

the BeeLine

Volume 32

Summer 2012

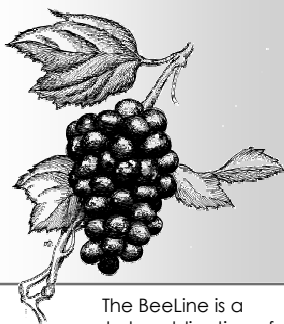
Newsletter of the Western Cascade Fruit Society

WCFS Cherry Trial The WCFS Cherry Trial participants are reporting their Spring 2012 results. Reports indicate that several trial trees will produce cherry samples this year. A larger cherry crop is expected next summer. Jean Williams of PFC took this photo of husband Gary Williams and more than 8' tall cherry tree on Krymsk 6 rootstock. Judi Stewart, NOFC

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www.wcfs.org



The BeeLine is a quarterly publication of Western Cascade Fruit Society, a non-profit 501 (c)3 corporation in the State of Washington.

Towards an Abundant Orchard -- Insects That Help Us Get There

Elizabeth A. Vogt, President VIFC

Question: Can we have a “successful” orchard (i.e., healthy trees/bushes/ canes; good fruit-set & harvest) without some help from our six-legged, invertebrate friends (insects)?

Answer: No

Reason: Pollination – not only from honey bees but from a variety of native bees.

Background: Approximately 1/6 of all described species on earth fall into the category of “angiosperms” (flowering plants). Ninety percent of those flowering – plant species need animals for pollination, that is, for reproduction of their species. Wind & water are sometimes vital (as with grasses – wheat, barley, oats, rye, & native non-agricultural flora). Bats, birds, & mammals contribute to dozens of pollination success stories (coconut, agave, bananas, mango). However, BEES are the most important pollinators in a given habitat as they are obligate pollinators. They have no choice but to visit flowers on a daily basis. In North America, & in our Pacific Northwest orchards, bees – both solitary natives & non-native honey bees – are significant pollinators (for pear, apple, peach, plum, cherry, strawberry, raspberry, apricot).

Pollination is the process of moving nonmotile pollen (male gametes) from the anther of one flower to stigma of another conspecific (same species) flower, & hence toward the female gamete in the ovule. Hopefully, the outcome is fertilization & seed production via pollen tube growth into the style of the ovary. Pollination occurs because the bees are feeding & gathering food -- nectar (carbohydrates) & pollen (protein). Also, flowers may provide sheltered microclimates for bees, aiding in protection from rain & predators. Places to rest & common mating sites are other reasons bees visit flowers. Pollination is secondary to these activities.

There are over 20,000 identified species of bees worldwide. Most of them are solitary & ground nesting, meaning an adult, mated female lays eggs, provisions the eggs with nectar & pollen, & then the egg develops into an adult on its own. Adult bees do not care for their siblings as with the highly structured society of honey bees.

Honey bees are of major importance not only as industrious agricultural pollinators but also as busy pollen distributors in our home orchards. However, we have several families of native, wild, solitary bees abundant throughout our region. These species are very effective pollinators & represent a vital diversity of pollination activities. They are well adapted to our rainy, cool climate. With the many problems facing our honey bee populations, orchardists & researchers have renewed interest in identifying & conserving our wild bee pollinators.

From visitor to pollinator: What characteristics of these solitary bees in particular make them more than just flower visitors? They are vegetarian; both larvae & adult bees rely on flowers for food so they must visit flowers often. Their small body size & long tongues enable them to gain access to the flower’s reproductive organs. They have hairy body surfaces that trap pollen grains & many species have evolved specialized pollen-carrying structures. They have the ability to learn & recognize rich nectar sources. Unlike the majority of insects, bees may endothermically regulate, meaning in the absence of solar input they are able to warm up.

Our common solitary bees: There are at least six families of bees in our area that are contributing to our abundant orchards. They are the colletids – yellow-faced bees, andrenids – mining & sand bees, halictids – sweat bees, megachilids – masons & leaf-cutting bees, anthophorids – carpenter & digger bees, & apidae – the bumbles. Photos of all of these beauties are on the internet. Please refer to my resource list at the end of this article.

