
Photo by Melinda Nestlerode

University of California Cooperative Extension

Online Edition

Seeds For Thought

Solano County Master Gardeners

Summer 2018 Vol. 13 Issue 3

JAPANESE GARDEN: MY INSPIRATION

Nancy Forrest, U.C. Master Gardener, Solano County

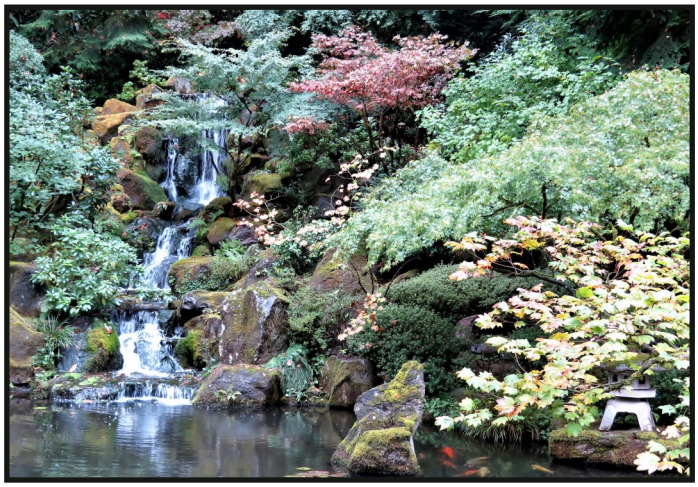

Photo by Melinda Nestlerode

In the fall, I went on a trip to Portland OR, where I saw the sites of the city. One of the excursions I took was to the Japanese Gardens. Portland's Japanese Garden, located in Portland's West Hills, opened in 1963 as a symbol of the friendship between Portland and its first sister city, Sapporo, Japan. The Garden is said to be the most authentic Japanese Garden outside of Japan.

In researching the history of the establishment, I learned that on January 15, 1963, the first Board Meeting of the Japanese Garden Society of Oregon was held, where Phillip Englehart was elected President. During his tenure, Englehart played an "active role" in securing materials for the gardens and traveling to Japan to get authentic pieces. In June 1968, the Iyo Stone, designed by Professor Takuma, was added to the garden to commemorate Englehart's 1963–1964 presidency (https://en.wikipedia.org/wiki/Iyo_Stone). He was the first president of the society, and as it turns out, a distant relative of mine.

This 5.5-acre garden utilizes, five distinct Japanese garden styles—

- **Tea** (*roji*) is a style of Japanese garden associated with the tea ceremony, certain types of restaurants, and occasionally Japanese houses
- **Strolling Pond** (*chisen-kaiyu-shiki*) is a design inspired by the natural landscape in Japan; islands, mountains, water, and plantings of evergreen and deciduous trees
- **Natural** (*shukei-en*) rocks, sand, water, bamboo, trees, flowers and even bridges are placed with precision to create an exceptional sense of organic symmetry
- **Sand and Stone** (*karesansui/zen niwa*) creates a miniature stylized landscape through carefully composed arrangements of rocks, water features, moss, pruned trees and bushes, and uses gravel or sand that is raked to represent ripples in water
- **Flat** (*hira-niwa*) Designs of this type are supposed to represent either a mountain valley, or an extensive moor

The gardens were magnificent; one is overwhelmed by the peace and tranquility. In addition, the views of the city and Mount Hood were breathtaking and inspired me to create a Japanese Garden in my own back yard. This was especially important since I had agreed to be part of the Master Gardener Garden Tour-Solano County in April, 2018.

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(Continued from Page 1— Japanese Garden—My Inspiration)

I tried to incorporate the basic fundamentals of Japanese gardening by creating balance and symmetry. Being a novice, I enlisted the help from a friend, Tina Paris, who is also a Master Gardener. Together we picked an area that was flat, empty and not very attractive looking on the side of the house. I decided to incorporate some of my existing plants, rocks, statues and other miscellaneous items. I scavenged the yard and collected rocks, pieces of slate, a Buddha, a pagoda, two maple trees in pots, an old metal-framed futon (for seating), and, a broken archway to create a bridge.

Now came the hard part, designing it. I wanted to draw people into the seating area under the tree, and to create a river under a bridge. Tina suggested we add some dimension to the area by building it up on either side of the walkway. So, I ordered a couple of yards of dirt to create the mounds, laid out the slate to create a walkway, painted the arch red to create a bridge and started collecting rocks to fill in the river.

