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# CRAMBIDAE - *Pyrausta*

## Taxonomy

**Pyraloidea: Crambidae: Pyraustinae: *Pyrausta***

Common names: corn borer, mint moth, grass moth

Synonyms: [too many to list - see http://www.pyraloidea.org for complete taxonomy]

## Larval diagnosis (Summary)

- Mesothorax and metathorax with the MD and MSD1-2 setae on pigmented pinacula
- SD1 pinacula of A2 and A7 not reduced
- Tonofibrillary platelet posterior to the spiracle on A3-6 often present
- Found on Lamiaceae
- V1 on A3-6 can be on a round pinaculum

## Host/origin information

Most interceptions are associated with mint (Lamiaceae) and originate in either Mexico (29%) or Israel (25%). The common origin/host combinations are listed below:

| Origin | Host(s) |
|---|---|
| Colombia | *Ocimum* |
| Dominica | *Thymus* |
| Haiti | (various) |
| Israel | *Origanum*, *Rosmarinus*, *Thymus* |
| Jamaica | *Thymus* |
| Mexico | *Mentha*, *Ocimum* |

## Recorded distribution

*Pyrausta* is a cosmopolitan genus.

## Identification authority (Summary)

*Pyrausta* are difficult to define as larvae, although the majority of species feed on plants in the mint family. Given this uncertainly, it is safest to restrict identification of *Pyrausta* to interceptions on the Lamiaceae that possess the morphological characters listed above.

## Pest characterization

(Based on Cavey 2001, Munroe 1976)

- Taxonomy: **Medium.** Identification to genus is routine in late instars.
- Distribution: **Medium.** Some *Pyrausta* occur in the U.S.
- Potential Impact: **Low.** A few *Pyrausta* are pests on mints

This ranking characterizes *Pyrausta* as not quarantine significant for the U.S.

## Larval diagnosis (Detailed)

Solis (1999, 2011) defined the larva of *Pyrausta* sp. by having small pigmented pinacula with microscopic setae anterior to the D pinacula of the mesothorax and metathorax. She noted that Allyson (1981) characterized *Pyrausta* using color (lightly pigmented prothoracic shield, pale pinacula below the spiracles), size (less than 20 mm), and the variable number (two or three) of SV setae on A1. These pinacula with microsetae are also present in *L. orbinalis*.

European species of *Pyrausta* were studied by Hasenfuss (1960: 174, 175, 187) who stated that the space between stemmata one and two is larger than the distance separating stemmata two

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Fig. 1: Late instar, lateral view


Fig. 2: Late instar, dorsolateral view


Fig. 3: Late instar, lateral view


Fig. 4: MD and MSD1-2 setae on T2-3


Fig. 5: Crochets

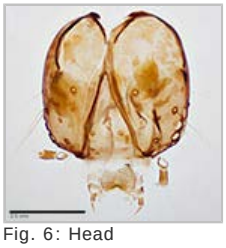


Fig. 6: Head


Fig. 7: Hypo. complex


Fig. 8: Mandible

and three if the SV group is bisetose on A1. Other important characters are the SD1 pinaculum of A2 and A7 not being reduced, a front that extends 1/3 to 3/4 the distance to the epicranial notch, and some details of the frontal and prothoracic setae. Bollman (1955) took a broad view of European *Pyrausta* making analysis of his diagnosis difficult. He did call attention to the presence or absence of a tonofibrillary platelet on the abdomen and ringlike pigmentation on the pinacula in some species. Both European and American species can have stemmata six reduced (Allyson 1981).

Mathur (1954) illustrated "*Pyrausta*" *coclesalis* from India. The thoracic anterior pigmented pinacula with microsetae were absent but posterior pinacula lacking setae were present. The host (bamboo, etc.), pigmented prothoracic shield, and large prespiracular pinaculum suggest this species is not congeneric with other temperate *Pyrausta* and the current removal of this species from the genus is justified.

## Identification authority (Detailed)

Origins are usually not helpful because of *Pyrausta* is a cosmopolitan genus. However, most interceptions are from the New World (Solis 2011). We studied the species from Jamaica on *Thymus*. Munroe (1976: 84) pointed out *Pyrausta* is difficult to define as larvae and that the majority of species feed on the mint family. Given this uncertainly, it is safest to restrict identification of *Pyrausta* to interceptions on the Lamiaceae. The *Pyrausta* from Jamaica does have the tonofibrillary platelet posterior to the spiracle on A3-6 mentioned by Bollman (1955: fig. 225). The prespiracular group surrounds the prothoracic spiracle, an unusual but not unique modification. Unlike the diagnosis by Allyson (1981), the pigmented prothoracic shield is pigmented and all the body pinacula are sometimes dark. At least for the *Pyrausta* from Jamaica on *Thymus*, V1 on A3-6 is on a round pinaculum; compared to many other Spilomelinae and Pyraustinae, this is unusual.

The "anterior pinacula with microsetae" from Solis (1999, 2011) is merely another name for the MD setae. This character is more correctly defined as "MD1 and MSD1-2 setae on pigmented pinacula." These setae are present in Lepidoptera (Stehr 1987) but may not be obvious unless the pinacula are large.

