

**Rutgers Master Gardeners of Morris County
Community Garden IPM Team Report #9
Week of September 1, 2024**

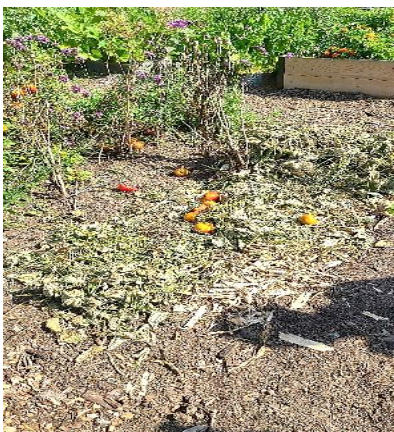
WHAT'S IN THIS REPORT			
TIPS	PROBLEMS SEEN	WATCH OUT FOR	SPOTLIGHT
<ul style="list-style-type: none"> • Plot cleanup to prevent Overwintering whiteflies and Harlequin bugs 	<ul style="list-style-type: none"> • Tarnished plant bug • Eggplant Lace bug 	<ul style="list-style-type: none"> • Allium Leaf Miners- autumn generation • Saddleback caterpillar 	<ul style="list-style-type: none"> • Nectaries on Taiwanese Loofa plant

GARDENS SCOUTED FOR THIS REPORT: Madison Community Garden, Pequannock Township Community Garden, ValleVue Preserve Community Garden in Morris Township and Wick Farm Garden at Jockey Hollow

GENERAL OBSERVATIONS AND TIPS

Our 2024 season of scouting has now ended, with this report being our final one for the year. It has been an interesting one with adding some new pests and diseases to our repertoire, but also enjoyable in having visited the various gardens and meeting some of you to chat about your plants. The IPM Team remains committed to scouting and helping educate about IPM methods to enhance your growing success. Spring 2025 is when we will return, so stay well and thank you for reading!

GARDEN PLOT CLEANUP TIPS



A tale of two plots. The plot with rotted vegetables and decayed debris is a haven for pests and diseases to flourish. It does no one in the garden a favor. The cleared plot is free of debris, and amended with compost. A top dressing of shredded leaves would help insulate through winter and can be turned over in spring. Definitely a jumpstart for next year's planting!
Photos: J. Basile, NJAES

Garden cleanup at the end of the season is an important step to help prevent winter habitat for many overwintering pests such as Flea beetles, Squash vine borers, and Imported Cabbage worms. Diseased plant debris also harbors spores such as Early Blight, Septoria and Anthracnose, that overwinter and will continue to plague your plot.

Two main challenges we have found these last few years are overwintering whiteflies and Harlequin bugs. Both have continued to survive and thrive.

For the health of your plot, your neighbors, and the overall garden, please be sure to discard any debris to help stop them from gaining a foothold. Once removed, take a soil test and help build the soil by incorporating some compost, shredded leaves, or a cover crop. This cleared and amended plot not only becomes restored, but also a time saver, since you won't miss a beat in getting started anew next year. University of Minnesota

<https://extension.umn.edu/news/putting-your-garden-bed>



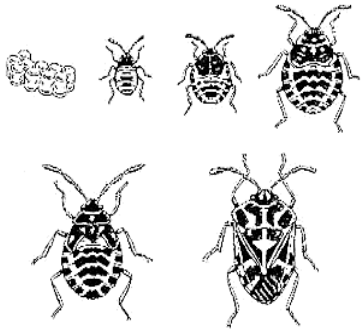
Overwintering whiteflies reproduce rapidly. When left unchecked, they will infest any newly planted Brassica crops throughout the garden. If you are planning to overwinter a plant for seed saving come spring, be sure to isolate it. Cover your plant and regularly inspect the leaves of the overwintered plant. If infestations of whiteflies are found, bag and remove the plant to help stop the spread.

Rutgers University <https://njaes.rutgers.edu/pubs/publication.php?pid=FS240>

Infested kale leaf. Be sure to inspect entire plant for whiteflies. Once disturbed, they will fly to neighboring plots. Photo: M. Albright, NJAES

Harlequin bug adults overwinter in debris and enjoy host plants of *Brassicas*, but will feed on a variety of other crops, hence the agricultural threat to growers. Continue to handpick to remove any eggs, nymphs, or adults until you clear your plot. Cleome is a favored host plant that will attract them to your plot. Be sure to remove this plant and consider other flower options next year.

