

A New Emerging Pest in Florida: European Pepper Moth (*Duponchelia fovealis*)



Photo: Carmelo Peter Bonsignore, Università degli Studi Mediterranei di Reggio Calabria



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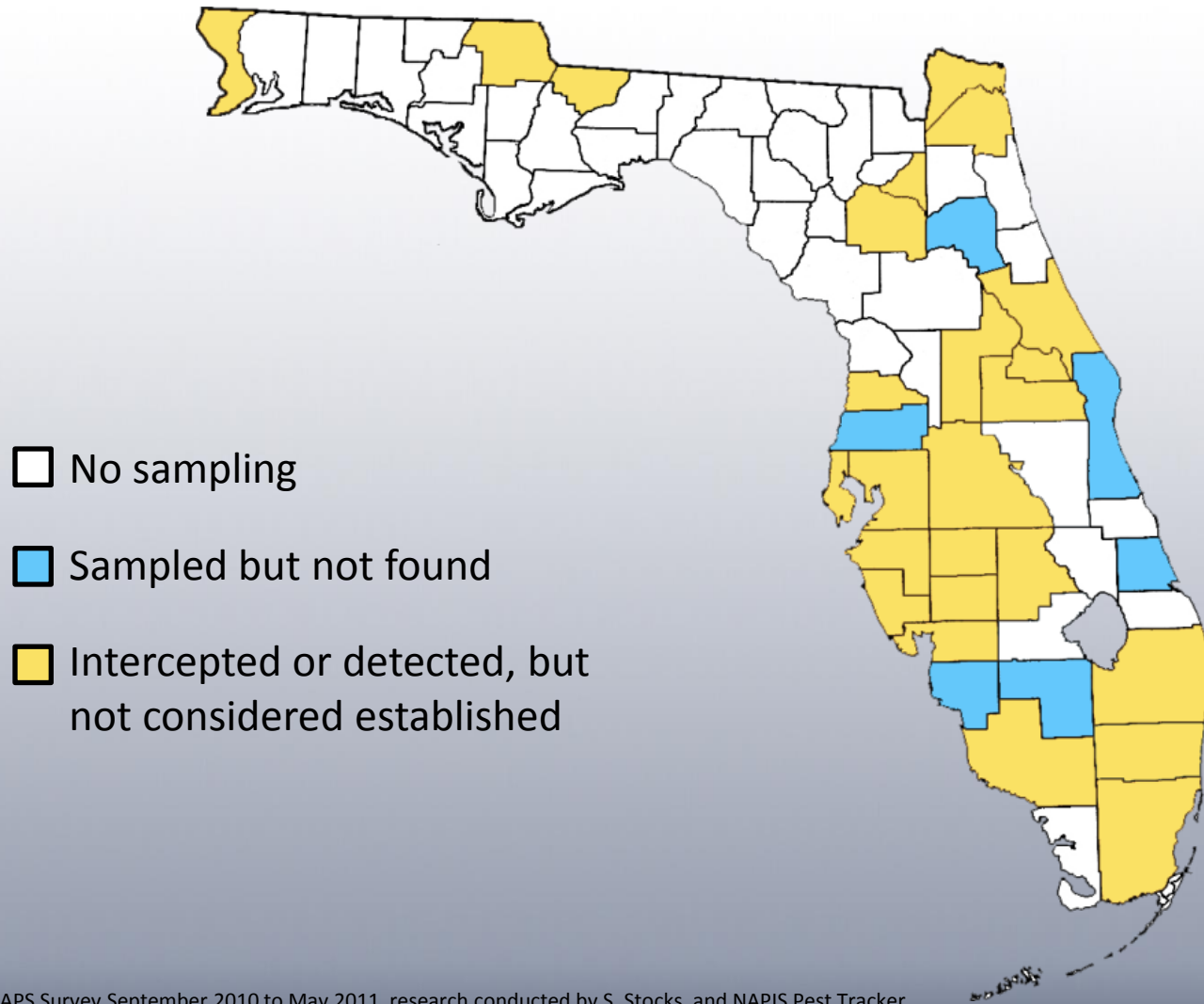


European Pepper Moth

- Native to the coastal wetlands of the Mediterranean.
- A.k.a. “Southern European marshland pyralid” and “European Pepper Moth”.
- Is known as a greenhouse pest in Northern Europe.
- May become a pest outside of a greenhouse setting if the climate is right.



Known Distribution in Florida



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Susceptible Plants

Ornamental hosts include:

- Begonia
- Daisies
- Poinsettia
- Lisianthus
- Common purslane
- Creeping buttercup
- Cyclamen
- Impatiens
- Kalanchoe
- Coral bells

Agricultural hosts include:

- beet
- pepper
- fig
- basil
- pomegranate
- blackberry
- Tomato
- Cucumbers
- Squash
- Strawberries

There are several aquatic plants hosts as well.



