# Heads UP!

From the
Master Gardener Diagnostic Lab
in King County

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## *END OF SEASON CONTEMPLATIONS*

Here we are at the end of a very strange and challenging season. The weather has challenged us as gardeners with record breaking temperatures and drought, and Covid has challenged us as Master Gardeners as we try to continue our calling in new and reimagined ways. Through all of the changes, adjustments, adaptations, and frustrations, the message we would like to convey is that **green and growing is still a magical thing and worthy of our focus**. With that focus in mind, it's time to evaluate our gardens and practices, and plan for next year, whatever that season brings. As knowledgeable and enthusiastic gardeners let's look at next year's growing season as a "do over" and move forward. It's time! PLAN TO PLAN!

With this summer's experience of heat/drought we should all be revisiting information concerning watering practices, plant selection, and placement. Plan to take note of those plants that suffered the most with the heat, and those that managed to survive relatively unscathed, and, as curious Master Gardeners, wonder why. Examples of sunburn, sunscorch, sunscald and even parch burn can be found just about anywhere in our gardens and surroundings. Take a look at the article on page 3 of this edition of *Heads UP!* for more information on what happens to plants when it's too hot/too bright/too dry.

PLAN TO PLAN for next year's gardening season by taking note of what worked, what didn't work and figure out why. Make note of new things/new plants/new techniques you want to try next season. Next spring is a chance at a "do over" and, with some advanced planning, can be something we can all look forward to.

## WEATHER STATION

## *RECORD BREAKING WEATHER—LOOKING BACK*

Summer 2021: Let's start with the good news! Yes, this is the first time in over 20 years extreme drought conditions existed, and words like "remarkable," "unprecedented," and "record-breaking" heat might have dulled your senses. Worth mentioning, however, is that major water suppliers in western WA were excluded from the drought emergency declared mid-July because they accurately anticipated having adequate water supplies through the summer for your precious plant babies due to the storage from our above normal winter snowpack.

And more good news! Since record keeping began, Seattle tied for the second-longest (instead of the longest) dry spell of 51 days. Yes, measurable rain in August of about two-hundredths of an inch (!) kept us from surpassing a similar dry spell in 1951.

Ok, so now for the reminder of the bad news - just in case you happened to miss the "perfect storm" of down sloping winds, blocking patterns, and a buckling jetstream, topped off with sinking air. Yes, that which was responsible for the current season of plant owies.

*Continued to page 4 . . .*


*A new kind of pollinator.*

INSIDE THIS ISSUE



SPECIAL POINTS OF INTEREST

- Useful Web Resources
- Nerd's Corner
- Twigga Mortis
- Frankensquash

*Good News! Reading Heads UP!, including the links, is good for 1 hour CE credit!*

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://www.mgfkc.org/
- Puget Sound Gardening Tip Sheets
- Ask a Master Gardener Online

SIGN OR SYMPTOM?



*Elm leaf miner damage.*

# *THE ATTACK OF BAY LAUREL (LAURUS NOBILIS) PSYLLIDS*

When a bay laurel is covered with ugly rolled yellowing sticky leaves, and terminal growth is distorted, the leaves cannot be used in cooking. These symptoms are caused by Bay Laurel Psyllids, also known as Jumping Plant Lice. Psyllids are members of the *Hemiptera* order of true bugs, in the family *Psylloidea*. Each psyllid species generally attacks only one plant species. The non-native psyllid on *Laurus nobilis* is named *Trioza alacris*.

There is little information on this psyllid species in Pacific Northwest publications because bay laurel is not widely planted. What we do know is that psyllids suck plant juices on a wide variety of plant species and drip honeydew like aphids do. The honeydew then attracts black sooty mold. The psyllid covers itself with a thick waxy substance which is quite visible on the plant.

This pest can produce several generations in a year. The winged adult female lays her eggs on the laurel. The eggs hatch and develop into five instar stages, all the while sucking plant juices and distorting foliage, before maturing into a winged adult. The adult then mates and flies to another leaf and lays eggs, starting the process all over again.

Though they discolor and warp leaves, psyllids seldom actually kill the plant. Of course, this is little comfort to those of us who grow bay laurel for its culinary support and broad-leaved evergreen presence in our gardens.

Hanging yellow sticky traps on the plant is a good way to monitor for the presence of psyllids before major symptoms occur. Withholding nitrogen fertilizer can reduce the number of succulent tasty new leaves which attract the adults in the first place. Prune out and destroy all affected leaves when you first notice them. If you use bay leaves in cooking, choose Neem oil or Safers Soap to spray if the population is too large to prune out. And be sure to follow the label.