Another friend of mine, Teresa Smith, thought that I needed some koi fish, so she painted some on rocks for me, which I added to the faux river bed, along with some cranes. Mind you, this took weeks and lots of hard grunt work. I had no idea how hard it was to create a garden, that's before selecting the plants, which was next on our agenda. After laying the slate I discovered that we needed something to fill in the blanks, other than dirt, so went and got some *Dichondra*, which is a small genus of flowering plants in the morning glory family. We placed a Japanese maple tree and a regular maple tree on either side of the futon, and on the mounds we added some ground cover, plants, and succulents.

I started this project in November 2017, and was able to finish it in time for the Master Gardener Garden Tour in April 2018. I am so proud of the results! I have attached before and after

Before and After Photos of Japanese Garden
Photos by Nancy Forrest

UC MASTER GARDENERS WILL ANSWER QUESTIONS AND PROVIDE INFORMATION THROUGHOUT THE SEASON

FARMERS MARKETS

Vallejo Farmers Market
Saturday's 9:00am to 1:00pm
Year Round (Rain Cancels)
Georgia and Marin Streets

Benicia Farmers Market
Thursday's 4:00 pm to 8:00pm
Through October 25, 2018
End of First Street

FAIRFIELD HOME DEPOT
Every other Saturday
Through October 6, 2018
10:00am to 2:00pm
2121 Cadenasso Drive

ANNOUNCEMENT: The Master Gardeners will no longer be represented at the Vacaville Farmers Market

MASTER GARDENERS AT THE LIBRARY

Fairfield/Cordelia—July 26, 2018; 10:30am to 12:00pm—Kids Crafts!

TIME TO TRY THE TANGY TOMATILLO

Pearl Eddy, U.C. Master Gardener and U.C. Master Food Preserver, Solano County

Tomatillos are odd-looking distant cousins of the tomato. They are native to Mexico and Central America, and certain varieties of this *Physolis ixocarpa* grow wild in fields of corn and beans. This fruit is pronounced to-ma-Tee-yo, and its appearance is quite interesting, as the fruit grows inside a papery husk. In fact, it is also known as a husk tomato, and certain varieties may be called ground cherries. These fruits have a sharp, citrus-like tang and are the primary ingredient in salsa verde (green salsa). There is a purple variety, but most start out green and some ripen to a yellow color with a milder taste. Sizes differ, with some varieties like marbles and others larger than an apricot. They are reasonably nutritious with vitamins C and K, niacin, iron, zinc, selenium and potassium.

Tomatillos are easy to grow and may germinate in only five days in warm soil. The plants are not self-fertile so it is necessary to have at least two plants. They have a sprawling habit, so you might want to use tomato cages to help contain them. They are light feeders and may not need any fertilizer. They do not like soggy, poorly drained soil and might do well in raised beds if your garden has very heavy clay soil. They are moderately drought-tolerant but do best with at least an inch of water each week. Seeds are easy to find in garden supply stores or seed catalogs. Some varieties can be harvested in only 65 days. Their seeds are easy to save as they do not need fermentation as is usually done with regular tomato seeds, and they will keep for several years.

Tomatillos are ready to harvest when the husk has filled out and is beginning to split, but they can be allowed to ripen more on the vine until they begin to yellow. They can be stored with the husks intact either on a counter or, for longer storage, placed in a paper bag in the refrigerator for up to a month. The fruit is coated with a sticky substance, so they should be rinsed before using, after removing the husks. They do not need peeling. I have found them in local grocery stores when they are not in season here.

For preservation, the fruit may be canned or frozen. To freeze, either leave whole or chop and seal in plastic bags or freezer containers. To can in jars, place whole fruit in a large saucepan with enough water to cover them and boil gently until tender, about 5 to 10 minutes. Pack fruit loosely into hot canning jars, leaving ½-inch headspace. Cover with hot cooking liquid, leaving ½-inch headspace. To ensure safe acidity, before filling jars, place two Tbsp. of bottled lemon juice or ½ tsp. citric acid crystals into each quart jar. For pints, include one Tbsp. bottled lemon juice or ¼ tsp. citric acid. (Do not substitute fresh lemon juice as the acid content varies.) Seal and process in a boiling water canner for 40 minutes for pint jars and 45 minutes for quart jars.

If you need a refresher on home canning, refer to the USDA Complete Guide to Home Canning, 2015 edition: http://nchfp.uga.edu/publications/publications_usda.html

The following salsa recipe is good fresh and is safe to be canned, provided you do not alter the proportions of vegetables to acid and tomatillos. The amounts of herbs and salt can be adjusted, and 5% vinegar may be substituted for the bottled lemon juice. Combine all of the following ingredients together: 3 cups chopped tomatillos, 3 cups chopped mild green chilies, 1 chopped jalapeño pepper, ¾ cup chopped onions, 6 cloves finely chopped garlic, 1 cup bottled lemon juice, ½ tsp. ground cumin, 2 tsp. oregano leaves, and 1 tsp. salt (or less). For fresh salsa, place in a jar in the refrigerator.