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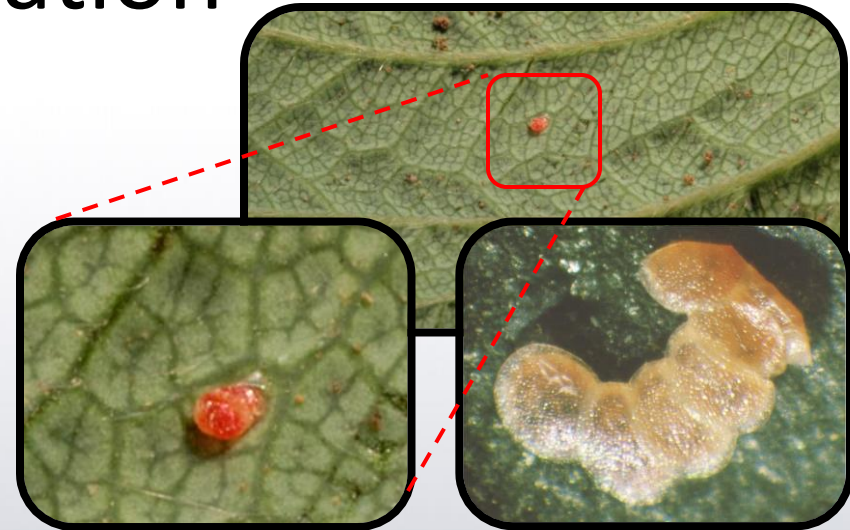
Identification

Eggs

- Laid singly or in groups of 3-10.
- Mostly found on undersides of leaves
 - can also be found on the upper side of the leaves, on the stems, at the base of the plant, in the upper soil layer.

Larvae

- Turn creamy white or light brown with spots as they mature.
 - Depending on diet
- 20-30mm long when fully developed.



Color of larvae feeding on live plant material



Color of larvae feeding on detritus

Photos:

Eggs - Carmelo Peter Bonsignore, Università degli Studi Mediterranei di Reggio Calabria and Pasquale Trematerra, University of Molise, Italy.

Larvae - Henk Stigter, Plant Protection Service, National Reference Centre, The Netherlands, Marja van der Straten, Plant Protection Service, Wageningen, Netherlands, and Lyle Buss, Department of Entomology and Nematology, University of Florida



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Identification

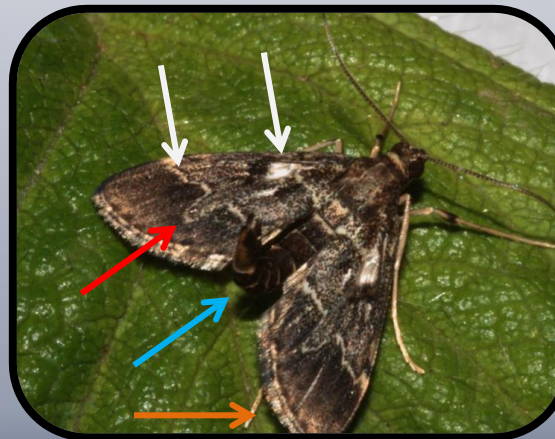
Pupae

- 9-12mm long made of webbing with soil and frass in it.
- Found on undersides of leaves, at the edge of the pot, or in the upper soil layer.



Adults

- 19-21mm across
- Striped abdomen
- Dark wings
- “The finger”



Photos:

Pupa - Henk Stigter, Plant Protection Service, National Reference Centre, Netherlands and James Hayden, Florida Department of Agriculture and Consumer Services, Division of Plant Industry

Adult - James Hayden, Florida Department of Agriculture and Consumer Services, Division of Plant Industry and Carmelo Peter Bonsignore, Università degli Studi Mediterranei di Reggio Calabria



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Life Cycle



Egg stage
(4-9 days)



Laval stage
(3-4 weeks)



Pupal stage
(1-2 weeks)



Adult
(1-2 weeks)



Photos: Carmelo Peter Bonsignore,
Università degli Studi Mediterranei di
Reggio Calabria



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Hibernation and Dispersal

- Is not cold tolerant.
- Hibernation reportings are unknown
- In colder climates: it is primarily a pest of greenhouses.
- In warmer climates: it is usually found in the field
- Dispersal:
 - Movement of plant material spreads this pest
 - They are also reportedly good fliers



Damage to leaves



Strawberry



Eustoma

Damage to fruit



Pepper



Stem collapse
in Eustoma



Note the larva girdling the
stem

← Damage to stems

Image credits:

Strawberry - Carmelo Peter Bonsignore, Università degli Studi Mediterranei di Reggio Calabria;

Pepper fruit - Marja van der Straten, Plant Protection Service, Wageningen, The Netherlands;

Stem damage - Bryan Vander Mey, Department of Entomology, University of California, Riverside;

Both Eustoma images - Henk Stigter, Plant Protection Service, National Reference Centre, The Netherlands



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Monitoring and Inspection

Check pots next to detritus



Plant pulled out of the container



Check the bottom edge of the container.



Look for webbing on the soil surface



adult

Photos: Lyle Buss, Department of Entomology and Nematology, University of Florida



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Florida Look Alikes - Adults



Hydriris ornatalis



Niphograptia albiguttalis



Udea rubigalis



Parapoynx obscuralis



Penestola bufalis



Duponchelia fovealis

Image credit:

James Hayden, Florida Department of Agriculture and Consumer Services, Division of Plant Industry and Thomson Paris, graduate student, Department of Entomology and Nematology, University of Florida; EPM - Kurt Ahlmark, FDACS Division of Plant Industry, Bugwood.org - #5499609



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Collaborating Agencies

- U.S. Department of Agriculture Animal and Plant Health Inspection Service (USDA-APHIS)
- Cooperative Agricultural Pest Survey Program (CAPS)
- Florida Department of Agriculture and Consumer Services (FDACS)
- National Plant Diagnostic Network (NPDN)
- Sentinel Plant Network (SPN)
- Protect U.S.
- University of Florida Institute of Food and Agricultural Sciences (UF-IFAS)



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