



## **Cut Flower & Greenhouse Newsletter**

**Central Maryland Research and Education Center  
Ellicott City, Maryland**

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### **Welcome to Your Monthly Newsletter**

**By: Laura Nixon**

Spring has officially sprung, and with it comes a new iteration of our Greenhouse and Cut Flower Newsletter ([archived issues are available on our website](#)). For those of you who haven't met me yet, Hello! I'm Laura Nixon, the new Ornamental IPM and Entomology Specialist for the University of Maryland Extension (UME). I started at UME in September 2025, and specialize in sustainable IPM tactics, chemical ecology, and invasive insects. If you are in Maryland (or attend some of our events), you may have met me this Winter; if you haven't, feel free to reach out at [Lnixon1@umd.edu](mailto:Lnixon1@umd.edu).

Here at UME, we're excited to be partnering with Penn State Extension to bring you a monthly newsletter dedicated to Greenhouse and Cut Flower Production. My co-coordinator for this endeavour is Patricia Prade. Patricia is the Horticulture Extension Entomologist with Penn State Extension serving Northampton and Lehigh Counties, specializing in integrated pest management, biological control, and invasive species affecting ornamental, vegetable, and specialty crop systems. On the third Wednesday of each month, we will bring you Flower of the Month from Krystal Snyder (PennState), timely disease management from one of our states' plant pathologists, and greenhouse pest management from the IPM team. If YOU would like to get your name in the Newsletter, you can send any member of the team pictures and observations from your greenhouse or cut flower field.

Happy Spring, folks!



**Hot pink geranium flowers in bloom**  
Photo: Suzanne Klick, UME

**Flower of the Month: Ball Ageratum Monarch Magic**  
**By: Krystal Snyder**

Ball Ageratum Monarch Magic is a great pick for spring sales. It stands out in stores and trial gardens. This versatile plant looks good in landscape beds, patio pots, or mixed arrangements. Its bright color, and dependable performance make it perfect for spring and summer displays.

Monarch Magic really does attract pollinators, bringing in butterflies, bees, and other helpful insects. This makes it a great choice for gardeners who care about the environment. Besides its value for pollinators, it also adds beauty to home gardens and public spaces.

It was named a “Best of” selection at the Penn State Flower Trials two years in a row for its strong growth, bold look, and steady performance in the garden. It sells well and keeps gardeners happy long after planting.



**Ball Ageratum Monarch Magic**  
Photo: Krystal Snyder



**Broad Mites in Greenhouse SunPatiens**  
**By: Hayden Schug & Ben Beale**

Broad mites (*Polyphagotarsonemus latus*) were recently confirmed in SunPatiens in a greenhouse in Southern Maryland. This pest is common in greenhouse and ornamental production and can be difficult to detect due to its extremely small size. Broad mite incidence has increased in recent years. They are also a pest of tomato, pepper

and eggplant, both in greenhouses and in field production. Due to their small size, a microscope is needed to properly identify broad mites.

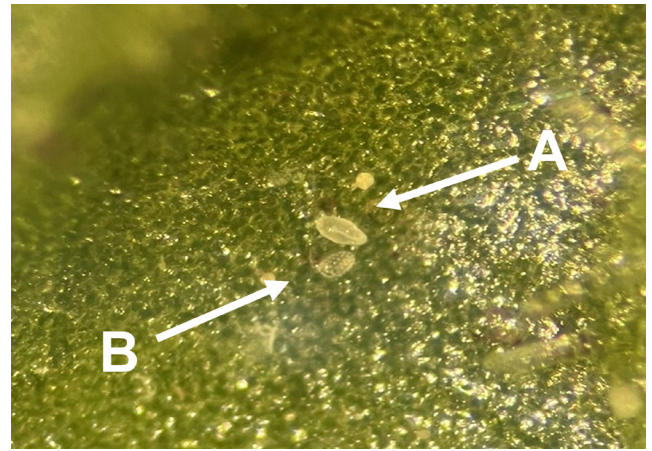
Adults are about 0.25mm long, about a quarter the size of spider mites. Eggs are distinctive, with rows of white pegs protruding from the egg’s surface.



**Distorted leaves and buds are typical of broad mite damage**  
Photo: Hayden Schug, UME

Broad mites feed on new growth and inject toxic saliva, causing distorted, thickened, and stunted leaves. Symptoms often include downward curling, leaf distortion, bronzing, and hardened plant tissue. These symptoms are similar to herbicide or plant growth regulator injury, and can be easily confused. Damage may not become apparent until after feeding has occurred, which can make early detection challenging. They develop rapidly under warm, humid conditions, with a life cycle as short as 6–10 days.