To can the above salsa, combine all ingredients in a pan, bring to a boil and simmer for 20 minutes, stirring occasionally. Ladle into clean, hot pint jars, leaving 1/2 – inch headspace, seal and process in a boiling water canner for 15 minutes. Makes about 3 pints.

I found many recipes which use tomatillos, including salsas, scrambled eggs, ravioli casserole, fried, chicken stew, salads, jam and chutney. I hope that you will enjoy trying this tangy fruit in many interesting ways. ☼

For very useful information about preservation you can contact the National Center for Home Food Preservation:
http://nchfp.uga.edu/

KEN WILLIAMS SAILS INTO A NEW PHASE OF HIS LIFE

Melinda Nestlerode, U.C. Master Gardener, Solano County

All Photos in this Article Provided by Ken Williams

On June 11, 2018, nearly 100 people gathered to wish Solano Community College (SCC) Horticulture Professor and Master Gardener, Ken Williams, a *bon voyage* as he enters the next chapter of his storied life. Ken began teaching Horticulture classes – his third career – in 1999. For Ken, his retirement is bittersweet. He states that he learned something every day from teaching, and that every student who crossed his path made him a better person. In addition to teaching, Ken has been the faculty administrator/ advisor of the SCC Horticulture Club for most of his 18 1/2 years. The club has been a part of SCC Horticulture for over 30 years, but under Ken's tenure it was reorganized to allow non-students to join as well, swelling the membership to 80 or more members every year.

Ken learned the science of horticulture at SCC himself. He began studying the horticulture curriculum in 1993, and graduated with an Associates of Science degree in Horticulture and an Associates of Arts degree in Business Management in 1995. That lead to a job at Live Oak Landscape – his second career - where Ken worked as an estimator, designer, and basically anything else his talent and education enabled him to do.

Ken was raised in Farmington, New Mexico, which is located approximately forty miles from Four Corners. Four Corners is the location where New Mexico, Colorado, Utah and Arizona meet, and is the only location in the United States were four states meet.

Ken joined the US Navy – his first career - in 1966, a year after the beginning of the Vietnam War. Fourteen of the twenty-seven years he served in the Navy were spent as a student, and subsequent instructor, at the Combat Systems Technical School Command (CSTSC) on Mare Island in Vallejo, CA. At his retirement from the Navy in 1993, Ken was serving as the CSTSC Senior Enlisted Advisor to the Commanding Officer. Ken spent plenty of time on ships during his naval career as well, serving on Guided Missile Cruisers USS Albany (CG10), USS Chicago (CG11), USS Dale (CG19), and the nuclear powered USS California (CGN-36), where he also served as the Senior Enlisted Advisor to the Commanding Officer.

While Ken has successfully navigated three careers (and counting) his life hasn't been all work. Ken met his wife, Pat, on a blind date in Vallejo, which led to a 41 year (and counting) marriage. Their union produced a son, Ryan, a Project Manager for Jensen Landscape; and a daughter, Dr. Victoria Sanchez, who holds an AuD in Audiology and a PhD in Communication Sciences and Disorders, and works as a Research Audiologist for the University of Southern Florida. Ken and Pat also have a granddaughter – adorable four-and-a-half-year-old Adelina Rose, who lives with her mom and dad in Florida.

Ken's life has also been enriched through volunteer activities. He became a Solano County Master Gardener in 1995, and volunteers to teach classes to incoming Master Gardener students every year. Ken has been the chief organizer of the Vallejo Garden Tour Master Gardener Docents, a fundraiser for the Vallejo Naval Museum, for the past 8 years.

Arguably the volunteer activity closest to his heart, however, is the fifteen years he spent as chairman of the Vallejo Police Athletic League German Soccer Exchange Program. In 1998, Ryan joined the program, and Ken traveled to Germany as a parent chaperone. Ken was hooked, signed on as chairman, and spent the following decade and a half raising money, and shepherding five groups of nineteen year old and under boys in each group, to Germany. His nickname was "Grumpy", due primarily to his role in relieving parents of their time in order to raise funds for the trips.