- Yellow-faced bees

Short-tongued, lack pollen-carrying structures
May resemble wasps
Line brood nests in the ground with glandular secretions

- Sweat bees

Very large family of bees; over 500 spp in N.A.
Populations/aggregations in the ground –
complex nest architecture.

Lasioglossum sp. common in our area



Abundant Orchard cont.

- Mason bees

Mud mixture used to line cells

Early-season

Osmia lignaria

Everyone in WCFS should have some of these!

- Digger, Carpenter Bees

Small, shiny to robust, resembling bumble bees

Ground nests. Long tongues.

Small carpenter bee: *Ceratina pacifica*

Xylocopa – excavate their nests tunnels in wood. Soft & hard woods, strong jaws, very long-lived

- Bumble bees

Pollinate blueberries, raspberries

“Buzz” /vibration pollinators

Early-season

Ground nests.

4 species to look for:

Bombus californius, vosnesenski, melanopygus, mixtus

As was recently reviewed in the Seattle Tree Fruit Society’s Newsletter (Vol. 30, #6, June,2012), conserving the habitats of our solitary bee species is vital for their increased survival. Ground-nesters need well-drained soil, bare ground, & near-by access to flowers.

I encourage everyone to get acquainted with our many pollinators. They are easily observed & are our partners in creating sustainable, vibrant orchards.

Elizabeth A. Vogt
President, Vashon Island Fruit Club

See internet links:

<http://snohomish.wsu.edu/pollinator2012.pdf>

<http://snohomish.wsu.edu/garden/bumble.htm>

<http://www.fs.fed.us/wildflowers/pollinators/index.shtml>

<http://skagit.wsu.edu/MG/bugs/Ground%20Bees.pdf>

http://whatcom.wsu.edu/ag/homehort/pest/mining_bees.htm

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Announcing the 2nd International Organic Fruit Research Symposium

Organic Fruit 2012: From Research to Practice

June 18-21, 2012 -- Leavenworth, Washington,

Note: The Symposium has filled to capacity and registration is currently closed. A number of sessions will be offered as on-line webinars on [eOrganic](#). Check there for details.

<http://www.tfrec.wsu.edu/pages/organicfruit2012/>

Sponsored by the International Society for Horticultural Science.

Note: If any WCFS Members are registered for this meeting, please contact Marilyn Couture or Ron Weston. We would like to have a report at our tele-conference June 23 or BeeLine report Aug. 1.

* * * * *

Attention WCFS Members

Want to know instantly what's happening in the organization?

Subscribe to the WCFS Forum. It's a benefit of membership. The Forum is private and closed to the public. It keeps us together and on top of what's happening in our chapters. Click on this link and follow the prompts:

<http://lists.ibiblio.org/mailman/listinfo/wcfs>

Judi Stewart, Forum Administrator

A Common Pesticide Decreases Foraging Success and Survival in Honey Bees

Science 20 April 2012, pp 348-350

Abstract:

Nonlethal exposure of honey bees to thiamethoxam (neonicotinoid systemic pesticide) causes high mortality due to homing failure at levels that could put a colony at risk of collapse.

Simulated exposure events on free-ranging foragers labeled with a radio-frequency identification tag suggest that homing is impaired by thiamethoxam intoxication. These experiments offer new insights into the consequences of common neonicotinoid pesticides used worldwide.

* * * * *

Neonicotinoid Pesticide Reduces Bumble Bee Colony Growth and Queen Production

Science 20 April 2012, pp 351-352

Abstract:

Growing evidence for declines in bee populations has caused great concern because of the valuable ecosystem services they provide. Neonicotinoid insecticides have been implicated in these declines because they occur at trace levels in the nectar and pollen of crop plants. We exposed colonies of the bumble bee *Bombus terrestris* in the laboratory to field-realistic levels of the neonicotinoid imidacloprid, then allowed them to develop naturally under field conditions. Treated colonies had a significantly reduced growth rate and suffered an 85% reduction in production of new queens compared with control colonies. Given the scale of use of neonicotinoids, we suggest that they may be having a considerable negative impact on wild bumble bee populations across the developed world. The treated bees were about two to three times more likely to die while away from their nests. The researchers concluded that this was probably because the pesticide interfered with the bees' homing systems, so they couldn't find their way home.

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Tent Caterpillars Are Back!