*Trioza alacris and damage*


## *BURNS, SCORCHES, AND SCALDS—SAY OUCH!*

This summer's heat dome event damaged our landscapes. Here is a breakdown of the processes that have caused so much dead plant tissue in our gardens.

**Sunburn** happens when too much sun burns leaves by altering the moisture in leaf tissues. Leaves wilt and drop. Sunburn is seen when sunlight directly hits unprepared leaves, or when plants experience excessive temperatures. Sunburn can also happen indoors when a shade-loving houseplant is moved into direct sunlight. Sunburn may not kill a plant. If a plant loses its leaves due to sunburn, reduce watering but don't cut off sunburned leaves yet since remaining green tissue may continue to photosynthesize

**Sunscorch** is often used interchangeably with leaf scorch. It is the result of environmental conditions such as the heat dome we endured this summer. Large brown, dead patches develop on leaves along with major leaf drop, and shriveled plants. Sunscorch combines the intensity of the sun and heat, with the plant's roots inability to supply enough water to compensate for water loss through evaporation. Entire leaves may curl and wither, and leaf cells may die. Leaves will not recover. Young plants with immature root systems, or those plants already stressed by insects, disease, or other cultural conditions are more susceptible. Scorch symptoms may differ from plant to plant, but is usually seen as a yellowing between leaf veins and along the leaf margins, with browning on leaf tips which are the last to be supplied with water. Because plants in our area were reeling from a dry spring, they were already stressed before the heat wave and susceptible to sunscorch. This condition is not caused by fungus, bacteria, or virus.

In needled evergreens such as arborvitae, hemlock, fir, pine, spruce, and yew, scorch injury begins at the needle tip and progresses inward. After our recent recurring years of drought, many of the affected plants will not be able to recover. Scorch can also occur in winter from drying winds. This is sometimes called leaf parch. A conifer's compromised root system creates ideal conditions for scorch. While scorch may not kill a plant, adequate water can help support stressed and susceptible plants.

Note to self: Water plants BEFORE a heat wave, and add mulch to conserve water. Deep watering of plants during drought is very important. Watering trees to a depth of 12 inches is a good goal. Adding mulch will also help maintain moisture around roots. Avoid applying fertilizers during the summer when soil is drier, and keep lawn fertilizers outside the dripline of trees and shrubs.

And finally, there is **sunscald**, sometimes referred to as southwest injury because it occurs in late winter on the southwest side of thin barked trees. Direct or reflected sunlight heats tree bark during the day causing cell tissues to become active and swell. Then cold night temps kill the active tissues and the bark cracks and peels allowing cankers to develop. These problems may not show until spring or summer. Though there is no cure, sunscald can be easy to prevent by wrapping the bark of young trees with commercial tree wrap. Be sure to remove the wrap in the spring. Damaged leaves provide support for the plant until it is able to regrow new leaves.

Resources:

FS197E-Sunscald and Sunburn on Trees

Sunscald Injury or Southwest Winter Injury on Deciduous Trees (usu.edu)

Hortsense: Leaf scorch and more Leaf scorch

Hortsense: Sunscald


*Scorched Rhododendron*


*Scorched Katsura*


*Scorched Maidenhair Fern*


*Scorched Hosta*


*Scorched Pieris*

## NERD'S CORNER:

***Scat, Cat!***
***Creative cat deterrent***

Love them or hate them, cats have a way of enjoying freshly dug soil. In this case, the soil is prepped and seedlings are popping up right and left. In order to kindly dissuade the cat to avoid this area, a clever gardener used forks with the tines sticking up around the precious seedlings. Apparently, spoons, knives, and straws work too, as demonstrated in the photo. Now this is a creative cat deterrent!

*"A weed is but an unloved flower."*

*—Ella Wheeler Wilcox*


*Record Breaking Weather . . . continued from page 1*

Records toppled in Seattle between June 26-29 with back-to-back days that set all-time heat records: 108 on June 28 after reaching 104 the day prior. You won't remember this, but in the previous 126 years Seattle had only hit 100 degrees three times, and it reached that mark in three consecutive days in June!

Here's a tip that your body likely tried to tell you about: there's a measurement used to detect thermal stress on humans called the WBGT measure. Based on a variety of criteria (heat index, dew point, wind speeds), Seattle saw a value of 89 on June 28. Values of 88 - 90 means working or exercising in direct sunlight will stress your body after 20 minutes; take at least 40 minute breaks each hour. We may hope this "perfect storm" never happens again, but this time you can be prepared.