Ken will continue his volunteer work as a Master Gardener, and will still be a familiar face at SCC. While no longer responsible for the Horticulture Club, he is a valued member. He encourages everyone, including Master Gardeners, to take advantage of the classes offered by the Horticulture Department at SCC. He believes that a Horticultural major will not only ensure employment, but that it is the best major offered at SCC to develop life skills. ☼

GOT WEEDS? NUTSEDGE, DANDELION AND CLOVER

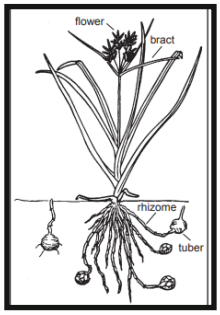
Sherry Richards, U.C. Master Gardener, Solano County

Removing weeds from gardens can be time-consuming, and takes patience and persistence. It is an important practice, however. Among other things, weeds compete with desired plants for water and nutrients.

Different weeds require different management approaches. We recommend following guidelines in the University of California (UC) Integrated Pest Management (IPM) *Pest Notes* for a specific weed. The article "*Got Weeds?*" in our Spring 2018 Seeds for Thought newsletter explains how you can receive assistance identifying weeds. Know the weed's name? Google "*UC Davis*" followed by the weed name to get to the UC IPM Pest Note.

NUTSEDGE

Yellow Nutsedge (*Cyperus esculentus*) and Purple Nutsedge (*C. rotundus*) are the two most common nutsedge species found in California (purple is mostly in Southern California.) They are perennial plants that begin growing in spring primarily by underground tubers that overwintered in the soil. One plant can make 400 new tubers in a year! The leaves and flowers generally die back in the fall. Nutsedge thrives in waterlogged soil and their presence often indicates drainage is poor, irrigation is too frequent, or sprinklers are leaky. To limit tuber production (tubers are key to nutsedge survival) remove small plants frequently and before growing more than 5 to 6 leaves, as they haven't had time to develop tubers. For further reading, Google "*UC Davis Nutsedge*" to locate UC IPM Pest Note #7432, or follow the hyperlink: ipm.ucanr.edu/PMG/PESTNOTES/pn7432.htm



UC IPM Publication 7432

DANDELION

Dandelion is also known as lion's tooth, puffball, blowball and monk's head. Margins of the leaves are deeply serrated and form a typical lion's tooth outline hence the common name "lion's tooth." In French, dent-de-lion means "tooth of the lion." Dandelion was introduced from Europe, where it has been used as an herb and medicinal plant since the time of the Roman Empire. There are about 40 species world-wide but only two are found in California: *Taraxacum officinale* and *T. californicum*, a rare and endangered species found in California mountain meadows. Dandelion are perennial plants growing year-round except in the coldest intermountain areas. They grow best in full sun, moist areas and have a strong deep taproot (commonly 6 to 18 inches below ground) which should be removed with the plant. Root sections (as short as 1 inch) left in the ground can generate new plants. Hand-pulling or hoeing is usually futile unless done repeatedly over a long period of time. Mulching can be very helpful for dandelion control in ornamental landscape areas. Seeds in the characteristic "puffball" can become windborne, traveling for miles, or seeds can be moved by garden equipment. For further reading, Google *"UC Davis Dandelion"* to locate UC IPM Pest Note #7469, or follow the hyperlink: http://ipm.ucanr.edu/PMG/WEEDS/dandelion.html. There is a link to a video on the right side of the pest note "How to Remove Dandelions" with examples of weeding tools.

Photo by Sherry Richards

CLOVER

Clover is a broad term that refers to plants in three genera: *Trifolium*, *Medicago* and *Melilotus*. There are annual and perennial species of clovers. Clovers are sometimes confused with the weed "oxalis". Clovers can be a concern in turfgrass and landscaped areas for at least three reasons. The blooms attract bees during flowering periods, so people or pets playing in areas might be stung; clovers reduce the uniformity of turfgrass because its texture, color and growth rate are different than grasses: and, the mature burs of burclover are a problem for people walking barefoot and when they become attached to clothing or pets.

The perennial white clover, *Trifolium repens*, is most often found as a turfgrass weed, but it and strawberry clover *Trifolium fragiferum*, are sometimes planted in a mixed stand with

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turfgrass to reduce the need for nitrogen fertilizer application. Composting or solarization is not very effective as clovers have very hard heat-tolerant seed coats which also allow the seeds to survive longer in soil. Clovers are usually easy to control in home gardens by hand-culling, cultivation, and application of mulch. For further reading, Google "*UC Davis Clovers"*, to locate the UC IPM Pest Note #7490, or follow the hyperlink http://ipm.ucanr.edu/PMG/WEEDS/strawberry_clover.html, or http://ipm.ucanr.edu/PMG/WEEDS/white_clover.html.