University of Maryland <https://extension.umd.edu/resource/harlequin-bug-vegetables/>



Harlequin bug life cycle. Drum shaped, black and white eggs are laid in rows. Nymphs at various instars and adult. These sap suckers cause plants to wilt and die. Destroy all.
Photo: UC Davis



Harlequin bug adults feeding on a leaf. Note the feeding marks that are white to pale yellow. When scouting, be sure to also check the undersides of leaves, as well as the entire plant.
Photo: M. Albright, NJAES



Harlequin bug nymphs were found feeding on Cleome plants in a plot that had cabbage and kale growing nearby. The entire plant grouping was covered with nymphs. Be sure to remove the kale, cabbage, and Cleome plants to prevent the adults from gathering in the debris for a winter's nap.
Photos: L. Terraneo, NJAES








RUTGERS NJAES CALENDAR OF EVENTS

Upcoming Home, Lawn, and Garden Events

Please check link for complete details <https://njaes.rutgers.edu/home-lawn-garden/>

- Sep 20: Fall Garden Days 2024 - The ABC's of Gardening
- Sep 21: Fall Garden Days 2024 - The ABC's of Gardening
- Sep 25: From Hive to Honey - An Intro to Honeybees & Beekeeping
- Oct 21: Bugs Birds and Beyond a FREE Festival for Children

REPORTS ON NEW PROBLEMS

<p>Tarnished plant bug (<i>Lygus</i> spp.)</p>		<p>Pequannock Community Garden 8/15 Wick Garden</p>		
<p>Description: Tarnished plant bug adults were found on both flowers and bean plants. They are oval, bronze/brown colored and ¼ inch long. They undergo incomplete metamorphosis, with nymphs and adults both feeding by piercing mouth parts. Damage can be found on many different vegetables including celery, tomatoes, potatoes, beans, as well as fruits and flowers. Adults will overwinter in plant debris and emerge in spring. Females lay eggs in plant stems, buds, and leaf veins, so be sure to check for damage on young shoots and flower buds. There are 4 to 5 generations per year here in New Jersey, which is a lot of plant damage potential and lost crops.</p>				
				
<p>Adult Tarnished plant bug on leaf. Damage to plants is caused simultaneously during feeding. The piercing mouthpart sucks out plant juice while inserting a toxin. This is a noteworthy pest of strawberries. Photo: University of Georgia</p>	<p>Adult Tarnished plant bug on Cosmos flower. The adults will overwinter in plant debris and emerge in spring to mate, reproduce and continue to attack an extensive range of fruits, vegetables, and flowers. Photos: L. Terraneo, NJAES</p>	<p>Above nymph is wingless and has five dots on back. Photo: J. Basile, NJAES</p>	<p>Parasitic wasp, <i>Peristenus digoneutis</i>, laying an egg in a Tarnished plant bug nymph. Within a week, the wasp larvae feed on nymph and destroy it. Photo: Scott Bauer, USDA AR</p>	<p>Strawberry damage can be extensive with significant crop loss for farmers. Photo: David Handley, The University of Maine Cooperative Extension.</p>
<p>Management:</p> <ul style="list-style-type: none"> • Row covers can help protect young plants. • Handpick and destroy. • Reduce weeds, practice good garden sanitation. • Encourage parasitic wasp, <i>Peristenus digoneutis</i>. Adults feed on nectar and pollen. Larvae feed on nymph. • In early spring, scout plants for adults and any plant damage. 				
<p>References:</p> <ul style="list-style-type: none"> • Rutgers University https://njaes.rutgers.edu/pubs/publication.php?pid=FS244 • Penn State https://extension.psu.edu/tarnished-plant-bug • Cornell University https://biocontrol.entomology.cornell.edu/parasitoids/peristenus.php 				

Description: The Eggplant lace bug is tiny and it is difficult to see any details using only the naked eye. Adults are mottled gray to dark brown and measure about 1/16 inch in length. Their nymphs are wingless, yellow with black markings, black antennae and develop black spines on their bodies as they mature. At the most mature nymph stage, they are only about 8/100 inch long. Eggs are 0.4 mm long, oval, and greenish at the base, brown toward the tip. There is a crater-like depression on one end with a white lace-like border. Eggs are laid on end in a roughly circular cluster and lean in different directions. The mother bug remains with her eggs and nymphs to protect them from predators. Since they are so tiny, this can be a helpful tool when attempting to diagnose their presence.

Eggplant lace bugs feed on eggplant, tomato, potato, sunflower, sage, cotton and horsetnettle. They feed by piercing and sucking the juices from plant tissues. This results in coarsely circular areas of a whitened discoloration. The insects will be found on the underside of these discolored areas. Adults overwinter among plant debris. They emerge to lay eggs in mid to late May with up to 6 annual generations per year.



Eggplant lace bug adults and nymphs feeding on eggplant leaf. Photo: M. Olin, NJAES



Adult eggplant lace bug (greatly magnified)
Photo: North Carolina Cooperative Extension



Example of damage caused by Eggplant lace bug feeding.
Photo: University of Maryland





Management:


- Encourage natural predators which include Lady beetle adults and larvae, spiders and shield-shaped soldier bugs.
- Inspect upper and lower surfaces of leaves if you notice stippling or loss of green color.
- Apply an ultra-fine horticultural oil or insecticidal soap, being sure to spray both upper and lower leaf surfaces.
- Clear away all debris at the end of the growing season to help prevent overwintering of this pest.

