



Heads UP!

From the
Master Gardener Diagnostic Lab
in King County

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GREETINGS AND HELLO TO OUR DEARLY MISSED MASTER GARDENER FRIENDS!

The calendar says it is already mid-summer, and this issue has been designated the July-August issue of *Heads UP!* but where is our summer?! We are in mid-season, and our gardens are very real yet our associations must still remain virtual; frustrations abound. One MG was overheard saying she was “about ready to start chewing on the furniture!” Don’t you just love that mental image! Gardeners are patient people, and the hope is that our innate “gardener’s patience” will bring us through these days while we try not to “chew on the furniture!”

One goal we have as Master Gardeners is to always be learning, and we certainly know there is always something to learn about. Since it’s the middle of summer we thought a little discussion of summer insects would be interesting, or at the very least entertaining. This next article can be a confirmation of what you already know, or a bit of new information to add to your already large body of knowledge.

THE BUGS OF SUMMER

From early spring to late fall there will be aphids. They come early and stay late. Their juice-sucking activities can cause all kinds of damage, or relatively little damage depending on the plant and the type of aphid. The breathtaking fact about **aphids** is that they are all female, pregnant all the time, and give birth to live young. Extraordinary and not funny!

<http://hortsense.cahnrs.wsu.edu/Search/MainMenuWithFactSheet.aspx?CategoryId=13&ProblemId=6019>



Aphids come in various colors!

You might notice all the birch trees with dead sticks for tops in our neighborhoods. This type of destruction is caused by the **Bronze Birch Borer**, a beetle that flies around in the spring looking for a birch tree where it can lay its egg. The egg hatches, the borer eats its way around the tree under the bark cutting off water and nutrients to the top of the tree causing the top of the tree to die. It pupates in the tree and then exits as a mature adult through a D-shaped hole (a good clue for diagnosis) to fly, mate, and lay another egg in some poor victim of a birch tree.

<http://hortsense.cahnrs.wsu.edu/Public/FactsheetWeb.aspx?ProblemId=390>



Whitney Cranshaw, Colorado State University, Bugwood.org

The bronze birch borer adult.

Continued to page 2 . . .



Barbara Reisinger

The rich blue hues of Tropaeolum seed grace the summer garden.

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- Nerd’s Corner
- Twisted Lilies
- Twigga Mortis

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WEATHER STATION



In July of 2019, the average temperature was 65.5°F with normal considered to be 65.9°F. Rainfall was 1.5 inches, with normal thought to be .79 inches.

For June of this year, the average temperature was 61.5°F degrees. Normal is 60°F degrees. Total rainfall was 3.06 inches, 188% above the normal of 1.63 inches.

Seattle made up for its dryish early start to spring with a hefty dose of higher-than-normal rain in May. Snowpack numbers continue to be normal west of the Cascades as of the beginning of summer—water for our gardens is not something to worry about.

Weather resources:

<http://www.climate.washington.edu/>
<https://cliffmass.blogspot.com/>

NERD'S CORNER:

It was an extraordinarily dark day on May 30.



Where were all the bees?

That day had less solar radiation than in early March!

As it turns out, bees stay home when solar radiation is low. If light intensity falls below 60,000 lux it might just be a no go. An overcast day has approximately 10,000 lux vs. an unobstructed sunny day at 100,000 lux. In fact, few bees get out of their easy chairs when temperatures are below 55°F preferring to do so in full force when temperatures are above 65°F. Winds are preferred at 10 miles per hour or lower. Winds at 15 mph will cause them to slow or stop foraging altogether. When a fruit tree is blooming, an orchardist is wishing for 65°F or higher days, with less than 10 mph winds. He also is hoping to count 20-25 bees on average in a 1 minute period on an apple tree, and 10-15 bees on a mature pear tree.—WSU [AgWeatherNet](#)



Bugs of Summer . . . continued from page 1

Odd patterns on Elm leaves might catch your eye. These patterns are bordered by veins and between the top and lower epidermis layers of the leaf. If you're lucky, and you look closely, you may even be able to see a little wormy thing within the damaged areas. This particular situation is the work of the **Elm leaf miner**, the larvae of a sawfly. There are many types of insects that use this method to propagate themselves. Mining patterns may vary but the methodology is the same.