Judi Stewart says "Tent caterpillars are in my cherry and apple trees in Port Townsend. I used several means to remove them in the past. I found fat caterpillars on the outside of one nest on a cherry limb. Ran out of neem oil so I used a hand-held propane torch on the nest. When caterpillars feel the approach of heat, they usually jump or fall. I put a catch tray on the ground under the nest and caught the buggers. Strays on the leaves were picked by hand."

Marilyn Couture, Sequim, is clipping them off and bagging them up, pouring bleach into the bag.

Francesca Ritson, Shelton, has seen them in her apple trees this year and cuts the effected branch off and puts it in bucket of water with a drop of dish washing soap to break the surface water tension and drowns them.

Ethan Russo, M.D. on Vashon Island, uses Spinosad, Monterey brand from Peaceful Valley Farm Supply.

"Catman" removed them from three cherry trees in Seattle by trimming the limbs where the tent is in the early morning. Someone may know more, but I understand they are not active at night and stay in the tent, so if you get it in the morning, you can prune the tented branch off, bag it, and dispose of it.

Francesca Ritson cautions: Use spinosad with caution and the awareness that: "The topical acute activity of spinosad against honeybees is less than 1 µg per bee which places spinosad in the highly toxic to bees category of the EPA."





Controversy Deepens Over Pesticides and Bee Collapse

Journal of Economic Entomology 6 April 2012

A controversial new study of honeybee deaths has deepened a bitter dispute over whether the developed world's most popular pesticides are causing an ecological catastrophe.

Researchers led by biologist Chensheng Lu of Harvard University report a direct link between hive health and dietary exposure to imidacloprid, a so-called neonicotinoid pesticide linked to colony collapse disorder, the mysterious and massive die-off of bees across North America and Europe.

The study isn't without critics, who say doses used in the study may be unrealistically high, and they say the findings are troubling.

"Our result replicates colony collapse disorder as a result of pesticide exposures," said Lu, who specializes in environmental exposures to pesticides. "We need to look at our agriculture policy and see if what we're doing now is sustainable."

Developed in the 1990s as a relatively less-toxic alternative to pesticides that seriously harmed human health, neonicotinoids soon became the world's fastest-growing pesticide class and an integral part of industrial agricultural strategy. In the United States alone, neonicotinoid-treated corn now covers a total area slightly smaller than the state of Montana.

Like earlier pesticides, neonicotinoids disrupt insects' central nervous systems. But unlike earlier pesticides, which affected insects during and immediately after spraying, neonicotinoids spread through the vascular tissues of plants. They're toxic through entire growing seasons, including flowering times when bees consume their pollen.

The first reports of colony collapse disorder came in the mid-2000s from commercial beekeepers, who have experienced colony losses ranging from 30 to 90 percent. Commercial pollination costs have since skyrocketed, as wild bees are also afflicted, even naturally occurring pollination is threatened.

Measuring bee declines, however, proved much easier than explaining them. Among a lineup of potential culprits including fungus, mites, viruses, bacteria and pesticides, studies failed to find an obvious, smoking-gun cause — but, piece by piece, evidence against neonicotinoids has steadily accumulated.

Honeybees are clearly exposed to them throughout the year and through multiple environmental routes. At certain times, especially in spring, death often follows exposure, and even non-lethal exposures may disrupt bee learning and navigation. Neonicotinoids also appear to make bees especially vulnerable to certain parasites and may interact similarly with other stressors.

'These pesticides are everywhere, every year. We've never used pesticides in the way we're using them now.'

Some European countries, including France, Germany and Italy, have even banned neonicotinoids, though pesticide companies vehemently defend their ecological safety and say concerns are based on inconclusive and premature science.

Lu's study, released April 5 and scheduled for publication in the June *Bulletin of Insectology*, attempts to replicate the life history of commercial bees, which are often fed dietary supplements of high-fructose corn syrup that may contain neonicotinoid residues that survive processing.

"We tried to mimic commercial beekeepers' practices. I believe one reason that commercial beekeepers are experiencing the most severe colony collapse disorder is because of the link between high-fructose corn syrup and neonicotinoids," Lu said.

In the spring of 2010, the researchers set up four groups of commercially purchased colonies. Each contained five hives, and during the summer months were fed a diet containing either no imidacloprid, what Lu considered a small dose of 20 parts per billion, or a much higher dose of 400 parts per billion.