On appearance, larvae of *Pyrausta* look like *Achyra* (Allyson 1981). Thus it is important to examine *Pyrausta* larvae carefully and use caution if not from mints. Hostplant information does exist for many of the species, including those on other plant families.

## Origin records

*Genus species* has been intercepted from the following locations:

Albania, Antigua and Barbuda, Argentina, Armenia, Australia, Bahamas, Bangladesh, Barbados, Belarus, Belgium, Brazil, British Virgin Islands, Cambodia, Cameroon, Chile, China, Colombia, Dominica, Dominican Republic, Ecuador, El Salvador, Gabon, Gambia, Greece, Guatemala, Guyana, Haiti, India, Israel, Jamaica, Japan (?), Jordan, Lebanon, Macedonia, Mexico, Morocco, Netherlands, Nigeria, Oman, Palestinian Territory, Panama, Peru, Portugal, Puerto Rico, Romania, Saudi Arabia, South Africa, South Korea, St. Kitts and Nevis, St. Lucia, Tanzania, Thailand, Tortola, Trinidad and Tobago, United Kingdom of Great Britain and N. Ireland, US Virgin Islands, Viet Nam

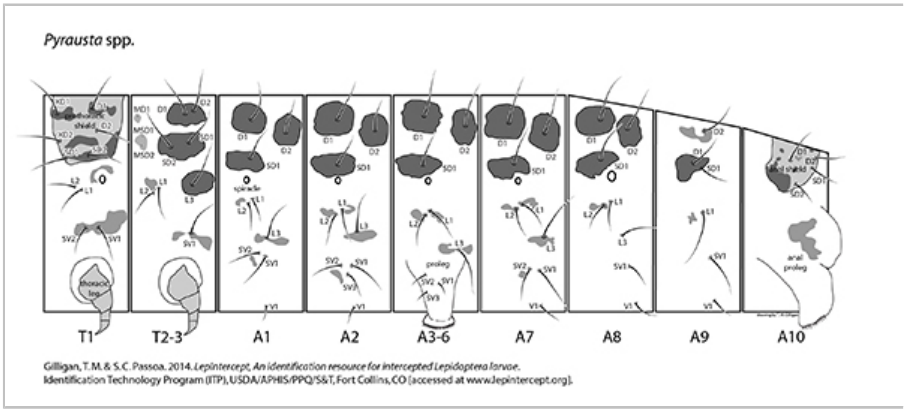
## Host records

*Genus species* has been intercepted on the following hosts:

*Allium* sp., *Alstroemeria* sp., *Amaranthus caudatus*, *Amaranthus retroflexus*, *Amaranthus* sp., *Amaranthus spinosus*, *Amaranthus viridis*, *Annona muricata*, *Anthriscus cerefolium*, *Artemisia dracunculus*, *Artemisia* sp., *Betula* sp., *Borago officinalis*, *Brassica* sp., *Butia* sp., *Capsicum annuum*, *Carica papaya*, *Chamaemelum nobile*, *Chenopodium* sp., *Cichorium intybus*, *Cinnamomum verum*, *Cirsium setidens*, *Citrus* sp., *Corchorus* sp., *Coriandrum sativum*, *Coridothymus capitatus*, *Cucumis sativus*, *Cucumis* sp., *Cucurbita maxima*, *Cucurbita pepo*, *Cucurbita* sp., *Eremurus* sp., *Eruca vesicaria*, *Eryngium* sp., *Erythrina berteroana*, *Erythrina* sp., *Eucalyptus* sp., *Gerbera* sp., *Gnetum* sp., *Hydrangea* sp., *Lablab purpureus*, Lamiaceae, *Lantana* sp., *Lathyrus* sp., *Lilium* sp., *Limonium* sp., *Lippia* sp., *Malus domestica*, *Mentha arvensis*, *Mentha longifolia*, *Mentha officinalis*, *Mentha piperita*, *Mentha* sp., *Mentha spicata*, *Momordica balsamina*, *Momordica charantia*, *Momordica* sp., *Monarda* sp., *Moringa oleifera*, *Musa* sp., *Nasturtium officinale*, *Nasturtium* sp., *Ocimum basilicum*, *Ocimum sanctum*, *Ocimum* sp., *Opuntia* sp., *Origanum majorana*, *Origanum* sp., *Origanum vulgare*, *Phaseolus* sp., *Phaseolus vulgaris*, *Piper* sp., *Portulaca oleracea*, *Psidium* sp., *Pterocarpus* sp., *Punica granatum*, *Rosmarinus officinalis*, *Rosmarinus* sp., *Rumex acetosa*, *Rumex* sp., *Ruta* sp., *Saccharum officinarum*, *Sageretia* sp., *Salvia officinalis*, *Salvia* sp., *Sechium edule*, *Solanum melongena*, *Solanum* sp., *Solanum tuberosum*, *Sophora secundiflora*, *Spinacia oleracea*, *Spinacia* sp., *Telfairia occidentalis*, *Thymus citriodorus*, *Thymus* sp., *Thymus vulgaris*, *Xanthosoma hastifolium*, *Zea mays*, *Ziziphus jujuba*

Hosts listed here outside of the Lamiaceae need confirmation.

## Setal map




*Pyrausta* setal map

Click here to download a full-size printable PDF of this larval setal map