<http://hortsense.cahnrs.wsu.edu/Search/MainMenuWithFactSheet.aspx?CategoryId=13&ProblemId=6032>



Elm leafminer damage



Elm leafminer adults—a sawfly!

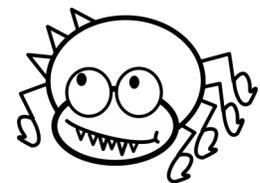
We're sure you have all seen what looks like suds on a leaf. How odd, you think. If you were to poke around in the suds or simply wash them off, you would find a little light-colored bug with beady-dark eyes staring back at you. **Spittlebugs** are kind of cute but a plant-juice sucker just the same. They are the larvae of a frog hopper, another plant-juice sucker. Froghoppers do indeed hop but (just for accuracy sake) don't mistake them for a leafhopper, another plant-juice sucker. A good squirt with the hose will get rid of spittlebugs and their suds.

<https://pnwhandbooks.org/insect/hort/landscape/common/landscape-spittlebug-frogopper>



Spittlebug nymph

Haven't we all seen our share of bugs over the years!?! We've discussed just a very few of them, but we do hope you've enjoyed this additional bit of information about **THE BUGS OF SUMMER**.



*I'm quite fawn'd of you,
my deer!*



HOUSEPLANTS: TODAY'S ORIGINAL CONTAINER GARDENS

It's rewarding to see a living thing thrive under our care, and we have indoor environments that can help us do this. Pick plants that are easy to care for and that fit your needs and your plant-care abilities. Let's see what you have to offer:

Light. Know your light levels. Low like a north-facing window. Medium like east-facing windows, overhead lighting or good indirect light. Bright like a west-facing window, direct sun for a couple hours, or a south-facing exposure. Match your plant's needs to what you can offer.

Water. Most plants need moderate watering, but never completely dry or completely wet. If the pot seems light and the leaf tips are brown or the plant collapses, there's too little water. If the pot is heavy, the plant droops, and the lower leaves turn yellow or brown, put away the water can. Leave about ¾ inch of space between the soil surface and the pot top as a reservoir to prevent spills.

Soils. Choose potting soil or soilless mixes to meet the water and air balance your plant needs. Always premoisten the soil before adding plants.

Nutrients. If you want flowers, you need to feed. For general plant health, fertilize regularly during the growing or bloom season. Taper off in dormant periods because we all need a rest including our plants. Use diluted fish emulsions or specific houseplant fertilizers. Liquid form is best for container plants.

Pots. So many to choose from. Size matters. Smaller pots dry out faster, cramp roots that dry out and inhibit growth. Clay is cheap but breaks. Plastic and fiberglass are lightweight, relatively inexpensive, and come in many shapes and colors. Ceramics are colorful. Polyurethane foam resembles heavier materials but resists chipping. Consider self-watering or double-walled containers indoors. Cache pots are a great option for managing large plants or heavy pots. Repot into an only slightly larger pot.

And Repots. Most plants outgrow their pots within two years. Remove them from the pot, pull roots apart, remove dead or damaged roots, fill the pot with new, premoistened potting soil, and replant. Voila!

Problems?! Watch for pests like aphids and spider mites (wash them off), scale and mealy bugs (pick them off with alcohol swabs), white fly (use yellow sticky traps or soap), and fungus gnats (water from the bottom, let the top soil dry out).

More problems? Spindly (add light), crusty soil (flush the salts from the soil), slow growth (needs repotting), leaf spots (pick them off, watch watering, add light, feed, hope!), and sooty mold (look for the critters).



