raspberry shortened supply chains unbroken

your yard. your berries.
U-Pick. U-Eat. EOS.

the Urban Scion Post

a publication of the Seattle Tree Fruit Society,
a chapter of the Western Cascade Fruit Society

VOLUME 40 Number 07 July 2022

7/19/22 Message from the President

Dear STFS members,

Thanks to the STFS volunteers who participated in the June 18th Magnuson Park Orchard work party, especially those who made the journey from far-away places. Also, to those who brought food to this event – Thank You. There is much work still to be done at the orchard. Feel free to stop by whenever you have a chance and put some volunteer hours in. Please email or call STFS Treasurer Trent Elwing (trelwing@gmail.com or 206.517.3118) to log your volunteer time and discuss a general work plan.

On Saturday August 6th, we are holding another Magnuson Park Orchard work party. Please see additional information in this issue.

The following week (Saturday August 13th) we will have a day of open gardens/orchards. In the morning, two locations will be visited in the Wallingford neighborhood of north Seattle near the Ship Canal & University Bridges, and then in the afternoon at least one site in West Seattle near White Center. More information including garden descriptions is available in this issue. Thanks to STFS members Gudrun Utz and Tracey Bernal, who both stepped forward to volunteer their gardens.

A week later, on Saturday August 20th, tentative plans are to hold another event, in conjunction with the Vashon Island Fruit Club. Final plans will be communicated in an email sent to STFS members several weeks before that date.

Within the next few weeks, we hope to meet with the Snohomish County Fruit Club to discuss a potential combined Fall Fruit Show.

The Snohomish County Fruit Society will be participating at the 2022 Evergreen State Fair in Monroe August 25th to September 5th. SCFS is looking for volunteers to give demonstrations on fruit-related topics. If you are interested, please contact Cindy Smith at csmith21021@gmail.com.

The Tahoma chapter of WCFS is staffing a booth at the 2022 Washington State Fair in Puyallup. Bill Horn emailed on July 20th, the following details: Come help staff the WCFS booth & see, smell & taste the 2022 Washington State Fair in Puyallup between Friday, September 2, 2022 and Sunday, September 25, 2022. New this year, our shifts are 4 hours each & there are 2 shifts a day: 12 Noon to 4 PM and 4 PM to 8 PM. In return for your help, we offer a free entry ticket, access to free parking and shuttle service from at least one of the parking lots. Tickets should be available by mid-August. Sign up using "Sign-Up Genius". If you have questions or problems, contact Bill Horn (hornbill66@msn.com 253-770-0485) or John Jacobs (johnsblooms@gmail.com 253-581-0290).

Observations over the past month:
- I haven't noticed much SWD (spotted wing drosophila) damage this year…so far. My Raspberries seem untouched. We'll see how the Blueberries turn out.
- It seems that Stone Fruit pollination has been subpar this year, possibly due to the cooler than normal spring.
- Clove Currants (*Ribes odoratum*) are such "cool" plants that should be planted more: carefree, lovely fragrance in the spring, no thorns, not affected by sawfly larvae (for the most part), tasty berries, nice fall color, great leaf structure.
- My 'Desert King' Fig is loaded again this year.

Now that we are having great weather, you might find yourself traveling out of town on a day trip. If you are heading north, try to visit the Fruit Garden at the WSU Research Station (16650 State Rt. 536, Mount Vernon), stewarded by the Western Washington Fruit Research Foundation. This display contains a nice selection of different fruit varieties that do well in our area. WWFRF is celebrating its 30th anniversary this year. In addition to Thursday work days during summer 2022, WWFRF is hosting biweekly Saturday work days July 30th, August 6th & August 20th from 9 AM to noon. Bring a water bottle, hat, gloves, and small pair of hand pruners then learn how to care for trees and other fruit. Park in the lots on the north end of the fruit garden.

Enjoy the summer. Hope to see you at an event soon.

Regards, Mike Ewanciw

Urban Scion Post

Inside this issue:

On the cover

Golden raspberry variety (possibly Cascade Gold) growing on raised bed in Port Orchard. Photo taken 7/20/22.

It's July 2022, the pruning month
By Marilyn Tilbury

Folks who have lived here a while like to say that summer starts on July 5. Meteorologists have a slightly different take: they say summer reliably starts about July 12 and plan weddings, reunions and vacations accordingly.

NOAA's Climate Prediction Center has forecast a 51% chance of a triple La Niña. Scientists are actively researching the ENSO (El Niño Southern Oscillation) phenomenon since it affects not just our west coast, but the world's weather. They have observed that over the last 50 years the frequency of La Niñas has been increasing. Is this just natural variation or due to climate change? Keep tuned.

Plants have become confused by our unusually consistent cold and wet winter and spring. Your brassicas may have bolted, fruit trees may have little or no fruit but have put on a lot of growth. We can recover on the veggies by seeding winter veggies during the first two weeks of July and setting out veggie starts after that into early August. This is the traditional time to do so and even this late summer should get them off to a good start.

The abundant growth of our fruit trees this year demands attention. Summer pruning is traditionally done the last week of July and the first week of August. This two-week period is statistically the driest, summery time of the year but actually, summer pruning can be done gradually starting in June and continuing into August. This period is the best opportunity all year to reduce tree height, remove or prune water sprouts and cut back vigorous growth. But use discretion here; don't prune trees in the areas where you want to *encourage* growth—wait till next February for that.

Stone fruits are best pruned immediately after harvest. Not only is weather likely to be favorable then compared to winter pruning, but you want good growth now for fruit next year. For both pome and stone fruit trees, water deeply after pruning and make sure they don't become dry during hot summer weather. A lot is going on in them now which affects next year's production.

Another pruning chore best accomplished now is pruning back the June bearing strawberries. Remove all foliage just above the crown of each plant. Fertilize and water the bed and place a rock over runners to anchor them. Too many runners? Just pinch excess runners off as they form.

Our raspberries and blackberries are a tad late this year. Do try to remove the spent floricanes soon after harvest. This job is much harder after the new growth becomes entwined into them. Our cool, damp weather allowed SWD to be especially numerous now. Try to harvest as soon as these small fruits ripen and refrigerate promptly.