Colony collapse disorder is characterized in part by bees abandoning their hives during winter, and that's what Lu's team reported in 15 of 16 imidacloprid-receiving hives. While other colony collapse disorder symptoms, such as queens

Bee Collapse cont.

that stay in the hive while workers flee, were not reported, Lu considers the experimentally induced collapse to be realistic.

Reaction to the study was swift and varied.

Bayer, the chemical and pharmaceutical giant that manufactures imidacloprid, issued a formal statement denouncing the findings as "spectacularly incorrect" and "based on artificial and unrealistic study parameters that are wildly inconsistent with actual field conditions insecticide use."

Jeffery Pettis, a bee biologist at the United States Department of Agriculture, called the results "tantalizing but not conclusive." Pesticide expert Charles Benbrook of The Organic Center, a research consultancy, said "It's very difficult to test for this particular chemical in high-fructose corn syrup."

But Pettis said the study's lower dose ranges, which were sufficient to destroy the colonies, "were what bees could encounter in the environment." His take was echoed by biologist Christian Krupke of Purdue University, who said the doses "are certainly within the range that bees may encounter in the field."

Bees are regularly exposed to neonicotinoids through drops of sap that form on the edge of plants. Another major route of exposure is through dust emitted by air-powered seed planters exposed to pesticide coated seeds. The Environmental Protection Agency is currently evaluating the safety of neonicotinoids, and more than 1.25 million people have signed petitions requesting a ban. In parts of Europe that have already banned neonicotinoids, there is evidence that colony collapse disorder may have slowed.

"In areas where neonicotinoids are used, but you don't have colony loss, Krupke said, we're seeing sub-lethal effects. These stressors have softened up the bees for other parasites." Pesticide risk analysis in the United States has focused too much on whether chemicals are immediately, obviously toxic, said Krupke. "Our way of thinking is fundamentally flawed," he said. "We need to look at sub-lethal effects, and for a longer time period.

WCFS NEW MEMBERS



Seattle Tree Fruit Society

Bill Thorness
Anne Chafee
Art Resnick
Dianne Garcia
Susan Williams
Melody Sorensen
Paul Stappenbeck
Deborah Dickstein
Lisa Strandin
Robert Brooks
Crista Schneider
Jennifer Klock

Tahoma

E.B. and Aileen Corley

NOFC

Kelley Watson
Jim Moore
Sheila & Roberto Garcia

OOS

Leslie Parker
Richard Norred

Peninsula Fruit Club

Stan Adams
Kelley Calhoun
Clay Norton
Brian Collins
Gerald Ebel
Jesse Fenger
Berit Madsen
Jim Francis
Chris Fraizer
Jennie Hoffman
Dan Froehlich
Ann Kilby
Helen Kirkham
Jay Magneson
Lynn McLean
Janet Quanrud
Kathleen Rose
Nancy Sullivan
Jerry Towne
Margret Tufft

The Summer 2012 BeeLine was produced by Editor Marilyn Couture, with input from membership. Please contribute your articles for our next Fall issue! **Issue Deadlines:**

Winter December 15;

Spring February 15;

Summer May 15;

Fall August 1

Email your articles to:

Marilyn Couture: couture222@msn.com



WSU Apple Breeding Program's Fruit Evaluation System

Good Fruit Grower July 2011

The Washington State University apple breeding program was established in 1994 to provide Washington growers with a portfolio of new varieties with high consumer acceptance that are well suited for Washington growing conditions.

Going back just a few years, apple breeders had few tools and little new science to assist the program. Today, Dr. Kate Evans, the program leader, collaborates with an international team of scientists working in tree fruit genetics, genomics, and breeding (GGB). Team members, working with WSU in Pullman and the U.S.D.A. in Wenatchee, WA, are international leaders in their fields. They bring the latest technology to the program and help develop methods to implement the technology for the benefit of the breeding program.

One of the first benefits of the genetics research is to be able to fully characterize the parent varieties using molecular markers that are linked to important traits and therefore be able to make more informed decisions about which two parents to combine in the crossing program. These markers can also be used to screen the seedlings to determine which have inherited the trait without having to grow a tree and wait for fruit.

