

Roots & Shoots

in this issue >>>

Autumn Pest Alert

MG Update

WWOOFing?

Who let the Frogs Out?

And many more!!

Cover by Kirsten Carter

EDITOR: Vineetha Kartha

ASSOCIATE EDITOR: Meg Paterson

COPY EDITORS: Jean Updike, Karen Sankman

WEBSITE QUESTIONS: Jo Cook, 602.827.8211

Roots & Shoots, published monthly by & for

Maricopa Co. Master Gardeners, is printed under the direction of:

THE UNIVERSITY OF ARIZONA COOPERATIVE EXTENSION
MARICOPA COUNTY OFFICE

4341 E. BROADWAY RD. / PHOENIX, AZ 85040-8807

PHONE 602.827.8200 FAX 602.827.8292

HOURS: 8:00AM-5:00PM WEEKDAYS

www.maricopamastergardener.com

STAFF:

Kelly Young, Assistant Agent, ANR/Urban Horticulture
602.827.8219, kyoung@email.arizona.edu

Rebecca Senior, Assistant in Extension, Ornamental Horticulture
602.827.8276, rsenior@email.arizona.edu

Jo Cook, Program Coordinator
602.827.8211/jocook@email.arizona.edu

Sharon Dewey, Speakers Bureau
602.827.8209/sdewey@email.arizona.edu

Marina Acosta, Program Coordinator, School & Community Gardens
602.827.8221, marinaa@email.arizona.edu

Jesse Davenport, Instructional Specialist, Food Access
602.827.8212

Yvonne Cooper, Departmental Secretary, 602.827.8239

MG CONTACT LIST: For a complete listing, see the organizational chart under MG Business on the MG Central website, www.maricopamastergardener.com/mgcentral

Maricopa County Master Gardeners Advisory Board Standing Committee (A complete list can be found at the end of this document)

Budget & Finance	Linda Thieken	lthieken@cox.net
Data Collection	Larry Miller	millerls@cox.net
Education	Liz Lonetti	liz.lonetti@gmail.com
Fundraising	Debra DeBoor	Debra7@me.com
Marketing	Linda McCabe	lhmccabe@aol.com
Peer Support	Bill McLain	Billmc13@gmail.com
Technology		

OFFICES:

Main Office: 602.827.8200

University of Arizona Cooperative Extension
4341 E Broadway Rd
Phoenix, AZ 85040
Weekdays 8:00 a.m. – 5 p.m.
9:00a.m.-Noon

NORTHEAST VALLEY: 480.312.5810

Via Linda Senior Center
10440 E Via Linda
Scottsdale, AZ 85258-6099
Mon. 9 -12:30 p.m.; Thurs. 9 - 12:30 p.m.

NORTHWEST VALLEY: 623.546.1672

PORA Office
13815 Camino del Sol Blvd
Sun City West, AZ 85375
Week- days



<https://www.facebook.com/MaricopaCountyMasterGardeners>

The University of Arizona is an equal opportunity, affirmative action institution. The University does not discriminate on the basis of race, color, religion, sex, national origin, age, disability, veteran status, or sexual orientation in its programs and activities. Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting Jo Cook, Program Coordinator, at jocook@cals.arizona.edu 602-827-

Autumn Pest Alert

by Kelly Young

September brought heavy rain and cooler temperatures to the parched desert. The succulent growth of our landscape plants and the warm season weeds have provided plenty of food for a diversity of creatures, vertebrate and invertebrate. Most notably, a few of our old and new caterpillar friends showed up for dinner and are causing distress among some of our public clients.

To review: "Caterpillars" are larvae of insects in the order Lepidoptera, which includes moths and butterflies. Winged adults lay eggs on a host plant; the eggs hatch and first instar larvae emerge and begin feeding. The larvae will shed its skin as it passes through five instars. Once they have eaten all that they can, the larvae will sometimes leave the food source and "march" away to find a suitable location to molt again and enter the pupal stage. Although there is not much activity visible externally during pupation, radical transformations are occurring. After some time interval (weeks to months, usually) the adult emerges through one last molt and goes about the business that grown and sexy moths and caterpillars do.

