



Box Tree Moth
Ohio's Latest Ornamental Menace

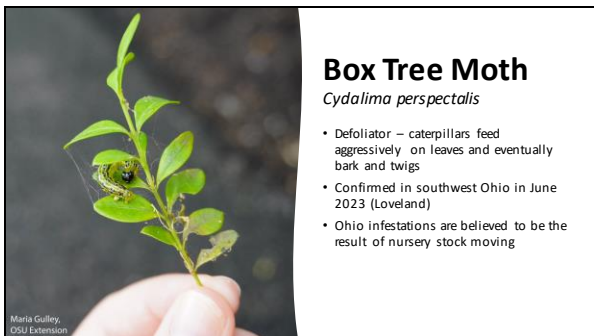
Maria Gulley
OSU Extension Hamilton County
ANR & 4-H Program Coordinator



Invasive Species are:

- Non-Native
- Do Harm to
 - Environment
 - Human Health
 - Economy

THE OHIO STATE UNIVERSITY
EXTENSION



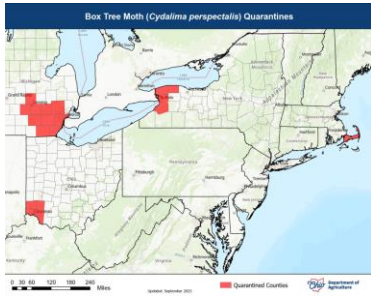
Box Tree Moth
Cydalima perspectalis

- Defoliator – caterpillars feed aggressively on leaves and eventually bark and twigs
- Confirmed in southwest Ohio in June 2023 (Loveland)
- Ohio infestations are believed to be the result of nursery stock moving

Maria Gulley,
OSU Extension

Current Distribution

- Original Ohio infestation at the junction between Warren, Clermont, Butler, and Hamilton Counties
- Confirmed near Dayton (Montgomery County) in late September
- Southernmost infestations in North America
- Arrived in Toronto in 2018, New York in 2021, and Michigan in 2022



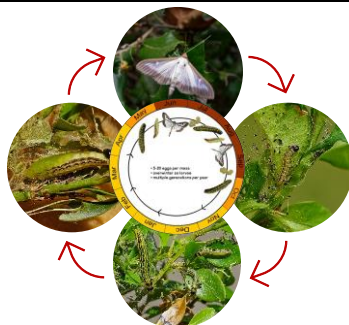
BTM Damage

- Early instars feed on leaf surfaces
- Later instars eat leaves, leaving one edge remaining
- Later instars may also eat twig bark as they move to new leaves
- Plants can be entirely defoliated within a few years
- No dead leaves left behind – see through appearance
- With damage, branches do not recover, and the plant dies



BTM Life Cycle

- Complete metamorphosis
- Larva do the damage
- At least 2 generations per year, possible more
- Overwinter as larvae



Egg mass under the leaves
 (Courtesy of Walter Schön, www.schmetzling-raupe.de/en/perspectalis.htm)



Caterpillars and webbing
 (larvae can reach 1.5 inches long)
 (Courtesy of Matteo Maspero and Andrea Tarsatini, Centro MIRT - Fondazione Mioprog [IT])



Box Tree Moth Caterpillar
 (*Cydalima perspectalis*)



Mojzsinovic Osninar, Faculty of Forestry, Bugwood.org


Box Tree Moth Caterpillar
 (*Cydalima perspectalis*)




Petenc Lallator, University of Sopron/Bugwood.org

Total life cycle 33-44 days
 2-5 generations per year

Pupa
 (Courtesy of Ilya Mityushev, Department of Plant protection of the Russian State Agrarian University - Moscow Timiryazev Agricultural Academy.)



Damage
 Courtesy of Collette Walter,
http://www.lepiforum.de/webbbs/imagesforum_2/jc13983.jpg.





BTM Prognosis

- Eradication is unrealistic, but mitigation and slowing the spread is possible
- If left unchecked, BTM can and does kill boxwoods
- BUT the caterpillars are easy to manage once detected
- BTM is a weak flyer and does not spread quickly over long distances on its own
- Indications of possible resistance – research plots will be planted
- Using pheromones for mating disruption is a possibility

BTM Management

- Do not use preventative insecticides!
- Mechanical removal is viable for small-scale infestations
- A wide range of insecticides are available for control (see BYGL Alert from 9/27/23 for link)

Box Tree Moth: Fact Sheet, Management & Visual Guide
 Steven Frank - North Carolina State University
 Dan Gilman - Covelli Cooperative Extension of Suffolk County
 Matthew Havens - IR 4 Project, Rutgers University
 Crist Palmer - IR 4 Project, Rutgers University

Marla Gulley, OSU Extension

Other Boxwood Problems

- Winter damage
- Volutella Canker
- Boxwood Psyllid
- Boxwood Leafminer
- Boxwood Blight
- Boxwood Dieback

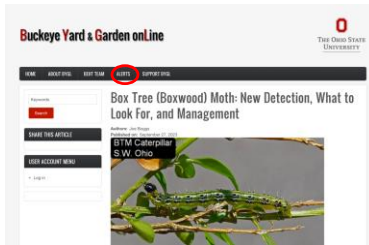


Reporting and Staying Informed



BYGL

- <https://bygl.osu.edu/>
- To sign up to receive updates, go to the Alerts tab and follow the instructions.



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Divisions / Plant Health / Plant Pests / Invasive Insects / Box Tree Moth (BTM)

Box Tree Moth (BTM)

General Information

The box tree moth (*Cydolima perspectiva*) is native to temperate and sub-tropical regions in Asia. It was first reported in Europe in 2007, after which it spread rapidly across Europe into Western Asia and Northern Africa. Infestations were found in Ontario, Canada in 2018, and was confirmed to be found in a Canadian nursery in the spring of 2021. The pest was later found in New York state and then in Michigan in 2022. It was detected in southern Ohio in June of 2023.

The box tree moth can significantly damage and potentially kill boxwood plants if left unchecked.



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For more information

Plant Pest Control Section
Ohio Department of Agriculture
3050 S. Main St. 5th Fl.
Reynoldsburg OH 43068
Phone: 614-728-6400
Fax: 614-728-6403
Email: plantpest@agri.ohio.gov


Web sites, your message and any response to it may constitute a public record and may be subject to disclosure under the Ohio Public Records Act.

ODA: Ohio Plant Pest Reporter

ODA: Ohio Plant Pest Reporter

Please take a photo of the suspected invasive or harmful pest you have seen and report it to the Ohio Department of Agriculture. We are not able to identify the pest without a clear photo.

Most Wanted
From left to right: Asian Longhorned Beetle, Spotted Lanternfly, and Box Tree Moth. Photo credits: USDA



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ODA: Ohio Plant Pest Reporter

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Contact Information

Observation date*

Your name*

Phone*

ODA: Ohio
Plant Pest
Reporter

ODA: Ohio Plant Pest Reporter

Pest Information

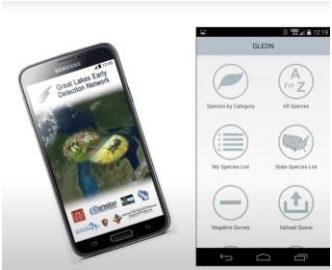
Pest Type

Insect
 Plant
 Diseases and Fungi


Suspected Pest Name
Please provide the name of the suspected pest, if known.


Description of pest and/or symptoms present*
Please provide a description of the pest and/or symptoms, where it was seen, habitat, etc.


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<https://apps.bugw.ood.org/apps/gledn/>







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