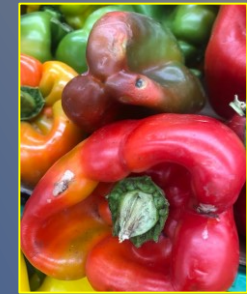


Platinota stultana,
Thaumatotibia leucotreta,
and *Epiphyas postvittana*
three invasive tortricid pests
recently intercepted in Italy
(Lepidoptera)

Prof. Pasquale Trematerra
Università degli Studi del Molise - Italy
trema@unimol.it

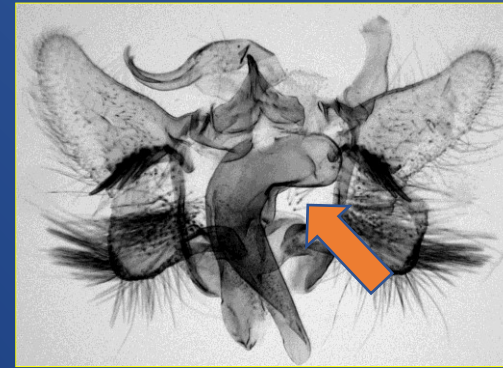
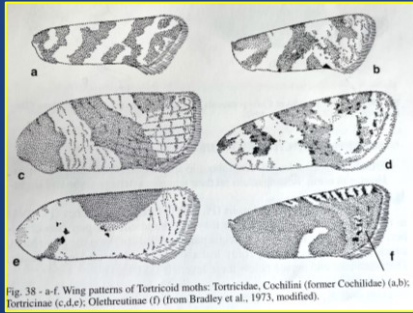
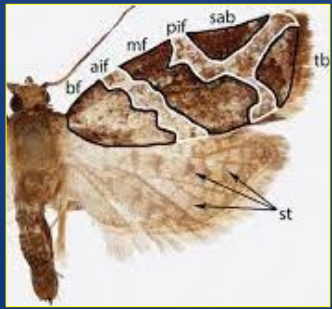




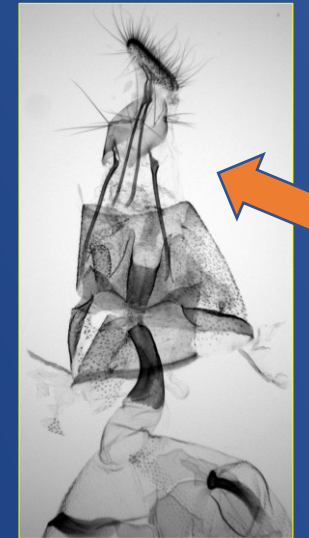
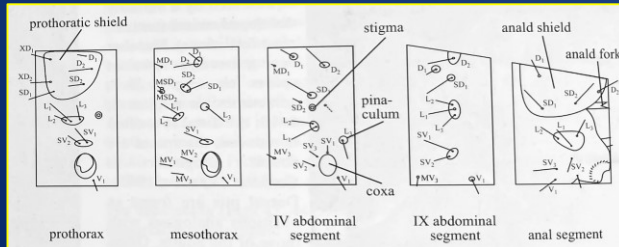
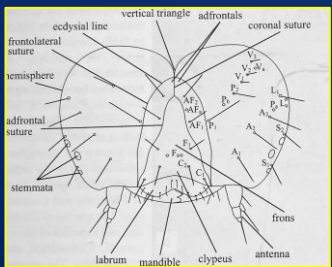
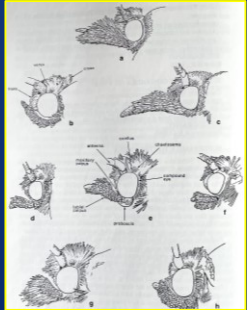
Polyphagous species.

Harmful in agriculture, forests to ornamental plants and in post-harvest.

More than 700 species have economic importance.



Basal cavity of male



Ovopositor o female

Adults and genitalia (Kuznetsov, 1989; Razowski, 2002-2003; Horak, 2006).
 Larvae (Swatschek, 1958; MacKay, 1959, 1962).