Seeds from the crosses are harvested and planted in the greenhouse. Some are tested for resistance to fireblight and any susceptible seedlings or those with severe mildew are discarded. As the effectiveness of the genetic markers identified has improved over the last couple of years, they are being used to screen the seedling population prior to planting outside in a nursery row. After planting out, the seedlings are grown until the wood and buds are large enough to be used in budding onto precocious rootstocks (Malling 9 T337). Genotypes that have spines, indicating low yield potential, and severely mildewed trees are discarded. The trees are transplanted to the seedling orchard at a WSU research farm in year five after the cross is made. This is Phase 1 of the five phases in the breeding program.

Phase 1

Selections are made from Phase 1 trees based on appearance and fruit quality. A series of instrumental and sensory tests are completed on fruit at harvest, and after two and four months of regular cold storage. The most promising genotypes are identified over the course of three to four fruiting cycles and are advanced to Phase 2.

Phase 2

Phase 2 plantings are in three different climatic zones in Washington and are replicated for statistical evaluation. Industry standards such as Gala, Fuji, and Honeycrisp are included in the plantings. The best of the Phase 2 selections are placed into the commercial variety portfolio to evaluate their place in the commercial line-up. The decision to advance a genotype is made annually by Evans. If no genotype meets the requirements of the industry, none will be advanced. At least 23 commercial apple varieties, not including color or spur sports, are currently produced and sold from the state of Washington. In order to improve the product line of our industry, the new products from the breeding program must be outstanding and fit within the existing variety portfolio. An Industry Advisory Council participates in the apple genetics, genomics, and breeding program in several ways.

Ranking the importance of traits of apple is one activity. The GGB team prepares a list of traits that is frequently updated, and the advisory team and GGB team members vote on the importance of the traits listed (*see current list in Table 1*). Of the 21 traits rated, flavor out of storage and crispness were the top two. Six of the top ten traits are related to appearance, packout, or yield, which would be considered commercial traits rather than consumer traits. The intended use of this ranking is to prioritize genetic targets for the GGB team.

Apple breeding cont.

Phase 3

In Phase 3 trials, further phenotyping—the observation of properties of a genotype (variety) that are produced by the interaction of the genotype and the environment—is undertaken under the leadership of Tom Auvil and Dr. Ines Hanrahan (both with the Washington Tree Fruit Research Commission's internal program). There are four Phase 3 sites, with environmental differences driven mostly by elevation. The aims of Phase 3 trials are fourfold:

- Provide adequate volumes of fruit from different environments to determine storage and postharvest handling behavior
 - Observe the interaction of a genotype and the various environments in which it is grown.
 - Allow growers to visit trial sites to see the trees and fruit in production prior to engaging in evaluation agreements
 - Provide fruit for nursery trade show booths and gift box volumes for marketing organizations
- The Industry Advisory Council meets annually to review growing season results.

The most commonly shared trait of the ten selections currently in the Phase 3 plantings is crisp texture. Most genotypes do not have sunburn damage. A couple of genotypes have some bitter pit, but far less than Honeycrisp. Mildew has not been an issue with any of the genotypes, though it can be found if sought out. The greatest challenge has been stem end splitting, which has been seen in several genotypes at or just prior to commercial harvest maturity. Two selections have compact growth habit, two are vigorous, the rest are intermediate. Two have high crop densities (will overcrop), and two are not precocious, leaving six intermediate. Fruit size ranges from moderate to very large, which means bigger than Gala for moderate and equal to Honeycrisp for very large. All of the Phase 3 genotypes have responded well to 1-MCP. A few do not have the storage life needed for a commercial variety, and their evaluation will likely be discontinued. Of the ten selections, two (WA 2 and WA 5) have been released into **Phase 4 grower evaluation**, with WA 2 already moved into **Phase 5 commercialization**. At least one and possibly more releases are expected from this batch of Phase 3 genotypes.

New material has been propagated for Phase 3 plantings in 2012.