Resources: climate.gov, komonews.com, and climate.washington.edu

## *CONSIDER COVER CROPS TO ENHANCE NEXT YEAR'S GARDEN*

Cover crops, usually grasses or legumes, are plants that cover and improve the soil. They can be a mulch on top or be incorporated into the soil as a green manure. Cover crops provide organic matter and nitrogen, reduce soil erosion and nitrogen leaching, suppress weeds, or all of the above depending on which you choose. Using them can be complicated, depending on how you manage your garden, but resources are available to help you decide whether to use cover crops, which to use, and how best to benefit from them.

In late summer when temps are still warm, vegetable plants are seldom ready to be ripped out for a cover crop seed planting. By the time you remove them, it can be too cold for many cover crop seeds to germinate. This is why many gardeners don't use them. Without a cover crop, however, winter rains can pound the soil surface, cause erosion, and leach nitrogen away.

Some crop seeds will germinate in colder temperatures. Rye, wheat, and fava beans are ideal for this situation since they germinate in cold soils. And, depending on how you organize your garden, it is possible to interplant a warm-season cover crop with vegetables in spring and summer.

According to WSU's Cover Crops for Home Gardens West of the Cascades, "when choosing species, decide which crop functions are most important to you. Legumes are the clear choice if you want to add nitrogen to your soil, and grasses are a good choice if you want plants that compete with weeds, establish quickly (reducing erosion), or capture available nitrogen left over at the end of the growing season. Grasses are often used in combination with legumes to reap the benefits of both these types of cover crops."

There are several ways to take advantage of cover crops that can help your garden flourish! WSU and OSU offer several fact sheets useful for gardeners wishing to learn more about using cover crops. Try these resources:

- *Cover Crops for Home Gardens West of the Cascades* (Home Garden Series)
- *A Home Gardener's Guide to Soils and Fertilizers* (Home Garden Series)
- *Methods for Successful Cover Crop Management in Your Home Garden*
- *Cover Crops for Home Gardens*

*Crimson Clover*

*Buckwheat Seed*


*Winter Wheat*

## *IRIS—A RAINBOW OF RHIZOMES*

Named for the Greek goddess of rainbows, most iris require full sun to produce their glorious rainbows of color. They are divided between two types: rhizomes such as bearded iris, and bulbous such as Dutch iris and reticulata iris. The following is a bit of information about what to do with your rainbow of rhizome iris after the rainbow has faded.

Rhizome iris, which include bearded, crested, and beardless varieties, have horizontal stems, or rhizomes, that grow partially visible above the soil. Rhizome iris should be divided every 3 to 5 years after flowering and as the leaves begin to dry out. These irises prefer a slightly alkaline soil.

**Bearded iris** is sometimes referred to as perennial iris or German iris. They have fuzzy appendages on the petals referred to as beards. Beards can be the defining feature in identifying this iris. Bearded iris bloom in late spring. Some even repeat bloom in fall. Divide bearded iris in late summer when the weather is dry. Clumps that don't need dividing can be cut back at the end of the season or after the first hard frost.

**Pacific Coast iris** are natives that grow all along the west coast of America. They grow one to two feet high in a variety of colors and patterns. Divide and transplant only when still actively growing, usually in September to December or March through June. Dig around clusters keeping roots intact. Lift out half of the clump and replant immediately, mulching to keep roots cool, and water well.

**Crested iris (I. crestata)** is a short iris with stemless blooms in blue to lilac with a white or yellow patch, called a crest, on each fall or petal. This crested material is where a beard would be. They thrive in moist or dry shade.

**Beardless iris**, which includes Siberian and Japanese iris, are without a beard or crest. Late summer or early fall is the time to divide clumps. Replant the new sections immediately, cutting off excess foliage. Water well, keeping the soil damp until you see new growth. These irises prefer a slightly acid soil.

**Siberian iris (I. sibirica)** are easy-to-grow hybrids that prefer cooler conditions and bloom slightly later than bearded iris. Their foliage resembles ornamental grasses that look good all season, growing up to 4 feet in full sun or part shade. These irises are beardless, tend to rebloom, and are fairly drought tolerant. Their fibrous root masses do not need dividing, but you may want to break up large clumps in late summer.

**Japanese iris (I. ensata)** have large blooms and can exceed 4 feet tall. They like full sun, rich, moist soil, and are the last to bloom in late June. These iris prefer bright locations, ample water, and regular fertilizer. Divide every 3 to 4 years in late summer setting plants farther apart. Never add lime or bonemeal.