WORLD CATALOG (Gilligan *et al.*, 2023)

1800 generi

11600 specie (3 subfam. – 22 tribù)

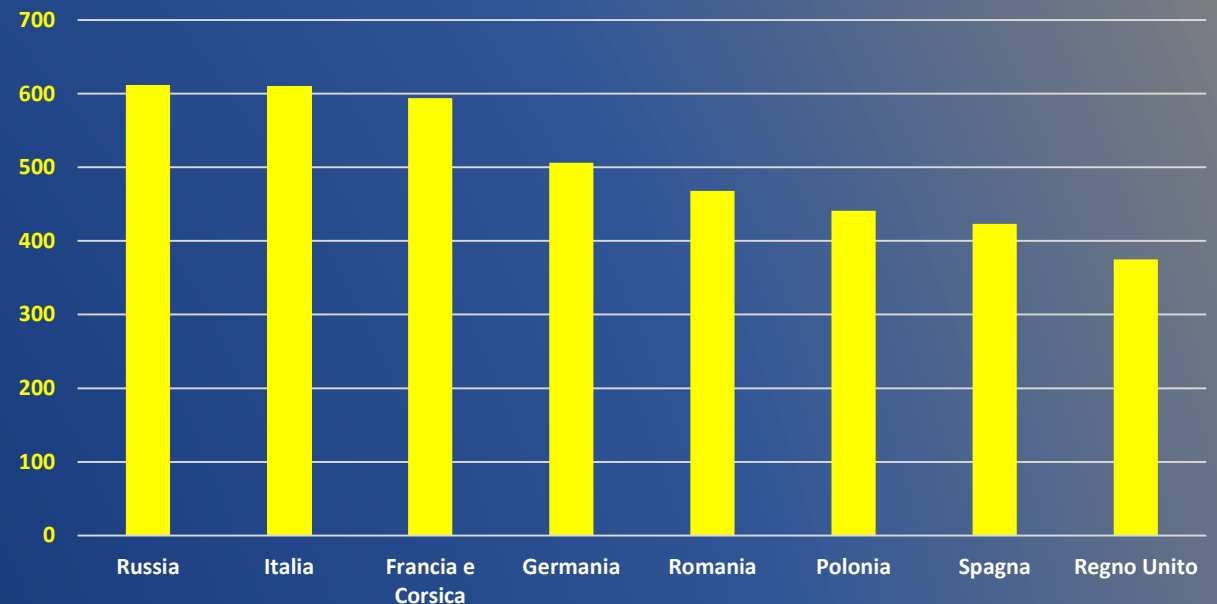
Lepiforum e. V. (2023)

1093 species in Europe

Tortricinae 445

Chlidanotinae 12

Olethreutinae 636





Epiphyas postvittana
the light brown apple moth



Platinota stultana
the omnivorous leafroller



Thaumatotibia leucotreta
the false codling moth



Platinota stultana Walsingham, 1884 - the omnivorous leafroller

P. stultana is a highly polyphagous species reported from over 100 plants species in 30 different families, including garden plants, numerous fruit and vegetable crops

The species' native from north-western part of Mexico and the adjacent south-western part of the USA.

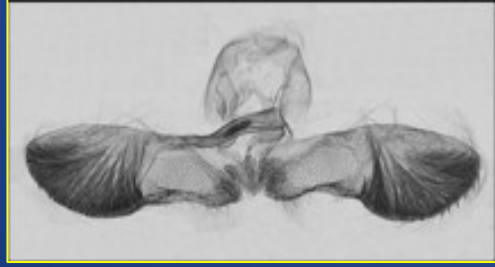
In Europe was first detected in 2009 in Spain. In the UK, there was a finding of a single larva at a nursery in 2004 (on *Lantana* sp. from the USA). In June 2018, a pupa was found in Germany (Augsburg, Bayern) on *Capsicum* sp. from Spain. Interceptor in the Netherlands. Reported in Italy: 'Apulien' (Trematerra and Colacci, 2022)



Platinota stultana Walsingham, 1884 - the omnivorous leafroller

This pest has the potential to damage many cultivated and wild plants in the EPPO region, it demonstrates that it has the **potential to enter** and **establish** itself in the Southern and Mediterranean parts of Europe.

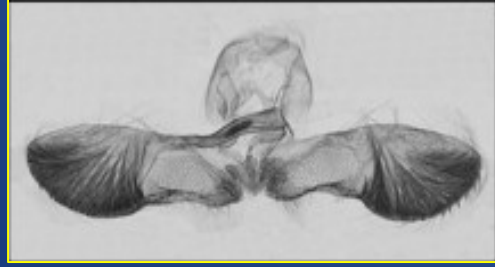
In other parts of the EPPO region, the pest is unlikely to establish **outdoors** but could be a threat to many **greenhouse** productions.