Table 1: Ranking of traits in new varieties

Rank Trait

- 3.86 Flavor out of storage
- 3.57 Crisp
- 3.53 Precocity (normal)
- 3.5 Low russet potential
- 3.47 Juicy vs. woody (dry)
- 3.43 Firmness retention
- 3.33 Acidity greater than Golden Delicious
- 3.33 Yield equal to commercial standard
- 3.2 Not bitter pit prone
- 3.19 Size between 100 and 48
- 3 Not prone to scald
- 3 Not prone to sunburn
- 2.93 Skin color coverage greater than 20%
- 2.73 Powdery mildew resistant
- 2.66 Fireblight resistant
- 2.56 Tender skin
- 2.56 Compact growth habit
- 2.53 Brix above 15°
- 2.5 Not prone to watercore
- 2.19 Yellow ground color rather than green
- 1.7 Red color vs. no red color



Tom Wood, Ag Entrepreneur, passed away March 5, 2012

From Mateusz Perkowski, Capital Press, 2009.

Tom Wood passed away March 5, 2012, doing what he loved, working in his green houses. He was 60 years old. Tom leaves behind his wife Carolyn and many friends.

Wood had a bachelors degree in Forestry from Oregon State U., but as a young logger in Alaska, Tom Wood jumped at the chance to take a job in the San Juan Islands. Disappointment soon set in when he found out he wouldn't be going to tropical forests in the Caribbean. "It wasn't warm like I thought."

Wood decided to come to the state anyway, and over three decades he adjusted to the climate. Plus, he found a way to bring the warm weather to his hometown of Centralia, Wash. With about 60,000 square feet of greenhouses, balmy conditions were available to Wood upon demand. Every layer of plastic moved the structures' climate about 500 miles to the south. That allowed him to cultivate pomegranate, citrus and avocado trees in the Northwest and to harvest raspberries, cherries, blueberries, peaches and other crops months before they'd otherwise mature in the region. "It's all about so the flowers don't freeze," he said.

The hobby started a few years after he arrived in Washington in the late 1970s. Wood found that he preferred tinkering with greenhouses to other forms of recreation.

Initially, his plant of choice was fuchsias, which he grew in a 48-square-foot greenhouse acquired in exchange for five cords of firewood. When a friend needed somebody to run his nearby raspberry farm, Wood agreed to volunteer -- as long as he could experiment with growing some in a greenhouse. He began selling the berries and customers soon requested other crops, like strawberries and blueberries. "I just listened to what people wanted and made the adjustment," Wood said.

Eventually Wood started leasing a 7.5-acre parcel near Chehalis. What had started out as a hobby turned into a commercial operation. Wood produced about a dozen fruit and vegetable crops, which he sold directly to the public.

Trees and bushes were grown in plastic containers and special plastic bags spaced very closely together. With blueberries, for example, Wood fit 700 plants into one greenhouse. The high density system permitted Wood to maximize the amount of fruit he could produce in each structure. "It's all about pounds to the square foot," he said.

Keeping production costs low also increased the economics of the operation. Many of the greenhouses were heated with wood stoves. In others, Wood ran hot water through converted automobile radiators.

Labor was also relatively inexpensive, considering Wood did the harvesting himself, with help from his wife, Carolyn. The work was grueling, particularly with small fruits that must be picked one at a time.

Aside from being able to produce crops out of season, like strawberries in February and cherries in March, Wood was able to manipulate some plants so they bore fruit twice a year. By artificially inducing dormancy, Wood basically tricked the plant into resuming its seasonal flowering cycle. The system wasn't easy to develop, and Wood ran into numerous failures before figuring it out, he said. "Everything I've learned, I've learned from the school of hard knocks."

* * * * *

Marian Lewis Dunlap, HOS Charter Member, passed away May 16, 2012, at 93 years.

Marian Lewis Dunlap served as HOS secretary for twelve years under ten presidents. She oversaw the care of antique fruit trees and blueberries at Home Orchard Society Arboretum well into her 90s. Marian was a descendant of early Oregon pioneers Tabitha Moffatt Brown, the "Mother of Oregon" and Daniel and Rachael Lewis. Her father, Clayton Brown Lewis and grandfather H.A. Lewis owned Russellville Nursery in East Multnomah County, Portland, and developed the Multnomah apple, Clayton apple, Prinlew plum, and Lewis apricot. The Clayton apple and Lewis cot appear lost.

Marian Dunlap is the mother of BeeLine Editor, Marilyn Couture.

Good Fruit Grower Magazine Subscriptions

WCFS members are eligible to participate in a group subscription to the magazine *GOOD FRUIT GROWER* at the reduced rate of \$20 per year.