**Spuria (I. spuria)** are beardless iris that resemble orchids in colors of browns, golds, and yellows. Hummingbirds love them. Growing up to 5 feet or more, they require regular water and fertilizer in well-draining soil. There is no need to divide, but clumps will spread over time. Dig large clumps in fall.

Resources:

Skagit Master Gardeners: *The Magic of Irises*

Cascadia Iris Gardens

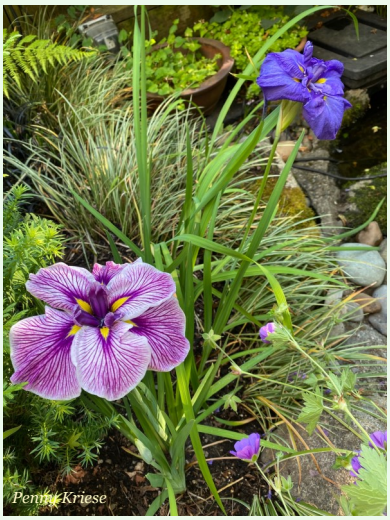
The Society for Pacific Coast Native Iris

Species Iris Group of North America

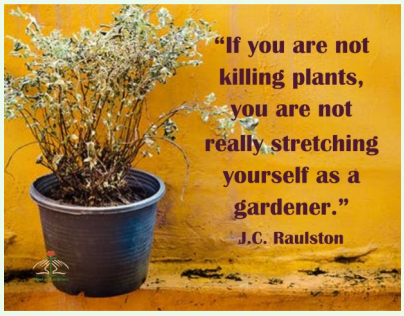
*Bearded Iris*


*Beardless Japanese Iris*


*I. sibirica 'Ruffles & Flourishes'*




*I. ensata 'Oriental Eyes' in front, 'Second Wave' in rear (blue)*





## DEPARTMENT REPORT

***Sun damage. . .***

Burn, scald, or scorch—aaack, it all looks bad! At this point in the season it can be difficult to tell the difference. The important thing to learn and prepare for the next time; water and mulch deeply and before an oncoming heat event, provide shade if possible, and to prevent winter scald, wrap those plants in a warm blanket.


Dave Sherbrooke


## *THE SAWFLY EXCEPTIONS*

In the last issue of *Heads UP!* we wrote about the larval forms of various insects, titled *Mommy Dearest*. The general rules we listed are all pretty straightforward except, of course, for the sawfly. Sawfly larvae can take many forms from caterpillar to slug.

If you see a mass of caterpillar-like larvae all the same size you can be assured they all hatched at once from eggs laid at the same time. Moths and butterflies don't tend to lay their eggs like that. These sawfly larvae will have 7 or more pro -legs along their body and are squirmy when touched. As a pack they can do some serious damage to leaves in a very short time.

If you see an odd legless glob on a leaf, think sawfly. If it's green and on a rose leaf you probably have a rose slug. If it's black and on a pear leaf you probably are looking at a pear slug. Both are sawfly larvae.

Sawflies are from the order *Hymenoptera* and are not susceptible to the biological insecticide Bt like butterflies and moths of the *Lepidoptera* order. The message here is identify your insect, and if you are wanting to rid yourself of it, read those labels.


Amy Fritz

*Sawfly larvae*


missouribotanicalogarden.org

*Rose slug*


Hort.extension.wisc.edu

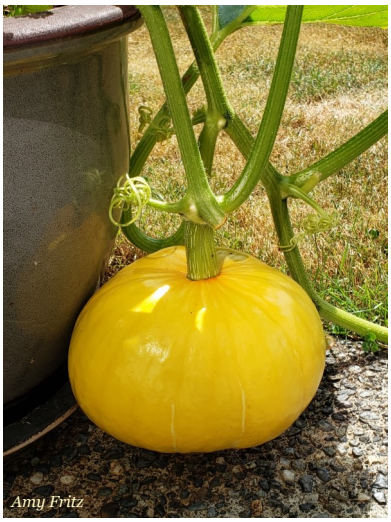
*Pear slug*

*ALL are sawfly larvae!*

## *THE FRANKENSQUASH*

Here we are at the end of the season and facing the realization that our squash is the wanton harlot of the vegetable patch who has crosspollinated with everyone! This is supposed to be a butternut, it looks like a pumpkin and smells like a zucchini . . . Isn't gardening fun!?!


Amy Fritz


Amy Fritz