When caterpillars damage garden and landscape plants, management may become necessary. Early detection through rigorous scouting is the best way to successfully manage all of these plant pests. If the egg clusters can be found before they hatch, the leaf can simply be removed and the eggs destroyed, thereby averting feeding damage. The biological toxin *Bacillus thuringiensis* var. *kurstaki* (Bt) can be quite effective in managing caterpillars if applied correctly. Bt denatures at high temperatures, so applications when the mercury rises above 95°F will not work. The larvae have to ingest the toxin, so be sure to apply Bt where it is likely to be encountered and consumed. This may be challenging when it comes to some of the leaf roller or leaf tier caterpillars, such as those that feed on *Bougainvillea* and *Tecoma*.

Let's talk about three common caterpillars and how we can educate the public about them.

Genista Caterpillar on Texas Mountain Laurel

Each spring and fall, the terminal shoots of our Texas mountain laurels (*Sophora secundiflora*) host the genista caterpillar, *Uresiphitarsus versalis*. The genista caterpillars feed during the day among the silken webbing they produce. During ideal conditions, there may be several generations each year. The feeding damage caused by these insects gives a ragged appearance to the plant and can stunt growth. The genista larvae tend to stay close to their food source when they are done feeding, so the pupae can sometimes be found on older leaves on the plant or on structures nearby.

The adult genista moth lays her eggs in clusters on the underside of the leaves at the tips of the branches. Regular scouting for eggs in early spring and late summer is the most effective strategy for managing this pest. Since genista tends to feed during the day and in plain sight, a soapy water solution can be sprayed directly on the caterpillars to kill them on contact. For residual control, Bt can be applied generously to the leaves every few days; or try the newer spinosads, which have longer residual activity and are also approved for use in organic agriculture.



Genista caterpillar on Texas mountain laurel.



Feeding damage caused by *Genista* on terminal shoots of Texas mountain laurel

Sesame Leaf-tier on Tecoma

The sesame leaf tier, *Antigastracatalaunalis*, is a new insect in Arizona. Considered a serious pest in commercial sesame production in Asia, larval *Antigastra* prefer young shoots of various *Tecoma spp.*, such as yellow bells and orange jubilee. As the name "leaf-tier" implies, the caterpillars cover themselves with leaves of their host plant and tie their private feeding chamber closed with silk. This behavior makes it difficult to directly observe the caterpillars feeding and impossible to spray them with insecticidal soap. Damaged leaves and black droppings indicate an infestation. Bt and spinosads are effective against these pests. As with any pesticide, organic or not, always follow the instructions on the label.



Typical symptom and sign of *Antigastra* on yellow bells.

White-lined Sphinx Moth on Everything

At the end of each summer, the larvae of the white-lined sphinx moth, *Hileslineata*, make their appearance. Most people don't notice them until they are in their fifth instar and marching across their yards, driveways and streets in huge numbers. The larvae feed on a diversity of host plants, including some garden varieties like tomatoes, apples and grapes but rarely cause problems to ornamentals. They also feed on several weed species, such as red spiderling, *Boerhaviacoccinea*. In fact, the spiderling in my neighborhood was mowed down in a matter of days by an army of hungry caterpillars. I consider that to be integrated pest management (IPM) at its best! The adult moth is striking, with a wingspan several inches across. Some people call them "hummingbird moths" because they feed on nectar at night. The white-lined sphinx moth is an important pollinator of evening primrose, among other night-blooming plants. Other than the nuisance factor of hundreds of determined insects crawling everywhere for a few days, they are not considered significant pests and do not warrant chemical management.



Adult *Hileslineata*

Irvine, Orange County, CA. 3/17/09. © [Peter J. Bryant](#)



5th instar larva of *Hileslineata* feeding on red spiderling in my yard in Phoenix on September 21, 2014. Photo by K. Young.

MG Update

By Deb Sparrow

A Citrus Dialog: Getting to know our Trees

WHO: Glenn Wright

If you want to know about citrus, dates and olives, University of Arizona Extension Specialist and Professor Glenn Wright is the man to talk to. Dr. Wright teaches citrus and date culture to Master Gardeners across the state. He also teaches Citrus Production for the University of Arizona program located at Arizona Western College in Yuma. Glenn has been with the University of Arizona extension program since 1992. He studied Horticulture and Spanish at Colorado State University and Horticulture at Texas A&M.