If you would like a short helpful "Quick Tip" guide about managing weeds in your garden, Google "*UC Quick Tips Weeds in Landscapes*", or follow the hyperlink http://ipm.ucanr.edu/QT/landscapeweedscard.html. At the top of the page, you'll find a link "Read More and See Videos on This Topic", which leads to a video on "Weed Control Using Landscape Fabric and Mulch" and links to very detailed weed information. ☼

Before and After Weeding
Photos by Sherry Richards

REFERENCES
- California Master Gardener Handbook, 2nd Edition, Pub 3382, Dennis R. Pittinger, 2015
- UC IMP Pest Note #7432, "Nutsedge" March 2010
- UC IMP Pest Note #7490 "Clovers" October 2007
- UC IMP Pest Note #7468 "Dandelion" January 2010
- UC IPM Pest Note #7441 "Weed Management in Landscapes" March 2007
- UC Quick Tips: "Weeds in Landscapes" October 2017

GLASSY WINGED SHARPSHOOTER; XYLOPHAGOUS LEAFHOPPER

Roy Rogers, U.C. Master Gardener, Solano County

Adult glassy-winged sharpshooters (*Homalodisca coagulata*) are large, almost half an inch (12 mm) in length, dark brown or black, head and back stippled with ivory or yellowish spots, the underside of the abdomen is whitish. They have red-veined but otherwise transparent wings, from which their name is derived. Nymphs are wingless. The smoke-tree sharpshooter *Homalodisca liturata*, is slightly smaller, and has wavy white lines on its head instead of spots.

Common Name: Glassy-winged Sharpshooter, or Xylophagous Leafhopper
Scientific Name: *Homalodisca coagulata*
Division: *Arthropoda*
Class: *Insecta*
Order: *Hemiptera*
Family: *Cicadomorpha*
Subfamily: *Cicadellidae*

A southern Californian's introduction to the glassy-winged sharpshooter is usually initiated by "sharpshooter rain" — tiny droplets of liquid landing on one's head or face while under a sharpshooter-infested tree or arbor. Most people are horrified to note that these droplets are the excretions of a plant feeding insect.

The original distribution area was the southeastern U.S. and northern Mexico (except for very arid areas). The current distribution, in addition to the original area, is now found throughout southern California as far east as San Bernardino County, and in patches as far north as Butte County.

The glassy-winged sharpshooter probably entered California through the accidental introduction of glassy-wing sharpshooter egg masses on nursery stock transported from the southeast.
The insect was first seen in California in 1989 but was mistaken for a native smoke-tree sharpshooter until it was properly identified in 1994. There was a subsequent 1997 outbreak of Pierce's Disease in the Riverside vineyards of the Temecula region attributed to the glassy-winged sharpshooter, establishing it as a dangerous vector of the disease and an exotic pest requiring containment if not eradication.

The glassy-winged sharpshooter has become established because the insect out-competes the native sharpshooters (blue-green, smoke tree, and others). The glassy-winged sharpshooter is a voracious, generalist feeder. It is known to subsist on over 70 species within 35 different plant families and is thought

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capable of further expanding its range of host plants and adapting to new habitats. It is active throughout the year, living in treetops where it consumes 10 times its weight in liquid an hour, feeding with a straw like mouthpart it inserts into the xylem of its host plant.

At the first sign of cold weather, the glassy-winged sharpshooter "drops like a bomb" to overwinter in the leaf litter, where it can survive temperatures as low as 20º F. It reproduces high numbers with two generations born a year. It begins egg laying in late February and continues through May. The first generation matures in May through August and begins the second egg laying from June through September. This generation will produce the next year's offspring. The glassy-winged sharpshooter can fly much further than any other sharp shooters; from 3 to 16 feet and up to .25 miles a day, compared to 3 feet for the smaller blue-green sharpshooter.

There have been some natural enemies observed in California that specifically attack sharpshooters. One, a small egg parasite, *Gonatocerus ashmeadi* (*Hymenoptera: Mymaridae*) attacks the glassy-wing sharpshooter egg masses starting in the spring. Its activity increases through the summer to early October when as much as 80% to 95% of the eggs can be parasitized. Parasitized eggs are evident by the small circular hole left by the emerged parasite at one end of the egg; other related species that have been found in low numbers parasitizing glassy-wing sharpshooter eggs in California include *G. capitatus*, *G. incomptus* and *G. novifasciatus*. At UC Riverside, they observed a predatory wasp *Pseneo kohlii* (*Hymenoptera: Pemphredonidae*), which stings adult sharpshooters to disable them, then transports them to provision a burrow for developing larva.