Management can be difficult because mites are protected within developing plant tissue, buds, and curled tissue. Focus on early detection, removal of heavily infested plants, and starting with clean plant material. Biological control with predatory mites may be effective in greenhouse systems, including *Amblyseius swirskii* and *Neoseiulus cucumeris*. Not all miticides labeled for two-spotted spider mites will control broad mites. Choose miticides specifically labeled for control of broad mites. Effective products include Akari, Avid, Dormant Oil, Judo, Magus, Pylon, SanMite, Summer Oil, Triact and Vykenda. Always consult the pesti-cide label before application.



A) Adult broad mite; B) Broad mite egg with white pegs on egg surface

Photo: Ben Beale, UME



## Early Season Dahlia Diagnosis (It's Thrips, of course)

By: Laura Nixon

This month, I received a package of infested Dahlia cuttings from one of my growers. They were sure they had thrips, but wanted to identify the species before moving forward with their IPM planning. There are several species of thrips commonly found on Dahlias, including greenhouse thrips (*Heliethrips haemorrhoidalis*) and western flower thrips (*Frankliniella occidentalis*). On the sample I received, I found active adult and larval onion thrips (*Thrips tabaci*). Onion thrips are often misidentified as western flower thrips, which tend to be more common in greenhouses. However, over the past several years, onion thrips have become an increasing issue in greenhouses. This species overwinters as adults and larvae, so once the temperatures warm up they are ready to start feeding and laying eggs. Best preventative practices are good greenhouse sanitation and proactive Spring monitoring. As with all species of pest thrips, onion thrips produces many generations per year with overlapping life stages. Therefore, they can develop resistance to chemicals. If choosing the chemical route, your contact options include spinosad (Entrust), spinetoram (Radiant SC), acetamiprid (TriStar), and *Beauveria bassiana* (BotaniGard), and for systemics you can use abamectin (Agri-Mek), cyantraniliprole (Mainspring), and dinotefuran (Safari). However, if you catch your thrips population early, well-planned biological control can have a huge impact on not only your onion thrips, but many of your common greenhouse week's write up on planning your biocontrol!

If you happen to own a microscope (which I know some of you do!) or a magnified hand lens and a sharp eye, I used this easy to follow key to ID this thrips species:

[https://onfloriculture.com/wp-content/uploads/2024/05/Thrips-Identification-Workshop-Guidebook\\_May-2024-Ed.pdf](https://onfloriculture.com/wp-content/uploads/2024/05/Thrips-Identification-Workshop-Guidebook_May-2024-Ed.pdf)



Adult Onion thrips

Photo: Laura Nixon, UME

## Early Season Cuts: Ranunculus

By: Laura Nixon and Ginny Rosenkranz

Crystal Giesey at Masterpiece Flowers on Maryland's Eastern Shore is using a high tunnel to grow Ranunculus flowers this Spring. Ranunculus is a great early season cut, as they generally bloom for 4-6 weeks in the Spring. These are a cool-loving plant, and excel in moderate climates, preferring when temperatures don't exceed 60 °F for extended periods of time.

Do you have a fun combination you'd like to share with us?



**An early season vase of Ranunculus paired with double file viburnum**

Photo: Crystal Giesey, Masterpiece Flowers

## Stay Alert for Alternanthera mosaic virus

By: Ana Cristina Fulladolsa

Alternanthera mosaic virus (*Potexvirus alternantherae*) has a host range of over 30 plant species and 15 families. Common ornamental hosts include Phlox, Celosia, Angelonia, Salvia, Scutellaria, Crossandra, and Nandina. Symptoms of infection can be subtle and differ depending on the plant. Look for mosaic, mottling, chlorotic or necrotic fleck, chlorotic spots or wavy lines patterns, irregular leaf margins, and leaf distortion, stunting, interveinal yellowing, or vein necrosis.

Alternanthera mosaic virus is mechanically transmitted through sap and can be spread from plant to plant through routine activities such as pruning, pinching, and even touching leaves of a healthy plant after handling those of an infected one. It is important to discard all symptomatic plants immediately and minimize handling the rogued material by placing it directly in a plastic bag. Disinfect any tools (e.g. pruners, hoses, stakes) and areas that came in contact with symptomatic plants.

The virus can also spread through infected cuttings. Inspect sourced material prior to planting and avoid using plants with disease symptoms. If you're propagating plants, make sure not to use any symptomatic plants as mother plants as the virus can be present in tissues that appear healthy. It is best to discard the symptomatic mother plant and obtain new stock from a reputable source.



**Alternanthera mosaic virus symptoms on purslane**  
Photo: Tom Creswell, Purdue University, Bugwood.org



**Alternanthera mosaic virus symptoms on fall phlox**  
Photo: Tom Creswell, Purdue University, Bugwood.org

## Planning for Biological Control in Greenhouses

By: Patricia Prade

The use of biological control agents (biocontrols) is a key component of greenhouse pest management. It allows for proactive control and reduces reliance on chemical inputs, particularly when pest populations are low. A critical factor for success is starting early. Many biocontrols can be introduced before pests are present, giving them time to establish within the crop. Some beneficials can also survive on alternative food sources; for example, the minute pirate bug (*Orius* spp.) can feed on pollen when prey is absent.

