* Herrich-Schäffer, [1851]  
*Heliothis peltigera* (Denis & Schiffermüller, 1775)  
*Protoschinia scutosa* ([Denis & Schiffermüller], 1775)
- Subfamily Condicinae Poole, 1995  
*Condica viscosa* (Freyer, [1831])
- Subfamily Eriopinae Herrich-Schäffer, 1851  
*Callopietria latreillei* (Duponchel, [1828])
- Subfamily Bryophilinae Guenée, 1852  
*Bryophila raptricula* ([Denis & Schiffermüller], 1775)  
*Bryopsis segunai* (Fibiger, Steiner & Ronkay, 2009)  
*Cryphia algae* (Fabricius, 1775)  
*Cryphia pallida* (Bethune-Baker, 1894)
- Subfamily Xyleninae Guenée, 1852  
*Agrochola lychnidis* ([Denis & Schiffermüller], 1775)  
*Agrochola ruticilla* (Esper, 1791)  
*Aporophyla canescens* (Duponchel, [1827])  
*Aporophyla chioleuca sammuti* Fibiger, Yela, Zilli & Ronkay, 2010  
*Aporophyla nigra* (Haworth, 1809)  
*Aporophyla nigra cinerea* (Staudinger, 1901)  
*Athetis hospes* (Freyer, [1831])  
*Caradrina clavipalpis* (Scopoli, 1763)  
*Caradrina flava* Oberthür, 1876  
*Caradrina flavirena* Guenée, 1852  
*Caradrina germainii* (Duponchel, 1835)  
*Caradrina proxima* Rambur, 1837  
*Caradrina selini djeblis* Rungs, 1972  
*Caradrina vicina castrensis* Berio, 1981  
*Denticucullus pygmina* (Haworth, 1809)  
*Dryobotodes tenebrosa* (Esper, 1789)  
*Episema grueneri* Boisduval, 1837  
*Eremohadena roseonitens* (Oberthür, 1887)

- Gortyna xanthenes* (Germer, 1842)  
*Hoplodrina ambigua* ([Denis & Schiffermüller], 1775)  
*Luperina dumerilii* (Duponchel, [1827])  
*Mesapamea secalella* Remm, 1983  
*Mniotype deluccai* (Berio, 1976)  
*Mormo maura* (Linnaeus, 1758)  
*Nonagria typhae* (Thunberg, 1784)  
*Oria musculosa* (Hübner, [1808])  
*Phlogophora meticulosa* (Linnaeus, 1758)  
*Scythocentropus inquinata* (Mabille, 1888)  
*Sesamia cretica* Lederer, 1857  
*Sesamia nonagrioides* (Lefèbvre, 1827)  
*Spodoptera ciliium* Guenée, 1852  
*Spodoptera exigua* (Hübner, [1808])  
*Spodoptera littoralis* (Boisduval, 1833)  
*Thalophila vitalba* (Freyer, [1834])  
*Xylena exsoleta maltensis* Fibiger, Sammut, Seguna & Catania, 2006
- Subfamily Hadeninae Guenée, 1837
- Anarta deserticola* (Hampson, 1905)  
*Anarta sabulorum pulverata* (Bang-Haas, 1907)  
*Anarta trifolii* (Hufnagel, 1766)  
*Brithys crini* (Fabricius, 1775)  
*Hadena capsincola* ([Denis & Schiffermüller], 1775)  
*Hadena sancta trisagittata* (Rothschild, 1914)  
*Hecatera weissi* (Draudt, 1934)  
*Lacanobia oleracea* (Linnaeus, 1758)  
*Leucania loreyi* (Duponchel, 1827)  
*Leucania punctosa* (Treitschke, 1825)  
*Leucania putrescens vallettai* Boursin 1952  
*Leucania zaeae* (Duponchel, [1828])  
*Luteohadena luteago* ([Denis & Schiffermüller], 1775)  
*Maestra brassicae* (Linnaeus, 1758)  
*Mythimna albipuncta* ([Denis & Schiffermüller], 1775)  
*Mythimna l-album* (Linnaeus, 1767)  
*Mythimna languida* (Walker, 1858)  
*Mythimna prominens* (Walker, 1856)  
*Mythimna sicula* (Treitschke, 1835)  
*Mythimna umbriger*a (Saalmüller, 1891)  
*Mythimna unipuncta* (Haworth, 1809)  
*Mythimna vitellina* (Hübner, [1808])
- Subfamily Noctuinae Latreille, 1809
- Agrotis catalaunensis* (Millière, 1873)  
*Agrotis haifae* Staudinger, 1897  
*Agrotis herzogi* Rebel, 1911  
*Agrotis ipsilon* (Hufnagel, 1766)  
*Agrotis lasserrei* (Oberthür, 1881)  
*Agrotis lata* Treitschke, 1835  
*Agrotis puta* (Hübner, [1803])  
*Agrotis segetum* ([Denis & Schiffermüller], 1775)  
*Agrotis spinifera* (Hübner, [1808])  
*Agrotis trux* (Hübner, [1824])  
*Axyليا putris* (Linnaeus, 1761)

*Cerastis faceta* (Treitschke, 1835)  
*Euxoa canariensis mauretanicus* (Bang-Haas, 1910)  
*Euxoa capsensis* Chrétien, 1911  
*Euxoa distinguenda* (Lederer, 1857)  
*Noctua comes* Hübner, [1813]  
*Noctua janthe* (Borkhausen, 1792)  
*Noctua pronuba* (Linnaeus, 1758)  
*Noctua tirrenica* Biebinger, Speidel & Hanigk, 1983  
*Ochropleura leucogaster* (Freyer, [1831])  
*Peridroma saucia* (Hübner, [1808])  
*Xestia c-nigrum* (Linnaeus, 1758)  
*Xestia xanthographa* ([Denis & Schiffermüller], 1775)

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