

Summer fruit tortrix *Adoxophyes orana*

This exotic moth feeds on a wide range of plants but is known primarily as a pest of pome and stone fruits. The larvae feed on leaves, shoots and fruits. The moth also may infest many broadleaf trees and shrubs common in Michigan's forests and ornamental plantings.

[Michigan risk maps for exotic plant pests.](#)

Other common name

smaller tea tortrix

Systematic position

Insecta > Lepidoptera > Tortricidae > *Adoxophyes orana* (Fischer von Röslerstamm)

Global distribution

Widely occurs in much of Europe and Asia.

Quarantine status

This insect has been intercepted once at a U.S. port of entry on a shipment of crabapples from France. In addition, *Adoxophyes* sp. has been intercepted twice from *Bupleurum* sp. and *Syringa* sp. originated from the Netherlands (Davis et al. 2005). It is listed as an exotic organism of high invasive risk to the United States (USDA-APHIS 2008).

Plant hosts

The moth feeds on over 50 plant species of multiple families including fruits, forest trees and ornamentals. It has a preference for Rosaceae, and is most commonly a pest of apple, cherry, peach and pear trees. Other hosts include: alders, alfalfa, ash, birch, elm, grapes, hawthorn, honeysuckle, lilacs, maples, oaks, peanuts, poplars, roses and willows.

Biology

A female moth lays yellow eggs in groups mostly on the upper surface of the leaves and sometimes on fruits. Larvae feed on leaves, shoots and fruits. They are leaf rollers. Pupation occurs in a cocoon in a folded leaf or two leaves spun together. Two to three generations develop per year.

Identification

- **Adult:** 15-22 mm wingspan; forewings gray-brown with two darker patterns; hind wings light grey; males smaller than females and have distinct dark-brown markings.
- **Larva:** Up to 20 mm long; body yellow-green to dark-



Adult. (Photo: H. Arentsen, Garden Safari, Bugwood.org)



Adult. (Photo: Museum Victoria, Melbourne, Australia, Australia)

green ornamented with warts and light hairs; head brown.

- **Pupa:** 8-11 mm long, pale to dark brown.
- **Eggs:** A batch of 30-50 yellow, oval eggs.

Signs of infestation

- Presence of yellow egg mass on leaves.
- Presence of larvae and pupae on plants.
- Leaves folded or spun together by larvae.



Larva. (Photo: J. Sohn, Bugwood.org)

- External fruit damage (point-like holes in the fruit tissue and grazing damage on fruit surface).

Management notes

The most effective survey method for this moth is the use of sex pheromone baited traps (Witzgall et al. 2004, Davis et al. 2005). Other sampling techniques involve Robin light traps and visual and beat sampling to inspect trees for eggs and larvae (Davis 2005).

Economic significance to Michigan

The moth is regarded as a major pest of apples and pears in its native range. Fruit feeding by larvae can reduce quality and quantity of fruit and make the fruit susceptible to diseases. Because of its wide plant host range, the summer fruit tortrix, if introduced into Michigan, can potentially disrupt production and marketing of agricultural and ornamental crops, especially pome and stone fruits. Davis et al. (2005) have forecasted that the moth can establish in Michigan based on climatic suitability and host availability.

Likely pathways of entry in Michigan

Imports of live plants from Asia and Europe.

If you find something suspicious on a susceptible host plant, please contact MSU Diagnostic Services (517-355-4536), your county extension office, or the Michigan Department of Agriculture (1-800-292-3939).

References

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