What a year for scab on crabapples and apples! To control it you have four options: ignore it, erect a rain shield over trees so foliage stays dry, grow scab resistant cultivars*, or start spraying a fungicide at bud break and keep it up every week until dry weather.

scab: 2022's 4-letter word

apple scab necrotic lesions on leaves and developing fruit of Marilyn's Summerred apple in SE Seattle

If you choose to ignore it, consider removing any fruit (which will be scabbed) and make sure the tree does not suffer moisture stress this summer. If you go the spray route, remember to switch fungicides to maintain effectiveness. Google <wsu pnw0582> or link to PNW 0582 for a good description of this disease. For a list of effective fungicides, google <wsu hortsense, hortsense factsheets, tree fruits, apple>.

The deep fertile soil of the Skagit Valley is prized for agriculture. There isn't that much of such fertile soil worldwide, and people hope that not too much more gets covered by housing or industry.

About two thirds of Ukraine's farmland is also a highly fertile soil called chernozem, literally "black earth". It is about three to six feet of dark organic matter with a bit of clay lain over a layer of loess. (Loess is fine windblown soil which also comprises our wheat growing area in Eastern WA.) Now it is being run over by heavy war machines, pockmarked by explosives and seeded with occasional land mines. We should expect that Ukraine's grain and oil seed production will be reduced for some years, which will affect food availability worldwide.

*(editor's note: For varieties advertised as scab resistant at area retail nurseries, link to:
Cloud Mountain Farm Center Scab Resistant or Raintree Nursery Search "scab resistant" or Burnt Ridge Nursery Search "scab resistant"

Demo Orchard Upkeep August 6th

Saturday August 6th 10 AM to noon (probably later), STFS members will summer prune fruit trees in the Magnuson Park Demo Orchard. This task has been neglected during the past several years of the COVID-19 pandemic. Laure Jansen and Tracey Bernal, both longtime STFS member and always helpful educators to other STFS members, will be onsite to offer hands-on pruning advice while assisting STFS members who prune demo orchard fruit trees. IF YOU NEED ADVICE ON PRUNING A MATURE FRUIT TREE, THIS IS THE STFS EVENT TO ATTEND. Learn by doing under the supervision of two generous experts. Thanks, Laure and Tracey.

"Green" battery mower conquering demo orchard overgrown grass/weeds July 10th

Attendees are responsible for deciding their own level of masking, socially distancing and other COVID-19 spread precautions. Onsite, there probably will be no access to interior spaces. Bathroom facilities may be limited to outside portable toilets near the P-Patch.

Please bring: 1) Face coverings and other items that you need to help minimize possible spread of COVID-19. 2) Apparel and PPE appropriate for forecasted weather and gardening activities. 3) Pruners, loppers, saws and ladders for fruit tree pruning. 4) Your own snacks and liquid refreshments. You can decide whether to share or not.

Q: Planting and nurturing a free chestnut seedling: A) sequesters greenhouse gases, B) cools with summe shade, C) creates wildlife habitat, D) provides nutritious sustenance or E) all of the above and more? (&A: E)

Back in April 2021, before moving out of Seattle, Samuel Orr donated 35 American chestnut (Castanea dentata) seedlings grown from nuts collected during fall 2019. Sam mentioned that the parent trees were included in an experimental testing forest operated by the US Forest Service begun in the 1920s. STFS President Mike E. retrieved the seedlings which have growing up in 4" square containers at Trent E.'s Port Orchard property. Some seedlings are now over a 1-foot tall and can be planted in the ground with barrier protection (possibly a tomato cage surrounded by chicken wire to exclude gnawing vermin). Please contact Trent E. (trelwing@gmail.com 206.517.3118) if interested in providing a good home to 1 or more of these seedlings.

Chestnut seedlings

Free to STFS members

Beyond these 3 dozen chestnut seedlings, the website for Many Trees Project based in Olympia reports this nonprofit currently having "2,000 chestnuts to distribute! If you are interested in adopting one or several chestnut trees, sign up here! Many Trees Project apparently is also raising several hundred hazelnut, walnut, and heartnut trees for distribution, as well as propagating cuttings of grape, currant, and fig. More on Many Trees Project's mission: "A single mature chestnut tree can provide half of the carbohydrate calories a human adult needs in an entire year. Imagine nut and fruit trees on every block. Imagine a garden neighborhood–apples, plums, hazelnuts, chestnuts, kiwis, cherries, paw paws and persimmons, fresh and dripping with juice after that first succulent bite. Instead of plastic wrapped and stale fruits from California, imagine such local abundance that the biggest challenges will not be affording food, but finding ways to share the surplus. Imagine that each one of those trees sequesters carbon from the atmosphere, cools our warming neighborhoods through evapotranspiration, and provides birds and pollinators with abundant habitat. Imagine that the fruit trees in your yard require pollen from a neighbor's tree to thrive, and that the rain that falls on your roof drains downhill through a neighbor's yard. Imagine that, in order to keep your local trees healthy and producing, you need to actively care for your neighbors' trees as well. What do property lines mean when pollen is blown by the wind and water runs along the path of least resistance?"

Need more info about chestnuts? Link to USP 38 11 2020 Nov containing past article by Laure Jansen about American, European & Asian chestnut cultivars.

STFS Member Gudrun U's Garden Tour Aug 13th 2022 10 AM

STFS Member Gudrun U's backyard orchard tour aka:

Goodie's 2022 G*arden of Eat'n* tour (1 on map)

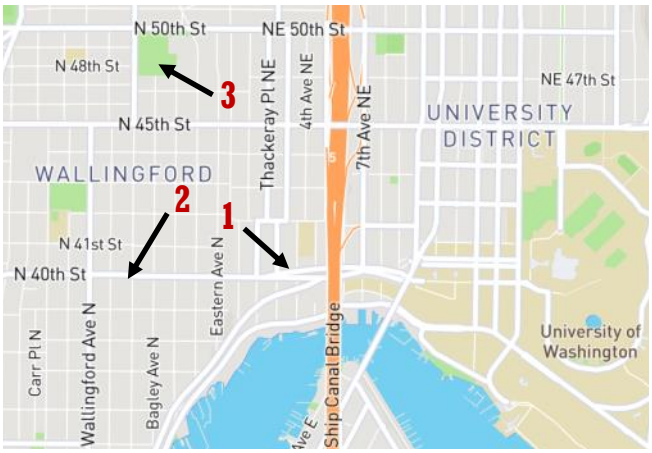
When: Saturday August 13th 10 AM to Noon

Where: 4015 4th Ave NE, Seattle, 98105-6511

(Seattle's Wallingford neighborhood just west

of Ship Canal and University Bridges)

Lost & need directions? Goodie's phone: 206.491.2133



Background: Goodie attended the 2014 STFS Fall Fruit Show and joined STFS on the spot. Being interested in all kinds of plants, she decided to focus her passion and mostly grow uncommon fruits. The next season it had evolved and now includes perennial vegetables, uncommon herbs and 'edimentals' (edible ornamentals).