Renewals and new subscriptions must be sent by June 15 to Dave Hanower, WCFS Treasurer, P.O. Box 77317, Seattle, WA 98177.

Please make checks payable to Western Cascade Fruit Society.

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WCFS

WCFS Annual Meeting Seattle Tree Fruit Society hosted the annual WCFS meeting in conjunction with the STFS Spring Fruit Show March 24th at Sky Nursery in Shoreline.

Following the Directors Meeting, Acting President Ron Weston called meeting to order.

Life Member Nomination proposed: Lois Twelves by Judi Stewart. In accordance with WCFS Life Membership guidelines, **It was moved, seconded and approved that Lois Twelves be accorded Life Membership in WCFS.** It was recommended that NOFC Chapter make provision in their By-Laws for recognition of lifetime achievement.

Elections: Sally Loree has expressed an interest in continuing to serve as a Director. Ron asked for nominations for the vacant offices of Secretary and President. Ron is willing to serve as President.

It was moved, seconded and approved to accept the following slate of Officers and Directors: President Ron Weston; Treasurer Dave Hanower; Director Sally Loree. The positions of Vice President, Secretary and two directors with terms expiring 2015 are vacant.

The next WCFS meeting is a teleconference scheduled for June 23, 10:00am.

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Chapter News

Olympic Orchard Society

Our Sequim High School grafting workshop report. 100% success of twelve grafted trees.

July - Field trip - Black Diamond Winery and Marty and Debora Marchant's farm.

Aug. - Picnic and summer pruning demonstration at Steve Johnson's Lazy J. Tree Farm.

Fall - Participation meeting - Fruit Show with North Olympic Fruit Club, Port Townsend

We had a Program by Dr. Paul Gleeson - *The status of Saving Olympic Nat'l Park Heritage Fruit Trees.* OOS is involved with an ongoing study of identification of historical varieties, collecting scion wood from these varieties within ONP, grafting onto rootstock, holding the fruit trees until they can be relocated at a site provided by ONP. Humes "fallen apple" has been saved. Contact Marilyn Couture or Erik Simpson if you are interesting in participating.

Marilyn Couture, Secretary

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Friends of Piper Orchard

June 9, 12-3pm Friends of Piper Orchard 'Bare Footies at Carkeek Park, Seattle (applying foot sox to apples)'

Aug 11, 12-3pm Friends of Piper Orchard 'Sucker Punch (summer pruning)'

Sept. 15, 10-3pm Friends of Piper Orchard 'Fall Fruit Show' & STFS Member Meeting

Dr. Tim Smith from Wenatchee Washington will speak on fruit problems at Piper's Orchard Harvest Fest on Sept. 15th in Carkeek Park in Seattle. Dr. Smith is known worldwide for the use of GF 120 NF cherry fruit fly bait and about fire blight in pear trees.

<https://sharepoint.cahnrs.wsu.edu/blogs/extensionupdate/archive/2012/01/27/tim-smith-chosen-new-cherry-king.aspx>

Don Ricks,
<http://pipersorchard.org/> , donricks@hotmail.com



Seattle Tree Fruit Society

Our spring meetings have brought us fascinating speaker programs. In April we were given a very timely presentation by Nick Bond, Washington State Climatologist. Nick detailed historical data that confirms the suspicion that not only is climate changing but it is changing at an increasingly rapid rate and the link to human activity is powerful. He explained the ways in which this change can affect our gardens and orchards. The presentation was a fascinating and we will undoubtedly call on Nick again. Coincidentally, while collecting some of my books to bring for a book exchange at our meeting I came upon an essay published in 1974 by the Association of American Geographers. In it W. H. Terjung detailed the mechanisms by which human activity can influence climate. The premise of human induced climate change is not as new as many would have us believe.

Our June 2nd meeting introduced us to an incredible orchardist from West Seattle, Alexander Eppler. He introduced us to several varieties of a favorite fruit of his, Cornelian Cherries, with which he was very familiar from his earliest days as a flute carver. His childhood and his lifetime travels throughout Europe opened up an incredible new (or is it old) world of fruits and berries including choicest varieties of elderberries, gooseberries, and currants-black, red and white from around the world. Some of us will be visiting him for a look at his orchard and for some scion wood.

