

DAFM Plant Pest Factsheet

Epiphyas postvittana Light brown apple moth



Fig 1: *Epiphyas postvittana* adult on leaf

Pest Characteristics

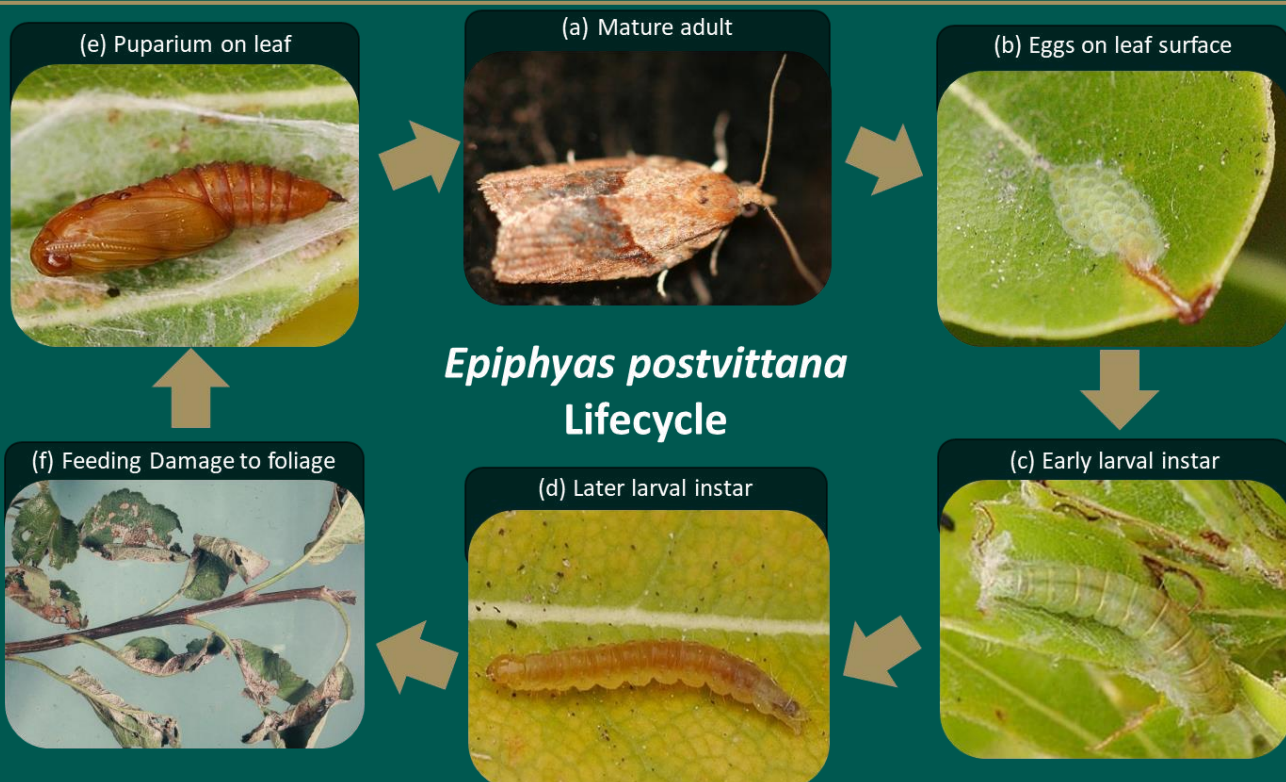
- **Pest:** *Epiphyas postvittana*
- **Common name:** Light brown apple moth
- **Hosts:** *Epiphyas postvittana* is considered to be a major pest in apple (*Malus domestica*) production. However, this species is extremely polyphagous and is considered to be a minor pest of a number of other notable plants including strawberry (*Fragaria x ananassa*), privet (*Ligustrum* spp.), hawthorns (*Crataegus*), pear (*Pyrus communis*), raspberry (*Rubus idaeus*) and potato (*Solanum tuberosum*).
- **Invasive Risk:** This invasive plant pest was first recorded in Ireland in 1997. It has since spread rapidly and established throughout the country becoming a particular problem in commercial apple orchards.
- **Entry Pathways:** The pest likely arrived in Ireland from the UK either via trade in host plants or by natural dispersal (flight).
- **Adaptability:** The pest has been recorded over 7000 times by Irish citizen scientists throughout the Island indicating it is suited to the Irish climate.
- **Impact:** Larvae feed on foliage, flowers and fruit. This damage reduces fruit production, reduces plant vigour and makes fruit unmarketable. The cost of the budget to manage the outbreak in the US was \$74.5m in 2008.
- **Visual Symptoms:** *Epiphyas postvittana* is a “leaf roller” pest. After the first moult the larvae form nests in the foliage by folding leaves together with webbing, a characteristic that can be observed by visual monitoring (Fig 2). In the spring larvae can be seen feeding on leaves and buds. Later in the season larvae also feed on fruit making the produce unmarketable.