In 2015 she started an experimental Food Forest in her backyard, which boils down to a fun test garden, bedded in arborist chips, where she casually trials, observes and edits her plant selections based on the following: The goal is not to be self-sufficient, but to grow edible plants that need low amounts of human effort while supplying great abundance year over year. She includes key Permaculture principals in her gardening practice and measures abundance in taste, beauty, volume, soil and pollination support. In 2020 she grew 132 different edible plant parts on her city lot. Here are a few:

- Uncommon plants in her yard include Yuzu and Sudachi (citrus), Longevity Spinach (Gynura procumbens), Goumi, Chilean Guava, Gom chwi (Ligularia fisheri), Alpine Mint Bush (Prostanthera cuneata), Chinese Toon Tee (leaves taste like garlic), Loquat.

- Common plants that people may not know are edible include Daylilies, Hostas, Spiderwort, Shot Weed (tastes like radish), Oregon Grape, Sassafras, Salomon Seal, Hops, etc.

Reminder: Please always do your own research before consuming any unknown plants!

Although Goodie's '*garden of eat'n*' is still in its infancy and not all plants are fruiting yet, she enjoys more and more fresh food from her garden year-round. She processes fruit from her and friends' gardens into jams, jellies and marmalade.

Bon appetit bonus: Goodie will have jam available for sampling in the garden as part of the tour. Yummy.

Parking is available on the street. Goodie's Food Forest is accessible from the street up 17-step stairs and found in the backyard up several more steps and over slight incline covered by arborist chips. Bathroom available, if needed.

Bonus tour (2)sorta within walking distance: Goodie spoke with the Pastor Jami Fecher of Gift of Grace Lutheran Church located 8 short city blocks to the west along N 40th St at the corner of Meridian and 40th (street address: 2102 N 40th St, Seattle, WA 98103), and the Gift of Grace Permaculture Urban Farm will be open to tour from 10 AM to noon on Saturday, August 13th.

Bonus self-guided tour (3 on map above) a short drive away: If you have time before or after visiting Goodie's Garden of Eat'n, drive north up Sunnyside Ave N to the community learning garden at the Good Shepherd Center located at 4646 Sunnyside Ave N, Seattle, 98103. "This garden features a solar greenhouse, a rain garden, worm bins and a variety of demonstration compost systems. There are many perennial plantings including Pacific Northwest native plants, cordon and espalier-style fruit trees, blue elderberry, cane berries, herbs and flowers. The annual vegetable beds provide a space for learning about year-round organic vegetable gardening techniques and strategies for building healthy soil."

STFS home orchard tours are happening Sat Aug 13th 2022

Goodie's *Garden of Eat'n* tour pics

Goodie's Backyard planted with Newtown Pippin apple tree, Chilean guava 'Flambeau' (Ugni molinae), Jerusalem Artichoke, Crandall Currant, Sudachi Citrus....

Goodie's Parking Strip planted with Chinese Toon tree, Medlar, Scarlet Runner bean arbor, Daylilies...

& Goodie's Backyard planted with Baby Shipova, Grapes 'Sensation?' on fence, Cardoon, Horseradish, Rose 'Bengal Fire', Elderberry 'Black Towers', pink Chrysanthemums, Lettuce, Pineapple Sage, Mulberry 'Gerardi', Perennial Kale.

STFS Member Tracey B's Garden Tour Aug 13th 2022 1 PM

STFS VP & frequent newsletter contributor
Tracey B's backyard orchard tour aka:
Tracey B's 2022 backyard orchard tour
When: Saturday August 13th 1 PM to 3 PM
Where: 10631 27th Ave SW, Seattle, 98146-1901
(west of White Center in south end of west Seattle)
Lost & need directions? Tracey B's email & phone: tmjbernal0216@gmail.com & 206.913.3778
Parking is available on the street.
Bathroom available, if needed.

Background: Tracey studied horticulture at South Seattle Community College and runs a landscaping business, as well as volunteering at STFS, PlantAmnesty and other local horticultural organizations. She is STFS's VP and contributes mightily to the USP newsletter.
Tracey's garden is filled with an abundance of ornamental plantings, as well as numerous edibles. Here is a complete list of edible fruiting plants currently grown in a low water garden that is extensively mulched in arborist chips:

In bloom at Tracey's mid-July 2022: Coolidge Pineapple Guava/Feijoa sellowiana 'Coolidge'

1) Medlar, Himalayan Honeysuckle, Hardy Fuchsia, Cornelian Cherry, Asian Pear-Chojuro; **2)** Multiple species of Elaeagnus- Goumi, Thorny Olive (Clemson's Variegated, Hosoba Fukurin) and others; **3)** Blueberries assorted varieties; **4)** Aronia, Paw Paw, Mahonia various species, Raspberry, Thornless Blackberry, Marshall Strawberry; **5)** Crabapple - Centennial and Everest; **6)** Alpine Strawberry, Hollywood Plum, Pineapple Guava, Honeyberry assorted, Crandall Currant; **7)** Apples - Akane, Golden Sentinel, Scarlet Sentinel; **8)** Figs - Atreano, Gilette; **9)** Persimmons - Giant Fuyu, Nikita's Gift; **10)** Strawberry Tree, Chilean Myrtle, Evergreen Huckleberry, Aromatnaya Quince. **For more details on Tracey B's Japanese Flowering Apricot, link to USP 40 05 2022 May and Nikita's Gift Persimmon, link to USP 39 11 2021 Nov

1st nursery a short drive (~10 minutes) from Tracey B's: South of Tracey B's, Clinton Bamboo retail nursery (location 12260 1st Ave S, Seattle, 98168 phone 206.242.8848) is open on Saturdays 9 AM to 5 PM and sells both running and clumping types of bamboo, hostas, ferns, ornamental grasses, hardy bananas, carnivorous plants, hardy fucshias and assorted perennials.

