



Heads Up!

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King County Master
Gardener Diagnostic Lab



Green stink bug

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Glyphosate damage to a rose



Botrytis on raspberry

What to expect in April

April means that all Master Gardener clinics are in full swing again. The weather has warmed to a point that our clients are out in their gardens and are beginning to see what's been "bugging" their plants. So, expect to see some of the following. The most problematic plants we've seen in the past four Aprils (in alphabetical order) are: boxwood, camellia, daphne, MAPLE, pear, pieris, pine, the prunus family, RHODODENDRON and yew. From this list, can you guess the top two problem plants? (look for caps)



Lace Bugs

It's spring and the birds are singing, the flowers are blooming. . . . AND THE LACE BUGS ARE HATCHING. Keep an eye on your rhododendrons and azaleas for symptoms of pale stippled leaves that look as if the color has been sucked out of the leaf in tiny dots. Then, like every true Master Gardener Diagnostician, turn the leaf over. If you see tiny brown dots all over the underside of the leaf, and maybe a stripe of brown along the midrib, lace bugs have been there, probably last year. You are looking at the frass (poop) left by lace bugs, and the stripe on the midrib is where they have laid their eggs, cemented down with more frass. Charming huh? If the lace bugs have hatched you will see the nymph stage feeding on the leaf. The nymphs look like very small round, spiky, alien sort of things in black and white. They will morph into adult lace bugs that are also black and white with wings – kind of pretty but still evil. There can be several generations throughout the summer with the hot dry part of the season being their favorite time of year. All stages of lace bug cause the same damage and can be found feeding together at the same time. They also seem to have taste preferences. Some rhodies or azaleas sail through the season completely unscathed while others are so seriously affected that leaves sun scorch or completely drop weakening the plant. So watch for lace bugs starting in early April. Learn to recognize the sign of stippling and lots of frass on the undersides of leaves. No other pest leaves that kind of clue. When you know what to look for...then you can tell your client about lace bugs and what to do about them.

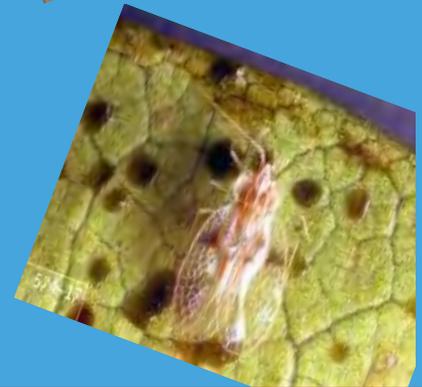


Photo courtesy of Bugwood.org

Lacewing Larvae

- A recent study showed that voracious green lacewing larvae (left) can be very effective against lace bug nymphs.
- But don't mix up the names...lacewings are beneficial, biological controls; lace bugs are damaging!!!

Picking 'em off!

While this won't work for all kinds of insects, it's worth a try on some. Look at the leaves and stems and if you can see critters on them, they can be picked off with fingers. A little gross, but still effective. Have your clients invest in some gloves that allow them to handle small objects.

Alternatively, the garden hose with a nozzle is a useful tool with some plants. A word of warning, some stems, leaves and flowers are fragile and may not survive a hearty blast of water!!



Weeds!!

Controlling weeds in the garden is essential. Left unchecked, weeds rob our garden of water, light and nutrients...the elements of growth. Like the weed pictured on the left (spotted knapweed which is a Class B noxious weed in King County required to be eliminated), weeds are tenacious. The best way of getting rid of them is hand weeding...yeah, that's right...on your knees. If your client can handle a torch: flame 'em! Suggest mulching as a control but be careful of the type and depth of mulches. Some can rob plants of necessary nitrogen, and any mulch applied too deep can rob roots of oxygen.

Soils

If your client's plant problem appears to be cultural, you might talk with them about their soil. Most of our King County soils tend to be acidic and could benefit from more organic material such as compost. A little goes a long way. Loosening compacted soils when you add that compost also promotes healthy tilth. Ph levels as well as N-P-K levels should be tested periodically and all can be adjusted with amendments. Whether you are growing vegetables or ornamentals, without good soil plants are compromised.

May:
Problems
coming your
way →

Over the past four years, the Diagnostic Lab has received about 10½ percent of its yearly submissions in May. That can be broken down into 35 percent fungal infections; 30 percent cultural problems and 22 percent insect issues. Very few bacterial or viral problems surface during May.

