



Greenhouse Pest Message, October 8, 2021

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Hunter Flies

Poinsettias are looking good without too much whitefly pressure. I am starting to see some beneficial **hunter flies** (*Coenosia attenuata*). They may be introduced into your greenhouses on incoming plants. Hunter flies may be confused with shore flies, but hunter flies are about twice the size of shore flies. They also have wings that are clear and may appear iridescent as the hunter fly adults perch on plant leaves, pipes or other objects in the full sun.

The female has a dark gray body with black legs while the male has yellow legs. These aerial predators will catch fungus gnats or shore flies on the wing. Adults lay their eggs in the growing media and their larvae prey upon fungus gnat larvae and shore flies in the growing media.



Figure 1: Close-up of adult hunter fly perching on a leaf. Photo by L. Pundt

Two Spotted Spider Mites on Tropical Plants

Considering the popularity of indoor tropical and house plants, I thought a review of **two-spotted spider mites** would be of help.

As spider mites insert their stylet-like mouthparts into plant tissue, they suck out plant juices reducing chlorophyll and moisture content with the leaf cells. At first, you will see a slight flecking or stippling (chlorotic spot) on the leaves. When high populations develop, fine webbing is extensive.



Figure 2 & 3: Stippling on Bamboo Palm leaves (on left) and all stages of two spotted spider mites on underside of leaves along leaf vein. Photos by L. Pundt

Scouting

Inspect plants weekly for signs of spider mite feeding. Turn over leaves, especially the older, more mature leaves and look for the two spotted spider mites that tend to be found along the leaf vein. Use a 10-20x hand lens to detect the eggs and all stages of mites. Look on the underside of the leaves for cast skins and empty eggshells, too. Because mites are easily carried on workers or their clothing, do routine greenhouse tasks and scout in mite-infested areas at the end of the day.

Cultural Controls

- Inspect incoming plants for signs of mites or their damage.
- Avoid over fertilizing plants. Spider mites are more able to feed upon this lush, succulent growth. Increased fertility levels, especially nitrogen, provide amino acids that are needed for the spider mites to develop.
- Eliminate weeds in and around greenhouses that can harbor spider mites.
- Promptly remove unsold or “pet plants” as older plants may be a source of mites for younger plants.
- Avoid allowing plants to become water stressed, as those plants have higher levels of amino acids, which are favorable to spider mites.
- Overhead watering both helps wash spider mites off plants and increases relative humidity in the plant canopy.

Biologicals Controls

Phytoseiulus persimilis is one of the most widely used predatory mites for two spotted spider mites.

- Release early when mite populations are low and two spotted spider mites are first noticed.

- This voracious, specialist predatory mite needs to have spider mite prey, or it will disperse or starve.
- *P. persimilis* is most commonly available either in a granular carrier or on bean leaves with all life stages and a food source.
- When using carrier product, check first by sprinkling some of the product onto a white sheet of paper and look for the active predatory mites.
- Gently roll the tube to mix the predatory mites in the carrier before application.
- Sprinkle material on leaves.
- Concentrate releases near hot spots of mite activity.

There are recently been an exciting development as *P. persimilis* is now also available in slow release sachets (BioPersi+) containing all stages of the predatory mite with alternative food for the mites.

The predatory mites are first pale white but change to the reddish-orange color you are familiar with once they start feeding.

For More: Biobee: <https://www.biobee.com/solutions/sample-4/>
 Hortidaily: <https://www.hortidaily.com/article/9340882/making-the-slow-release-option-of-predatory-mite-a-reality/>

Chemical Controls

Spider mites develop resistance to miticides very rapidly. The miticides used in your rotation schedule should have different modes of actions (i.e. come from different pesticide classes and work differently). Follow long-term rotations and all label restrictions in terms of amount and frequency of use. Many of the newer miticides are more selective toward a life stage or are more effective when populations are low. Provided you can obtain good coverage, contacts such as SuffOil X may also be used.

For miticides labeled for two spotted spider mites, consult the most recent edition of the *New England Greenhouse Floriculture Guide: A Management Guide for Insects, Diseases, Weeds and Growth Regulators* available online at <http://negfg.uconn.edu/>

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