Dr. Wright's work also includes citrus rootstock and scion evaluation, research on plant growth regulators, plant nutrition and orchard floor management for citrus and dates. He and Ursula Schuch, also an Extension Specialist and Professor at the University of Arizona, are working on pomegranate trials now.

WHAT: A Citrus Dialog: Getting to know our Trees

A garden is always changing. And our growing conditions change, too. The changing climate and worsening urban heat island challenge us. Luckily, Master Gardeners have a front row seat to research at the University of Arizona. We'll be among the first to know the new citrus varieties recommended for the new drier Phoenix. Yup, new citrus varieties. Our climate presents advantages as well as disadvantages. It's limiting factors may make Citrus Greening, when it comes to Arizona, it's easier to manage than in Florida. Did you know that harvesting citrus in Arizona is different than in many other places? Here it often ripens before it colors up. Why is that? Have you ever wondered what's actually in an orange juice carton? Come to this update and find out.

We'll learn how Glenn monitors his own citrus and how this works for more effective fertilizing. We can move beyond memorizing dates and get to know our trees better. New nuance in fertilization recommendations make more sense in this light. Glenn invites us to bring questions and participate in the discussion. He is prepared for a wide ranging discussion, from climate change to freeze damage, planting practices and the newest news on Citrus Greening and more.

Note - Professor Wright is teaching an MG intern class this month. This update will not be duplicative. This update is an opportunity to go beyond the basics and bring up other questions and see the growing expertise of our own Master Gardeners in the process.

WHEN: October 8th, Wednesday morning, 9:00 am

WHERE: at the extension office, 4341 E. Broadway Rd., Phoenix

The Arizona Herb Association will have a general meeting on October 2nd at 7:00 p.m. Our guest speakers for the evening will be students of the American Herbalism Training Program with Botanica and Southwest Institute of Healing Arts (SWIHA) under the direction of JoAnn Sanchez. Pam Matthews will be sharing information on loving lavender, and Reyna Guitierrez will be sharing her ethnobotanical presentation on the Mayan culture and herbs of approximately the same period. The meeting will be held at the Maricopa County Cooperative Extension building at 4341 E. Broadway Road Phoenix, AZ 85040.

Submitted by Julie DiMaria

Diggings

By Pam Perry

Anticipating October begins in July when we plant corn, cukes, beans and squash and even those fall tomatoes. We reap the benefits, harvesting fresh veggies as temperatures make working among our plants pleasurable. Only *now* will tomatoes begin to set fruit as daytime temperatures remain consistently below 95 degrees and night time temperatures do not dip below 55. Cooler weather from fall through winter slows ripening. Squash and cukes bear happily until frost! Eggplant is equally as productive during the fall months before frost. Harvest basil to preserve as pesto, or use it to flavor butters or sweets. Basil can, for some of us, lose flavor as the temperatures fall.

Anticipating October means we have done soil prep in September... or we have, at least, determined which summer crops are expendable and made room for much anticipated fall crops. We bid good bye to okra, melons, long beans and black-eyed peas to make room for peas, root crops, leafy veggies, and the Brassicas. We begin to harvest sweet potatoes to open up much needed real estate! How wonderful to turn the calendar page to October and start planting in earnest! Fall favorites may include mustards, turnips and collards for some of us, or spinach, kale, chard and fennel, carrots and beets or maybe rutabagas, cabbage and kohlrabi for others. A garden with an Asian spin will include Napa cabbages, daikon radishes, the many varieties of bok- or pak-choy, hon tsai tai. Those dark leaf colors of several lettuce varieties indicate supercharged healthy eating *and* wonderful interesting color schemes in our vegetable patch. Most leafy greens, root crops, and legumes are content with the nutrients available in a well-amended garden, but broccolis, cauliflowers, cabbages, and brocoverde are all heavy feeders, requiring additional fertilizer during the growing season as well as prior to seeding or right after transplanting to get a great start on life. A good balanced fertilizer -- one with the numbers on the label being even, such as 10-10-10 or 14-14-14 -- is a good choice. Using either a granular form dug into the soil prior to planting or a water soluble type at the time of planting and again in mid-January as the season warms up will go a long way to ensure a productive harvest.