Problem plants are:

- *Apple*
 - *Cherry*
 - *Hydrangea*
 - *Laurel*
 - *Maple*
 - *Pear*
- ...and the ever popular
- *Rhododendron*

...not to mention (but we will):

- *Raspberry* (See Page 5 for much more)
- *Spruce*
- *Strawberry Tree (Arbutus unedo)*

Clean Up

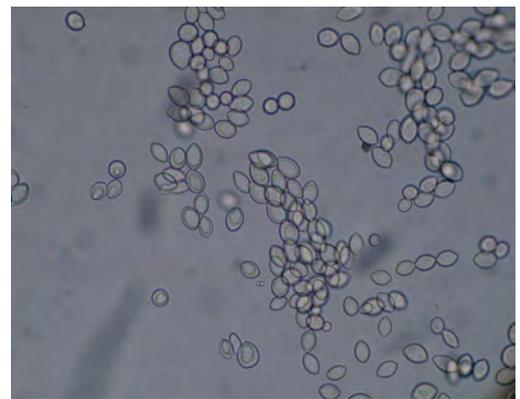
If it hasn't been done earlier in the spring, now is the time for your clients to clean their tools and their gardens.

- Dirty tools can spread nasty fungi, viruses and bacteria. Use soap and water and bleach and/or alcohol
- Rotting leaves and other litter can prevent spring growth from emerging, as well as being cozy hiding places for slugs and snails

Brown Rot

Spring is such an exciting time of year with crocus and daffodils blooming and the next thing you know it's the wonderfully fragrant daphne and then the flowering trees. . . . and as you gaze at your favorite cherry tree in bloom you sigh a great big "Oh no!" Clusters of the glorious blossoms you've been waiting all winter for are brown, shriveled and hanging on the branch. You may think there was a cold snap, or maybe the neighbor was spraying something awful that drifted onto your tree. Look closer. Your cherry tree is probably infected with the fungal disease – Brown Rot.

The shriveled flowers will have brownish fuzzy patches where spores are being formed. This fungus begins in the buds and travels up through the flower and into the twig. More advanced infections can girdle twigs and branches with weeping cankers causing branch tips to die – leaves and all. Those dead brown leaves will hang onto the branch looking like brown flags in the breeze. This is a very tell tale sign of Brown Rot. Fruit can also be infected and that infection contributes more spores to the life cycle of the fungus. Cherry trees and other prunus spp are susceptible to this disease as well as some pome fruits like apple and pear. We have also seen Brown Rot on ornamental flowering quince. Chemical sprays should have been applied before that lovely spring bloom, so for now, know it when you see it. Clean up fallen leaves and fruit and prune out dead twigs and branches.



You see the top picture...we see the bottom in the microscope. They are called *monilia* spores.

Got Hostas?...



Got Slugs!

Everyone has a favorite mollusk...right? King County is blessed with its fair share of slugs and snails that love hostas...actually they love just about everything organic! Unless "holey" plants in the garden are desired, your client can try the hand-picking technique (slime never pays!!), find the 'lost shaker' of *Margaritaville* salt, give them a beer party, try some copper, treat them to something like "Sluggo", or spread some diatomaceous earth (DE) (face masks required when applying).

Raspberries!! (*Rubus* spp)

Don't you just love them! ... with chocolate ... over ice cream ... as jam with peanut butter!

Raspberries are favorites – fun to eat but sometimes a problem to grow. If you or your client just can't resist these homegrown treats be sure to do your homework. Learn about raspberry requirements and do your very best to accommodate them.

A sunny planting sited with deep, well-drained soil – let's repeat that – DEEP, WELL-DRAINED SOIL! – is the ideal. Planting in raised beds will help achieve this.

Be sure to water adequately through the growing season, but absolutely ensure no standing water or soggy soil for healthy raspberries. With the heat and drought we experienced last summer, many raspberry plants suffered from drought stress. Their leaves were scorched and the canes were stunted as was the fruit – if any formed at all. Many just died from the excessive heat and inadequate water.

Unfortunately, the same symptoms can also indicate the disease, Raspberry Root Rot caused by the fungal-like organism *Phytophthora rubi*. This organism thrives in poorly draining or heavy clay soils, where there is hardpan, too much irrigation or lower areas where water collects. It moves in the water to infect and rot the plant's roots beginning with the small fibrous roots, working into the larger structural roots and eventually the canes. The plants look very similar to drought stressed plants and you may think you need to water them. Check the roots first. If the larger roots are dead and there are few fine feeder roots you might suspect Raspberry Root Rot. Water won't help. Planting a Root Rot resistant variety will, and whatever you do remember – DEEP, WELL-DRAINED SOIL!



Phytophthora root rot on raspberry

← Crown

Root →

