

## Broad Mite Broadcast

*Dan Gilrein, Cornell Cooperative Extension of Suffolk County  
dog1@cornell.edu*

Spring is here, judging from samples and calls to the Entomology Diagnostic Lab. Broad mite has been a common problem this spring. Named for its wide-ish body, these almost microscopic creatures are in the tarsonemid, or thread-footed, mite group along with the similar cyclamen mite. Broad mite has a very wide host range that includes many herbaceous and woody ornamentals, herbs and food crops. Primarily a tropical species, we occasionally see problems with it on outdoor plants even here in Long Island (though it probably does not overwinter) and it is a common pest in pepper production in Florida. Broad mite damage symptoms can be rather dramatic and appear generally quite distinct from spider mite injury. New buds and growth become strongly stunted and distorted, there may be noticeable bronzing or darkening of foliage, and stems on some plants may develop a kind of russet or scabby appearance. Flowers may have a very fine, pale flecking or petals can be distorted. In more extreme cases flower and foliage



*Broad mite damage on Salvia farinacea*

buds can abort and plants will stop growing. This spring we've had several cases of damage to English ivy and growers were wondering why new leaves were failing to expand. This mite likes warm and humid conditions; this time of year populations grow very rapidly.

One interesting fact about broad mite is it can hitchhike on legs of whiteflies. This explains how it moves from plants on



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**CONTRIBUTORS**

Dr. Nora Catlin  
Floriculture Specialist  
Cornell Cooperative Extension -  
Suffolk County  
[nora.catlin@cornell.edu](mailto:nora.catlin@cornell.edu)

Dan Gilrein  
Entomology Specialist  
Cornell Cooperative Extension -  
Suffolk County  
[dog1@cornell.edu](mailto:dog1@cornell.edu)

Dr. Brian Krug  
Floriculture Ext. Specialist  
Univ. New Hampshire  
[brian.krug@unh.edu](mailto:brian.krug@unh.edu)

Dr. Joyce Latimer  
Floriculture Extension & Research  
Virginia Tech University  
[jlatime@vt.edu](mailto:jlatime@vt.edu)

Dr. Roberto Lopez  
Floriculture Extension Specialist &  
Research  
Purdue University  
[rglopez@purdue.edu](mailto:rglopez@purdue.edu)

Dr. Paul Thomas  
Floriculture Extension & Research  
University of Georgia  
[pathomas@uga.edu](mailto:pathomas@uga.edu)

Dr. Brian Whipker  
Floriculture Extension & Research  
NC State University  
[brian\\_whipker@ncsu.edu](mailto:brian_whipker@ncsu.edu)

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benches to hanging baskets overhead. Problems with broad mite directly correlate with the use of vegetatively grown starts; I rarely see infestations on seed-grown plants. Often an infestation is confined to one or two varieties.

It is important to get a diagnosis when a broad mite infestation is suspected. Chilli thrips causes very similar damage and the symptoms might be also mistaken for chemical injury. Diagnosis is fairly easy under high magnification, where the pale mites can usually be seen. Sometimes the numbers are very low or they aren't present on older leaves. More often I find their distinctive dotted eggs, or the flattened 'eggshells' that retain the characteristic unusual ornamentation after the mites hatch. These can be seen even with a 20x handlens under good lighting. New and unexpanded terminal growth is the best place to look for them but in humid conditions the mites can be found elsewhere on the plant.



*Impatiens flower*



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Not all miticides will control broad mite. The ones that do and are labeled for greenhouse ornamentals include Pylon, Judo, Sanmite, Avid (or generic abamectin), and Akari. One application may suffice if coverage is very thorough, otherwise two around 7 to 10 days apart may be needed or if the population is high. Note that some plants are sensitive to Pylon (dianthus, kalanchoe, poinsettia, rose, salvia and zinnia), Judo (geranium, peperomia, dracaena, New Guineas, some roses, and more – see label for full list), and Avid (ferns, Shasta daisy). Magus and Kontos are the newest labeled products; both are foliar sprays and Kontos can also be used as a drench. We have had good results with both including Kontos as a drench, but two applications are suggested if applying either as sprays. Kontos should not be used on pelargonium, orchids, hoyo, dracaena, cordyline, schefflera, neathe bella palm, and ferns; only one application is suggested on some other plants (see label). Magus should not be applied to roses. The pyrethroid insecticides Talstar S Select (or generic bifenthrin ), and Scimitar GC are also labeled for broad mite on greenhouse ornamentals; we have tested Scimitar and found it



*English ivy* (photo N. Catlin)

will provide some suppression but for high infestations the specific miticides above may be more effective. Suffoil-X is also generally labeled for 'mites' on ornamentals; we found with good coverage it worked quite well though growers should expect no residual activity. Two applications would be necessary, but test any oil on a small scale first particularly when using multiple applications, be sure plants are well-watered, and consider possible oil incompatibilities with some products.

Biological control is an option too, most often used in longer-term crops. The predatory mite *Neoseiulus cucumeris* will feed on broad mite as well as immature thrips, but prefers humidity around 65%+. Other predatory mites, *Amblyseius swirskii* and *Neoseiulus (Amblyseius) californicus*, have been used successfully to control broad mite. These three mites will also feed on pollen and may benefit from having flowering plants present. Predator mites should be released preventively. Check with suppliers or your Extension specialist on release rates and other guidelines.



*New Guinea impatiens* (photo N. Catlin)