As a vector of Pierce's Disease, which decimates wine, table grapes, and raisin crops, the glassy-winged sharpshooter poses a significant economic threat to the billion dollar viticulture industry of central California. Pierce's Disease is an incurable disease, choking off a plant's ability to pump water and nutrients from the soil through its tissue (xylem) to its leaves. Diseased vines become nonproductive and usually die within 1-2 years. Although the bacteria that causes Pierce's Disease (*Xylella fastidiosa*) has been in CA for at least 100 years, the glassy-winged sharpshooter is a much more effective transmitter of the bacteria than the native sharpshooters. This is due to the glassy-wing sharpshooter's generalist feeding and breeding habits, greater mobility, and larger mouthparts. The latter enables it to feed on older wood and inject bacteria more deeply into the xylem.

Other sharpshooter species feed more on the edges of vines rather than the base stems, meaning infections are often cut away when the plant is pruned for the winter. But because of the glassy-winged sharpshooter feeding habits, infections are more often undetected until the next growing season, increasing the incidence of vine-to-vine transmission of the disease. Once it has picked up the bacteria, the glassy-winged sharpshooter carries it for life.

Combined with its generalist feeding habits, there is concern that the glassy-winged sharpshooter will vector strains of *X. fastidiosa* that will induce disease in other valuable crops. The glassy-winged sharpshooter is a known vector of additional diseases, such as almond leaf scorch, phony peach disease, alfalfa dwarf, oleander leaf scorch, and citrus variegated chlorosis. And because glassy-winged sharpshooter reproduces twice a year, it has substantially increased the population of insect vectors transmitting *X. fastidiosa* to vulnerable crops.

The exponential spread of Pierce's Disease since 1997 indicates the glassy-winged sharpshooter is a serious threat, having upset the tight control over spread of the disease by other native vectors and already has caused $12-14 million of damage in grapevines in Temecula and threatens the billion dollar wine, raisin, and table grape region in central California. Numerous additional crops are vulnerable as well. There is historical precedence that Pierce's Disease can wipe out entire agricultural industries; it decimated the California grape industry in the 1940's. Acres of cropland remain implantable today due to presence of the bacteria.

The California Department of Food and Agriculture (CDFA) worked in conjunction with the USDA, the County Agricultural Commissioners, the University of California, and the agricultural industry to formulate the following guidelines for

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Grape Vine Infected by Pierce's Disease
Photo by Jack Kelly Clark

eradicating the glassy-winged sharpshooter:

1. Inspect nursery stock moving from infested counties and from other states to slow the spread of the pest
2. Conduct a statewide survey to determine the distribution of the glassy-wing sharpshooter
3. Establish multicounty pest management areas to begin treatment in infested areas or to develop contingency plans to prepare for infestation
4. Conduct an aggressive public outreach to educate growers and others about the seriousness of the problem

CDFA is also supporting greater research efforts to learn more about both the glassy-winged sharpshooter and Pierce's Disease. Most recently and successfully, the University of California, Riverside discovered a predatory wasp, *Gonatocerus triguttatus* that is a natural enemy of the glassy-winged sharpshooter in Mexico and Texas. It parasitizes glassy-wing sharpshooter eggs, laying its eggs inside of them. When the wasps hatch, they eat their way out. This new exotic is being released in limited numbers in Riverside County to combat the glassy-wing sharpshooter. Additional releases are planned, although pesticides continue to be the more common weapon against the glassy-wing sharpshooter, the exotic wasp shows promise for urban areas, organic vineyards, and wildlands, where pesticide use is not feasible.

Other scientists are investigating how to prevent Pierce's Disease, such as by boosting grapevines' levels of essential plant micronutrients or finding the genetic sources of resistance to Pierce's Disease in muscadine grape varieties. However, grape breeding is a slow process and it is estimated that, once found, it will take at least 10 years to successfully transfer this gene or genes of resistance into wine-producing varieties.

In general, the most effective control strategies for diseases that result from insect-vectored pathogens involve selecting or developing pathogen tolerant or resistant cultivars. Because plant breeding is time consuming and expensive, surveying and screening appropriate cultivars for disease tolerance or resistance is a more reasonable first step. However, other methods are available to slow the spread of sharpshooters and *X. fastidiosa* until more effective long term solutions are found. Such strategies may include ensuring that nursery stock is disease-free, using insecticides that interrupt the vector transmission or reduce vector numbers, and using cultural methods such as pruning that excise infected branches before the pathogen spreads throughout the plant.