Thaumatotibia leucotreta (Meyrich, 1913)
the false codling moth

Known as the **false codling moth** in Africa, is an **important tortricid** pest to control because it is highly polyphagous on fruit and cultivated plants.

Larvae are reported to **feed on more than 50 species of plants in 30 families**. The species is a serious citrus **pest in southern and central Africa**. Larvae **feed within the fruit** and often show little external sign of attack. Feeding damage can also lead to the development of **secondary infections** mediated by fungi and bacteria.



Thaumatotibia leucotreta (Meyrich, 1913)

the false codling moth

In 2009 was detected in the Netherlands on glasshouse-grown *Capsicum chinense* Jacq. and was subsequently eradicated.

In the last few years, the insect has occasionally been intercepted in Finland, Sweden, Denmark, the United Kingdom, Belgium, Germany, France, and Spain .

The finding on January 14, 2022 was the second detection of the pest in Italy after an interception of infested navel oranges (*Citrus sinensis* L. Osbeck), the fruit arrived from South Africa.

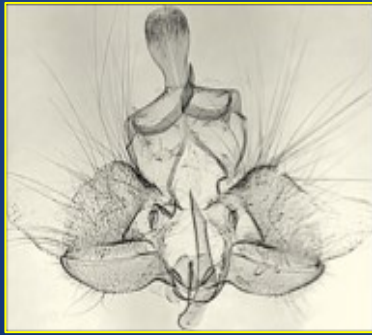


Thaumatotibia leucotreta (Meyrich, 1913)
the false codling moth

Eggs are laid singly or in small groups on developing fruits, and newly hatched larvae bore through the skin to feed on the flesh.

Fruit often has a distinct sunken brown patch on the skin marking the entry point of the larvae. In their natural habitat, last instar larvae leave the fruits or boll, drop from the host plant, and pupate in silken cocoons amongst debris or in cracks in the ground.

T. leucotreta is a polyvoltine species; as many as 10 generations are possible per year in South Africa.

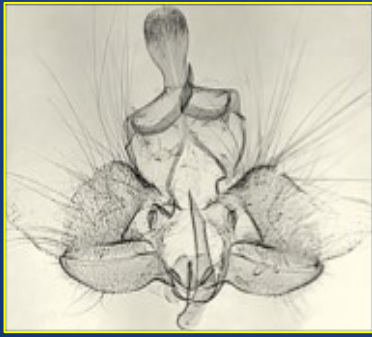


Epiphyas postvittana (Walker, 1863) - the light brown apple moth

Is a polyphagous species that is an **important pest to control on apples, citrus fruits, and grapes in Australia and New Zealand**. Attack many other plants, including **strawberries** and **pears** as well as other horticultural crops. It is also considered a pest of some conifers.

Has been recorded from more than **545 plant species in 121 families and 363 genera**.

The larvae feed on the leaves, shoots, flowers, and fruit of its hosts, but most economic damage **is caused by lesions on the surface of the fruit** in contact with the leaves, which cause scarring and provide sites for **secondary infections** and rot development.



Epiphyas postvittana (Walker, 1863) - the light brown apple moth

Was introduced in the United Kingdom in the 1930s, from where it may have colonised Ireland, as well as northwest France in 2000, while scattered records exist from the Netherlands and Sweden. More recently, it has been recorded in the extreme south of Spain (Cadiz), in Portugal mainland (at Sintra, near Lisbon), and in 2022 in Italy.

Eggs are deposited on smooth surfaces of host plant foliage, including leaves, stems, and fruit. Early instars feed on the undersides of leaves within a silk chamber. Larvae remain on the host plant and then drop to the ground, where they may feed on understory vegetation or survive in leaf litter. Pupation occurs in the larval nest, and metamorphosis takes about 10 days at 20 °C.



Platinota stultana



Thaumatotibia leucotreta



Epiphyas postvittana

These studies document the **importance of faunal surveys** and suggests that positive and negative data should be used to determine accurately where and when exotic species become established.

The presence of the three Tortricids would not only **represent new pests that could inflict considerable damage to agricultural crops and ornamental plants**, but could result in quarantine regulations that would adversely affect agricultural exports to trading partners.

Because the eggs, larvae, and pupae can be associated with plant material and readily transported, **vigilance and early detection methods are critical to minimise the probability of these species' introduction and establishment in Southern Europe.**