2nd nursery abit farther (~25 minutes) from Tracey B's: South of Tracey B's, Restoring Eden retail nursery (location 3501 S 228th St, Seatac, 98198 phone 253.202.5587) is open on Saturdays 11 AM to 5 PM and advertises "Seattle's largest fruit tree nursery, we carry exotic plants you from unique outdoor citrus to subtropical indoor house plants and everything in between.

STFS home orchard tours are happening Sat Aug 13th 2022

Apple anthracnose in western Washington 2022

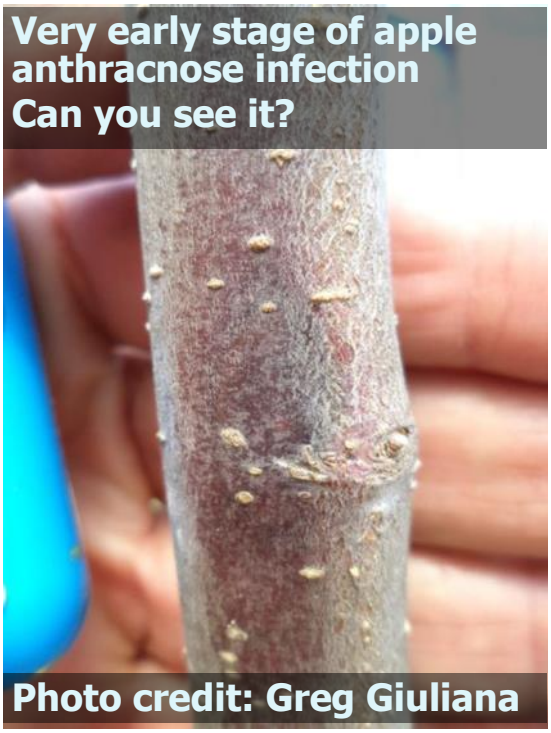
ALERT: Don't want to read this article, but do want to prevent more anthracnose from spreading throughout your apple trees? Now (end of July) is a real good time to assess your apple tree branches for anthracnose cankers/lesions then cover with petroleum jelly any cankers not already pruned away.

Read this article for details on anthracnose ID and treatment options.

Fungal spores: Everywhere All at Once: Every breath you take most likely contains many, many tiny, tiny particles of dried yeast/fungal cells or spores. And most likely these inhaled particles will have minimal effects on your health, though rarely, infections caused by specific fungal species can occur. For example, *Cryptococcus gattii* is a fungus that lives in sub/tropical environmental areas and some temperate regions including coastal parts of British Columbia and western States of the USA. We can become infected with *C. gattii* after inhaling airborne dried yeast cells or spores. *C. gattii* landing on lung tissue multiplies as a localized infection before possibly spreading to other areas of the host.

Apple Fungal Diseases in Western WA 2022: As observed by WCFS members during spring/summer 2022, apple trees grown in temperate regions of Washington state are also susceptible to hosting and possibly dying from specific fungal species.

During July 2022, several WCFS members, who took the time to inform the rest of us on the WCFS forum, reported apple scab and apple anthracnose hitting their trees hard in 2022. A longtime grower warned that even apple varieties supposedly resistant to scab had infections. Worse: apple anthracnose killing limbs and even entire trees that had been beautiful in 2021 with full crops and had initially leafed out in 2022. Concluding: The long, cool, wet spring allowed fungal diseases to really take off.



Knowing the pathogen and the pathogen's way: From the WSU Master Gardener Manual: "The term 'anthracnose,' for example, is used for diseases caused by a certain group of fungi but the symptoms can be variable depending on the host involved: dogwood anthracnose causes a blight of the bracts, leaves, and small twigs; maple anthracnose and oak anthracnose refer to foliar blights plus stem & twig cankers;

Anthracnose in W WA '22 cont.

while apple anthracnose refers to a disease of the branches and a 'bull's eye rot' of fruit, not a foliar infection at all."

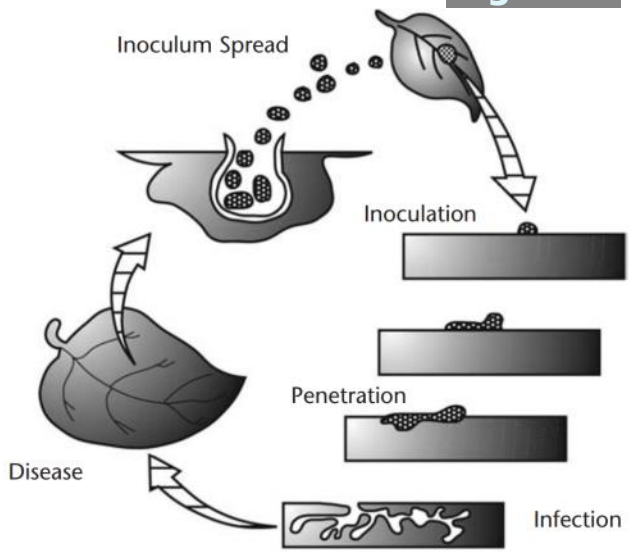
Plant Pathogens: The four main types of plant pathogens damaging plants that gardeners may encounter are fungi, bacteria, viruses, and nematodes.

Fungi: Members of the taxonomic kingdom Fungi include molds, smuts, yeast, mushrooms, and toadstools—many of which are valuable recyclers of organic matter but many of which are also poisonous or pathogenic. Fungi (singular: fungus) are the largest group of known plant pathogens, with over 8000 plant-damaging species having been described. Fungi require a food source as they cannot produce their own food; plant-pathogenic fungi use plants as that food source. *Venturia inaequalis*, the apple scab fungus, is one example of a fungal plant pathogen that infects the blossoms, leaves, and fruit of apple (See Marilyn's column). The growing vegetative body of a fungus is called a hypha (plural: hyphae), which appears as a filament; the mass of these hyphae is referred to as the mycelium. Most fungi reproduce by spores, which may (or may not) be produced in a structure called a fruiting body. Fungal pathogens use several different strategies to enter host plants; some fungi are capable of penetrating plant tissue but others require openings, such as stomata, lenticels, nectaries on a flower, or wounds in order to infect the plant. Still other fungi produce enzymes that help break down plant tissue to allow for infection.