Now for the plants. Here are a few selections that can recover from your benign neglect, but even easy plants need some attention. Read care instructions before you buy to be sure you can provide the plant's needs. It helps to group plants with similar watering/light needs. Here are some of the top, easy, indoor plants:

- Fiddle leaf fig/*Ficus lyrata*—bright light, moist soil and repot every couple of years, gets BIG!
- Elephant ear/*Philodendron*—medium light, allow soil to dry, move outside in summer, it's a vine!
- ZZ plant/*Zamioculcas zamiifolia*—low light, allow soil to dry, practically indestructible but toxic
- Chinese evergreen/*Aglaonema*—low light, moist soil, keep it warm, foolproof!
- Devil's ivy/*Pothos/Epipremnum*—low light, allow soil to dry, bi-colored, use hanging or on trellis
- Boston fern/*Nephrolepis exaltata*—medium light, moist soil, move outside in summer
- Peace lily/*Spathiphyllum*—low light, moist soil, feed to encourage blooming
- Dumb cane/*Dieffenbachia*—low light, allow soil to dry, repot every couple of years
- Snake plant/*Sansevieria*—medium light, allow soil to dry, great backdrop plant
- Air plants, bromeliads, orchids – so many choices. Read the labels.

Just like kids, no two are alike, even in the same genus. Read the plant tag instructions, look up the plant on the web, know where you plan to put it first and buy for your space. Choose wisely and enjoy!

Resources: [Houseplant Pests](#); [What Can Go Wrong with Houseplants](#); [Winter Houseplant Care](#)

KAOLIN CLAY—A BIOLOGICAL BARRIER

Kaolin is a naturally-occurring clay used in the food processing and cosmetics industry. *Surround WP* is an effective OMRI (Organic Materials Review Institute) listed crop protectant. Surround kaolin clay spray has given organic orchardists an effective tool for an array of petal fall pests that destroy fruit when it is the size of a marble. When it is finely ground, it can be applied with water to form a dry white film on the surface of plants. It is effective on codling moths, apple maggots, earwigs, psylla, and more.

Surround kaolin clay repels; it does not kill. These products form a barrier film that irritates insects and masks the color of the host. Control is directed against adults to prevent egg-laying, so timing is critical. Kaolin clay works best when the visible film barrier is established over the entire plant before fly activity begins. Reapplication of kaolin clay may be necessary after rain showers. For flying insects like codling moths that flit about to lay an egg here and there, landing on a kaolin-coated tree, the codling moth female senses a wrong environment and moves on. Surround will suppress egg-laying but does not control adult flies.

Surround only proves effective once three uniform applications have been made. Coverage needs to be applied to the point of runoff and allowed to dry. There is enough clay at that point to stop the early instar stages of sawfly larvae from going much beyond the winding scar trail of its first apple. This is a petal fall tool, so do not be tempted to continue coverage for a second generation of moths and apple maggot fly because it will impede the balance of beneficials in the garden.

Surround keeps for years. It can be applied up to the day the fruit is harvested. Wash the white residue off the fruit with a power sprayer or use a brush under running water. Kaolin clay products will suppress a broad range of insects that feed on apple leaves and apple fruit, including codling moth and leafrollers. Homeowners may consider applying kaolin clay as early as petal fall and continue on a 7- to 14-day schedule to protect apples from other insect pests.

Organic Pest and Disease Management in Home Fruit Trees and Berry Bushes
<http://pubs.cahnrs.wsu.edu/publications/pubs/em066e/>

Protecting Backyard Apple Trees from Apple Maggot: <http://extension.wsu.edu/benton-franklin/wp-content/uploads/sites/27/2014/04/Apple-Maggot-Guide-EB1928.pdf>

Fall kaolin sprays suppress psylla next year: <http://treefruit.wsu.edu/article/fall-kaolin-sprays-suppress-psylla-next-year/>

ANTHRACNOSE: NOT JUST FOR DOGWOODS

Anthracnose is not a specific disease but a condition caused by several related fungi, and it affects many trees, shrubs, and even strawberries and lettuce. Each fungus that causes the condition anthracnose is specific to its particular host, and symptoms vary by host. An anthracnose infection will cause leaf and flower blotches, cankers, and leaf drop. For a deeper delve into anthracnose, refer to the [July 2017 issue of Heads UP!](#)



Gerald Holmes, California Polytechnic State University at San Luis Obispo, Bugwood.org
Anthracnose, Colletotrichum spp. on strawberry



Paul Bachi, University of Kentucky Research and Education Center, Bugwood.org
Anthracnose on maple

TWISTED LILIES

Sounds like a girl's rock band, doesn't it?!