Fig 2: *Epiphyas postvittana* leaf roll nests (a), larval feeding on flower buds (b), feeding damage to fruit (c)



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- **Dispersal:** Adults are capable of flight and females can travel up to 300m after mating, though generally remain within 100m. Larval can disperse by “ballooning” on silken treads which are spread by wind.
- **Distribution:** This pest is native to Australia but has also been recorded in several other pacific islands including New Zealand, New Caledonia and Hawaii. The pest was introduced into Europe in the UK (1936) and subsequently spread to Ireland (1997) and Sweden (2009). There are also records of the pest in the Azores islands of Portugal. The pest has been introduced to North America in the USA (California - 2007).
- **Lifecycle:** In the spring newly emerged females lay batches of eggs, ~35 at a time, on host leaves. After egg hatch the larvae feed on plant material and undergo several developmental stages called “instars” before reaching adulthood. Males undergo 5 instars and females undergo 6. The final instar forms a puparium from which adults emerge. In the UK generally 2 full generations are produced per year, but 3 have been recorded in warmer years. Developmental only ceases below 7°C and above 31°C.
- **Control:** *Epiphyas postvittana* can be controlled utilising a combination of predators, traps and pheromone lures. The larvae are susceptible to many natural predators, particularly tachinid flies and ichneumonid wasps.

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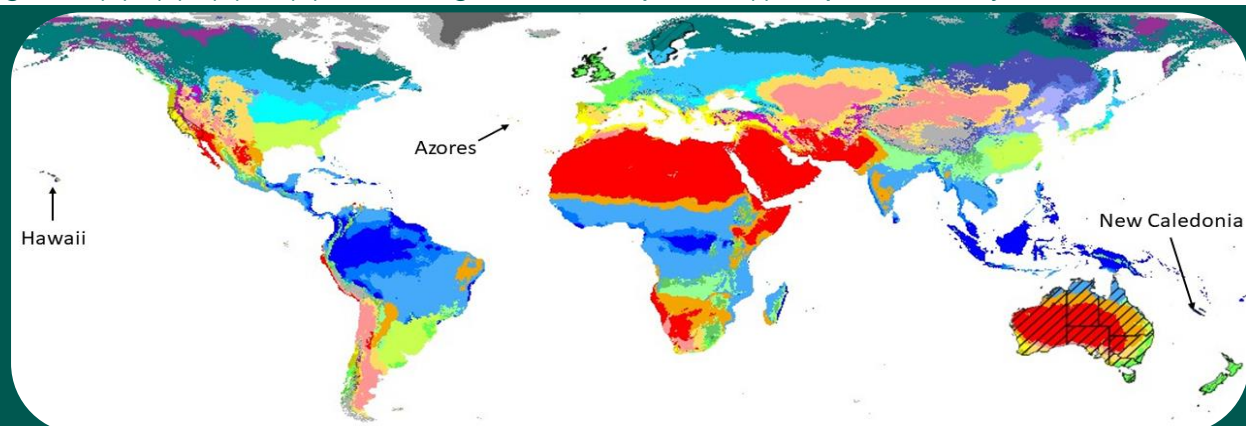


Fig 3: Known global distribution (hashed lines) of *E. postvittana* overlaid on climate classifications of regions



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