



by Dan Gilrein
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Spring is for Insects (and Mites)

*The insect serves some useful end,
But what it is I've never kenned.
I do not like the ones that buzz,
I do not know a soul who does;
And as for those that crawl and creep,
The more they die, the less I weep.*

Ogden Nash

While we recognize that insects and mites play critical beneficial and ecological roles, April can be the cruellest month when greenhouse pest problems arise with the least amount of time to address them. Following are some of the recent insect and mite issues brought to my attention.

Broad mite. A regular spring problem on cutting-grown plants like New Guineas, symptoms include distorted new leaves, bronzing or a scabby appearance of the undersurface, and sometimes complete suppression of



Lack of bloom on New Guinea impatiens due to broad mite infestation. Treatment was effective; plant should recover and be marketable.

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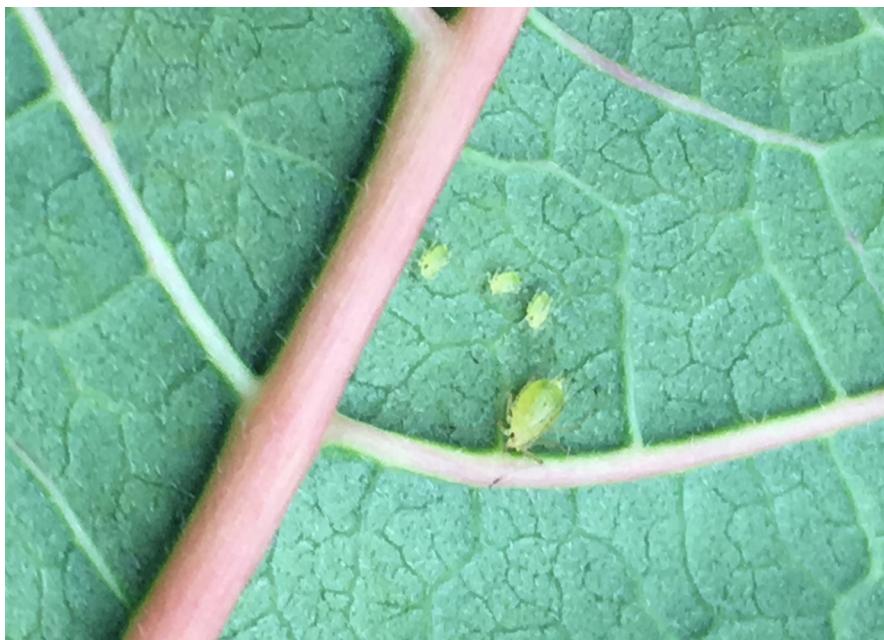


Broad mite injury on begonia

terminal growth. A recent sample also had brown spotting and flecking on petals. A begonia brought in showed severe leaf distortion, bronzing, and stunting. Seed-grown annuals can be affected when mites are transported on legs of some insects (whiteflies) to new plants. On symptomatic plants check for the mites and eggs with good 10 - 20x magnification or submit samples to a diagnostic lab. Following an effective miticide application one plant had damage but no mites, so the culprit was confirmed from the characteristic 'eggshells' left behind. Some of the plant symptoms can be confused with boron deficiency or other problems; a quick pH check helps in sorting that out. Though I am generally not in favor of preventive insecticide applications on finished crops, past experience suggests treating cuttings (certain kinds) before transplanting may be reasonable, particularly where they'll end up in baskets overhead. Some growers are releasing predatory mites (*N. cucumeris*) for broad mite. It is important to verify predators arrive in good condition and in the expected number by checking a random sample of sachets or media from each shipment.

Aphids. Some growers decided to treat plugs, particularly calibrachoa and petunias, before planting this spring

using a specific insecticide for aphids. I am looking forward to hearing how that strategy played out for hanging baskets - a recent complaint was where this wasn't done. An unusual case this spring involved foxglove aphids on poinsettias. Growers looking for a systemic alternative to neonicotinoids are using Mainspring or Kontos as a drench. These may perform best applied after plants are very well-rooted, not right at planting, to help assure good root uptake. Avoid overwatering after application, which can leach material out of pots. Note sensitive plants on the Kontos label and be thoughtful where pots are hung: we've seen zonal geraniums on benches beneath treated hanging baskets injured from runout -zonal geraniums are sensitive to the active ingredient in Kontos. Some growers are using biocontrols for aphids. Be sure the appropriate biocontrols are being released for the aphid species present and choose compatible treatments if additional controls are needed.