With regard to ornamental horticulture, an important part of the landscape in the southwest will be lost if oleander leaf scorch continues to spread, and resistant oleander varieties are not found. This disease threatens to wipe out what is arguably the single most important shrub to California's landscape industry. Oleander is frequently overlooked and underappreciated because it is common and requires little care. Oleanders play important roles as ornamentals, windbreaks, borders, and roadside plantings. Oleander is found in 20% of all home gardens in California and is a mainstay of landscapes in shopping centers, parks, and golf courses. The California Department of Transportation maintains oleander in over 2,100 miles of freeway median. Oleander is used similarly in other southwestern states, including Arizona, New Mexico, Nevada and Texas. The California Department of Transportation may suffer an estimated $52 million loss if oleanders in highway plantings are destroyed. In the city of Tustin (Orange County), approximately $200,000 was requisitioned to pay for removal of oleanders maintained on city greenbelts and for replanting other ornamental species. Other diseases induced by *X. fastidiosa* and spread by the glassy-winged sharpshooter in the southeastern United States affect elm, sycamore, oak and maple trees. ☼

Distribution of glassy-winged sharpshooter in California as of June, 2001

http://ipm.ucanr.edu/PMG/PESTNOTES/pn7492.html

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- http://californiaagriculture.ucanr.edu/landingpage.cfm?article=ca.v053n02p22&fulltext=yes
- http://www.plantmanagementnetwork.org/pub/php/research/sharpshooter1/
-http://www.columbia.edu/itc/cerc/danoffburg/invasion_bio/inv_spp_summ/Homalodisca_coagulata.html

TILDEN REGIONAL PARK

Winona Victery, U.C. Master Gardener, Solano County


https://www.ebparks.org/parks/tilden/botanic_garden.htm

Regional Parks Botanic Garden is part of Tilden Regional Park in Berkeley, CA. A few days ago, two friends from my former Agency invited me to meet them there for an early morning walk. The Botanic Garden portion was established in 1940 and is home to many of California's rare and endangered plants. From the brochure I learned that the garden begins its bloom in January and is at its peak flowering period in late spring and summer. The garden is about 10-acres and is planted along paths with bridges over several springs and creeks that run in the canyon of Wildcat Creek. Parking and admission are free but if you join the Friends of the Botanic Garden, you can hear about events and plant sales. Tours are also available with garden staff/docents. Several areas are covered with small bulbs and columbine in bloom. Most are labeled with the exact area the plants originated from. There were more kinds of manzanita than I knew of and many are labeled rare and threatened.

The primary role of the Garden is to create beautiful and diverse landscapes using as much of California flora as possible. It is also a living museum and educational resource for anyone interested in learning about California plant life. It serves as a center for conservation of threatened and endangered plant species, which are propagated and grown in the Garden and, when possible, reintroduced into their native habitats in the wild. Finally, the Garden is a hub for horticultural research. Promising plants previously unknown to horticulture are selected in the wild, propagated in the Garden, and eventually introduced into the nursery trade and thus made available to gardeners throughout the state.

This eminent garden, needs your support. Please join the Friends and keep the Garden blooming for the pleasure and enrichment of every visitor. Two types of trees/shrubs were very tempting for me to purchase: *Fremontodendron californicum* and spicebush (*Lindera benzoin*). One of the caretakers suggested it wasn't the right time of year for planting and the Garden wasn't selling plants that day. His name was Mike and he showed us the above ground nest of the Bushy-tailed woodrat. This was a new event at the garden. He invited Master Gardens to arrange a tour with the park staff and ask that he come along to help. My friend knew him from previous native plant projects.

The park itself is really large with many areas to picnic, hike, and ride a steam train. When driving along Wildcat Canyon, watch for bikers! There are loads of them. Fortunately, in the Garden, we were very much alone with natural beauty all around. ☼

MONTH	PROMINENT PLANTS AT TILDEN REGIONAL PARKS BOTANICAL GARDENS
January	silktassels, manzanitas, manzanitas, and more manzanitas, oso berry, currants
February	barberries, Dutchman's pipe, fuchsia-flowered gooseberry, milkmaids, western leatherwood, bluff wallflower, scoliopus
March	redbud, pink-flowering currant, California poppy, trilliums, shooting stars, wallflowers, fritillaries, fawn lilies, rock cress, pussy willows, trees begin to leaf out
April	California rose-bay or rhododendron, woolly blue curls, ninebark, mountain spiraea, summer holly, main ceanothus groups, Chinese houses, irises, storax, blazing star
May	monkeyflowers, fremontias, carpenteria, tidy tips, bush poppies, brodiaeas, mariposa tulips, cacti, clarkias, mock orange
June	western azalea, Matilija poppy, fireweed, ocean spray, sweetshrub, mariposas, Donner buckwheat, clarkias, columbines
July	red and yellow bush penstemons and other perennial penstemons, scarlet mimulus
August	wild buckwheats, late penstemons, evening primroses, gum plants, scarlet larkspur, Milo Baker's lupine
September	California fuchsias, tarweeds, buckwheats, hibiscus, helianthus, late penstemons
October/ November	fall color of snowberries, berries of the madrone, leaves of cottonwoods, deciduous oaks, dogwoods, hawthorn, willows, vine maple, chaparral currant blooms
December	first manzanita blooms, colorful twigs of deciduous shrubs