Conditions for Plant Disease: Pathogenic disease actually results from complex interactions between 1) a susceptible host plant or plant community, 2) a virulent (disease-causing) pathogen population, and 3) an environment conducive for the establishment of the particular disease. A plant disease can develop only when all three components are present at the same time and interacting with one another. Minimizing the influences of any of the three components reduces the severity of the disease problem.

Pathogen Lifecycles: Another concept important for achieving management of many of the pathogenic plant diseases is knowledge about the individual lifecycle of the pathogen. In general, the lifecycle of a pathogen (Figure 9) has these components: inoculation, penetration, incubation, infection/colonization, reproduction, and spread. Inoculation occurs when a pathogen makes contact with a host plant. The inoculum of a pathogen can include fungal spores or mycelia, ... Penetration occurs when the inoculum of the pathogen gains entry to the plant. Incubation is the stage from the time the pathogen penetrates the host until symptoms first appear on the host.

Figure 9



Anthracnose in W WA '22 cont.

Managing Plant Diseases: Disease problems can sometimes be avoided completely by proactively restricting pathogens so they never get established in an area. When a pathogen is already lurking in an area, preventative measures attempt to protect plants from that pathogen.

Two proactive strategies, exclusion and eradication, can be used to keep new problems from getting established in an area.

Eradication efforts are undertaken to kill and prevent the spread of any localized, relatively-small population of an introduced pathogen.

Many cultural techniques can either prevent or reduce plant disease problems. For instance, sanitation involves removing damaged plant parts and pathogens from the plant or from the environment of a susceptible plant. Common places for plant pathogen survival include sites on the infected plant, within plant debris, or in the soil. Sanitation is most effective for pathogens that would survive within plant debris or for infected plant parts that can be readily cut out; for example, discrete cankers on branches can be removed.

Humidity, often necessary for fungal and bacterial infections, can be reduced by cultural methods: carefully locating the plant in the landscape to achieve optimal air circulation, pruning to open up the plant canopy and increase air movement, and carefully targeting any summer supplemental irrigations to early in the day or around the base of the plant rather than on the foliage."

IDing Apple Anthracnose

Longtime STFS member Greg Giuliani has generously offered other STFS members past educational opportunities including tours of his fruit orchard near Duvall, numerous grafting demonstrations and services at multiple grafting fairs, advice and visual content for USP newsletters as well as both in-person and zoom STFS meeting presentations on a number of fruit growing topics. The following content is adapted from Greg's presentation "Apple Anthracnose Identification and Disease Remediation" from spring 2020. Greg welcomes questions about apple anthracnose emailed (Greg's email: dasgoog@hotmail.com) from WCFS/STFS members.

Science now knows almost as much about *Neofabraea malicorticis*, the western WA version of apple anthracnose, as they knew 120 years ago. The two different common types of apple anthracnose fungus infect either tree branches or the developing apple fruit. *N. malicorticis* attacks apple trees bark & cambium layers and is most active in damp, temperate zones, thriving in marine climates west of the Cascades. Most research has focused on control of the anthracnose type colonizing the apple itself and negatively affecting the bottom line of Eastern Washington commercial orchards.

IDing & Managing Anthracnose cont.

The information below is based on experimentation & observations at Greg's home orchard in Duvall over the last 8 years.

Fungal Life Cycle: Microscopic spores germinate, and the fungus grows vegetatively on apple tree branch lesions during summer. New spores are produced that are released and transported primarily by wind & down branches by rain moisture to new host sites as the weather cools and dampens. Transport via contaminated cutting tools can also occur. Anthracnose spores or micro infections overwinter in a dormant state. As air temps warm in the spring, these infection sites break dormancy and kill apple cambium tissue creating cankers of varying sizes. Within the cankers, a new generation of fungus grows then releases the next generation of spores as weather cools. A canker can produce spores a second season if sufficient nutrient levels still remain in the diseased cambium. Without intervention, this anthracnose life cycle can repeat itself on your apple trees, year after year.

Location where moisture lingers for infection sites
Photo credit: Greg Giuliana

Water surface tension may contribute to infection sites, especially on bottom sides of branches and limb crotches where moisture runoff is slow or stagnant and shaded. Spores may harbor in moisture clinging to the tree's surface providing time to establish themselves. Many times, infection sites also establish on vertical trunks or highly sloped branches.

IDing anthracnose branch infections by visual observation

Photos (all taken by Greg Giuliani) of different appearances & stages of anthracnose follow.

Fiddle strings

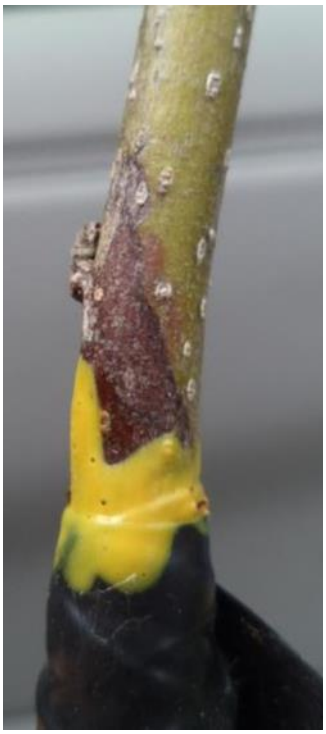
"Fiddle strings" or stringy structures are the last part of the disease site to decompose following an anthracnose infection begun several years prior. The wound is almost encapsulated by new tissue so there is no benefit of treating this site. When decomposing bark nutrients are no longer present, the site is not capable of anthracnose spore production.

Very early stage

This very early stage of anthracnose infection at the center of branch has a slight change of color turning a somewhat darker tint. Because of minimum color difference, this is a difficult stage to visually detect. As the disease progresses, the color will most likely turn more reddish or dark brown. Photo from early March in lower Snoqualmie Valley, WA.

IDing & Managing Anthracnose cont.

Incision at the infection site shows infection enzymes have already killed cambium tissue. The blade of the cutting tool has become contaminated with brownish & yellowish bits of debris that may transmit the disease during future incisions if not properly sanitized. Tool sanitizing is not thoroughly accomplished with a simple disinfectant wipe of the blade. Lab studies prove it takes time for disinfectants to penetrate microscopic plant tissue buildup on cutting tool blades. Surveying for anthracnose disease prior to leaf out, lessens chance that lesions hiding behind foliage go undetected. Always be on the lookout for lesions: while fruitlet thinning/covering, during summer pruning. Infected small branches need to be cut away. Prune well below lesions to lessen chance that cutting tool becomes contaminated with infected material.