Actual lilies (not daylilies, which are another genus) can exhibit twisted, curled, stunted and streaked leaves, buds and flowers when they are infected with a virus. There are several viruses that can damage lilies, and all of them are permanent to the plant. Viral infections become a part of the plant's genetic makeup. It cannot be removed with sprays or pruning. Wishful thinking or self-denial won't work either.



Dave Sherbrooke

The virus will remain in all parts of the plant and can be spread between plants by sucking insects like aphids. Sadly, virus symptoms qualify a lily for immediate removal before its plague is shared – and you just can't count on an aphid to cooperate or refrain from lurching on a tasty lily.



Dave Sherbrooke

[https://pnwhandbooks.org/plantdisease/host-disease/lily-lilium-spp-virus-diseases#:~:text=Cause%20There%20are%20more%20than,stalk%20disease\)%20a](https://pnwhandbooks.org/plantdisease/host-disease/lily-lilium-spp-virus-diseases#:~:text=Cause%20There%20are%20more%20than,stalk%20disease)%20a)



DEPARTMENT REPORT

When your pear tree turns orange. . .



Sue Nicol

Orange just might be the new black for your pear tree. This very fashionable orange is due to an infection of pear trellis rust. Look for its partner in crime, the juniper, as it is the rust's alternate host. For more information about the rust cycle of death, refer to the [June 2018 Heads UP!](#)



USEFUL WEB SOURCES!

- <http://gardening.wsu.edu/>
- <https://pnwhandbooks.org/insect>
- <https://pnwhandbooks.org/plantdisease>
- <http://hortsense.cahnrs.wsu.edu/Home/HortsenseHome.aspx>
- <http://pestsense.cahnrs.wsu.edu/Home/PestsenseHome.aspx>
- <http://mastergardener.wsu.edu/diagnostic-resources/>
- <http://extension.wsu.edu/king/gardening/fact-sheets/>
- <http://www.mgfk.org/>
- [Puget Sound Gardening Tip Sheet #2 Gardening Publications](#)

MANAGING IVY: THE JUVENILE VS. ADULT WAY

Plants, like humans, don't reproduce until they get their adult forms. The adult form includes a change in leaf structure as well as growth habit. I'm thinking English ivy, *Hedera helix*, here, though juniper, chamaecyparis, philodendron, eucalyptus, and many other species have the same habit. All have foliage that changes form before it begins to reproduce.

The juvenile form of ivy grows as a ground cover and doesn't flower. To manage it, make sure it doesn't grow upwards onto tree trunks, walls, or fences. Only when it starts growing vertically do the leaves change shape and the plant then flowers and sets seeds. Birds eat the fruit and then deposit the seeds into our native forests. Learn to recognize the adult form of English ivy and keep it from flowering and going to seed.



OSU Landscape Plants

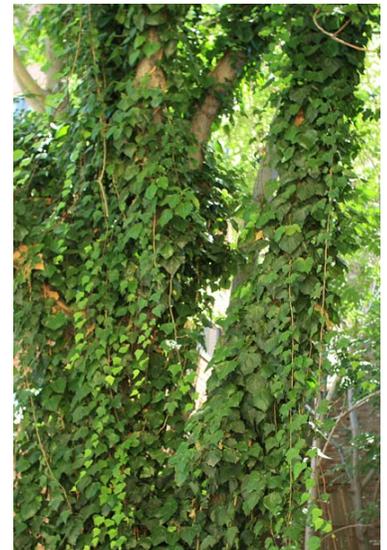
Adult Form



OSU Landscape Plants

Juvenile Form

Don't let this happen to your tree!



HOW TO USE A TREE WATERING BAG—PROPERLY

Until a young tree is around five years old, most of its roots are close to and under the trunk. That's when a tree watering bag will keep the roots hydrated.

However, this works only if you remember to fill the bag with water! An older tree will not find a watering bag useful because the great majority of its roots are many feet away from the trunk and the bag is too small to be filled if wrapped around the trunk.

Don't forget to take the bag off the tree in winter. If left wrapped around the trunk, it can rot the bark and kill the tree during cold wet weather



Sue Nicol



Sue Nicol