Banker plant systems can further support early establishment. These systems provide a continuous source of food or hosts, allowing beneficial populations to build and persist even when pest pressure is low. When implemented early, banker plants help establish a “standing army” of natural enemies ready to respond as pests emerge.

It is important to recognize that not all biocontrols will establish long-term in greenhouse systems. Some require repeated releases at regular intervals to maintain effective populations, particularly when environmental conditions are suboptimal or prey is limited. Planning for these supplemental releases is essential for consistent pest suppression throughout the season.



**Blue sticky cards are highly effective for monitoring and trapping adult thrips.**

Photo: Patricia Prade, Penn State Extension



**Adult minute pirate bug feeding on adult thrips pest**

Photo: Lyle J. Buss, University of Florida

Effective planning begins with understanding your key pests and crops. Reviewing past production records can help identify recurring issues such as aphids, thrips, whiteflies, or spider mites, and determine when they are most likely to appear. This information guides the selection and timing of appropriate natural enemies, including preventive releases.

Selecting the right biocontrols is equally important. Common greenhouse options include predatory mites for thrips and spider mites, parasitoid wasps for aphids and whiteflies, and generalist predators such as minute pirate bugs and lacewings. Each species targets specific pests and life stages and performs best under certain environmental conditions, making proper matching essential. A successful program also depends on maintaining conditions that favor beneficial organisms. Temperature, humidity, and light influence their performance, and stable conditions improve establishment and effectiveness. Minimizing the use of broad-spectrum pesticides is critical, as these can disrupt beneficial populations. When chemical control is necessary, selective products compatible with biocontrols should be used.

Regular monitoring is essential to guide decision-making. Scouting programs that include sticky cards, plant inspections, and recordkeeping allow for early pest detection and help determine the timing and placement of releases. Greenhouse organization and layout can also support success by reducing pest hotspots and improving access for scouting and applications

Starting early and planning proactively are fundamental to successful biological control. By combining knowledge of pest dynamics, appropriate natural enemy selection, and a supportive greenhouse environment, growers can build a robust Integrated Pest Management (IPM) program that improves crop quality and promotes long-term sustainability.



## **Botrytis in Cut Flowers Grown in Greenhouses and High Tunnels**

**By: David L. Clement, Extension Specialist**

Gray Mold, caused by the fungus *Botrytis cinerea*, may become visible on old flowers and yellowing foliage of herbaceous plants. This is especially true when plants are closely spaced with poor air circulation in greenhouses and high tunnels. There can be a range of symptoms including damping-off of seedlings, leaf spots, flower and bud blights, and stem cankers. In some cases, infected tissue can become fuzzy gray overnight or may become spotted. In severe cases, infection of cut stem wounds, and flower or leaf stubs can lead to stem cankers. It's very important to incorporate the use of ridge vents, rolled up high tunnel sides and horizontal air flow fans to reduce humidity levels within the plant canopy. The goal should be to keep humidity levels below



***Botrytis* on snapdragon**

Photo: Jay W. Pscheidt, Pacific Northwest Pest Management

85%. The optimum spore germination temperature is between 72-77 °F. Prolonged humidity and warm spring temperatures can create a perfect storm for infection.

Sanitation in the form of grooming older leaves and dead heading old flowers from plants is the most important step in managing *Botrytis* infection. When possible avoid irrigation late in the day to allow foliage to dry before nightfall. If possible, thin or space plantings to promote better air circulation.

Unfortunately, fungicides cannot control heavy infections, and in addition, *Botrytis* has developed resistance to several fungicide groups. Please see the link to Michigan State's 2-page Greenhouse

2026 guide: <https://www.canr.msu.edu/resources/greenhouse-disease-management>. Another good resource for Diseases of Specialty Cut Flowers is a free downloadable PDF from Ohio State: <https://extensionpubs.osu.edu/diseases-of-specialty-cut-flowers-pdf/> The best management strategies are to lower humidity levels, increase air circulation, space plants, keep up with your maintenance schedules, and to remove older flowers and foliage before infection becomes wide spread within the crop.



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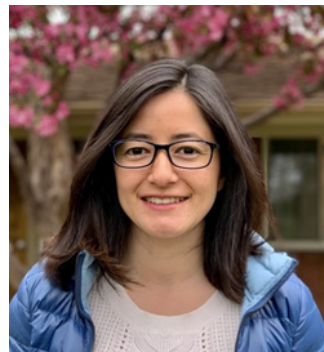
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**Conferences** - Go to the [IPMnet Conference Page](#) for links and details on these programs.

June 16 2026 - **Eastern Shore Procrastinator's Conference** (all day)

Location: Zoom

June 23 / July 22 / August 26 2026 - **IPM Scouts' Diagnostic Sessions** (1 - 3 PM)

Location: CMREC, Ellicott City, MD



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