Because of the narrow diameter, treatment options are limited when anthracnose infects a graft at the union. If the entire circumference is diseased, the scion will die. Cut at a safe distance above and below the lesion and re-graft. To avoid the risk of diseased scions, don't harvest scions from anthracnose-infested trees or orchards. If that is not an option, scions can be treated with disinfectant to mitigate potential disease transmission.

Anthracnose infection hiding behind foliage

The reddish area may or may not expand. As the disease progresses the site will darken in appearance as tissue dies. This tree is 2-3 years old. Whatever the tree size, after locating one infection look above and below the infection. Infection sites are typically not on the same horizontal or vertical plane. Photo taken early April, pre-blossom.

IDing & Managing Anthracnose cont.

Color of infection site progresses from red to dark as infection enzymes kill bark tissue. On right, infection appears to be contained. On left, infection is spreading outward with epicenter darkening as cambium dies.

Early stage anthracnose infections on 8-10 year old bark appear orange-red before turning dark brown. Once tissue turn dark brown it is lost and becomes a canker. The bark is dying from enzymes released by the fungus. Dead, dark brown tissue is prime food for anthracnose growth and will eventually host spore formation and dispersal if not treated or removed.

This early-stage infection appears to have concentric rings, a possible sign that infection is progressing in stages. If the infection encompasses the limb's entire circumference, the limb above the infection will die because no cambium will exist to transport fluid to the vegetation above the canker/lesion. Wrinkles appear in the middle of the infection as the cambium flow ebbs and tissue begins to dehydrate. Small new spouts emerge below the infection site from once dormant buds. The new sprouts receive a surge of hormones & nutrients since the dying cambium above acts like a pruning cut.

Dark, dying or dead, discolored bark, at center of lesion. Peripheral tan colored tissue is dying. Reddish color may have preceded the tan color.

Another image of diseased, dying tissue with advancing radiating reddish infection. Anthracnose cankers/lesions are typically elliptical in shape and vary in size. The dark, dying area of this lesion is approximately 1" wide and 2" tall, and the reddish area extends approximately 1/4" beyond the dark area.

IDing & Managing Anthracnose cont.

Fissure beginning to appear (arrow) between living and dead tissue on upper part of the infection. The infection has been mostly contained with only a bit of advancing tan color on the right side. Infection consists mostly of darkening, dead tissue turning into a canker or diseased wound. Spore growth will occur shortly in the canker.

Cross section of an anthracnose canker. Cambium is dead and bark tannins are staining internal wood.

Similar to other older bark, slight change of bark tone, slightly reddish and early onset of fissures.

A grouping of several small anthracnose infections. Largest site has approximate 1/4 " diameter. Why did these infection sites stay so small and why so numerous?

Older bark typically has little to no color variation at early stage of infection. Fissures encompassing disease site outer boundary are the defining feature to distinguish diseased from healthy tissue. Modest color contrast may be noticeable at this point, usually not before. The canker darkens as tissue dies but to a lesser extent than on younger wood.

IDing & Managing Anthracnose cont.

As the infected area's bark dies a defining fissure develops around the entire lesion circumference. Surrounding the canker, living cambium starts walling off dead area. As the canker dehydrates, it sinks below the level of living tissue. An elliptical depression and encompassing fissure with darkening of bark are signature features of apple anthracnose disease.

Anthracnose treatment options

Common anthracnose lesion treatment methods are 1) removing the branch completely, 2) removing the lesion only (cutting it away), and 3) selectively burning infected tissue to kill fungus.

1 - Removing the branch is wise when the branch size is small and/or the number of infections or total area infected becomes unmanageable regarding treatment time and further disease-spread risk. For an infected major branch, removal may not be practical.

2 - Removing the canker using cutting tools. There are online videos of this process if you choose this route; it can be time consuming.

3 - Heat from flame kills anthracnose fungus, but if not used very precisely, use of flame may also cause considerable damage to healthy tissue surrounding the infection. This option is not recommended for beginners. Aiming the flame towards a metal shield with a small hole helps control heat projection. Flame is not effective on small diameter wood because the heat tends to kill the entire cambium circumference. Risks are burning yourself and burning excessive health tissue bordering the infection.

The most common homeowner lesion removal technique is cutting away with a sharp blade. This requires basic knife sharpening and blade handling skills. Diseased tissue is removed until only living tissue remains. Young wood removes easily, the thicker the bark the more difficult to cut. Primary risks with this method is cutting yourself and cross contaminating healthy tissue with diseased material remnants on your blade.

IDing & Managing Anthracnose cont.

Novel treatment: Encapsulation of anthracnose canker with petroleum jelly

The noninvasive, inexpensive, safe and easy to use option: petroleum jelly.

Jelly takes the swipe of your finger to treat an anthracnose infection site. Applying jelly has little risk of hurting yourself or damaging healthy tissue surrounding the infection. The wound site remains as small as possible. Also, if you happen to misdiagnose and treat a non-diseased area, the tree doesn't suffer damage to a healthy branch. Both cutting away and burning of an anthracnose infection require the removal of some healthy tissue to ensure the entire infection has been removed. A side benefit: vermin like rabbits are deterred from gnawing by jelly-treated bark of young stock. Jelly is inexpensive in larger containers and readily available. A 13 oz. jar costs about $4.

A heavy film of jelly covering an anthracnose canker.

Apply enough jelly to last the growing season, about the thickness of a round toothpick to the entire diseased, dying or dead area. If you accidentally cover a bit of healthy tissue, that isn't a problem.

Canker on right first formed in spring 2016 and was promptly treated with petroleum jelly. During 2016, minimal healing occurred. A significant healing surge occurred in 2017. These photos were taken spring 2018. After the 2019 growing season, 1/8th-inch canker edge remained unhealed while jelly application continues. A jelly coating delays dead tissue deterioration; usually after the 2nd year the dead area can be pulled loose like a tissue scab. Dispose of scab into your garbage can. Based on use of petroleum jelly to fight anthracnose Greg has seen no incidents of jelly harming healthy bark. Greg firmly believes that sealing of the infection surface inhibits anthracnose spore reproduction and dispersal.

IDing & Managing Anthracnose cont.