SUMMER GARDENING GUIDE

	JULY	AUGUST	SEPTEMBER
PLANTING	◊ For summer-to-fall color, choose ageratum, celosia, coleus, marigolds, and zinnias ◊ Continue planting warm-season vegetables until midmonth: beans, corn, tomatoes ◊ Start perennials from cuttings: dianthus, geraniums, verbena ◊ Sow seeds of columbine, coreopsis, forget-me-nots and foxglove	◊ Start seeds of cool-season crops: broccoli, cabbage, lettuce—to set out in August ◊ Direct-sow edibles: carrots, onions, peas, radishes ◊ Start sowing seeds of cool-weather bedding flowers in flats now: calendula, candytuft, pansies, snapdragons, stock	◊ Seed: try a selection of colorful salad greens, which are easy to grow at home ◊ Time to start thinking of what tree to buy. Consider fall color and shop when the leaves color up ◊ Shop for bulbs now to get the best selection ◊ After midmonth, sow seeds of California poppy and clarkia
MAINTENANCE	◊ Control weeds—pull or hoe them as soon as they appear ◊ Deadhead (remove old flowers) from dahlia, rudbeckia, rose and other perennials ◊ Fruit trees: brace limbs that are sagging with fruit. Clean up any fallen fruit ◊ Continue to irrigate plants, especially when hot and windy weather is forecast	◊ Deep-water trees. Use a soaker hose and place at drip line of tree ◊ Fertilize warm season annuals ◊ Deadhead spent blooms ◊ Refresh hanging baskets with new transplants. Succulents work well ◊ Continue to harvest vegetables for maximum production	◊ Get flowering annuals and perennials as well as fall-planted vegetables off to a strong start by incorporating a high-nitrogen fertilizer into the soil before planting. Fertilize again in 2—4 weeks, or follow label instructions ◊ Later this month is one of the best times to rejuvenate bluegrass, fescue, and rye grass lawns. Rake and reseed. Be sure to irrigate and keep moist
PREVENTION	◊ Budworms—inspect plants for holes in buds and black droppings. Use organic pesticide, such as Bt (*Bacillus thuringiencsis*), to control ◊ Deep water trees. Midsummer heat can cause drought stress. Deep water citrus, fruit and flowering trees once every week or two. Water less thirsty trees one a month ◊ When foliage dries completely, dig up spring-flowering bulbs and tubers. If daffodils and Dutch iris appear crowded, dig them up too. Store bulbs in a cool, dry place until fall planting ◊ Dig and divide overcrowded bearded iris clumps. Share with friends and neighbors	◊ Continue to deep water all plants to avoid sunburn and other damage from hot weather ◊ Continue garden clean up. Remove fallen fruit and garden debris ◊ Inspect plants for signs of spider mites. Apply a blast of water spray to undersides and tops of leaves to dislodge dust mites	◊ Use a selective pre-emergent herbicide on lawn to keep winter weeds under control ◊ Clean up fallen fruit and leaves to keep diseases at bay ◊ Clean up old vegetables to prevent over-wintering of insects and disease 

UC Master Gardener Plant Exchange

September 22, 2018
9am Sharp Until 12 Noon
501 Texas Street, Fairfield

Plant Exchange—Bring a plant, take a plant. We will also have yard sale-type items like garden tools pots, magazines, books, etc., as part of the exchange; bring them if you have them. Please come, even if you have no plant to share.

Information: Jennifer, (707) 389-0645 (texts ok) or jmbaumbach@ucanr.edu

NOTE: The last 30 minutes of the plant exchange will be a "green light" special and you may take unlimited plants.

NO invasive plants, pesticides, herbicides, fungicides , or fertilizers!

***Seeds For Thought* is produced by the Solano County Master Gardeners**

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Have a comment or question about *Seeds For Thought?* Contact us!

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Please put '*Seeds For Thought*' in the email Subject line.

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Seeds For Thought is a quarterly publication of the University of California Master Gardener Program of Solano County and is freely distributed to County residents. It is available through the internet for free download:
http://cesolano.ucdavis.edu/newsletterfiles/newsletter130.htm

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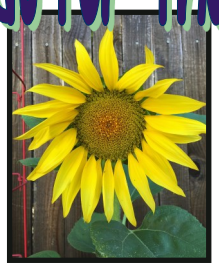

SUMMER 2018