

| NEW PROBLEMS SEEN  | SPOTLIGHT  |
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| <ul style="list-style-type: none"> <li>• Sowbugs and pillbugs</li> <li>• Rhubarb leaf spot</li> <li>• Earwigs</li> </ul> | <ul style="list-style-type: none"> <li>• Ladybird beetle (beneficial)</li> </ul> |

*GARDENS SCOUTED FOR THIS REPORT: Morris County Park Commission’s Community Garden in Morristown, ValleVue Preserve Community Garden in Morris Township, and Madison Community Garden.*

**GENERAL OBSERVATIONS AND TIPS**

The gardens are really beginning to show signs of life and have begun producing some cool weather crops. The weather has been erratic in Morris County, presenting a bit of a challenge for gardeners. Many seedlings that were planted early have died or been seriously damaged by the very cold weather on the night of May 17<sup>th</sup>. If you can’t resist planting early in the future, be ready to cover tender annuals if the weather turns cold. It’s useful to check the weather forecast before putting out warm season plants. While it often works to plant around May 15, it doesn’t work well to plant when the temperature goes much below 45 degrees and it certainly does not work well when temperatures drop to the 30s. This year the temperature went below 35 degrees on May 17.

Now is peak planting time for summer crops. As you transplant seedlings be sure to give them adequate room. This reduces competition for resources and provides for good airflow which can help minimize disease pressure.

You could also consider using supports for as many crops as possible. Growing crops vertically helps to maximize valuable garden space. It also provides air circulation and keeps fruit off the ground and hence less likely to rot.



Peas supported in a metal cage  
Photo: C. Mathis, NJAES

This is also a good time of year to start thinking about mulch. Once the weather is reliably warm applying mulch can help keep weeds in check. It also helps preserve water and moderate temperature fluctuations. Straw, salt hay, and grass clippings are options for biodegradable mulch. Apply about 3 to 4 inches. If using grass clippings, be aware of how the lawn was treated. Don't use clippings from a lawn that has been treated with herbicides. Black plastic is another mulch choice. It has the advantage of also warming the soil but is not biodegradable. Be vigilant though because mulch can also provide shelter for garden pests.



Lettuce and cilantro mulched with grass clippings  
Photo: M. Sample, NJAES

Although we have not seen a lot of new pests during the past two weeks, we have seen damage from pests first seen earlier in the season. Notably, flea beetles and aphids are being seen in significant populations. We have also seen different life cycle stages of pests we observed earlier.

Leaf miner eggs were seen in April and we have seen significant leaf damage caused by the leaf miner larvae. Remove damaged leaves to minimize increases in the miner population. More information on leaf miners can be found in Report #1 and the Annual Top Problems report attached with this email.



Leaf miner damage  
Photo: M. Albright, NJAES

Imported cabbage worm larvae are being seen on cabbages. The adults were first seen flying in April. Cabbage worms can cause significant damage to cole crops (cabbage, broccoli, kale, cauliflower, etc.), so be vigilant about scouting for them. You may also see other cabbage “worms” later in the season. The larvae of the cross-striped cabbageworm and the cabbage looper are also significant defoliators of cole crops. Handpick or treat them promptly. For more information see Report #1 or the Annual Top Pests report.



Imported cabbage worm larvae on cabbage  
Photo: N. Gardner, NJAES

Some issues that may start to appear soon include bacterial leaf spot on peppers, cucumber beetles, basil downy mildew, and fungal disease on tomato plants.

We will soon be entering prime growth season in the garden. As the garden growth revs up, so too does disease and insect pressure. If you see insects, try to identify them to determine if they are friend or foe, or maybe a little of both. Avoiding overhead watering when possible, providing adequate room for air flow, and carefully monitoring for issues before they become big can go a long way to ensuring a healthy productive garden.

## REPORTS ON NEW PROBLEMS

**Problem: Sowbugs and Pillbugs**  
**(Porcellionidae family)**

**Where: Morris Township Community Garden (5/15)**  
**Morris County Community Garden (5/22)**

**Description:** Friend or foe? Usually considered beneficial due to its contributions breaking down dead matter, this tiny crustacean can also prove a nuisance, especially when present in great numbers. They will feed on seedlings, fruit that comes in contact with the ground, such as strawberries and melons, and root crops.

Characteristics include a grey-brown armored exoskeleton, with seven pairs of legs, length of half inch, antennae and two pointy 'tails' at the end. Sowbugs differ from Pillbugs, aka the Roly-Poly, as the end appendage prevents them from their namesake rolling response when disturbed. They thrive in moist soils, and do not bite. Their natural predators are small mammals, spiders, beetles, and toads.

Sowbugs at base of radishes



Photo: C. Mathis, NJAES



Pillbugs and Sowbugs  
Photo: J. Kalish, University of Nebraska

### Management:

- To prevent damage to tender plants, eliminate garden debris, leaf piles, fallen fruit and weeds from gardens and growing areas.
- Use coarse mulch which will allow water to drain easily. Improve air circulation by providing trellises for vines.
- If possible, raise fruits like strawberries and melons above the ground.
- Apply diatomaceous earth as a barrier; it will act as a desiccant and may protect plants.
- Practice good garden sanitation to remove hiding spaces.
- The use of landscape fabric can be effective to create a barrier between soil, seedlings, and low fruiting plants.