Avoid misIDing of other plant parts as anthracnose

NOT ANTHRACNOSE: This graft wound, appearing reddish brown, is NOT infected with anthracnose. The darker shaded bark has been covered by opaque tape and lack of UV light exposure may have influenced coloring.

NOT ANTHRACNOSE: Lichen creates the darker shades on bark, this is not diseased.

NOT ANTHRACNOSE: Lichen creates the darker shades on bark, this is not diseased.

NOT ANTHRACNOSE: The brownish area is a healed wound possibly even a former anthracnose infection site. The ridge around the wound isn't a fissure and has no separation.

NOT ANTHRACNOSE: This is an encapsulated pruning wound. The color can be misleading because it has a lighter, slightly reddish hue than surrounding older bark. Its circumference border is round and not like the elliptical shape of an anthracnose canker.

NOT ANTHRACNOSE: This is an almost 100-yea-old limb with very thick bark. Neither the light brown or dark gray areas have disease.

NOT ANTHRACNOSE: Both flanking pictures are of the same spot. Healthy older tree sluffing bark, a natural process.

IDing & Managing Anthracnose cont.

Avoid misIDing of other plant parts as anthracnose

NOT ANTHRACNOSE: Bark fracture as the limb expanded then wounds healed. Reminder: if you treat a site that isn't diseased (and sometimes it's hard to tell) the jelly doesn't harm the tree's tissue. You just waste a little time and jelly.

Tree maintenance and cultural techniques to limit susceptibility to anthracnose infections.

1) Provide your tree adequate water during the dry season. As rainfall, air temps, wind, soil conditions and fruit load vary, so will your tree's water needs.

2) If fruit set is heavy, thin it. Heavy fruit loads i) deplete your tree's energy, ii) may make it more disease prone and iii) less likely to produce well next year. Additional thinning later in the season may help remaining fruit to mature more quickly.

3) Prune to let sunlight in and promote good air circulation. In general, this is a sound disease prevention practice.

4) Inform your apple growing neighbors about anthracnose and its treatment. If your trees are down wind of anthracnose infection sites, most likely released spores will travel to your site.

5) Depending on your microclimate, from mid-March through the summer, observe for new anthracnose infections and lesions. Before vegetative growth, during fruit thinning and summer pruning are prime times to spot new infections.

Additional online apple anthracnose resources

Apple Anthracnose | WSU Tree Fruit | Washington State University

Apple (Malus spp.)-Anthracnose (Bull's-eye Rot) | Pacific Northwest Pest Management Handbooks (pnwhandbooks.org)

Gallery Bull's Eye Rot | WSU Tree Fruit | Washington State University

Fact Sheet: Apple Anthracnose – Database of Apple Diseases (cornell.edu)

From the Fruitful Kitchen:

Summer Fruit Salad w/ Spicy Coconut Dressing - Contributed by Tracey Bernal

I adapted this from a recipe I found in Everyone's Table, an exciting cookbook by the renowned Portland, Oregon chef Gregory Gourdet. It's too early in the summer to find some of the produce used in the original recipe, such as blackberries, corn for grilling and ripe slicing tomatoes. I use what I had in the garden or in my delivery box: raspberries, strawberries, cherry tomatoes and nectarine.

INGREDIENTS

For the salad:
3 large ripe tomatoes of various types/colors
some salt
2 ripe nectarines
1 1/2 Cups mixed summer berries
1 Cup roasted cherry tomatoes
a little olive oil
a small assortment of mixed herbs and edible flowers- I used mint, cilantro, calendula petals, and nigella petals

For the dressing, whisk together:
1/4 Cup fresh lime juice
2 Tablespoons canned coconut milk
2 Tablespoons olive oil
2 Tablespoons coconut sugar
1 small garlic clove,
crushed in a garlic press
1 small serrano chile,
thinly sliced
1/2 teaspoon kosher salt

TASKS

1) if including roasted cherry tomatoes, preheat oven at 350°F.
2) thickly slice large tomatoes then sprinkle with salt.
3) pit and thinly slice nectarines.
4) cut berries in half if large.
5) toss cherry tomatoes with a little olive oil and roast on a sheet pan at 350°F for 30 minutes. Let cool to room temperature.
6) assemble: i) Start with the sliced large tomatoes if you have them; arrange on the plate. ii) top with the remaining fruits. iii) Drizzle on the dressing - you don't have to use all of it, and it will keep for a few days, refrigerated. iv) Sprinkle the herbs and flower petals artfully across the salad.

Still Needed NOW: WCFS BeeLine Editor

BeeLine editor assembles the quarterly newsletter from other authors' articles. The 9 WCFS chapters are expected to provide content. BeeLine editor also needs to find additional content from other publications like Good Fruit Grower. Ideally, the new BeeLine editor is proficient with Microsoft Publisher which is similar to PowerPoint and other Office software. Past BeeLine editions are available for review at the WCFS website (www.WCFS.org) under the "Resources" tab. Marilyn Couture, former BeeLine editor, emailed on 6/12/21 that BeeLine editor activities are rewarding and educational to all. Marilyn offered some initial mentoring for the new editor. Interested? Contact Ron (email ronweston09@comcast.net) or Marilyn(email marilyncouture1@gmail.com) directly. Past editors have volunteered their time, but with the position still open now for many months, WCFS representatives may realize that a nominal stipend may be necessary to fill this position. You won't know if you don't ask.

And Needed Soon (Jan 2023): WCFS Treasurer

Summarizing the 5/8/22 email from Ron Weston, WCFS President, to chapter presidents: Long-time WCFS Treasurer, Jerry Gehrke, is retiring from this volunteer position at the beginning of calendar 2023. Ron asks to please consider who amongst WCFS chapter members might make a good fit to pick up Jerry's duties in 2023. WCFS doesn't have the luxury of going without a WCFS Treasurer. Ron is confident that Jerry will coach any potential replacement candidate on what the job entails and see that she or he is equipped with the knowledge to succeed. For now, it is imperative that WCFS find the person for Jerry to mentor. Interested? Or know of someone who might be? Please contact Ron Weston, WCFS President, directly via email (ronweston09@comcast.net) ASAP.

From 7/14/22 email sent by Burnt Ridge Nursery & Orchards:

We are excited to announce summer hours for drop-in browsing!
During the summer months, we will be open weekdays from 9:00am to 4:00pm, and weekends from 9:00am to 3:00pm.