References:


- Virginia State University https://www.pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/3104/3104-1548/ENTO-415.pdf
- University of Maryland <https://extension.umd.edu/resource/eggplant-lace-bugs-vegetables>

PESTS LIKELY TO BE SEEN SOON

<p>Allium Leaf Miner adults <i>(Phytomyza gymnostoma)</i></p>	<p>Please note the second generation are now re-appearing, so use row cover to protect any alliums.</p>	
<p>Description: Allium Leaf Miner (ALM) adults are small flies that are active in Morris County from late March/early April to late May/early June. A second generation occurs in September to October / November. The adults lay eggs on the leaves. The larvae mine the leaves and migrate into the bulb and pupate. The injury caused by the larvae often leads to a rot in the bulb or neck of the plant and distortion of leaves. Injury to leeks, onions and scallions can be severe. Large numbers of orange pupae may also be found in harvested alliums, particularly leeks.</p>		
	<p>Feeding marks from ALM adults Photo: M. Sample, NJAES</p>	 <p>ALM Adults Photo: Pennsylvania Department of Agriculture</p>
	<p>ALM Pupae Photo: Pennsylvania Department of Agriculture</p>	 <p>Plants damaged by ALM larvae Photo: Pennsylvania Department of Agriculture</p>
<p>Management:</p> <ul style="list-style-type: none"> • Row covers are effective at preventing egg laying during periods of adult activity. The spring row covers can be removed in early June after the adults quit flying. Row covers should be used again in the fall to prevent damage from the second generation of adults. • Spinosad (for example, Captain Jack's Deadbug Brew) can be used for allium leaf miners. Please spray only allium foliage (not other plants) to protect beneficial insects and pollinators. • <u>Removal of all host debris prior to the end of the season can help prevent overwintering.</u> 		
<p>References:</p> <ul style="list-style-type: none"> • Cornell University https://cals.cornell.edu/new-york-state-integrated-pest-management/outreach-education/fact-sheets/allium-leafminer 		

<p>Saddleback caterpillar (<i>Acharia stimulea</i>)</p>	<p>This stinging caterpillar has recently been spotted in home gardens. Please be aware while gardening.</p>
<p>Description: These small ¾ inch caterpillars are quite distinctive with a chartreuse green body, small brown ‘saddle’ on its back, with menacing hairs found along the body. It has a wide range of crops, but causes low impact of damage. They can presently be found on many ornamentals, so be mindful not to brush up against the hairs or walk barefoot. Avoid handling this caterpillar. Especially keep children away from handling any caterpillars that are spined or have hairs, as these can cause irritation, painful stings, and possible severe allergic reactions leading to anaphylaxis.</p>	
	<p>These close-up photos show the typical saddle and venomous hairs that protrude around the body. When you brush up against the hairs, stinging and swelling are sure to follow. Nausea and a rash are also common. Be mindful that they appear from mid to late summer and will overwinter in debris. Please dress appropriately when out weeding around or clearing up. Be vigilant out there! Photo: L. Terreneo, NJAES</p>
<p>Management:</p> <ul style="list-style-type: none"> • Do not weed with bare hands. Use gloves and wear long sleeves. • Do not attempt to handle and by all means, avoid allowing children to handle. • Remove spines immediately with adhesive tape and seek medical attention for severe reactions. 	
<p>References:</p> <ul style="list-style-type: none"> • University of Maryland https://extension.umd.edu/resource/stinging-caterpillars-shrubs/ • University of Minnesota https://extension.umn.edu/yard-and-garden-insects/caterpillars-ornamental-plants 	

Spotlight

<p>Nectaries on Taiwanese Loofa plant at Morris Township Community Garden</p>	
	<p>Description: This amazing find was reported by a community gardener in Morris Township. Nectaries are small, round green structures found outside of the flower along the calyx. They provide, you guessed it, extra nectar. If you get a chance to stumble upon these, no worry, they are not harming the plant. There is a symbiotic relationship with ants. Ants feed on the nectar and in return help keep away any other grazing competition. Management: None, just Nature doing its thing!</p> <p>References:</p> <ul style="list-style-type: none"> • University of Florida https://nwdistrict.ifas.ufl.edu/hort/2019/12/10/nectaries-that-are-out-of-this-flower/ • Ohio State University https://bygl.osu.edu/node/746 <p>Photo shows ants feeding on nectaries on calyx of blossom. Photo: Lenny Voo</p>

ADDITIONAL RESOURCES

- All Rutgers Gardening and Landscaping Fact Sheets & Bulletins <https://njaes.rutgers.edu/pubs/subcategory.php?cat=5&sub=1001>
 - Rutgers Master Gardener Program <https://njaes.rutgers.edu/master-gardeners/>
 - Rutgers Soil Testing Laboratory <https://njaes.rutgers.edu/soil-testing-lab/>
 - Community Gardening Series <https://njaes.rutgers.edu/community-garden/>
 - Office of the New Jersey State Climatologist <https://climate.rutgers.edu/stateclim/>
 - Rutgers New Jersey Weather Network <https://www.njweather.org/>
 - Ticks and Tick-borne Disease <https://njaes.rutgers.edu/tick/>
 - Rutgers NJAES You Tube Channel <https://www.youtube.com/user/RutgersNJAES>
- Report Editor: Jennifer Basile