MASTER GARDENER COLUMN by Jan Beglinger, Agriculture Outreach Coordinator
Run week of August 29, 2023

A new pest to deal with – Box Tree Moth

Boxwoods are popular evergreen shrubs that make great hedges, are deer resistant and have been relatively trouble free, but then along came boxwood blight. Now a new pest is after your boxwood. The Box Tree Moth (Cydalima perspectalis) is an invasive pest that is native to East Asia. They were found in Germany in 2006 and quickly spread across Europe. It found its way to Canada (Toronto area) in 2018 and then it was discovered in Niagara County in July 2021. It has also been found in Michigan and Ohio. A quarantine has been established in New York for Erie, Niagara, and Orleans counties prohibiting the movement of boxwood.

Left unchecked, the caterpillar stage can cause significant damage to boxwood plants. They will also feed on Holly (Ilex spp.) and Euonymus (Euonymus spp.) once boxwood plants are decimated. Caterpillars will feed on the bark after defoliating plants. This can result in caterpillars girdling stems or the trunk which can lead to the plants death.

Most adult box tree moths (BTM) are white with a brown border around their wings. Some adults are all brown with white spots that look like a comma on the forewings. The wingspan of the moths is 1.5 to 1.75 inches. They are good fliers and can travel four to six miles. Adults live for about a month. Depending on climate and latitude, between May and October, they can have one to five generations.

The oval eggs are laid in groups on boxwood leaves. Eggs hatch in about three days. Caterpillars are green and yellow with black spots and black, white, and yellow stripes. The head capsule is black, and they have white hairs extending out from the body. The young caterpillars will hide among twigs and leaves, feeding on the undersides. Caterpillars can grow 1.5 inches long. They spin a white silk that will eventually cover decimated plants. Older caterpillars make silken retreats for protection, which can make spraying them difficult. Caterpillars mature into adults in 2 weeks, depending on the weather. The last generation of the season will spend the winter as caterpillars and they are hardy to minus 22 degrees F! They start to feed again in the spring when temperatures reach around 50 degrees F.

Like all Lepidoptera, BTM have to pupate from caterpillar to the adult moth. The pupae are green with brown stripes. The wings become visible as moths are ready to emerge. This stage takes about 14 days. Look for the cylindrical pupa among the chewed leaves and webbing.

If you have boxwood, check your plants regularly for this new pest. Be on the lookout for missing or skeletonized leaves and white webbing. Plants that have been heavily infested can look burned. Check inside the canopy for caterpillars that are hiding. Look at the underside of leaves for eggs and small caterpillars. Caterpillars create green-black balls of sawdust-like frass (insect poop) which you might see
on the ground or on the plants. The adults are most active at night, so you probably won’t see them flying around.

What can you do if you find them? If the infestation is small, you can hand pick the caterpillars and drop them into a bucket of soapy water. A strong stream of water will knock off small caterpillars and they will die before they can crawl back onto the plant. If you have a heavy infestation, the USDA recommendation is to remove infested branches or cut the boxwood at its base (it should grow back from its roots). Boxwood debris should be disposed of by double-bagging it in plastic and putting it out with the trash. This is to prevent its spread. Damaged, diseased, or dead sections can be removed any time of the year.

Larger infestations may need to be treated with an approved insecticide. Thorough coverage of the shrubs is necessary. Hiring a professional pesticide applicator for large plantings of boxwood might be easier than trying to do it yourself. The NYS IPM box tree moth website has an Excel spreadsheet called “Insecticides Labeled for Box Tree Moth Registered in New York State for Home Garden Use.” A list of insecticides known to be effective against the caterpillars is available at the APHIS website - www.aphis.usda.gov/planthealth/box-tree-moth, under “Resources.” You can also contact your local Cooperative Extension Office for help.

Report it! Box tree moth is a Federally regulated species. Its distribution is still limited in New York State, so it is important to report it. If you live outside Niagara County and find any signs of infestation, take a picture, and report it online at the NYS Department of Agriculture and Markets Box Tree Moth public portal - agriculture.ny.gov/reportBTM. (You don’t need to report your findings if you live in Niagara County.) You can also bag any infested plant material and contact the NYS Department of Agriculture and Markets through their portal for guidance. They may want to send an Ag & Markets official to visually inspect your boxwood planting or place pheromone traps to monitor for BTM.

Resources for this article include NYS Department of Agriculture and Markets, NYS IPM, Penn State, and USDA Animal and Plant Health Inspection Service.

Have a gardening question? Our Helpline is open! Master Gardener volunteers are in the office Monday through Friday, from 10 am until Noon. You can stop in at our CCE office at 420 East Main Street, Batavia, call 585-343-3040, ext. 127, or e-mail them at: geneseemg@cornell.edu. Visit our CCE web site at genesee.cce.cornell.edu. “CCE of Genesee County is an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities and provides equal program and employment opportunities.”

Our next Garden Talk “Fall Garden Cleanup and Pollinators” will be September 7 at Noon. The talk will cover how to do a garden clean up in the fall while protecting pollinators, butterflies, and other beneficial insects. You can attend this free program in person at the CCE office or online via Zoom. To register for
a zoom link, visit our events page [https://genesee.cce.cornell.edu/events](https://genesee.cce.cornell.edu/events). To register for the in-person option, please call the CCE office at 585-343-3040 x101.

Rain or shine, the Genesee County Master Gardeners will be hosting their annual Fall Garden Gala on Saturday, September 16, from 10:00 am to 1:00 pm at the Cornell Cooperative Extension of Genesee County office, 420 East Main Street in Batavia. This annual plant sale features a variety of perennials, and house plants. The plant sale will start promptly at 10 am. Visit the Basket Auction for a variety of themed baskets. Basket Auction drawing starts at 12:30 pm. Talented Master Gardeners will create flower arrangements and bouquets right before your eyes! These will be available for sale. For more information call 585-343-3040, ext. 101.