We have lots of potted plants to choose from, including blueberries, figs, elderberries, apple trees (including Monty's Surprise), and so much more! If you have specific questions about availability, feel free to call or email ahead of time - if it's not available now, we can take a preorder for fall or winter/spring pickup or shipping.

We're also hosting summer events on the farm!
In addition to our regularly scheduled July and September farm tours, we'll be hosting weekly organic garden and orchard classes. You can find the full schedule and more information on our website.

We hope to see you this summer!
Burnt Ridge Nursery & Orchards, Inc.
432 Burnt Ridge Rd., Onalaska, WA 98570
phone:360-985-2873 e-mail: mail@burntridgenursery.com
web: http://www.burntridgenursery.com/
face-
book: https://www.facebook.com/BurntRidgeNurseryandOrchardsInc/

STFS: Who Are We & What We Do

Western Cascade Fruit Society (WFCS), a 501(c)(3) non-profit organization, was founded in 1980 & is made up of nine Western Washington chapters, including STFS, full of helpful hobby orchardists & backyard fruit growers.

STFS members receive automatic membership in WCFS. WCFS publishes a quarterly BeeLine electronic newsletter to inform members of events, tours, articles & reports. WCFS provides other member services, including an online member forum, an online chapter-wide event calendar & an online home for chapter sites. See www.wcfs.org.

Seattle Tree Fruit Society (**STFS**) is a chapter of WCFS. The purposes of STFS are listed in Article II of STFS By-laws amended & restated as of 18 January 2014:

STFS will bring together people …
1) to promote & stimulate interest in growing fruit bearing trees, shrubs & vines in urban areas,
2) to encourage propagation of desirable fruit varieties suited to the local climate,
3) to disseminate pertinent horticultural information to its members & the general public through the use of fruit shows, orchard tours, meetings, seminars, workshops, publications & other media,
4) to provide financial & other support to our area's fruit research and/or projects, &
5) to join with other organizations in promoting tree fruit in the Western Cascade region.

STFS members share an interest in growing fruit & nut trees, berries, kiwis, grapes & other fruit. We offer information on adapted varieties, current growing techniques & share our own experiences growing fruit.

STFS members meet monthly from Sept to May usually in-person on a Saturday morning in Seattle's Magnuson Park. In-person meetings typically include speakers presenting on topics such as grafting, pruning, pest control, plant health & fruit preservation tailored to Western Washington growers. STFS members receive both the STFS online monthly newsletter Urban Scion Post (USP) & the WCFS online quarterly BeeLine. STFS is online at www.seattletreefruitsociety.com and www.facebook.com/SeattleTreeFruitSociety/

The STFS membership is Seattle Tree Fruit Society. The goals of STFS are achieved by STFS members. Please contact STFS representatives listed in this newsletter and communicate what STFS can do for you and what you can do for STFS. When more STFS members get involved, STFS does more & attracts more STFS members who get involved.

Background: Figs of July—Italian Honey fig from Burnt Ridge Nursery breba crop maturing July 4th 2022 in Port Orchard. Italian Honey also known by cultivar names "Lattarula" or "Blanche."

Seattle Tree Fruit Society

seattletreefruitsociety@gmail.com
www.seattletreefruitsociety.com
www.facebook.com/SeattleTreeFruitSociety/

PRESIDENT Mike Ewanciw 206.683.9665
(2-year term expires Jan 2023)
VICE PRES. Tracey Bernal 206.913.3778
(2-year term expires Jan 2023)
SECRETARY Vacant—please volunteer
(2-year term expires Jan 20??)
TREASURER Trent Elwing 206.517.3118
(2-year term expires Jan 2023)

MEMBERSHIP Trent Elwing 206.517.3118
HOSPITALITY Judy Scheinuk 206.200.1483
scheinukj@gmail.com

STFS DIRECTORS
#1 - Laure Jansen
(3-year term expires Jan 2024)
#2 - Linda Sartnurak 425.271.6264
noilinda@yahoo.com
(3-year term expires Jan 2024)
#3 - Ed Scullywest 425.286.4030
(3-year term expires Jan 2024)
#4 - Rick Shultz rshultz@highline.edu
(3-year term expires Jan 2024)
#5 - John Roach
(3-year term expires Jan 2025)
#6 - Vacant—please volunteer
(3-year term expires Jan 20??)
#7 - Vacant—please volunteer
(3-year term expires Jan 20??)

USP NEWSLETTER EDITOR
Trent Elwing trelwing@gmail.com

STANDING COMMITTEE CHAIRS
Orchard - Vacant—please volunteer
Events - Vacant—please volunteer
Programs - Vacant—please volunteer

NEW MEMBERSHIP & RENEWAL FORM

Seattle Tree Fruit Society

www.seattletreefruitsociety.com
A Chapter of the Western Cascade Fruit Society
www.wcfs.org

Name:	Phone:
Address:	
City, State, ZIP:	
Email address:	

DUES (includes STFS and Western Cascade Fruit Society)

New Member – Regular Rate – $25	_____
New Member – Limited Income or Student Rate – $15	_____
Renewing – Regular Rate – $25	_____
Renewing – Limited Income or Student Rate – $15	_____
Optional: Donation to support fruit research ($5 min)	+_____
Optional: Donation (other purpose) ($5 min)	+_____
TOTAL	_____

make checks payable to STFS., and mail with this form to:
STFS, c/o Trent Elwing,
1035 Alaska Ave E, Port Orchard, WA 98366

Our STFS club is run by and for our members - volunteers make things happen. If you would like to help, contact any Officer or Board member (see your newsletter) or email seattletreefruitsociety@gmail.com

How do I know when my annual STFS membership will expire?

Back in March 2020 before the COVID-19 pandemic took hold, printed USP newsletters were USPS-mailed, and the STFS membership renewal date was printed above the mailing address of each member's hardcopy printed newsletter.

To minimize spread of the coronavirus causing COVID-19, USP newsletters are now electronic and emailed. A reminder to renew your STFS membership no longer is printed above the mailing address.

Depending upon when a STFS member joins, annual memberships expire at the end of March, June, September or December each year.

Trent Elwing, STFS membership coordinator, will email STFS members one month prior to an expiring STFS membership reminding of the need to renew shortly and how to renew.

Need to know now? Contact Trent
(phone/text: 206.517.3118 email: trelwing@gmail.com)