### References:

- University of Nebraska: <https://lancaster.unl.edu/pest/resources/001sowbugs.pdf>
- University of California: <https://ipm.ucanr.edu/PMG/GARDEN/FRUIT/PESTS/sowbugs.html#:~:text=Solutions,surfaces%20are%20drier%20by%20evening.>

**Problem: Rhubarb leaf spot  
(*Ramularia rhei*)**

**Where: Morris Township home garden (5/21)**

**Description:** Rhubarb is usually relatively problem-free in the garden. *Ramularia rhei*, a rhubarb leaf spot disease, doesn't usually seriously impact yield but it can weaken the plants over time if left unchecked. It first appears as small red dots that gradually enlarge to form circular lesions a half-inch or more in diameter. Larger spots become white to tan with purplish halos. The larger spots can lead to sunken lesions in the stalk tissue. Stalk infections can come later, appearing as small spots that elongate as the stalk grows. White fungus can develop in the centers of spots on leaves and/or stalks, becoming brown as the tissue dies. Fungi overwinter in infected plant debris.



Leaf spot on underside of  
rhubarb leaf  
Photo: J. Basile, NJAES



Leaf spot on top of rhubarb  
leaf  
Photo: J. Basile, NJAES



Minor leaf spot on top of rhubarb leaf  
Photo: M. Sample, NJAES

**Management:**

- Remove and discard all leaves after hard frost
- Don't add infected leaves to compost
- When harvesting, remove stalks with infected leaves first
- Don't over-water and avoid overhead watering as much as possible
- Provide sufficient air flow by using adequate spacing

**References:**

- University of Minnesota: <https://extension.umn.edu/vegetables/growing-rhubarb#diseases-923465>

**Pest: Earwigs**

*Note: Earwigs are both garden pests and beneficial predators (insect order Dermaptera)*

**Where: Morris Township Community Garden (5/30)**

**Description:** Earwigs are night feeding insects that can be both pests and beneficial predators. As pests in the vegetable garden, they may feed on seedlings, plant leaves, flowers, soft fruit and on corn silk. Leaves chewed by earwigs often have a ragged or shredded look. As beneficial predators, they feed on eggs and immature stages of insects, such as fleas and aphids, as well as snails and other slow-moving invertebrates.

Earwigs mostly feed at night and seek out dark, cool, moist places to hide during the day. Common hiding places are under loose clods of soil, boards, or dense growth of vines or weeds. The best way to identify whether they are causing damage in the garden is to look for them with a flashlight at night.

Earwigs make up the insect order *Dermaptera*. The adult earwig is identified by a pair of prominent forceps-like appendages at the tail end of its body. Most species have wings under short, hard wing covers, but they seldom fly. Immature earwigs look like adults except they are smaller and lack wings. The adult is about 3/4 inch long and reddish brown.



Earwig on Horseradish  
Photo: N. Gardner, NJAES



Holes in leaves of Swiss chard plant eaten by earwigs  
Photo: M. Albright, NJAES



Male earwig, Iowa State University

**Management:**

- Earwigs can be trapped with a rolled-up newspaper, corrugated cardboard, bamboo tubes, or a short piece of hose. Place these traps on the soil near plants just before dark and shake accumulated earwigs out into a pail of soapy water in the morning.
- Remove hiding sites for earwigs, such as weeds, piles of rubbish, and leaves. Mulches may also harbor earwigs.
- Natural enemies include toads, birds, and other predators. Chickens and ducks will consume many earwigs.

**References:**

- University of Connecticut: <https://homegarden.cahnr.uconn.edu/factsheets/earwigs/>
- University of California IPM: <https://ipm.ucanr.edu/PMG/PESTNOTES/pn74102.html>

# Spotlight

**Ladybird beetles (Family: Coccinellidae)**

**Where: Morris County Community Garden (05/22)**

**Description:** Ladybird beetles are also known as ladybugs. There are hundreds of species of ladybird beetles in North America. All but two (Mexican bean beetles and squash beetles) are beneficial as adults and larvae, feeding voraciously on many soft-bodied pest insects, especially aphids. They also feed on mites and other small insects and insect eggs.



Ladybird beetle  
Photo: S. Brighthouse, NJAES

The adults are usually 1/4 - 3/8" long, round, or oval, and ranging from black to pink, yellow or red, with or without spots on their wings. Females may lay between 20 and 1,000 eggs over a three-month period. The eggs are tiny, bright yellow-orange and spindle-shaped, laid upright in clusters of 5-30 and usually deposited near colonies of the insects that the larvae eat, most often in relatively protected locations on the undersides of leaves. The larvae look completely different from adults; they are tapered and alligator-like, growing from 1/25" up to 3/8" long, typically through four larval instars over 20-30 days. The larvae are very active, moving around quickly in search of prey.

You can attract ladybird beetles by growing flowering plants that produce nectar and pollen eaten by adult ladybird beetles, and by avoiding the use of broad-spectrum insecticides. If any of your plants have aphids, undoubtedly ladybird beetles will follow!

A few other species of ladybird beetles:



Ladybird beetle  
(*Harmonia axyridis*)  
Photo: Cornell University



Ladybird beetle  
(*Hippodamia convergens*)  
Photo: Cornell University



Ladybird beetle  
(*Coleomegilla maculata*)  
Photo: Cornell University

Exceptions that are not beneficial: There are two species of Ladybird beetles that are not beneficial: the Mexican bean beetle, *Epilachna varivestis*, and the squash beetle, *Epilachna borealis*.



Mexican bean beetles are a major pest of bean plants  
The adult has 16 spots and is copper colored.

Photo: Purdue University

#### References:

- Rutgers Fact Sheet on Mexican Bean Beetles: <https://njaes.rutgers.edu/pubs/publication.php?pid=FS227>

#### **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>

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