At our June 2nd meeting we applied the “footies” to the orchard STFS maintains at Magnuson Park. At our next meeting (date tba) Ingela Wanerstrand will be guiding us in “Hands on Practice”, a Summer Pruning Workshop at the orchard. Then in September we will be joining with the Friends of Piper Orchard in the Harvest Festival in Carkeek Park.

We are now assembling the crew and organizing our Fall Fruit Show for October. The call for volunteers is out and the Board will be convening shortly.

Until next time,

Paul Mallary, President STFS

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Help Out at the Puyallup Fair Sept. 7--23

Volunteers get free entrance and free parking.

Contact: Henri Carnay of the Tahoma Chapter
hcarnay@comcast.net

Peninsula Fruit Club Chapter News

PFC had presentations at our April meeting about pollination and different pollinators such as mason bees, bumble bees, honey bees, and many other native bees, wasps, beetles, etc. We learned how we could help by hand pollinating and where to buy pollen and pollen puffers. We learned about mushrooms from Lowell Dietz <http://www.dietzfarm.com/> from Sequim at our May meeting. Who knew that common button mushrooms become crimini and then portobello mushrooms when allowed to grow larger and exposed to light? Several members purchased oyster mushroom kits to try. We also held our annual member plant sale at the May meeting. In June we plan to have a booth at the Maker Faire in Poulsbo. We will be explaining and showing pictures about how to make trees by grafting and how to make designs with them by espaliering. We will have a presentation from Michael Laurie of Watershed LLC from Vashon about drip systems and rain barrel collection systems at our June meeting. In July we'll watch some short summer pruning and budding videos and will practice hands-on budding. We plan to set up a couple of summer pruning workshops. August usually brings our club picnic and some tours of members' orchards along with our annual booth at the Kitsap County Fair, where we get to interact with the public and educate them about all things fruit for five days.

Jean Williams, President

Peninsula Fruit Club

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Snohomish County Fruit Society is going to host a booth at the Evergreen State Fair this year, Aug. 23-Sept. 3. Because we are a new group and still have a small membership base, we are looking for people to help us staff the booth this year. You don't have to sign up yet, just let us know if you are interested so that we can determine how many days we will be at the fair (just weekends or weekdays as well). Keep in mind that people who help get free parking and entrance to the fair for the day!

If you are interested in helping out, send an email now to SnohomishCFS@gmail.com (not this listserve) and include your name, phone, and general days (weekdays/weekends) and times you can work (or can't work if that's easier). Thanks in advance!

Rebekah Jackson SCFS

Tahoma Chapter News

Larry Owens was our guest speaker at our May meeting.

Although he grows 200-300 onions from seed starting in mid-September and spoke like a true onion guru, he also gave us good tips like:

- planting pumpkin seeds with the pointed head DOWN,
- buying vegetable seeds from commercial sources like Stokes Seeds in Buffalo, N.Y. rather than from local department stores, and
- using vermiculite when planting seeds to reduce damping-off.

Getting back to onions, Larry's seeds germinate in 5-days at 76 to 84 degrees. He plants them 6" apart and always uses warm water. It was suggested to use a lot of nitrogen initially, keeping the soil loose and exposing the tops so they can better grow and expand. Concerning variety, Larry said "I gave up on Walla Walla Sweets 3-years ago." He recommends growing Copra, a new variety that he finds superior, or Candy which he says grows bigger and tastier than Walla Walla.

When reviewing the advantages of growing from seed vs buying started plants he advised us that seeds offer a broader selection and can be timed to extend the harvest. On the other hand, small onion starts are available in March but varieties are limited and they go to seed quickly.

Looking for an onion guru? Just call Larry!!

Chuck Polance,
Tahoma Chapter

Vinegar as Weed Killer

20% Vinegar is effective weed killer but it won't move through the plant to kill the root. You may need to re-apply it. Vinegar will lower the pH of the soil, making it more acidic. Take great care when handling it and wear protective goggles and a mask. Protect your skin with gloves and long sleeves. This is an acid and it will burn.

It is available from Concentrates Organic Ag Specialists, 5505 SE International Way, Milwaukie, OR 503-234-7501.

Marilyn Couture, Editor

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