Foxglove aphids on poinsettia

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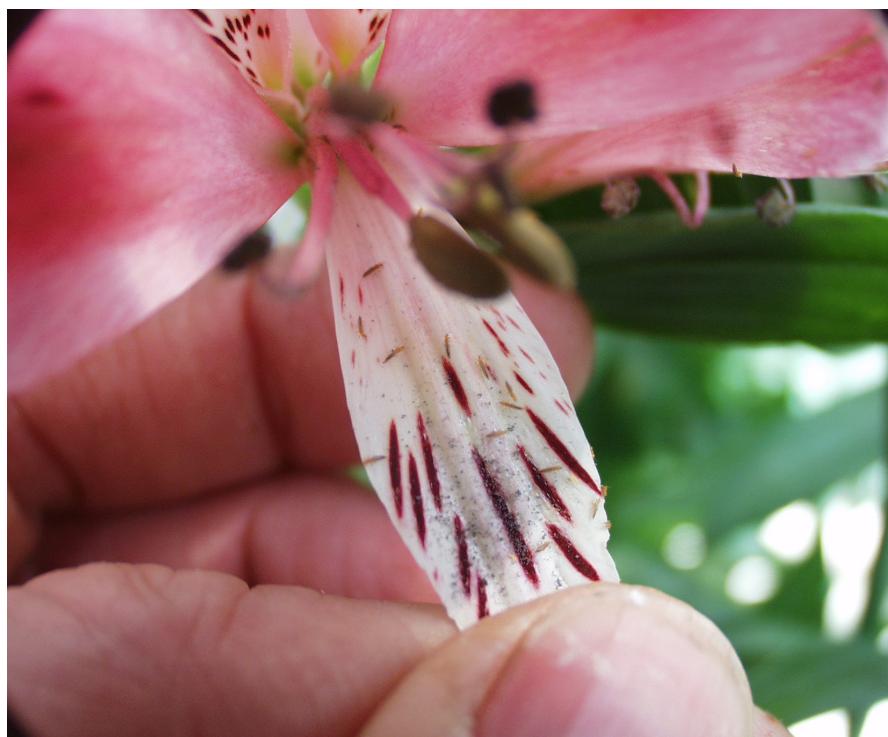
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Severe distortion and honeydew on salvia due to foxglove aphid infestation.



Western flower thrips populations increase quickly when pollen is present

Western flower thrips (WFT). There have been surprisingly few inquiries this spring, but where populations have popped up growers are reporting good results with Mainspring foliar applications (include a non-phytotoxic wetting agent), which also provides aphid (and caterpillar) control. Overture (also effective for caterpillars), Pylon (also for mites, fungus gnats and others), Mesurol, and (where resistance isn't an issue) Conserve (also for caterpillars and shore fly adults) can also be used. Note some plants are sensitive to Pylon and avoid use with or around time of oil applications (labels state: "Crop oils, surfactants and fertilizer adjuvants have been shown to increase the likelihood of phytotoxicity and are not recommended with this product.") There were several cases of tospovirus in greenhouse plants at the diagnostic lab this spring. Tospoviruses can be transmitted by several thrips species, including WFT. A new type, tomato chlorotic spot virus (TCSV), has been detected elsewhere in some food and ornamental crops. Test strips for TSWV (but not those for INSV) may show as positive when the virus is present, but a lab diagnosis is required to distinguish TCSV from the other tospoviruses.

Shore flies have been an annoyance in some greenhouses. Controlling algae and moisture (drainage) will help reduce numbers. A light spray of Conserve (Entrust for organic production) will knock the adults down pretty well if they become intolerable. Sticky cards or tape placed horizontally will help by trapping large numbers of flies. Hunter flies (*Coenosia attenuata*) are present in some ranges. Growers may not recognize these helpful predators, but in some operations they appear to be controlling the shore fly and fungus gnat populations. Hunter flies are similar to but about half the size of house flies and colored gray, unlike shore flies which are nearly black. Careful observers will notice differences in behavior as well. Both adult and larval

stage hunter flies will feed on other kinds of insects as well. Be on the lookout for this relative newcomer - a good photo is here: <https://www.ars.usda.gov/news-events/news/research-news/2005/a-fly-new-to-north-america-hunts-down-greenhouse-pests/> and an article by Dave Kuack discusses shore vs hunter flies: <http://www.greenhousemag.com/article/learn-difference-between-hunter-and-shore-flies/>. *Hexacola neoscatellae* is a small wasp parasitoid of shore flies often seen naturally appearing in greenhouses. Some other biocontrols (like *Athetacoriaria*) may feed on shore fly larvae. Dr. John Sanderson has a helpful fact sheet on shore fly biology and management at <http://www.greenhouse.cornell.edu/pests/pdfs/insects/SF.pdf>.



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