Fungi are part of the process of decomposition of organic materials in soil: the compost we introduce, roots, or parts of plants that remain in the soil. Fungi are instrumental in making nutrients available to plants. They do not signify something awful in our soils; just that there is a viable community of microorganisms living there. All the rain in this monsoon initiated what passes for sexual activity for fungi. Mushrooms are the visible, sexually active, or 'fruiting body' stage of the fungi that exist in our soils. Fungi reproduce through spores, not seeds. Spores are carried in the gills of the mushrooms. They finish the reproductive cycle and do not appear again until conditions are right. Unless one is truly expert enough to know what is both edible and tasty, do not harvest them to add to your meals! Do not let pets consume them.

Along the trail, volunteers have kept up with weeding and planted a few plants, too. We located a butterfly chrysalis on one of the desert milkweeds one morning. Lots of volunteer seedlings emerge with rains; we found among the less desirable weeds some chocolate flowers this season. We are collecting seed from summer desert bloomers and generally keeping the garden tended. Burrowing rodents not only necessitated repairs to drip lines in the veggies, but they totally consumed the roots and crown of the artichoke and a gourd plant. The remains are gone, the irrigation repaired and this year I will plant artichokes from seed, directly into the garden. The Cardoon was quite successful and is a very close relative. Pea trellis is up and ready to plant, and first crops of green onions and carrots are planted. One fall we planted no less than 61 varieties of fall vegetables in the Demo garden, and there were many more we did not have room for. What new varieties are you trying? Anticipate October with joy!

Design Charrette

Beth Kirkpatrick, Sue Lanker, Suellen Seifert, and Matt Murman

Design Charrettes are scheduled for October 11 and November 1. The October 11 Charrette is at the garden of Melinda Louise, who lives in Tempe near the crossroads of McClintock and Apache. Sue Hakala, who lives in Mesa near the 101 and Guadalupe, is hosting a Charrette on November 1. Both of these Charrettes are on Saturdays and begin at 9:00 am, followed by a potluck lunch. You will be helping a fellow Master Gardener, learning new design ideas and earning three volunteer or education hours. No experience is required; just bring paper, pencil, a dish to pass and your imagination.

This is what Melinda has to say about her garden:

"This 1955-era house has been aptly named "The House of a Thousand Projects" since being purchased about six years ago. We've got a good start on the back yard, including our vegetable garden and compost. We're looking for ideas for the front of the house, where we hope to incorporate some berms for passive water harvesting and desert-adapted plants and shrubs. We would also appreciate input for the narrow area on the east side of the house."

This is what Sue has to say about her garden:

"I need some street appeal for our south-facing gravel-filled yard. There is a special challenge: I want plants that don't need to be watered after they are established, except very occasionally in the summer. Also, I can't bend like I used to so I need plants that won't require a lot of fuss.

My backyard was on the first RGRP tour and has matured since then and could use some sprucing up. Also, we lost our lone mesquite tree in the backyard in a microburst, and as a consequence we lost all of our shade, too. Suggestions on how to deal with this and what tree would best replace it are also needed. We would appreciate all input."

If you would like to participate in either of these Charrettes, please e-mail designcharrette@hotmail.com or call Beth Kirkpatrick at 480-275-4833.

What is a Design Charrette...And How Can I Participate?

A Design Charrette is a forum hosted by a Master Gardener to develop design ideas for a chosen landscape. As a Master Gardener, you can host a Charrette for your own property. This is a 3-hour event that includes a tour of the grounds, potluck and design discussion. The number of attendees is usually limited to 12.

HOSTS: Receive the benefit of free design ideas. As the host, you will provide a tour of your property, which includes plant identification and information, researched or experimental. The host provides a letter of intent for the property that prioritizes goals, needs and problems to be solved. A simple drawing of the property must also be provided to the group to use in their landscape design. Lastly, the host provides cups, plates, utensils, napkins and water. Guests will bring the food.

GUESTS: No formal landscape design education is required. But we do require that you bring your imagination! Come; enjoy the garden tour, plant identification and the opportunity to learn from fellow Master Gardeners as we share our design ideas. Each guest will need to bring a potluck dish. Design Charrettes are held on Saturday mornings, and the host and Design Charrette team determines the date.

Garden Pictures: From Russia with Love

By Meg Patterson

It's August, and it is a beautiful day in Pushkin, Russia, despite tensions elsewhere in the country and the world. The temperature is in the 80's, and it is slightly humid. My brother and I are in the gardens of the Catherine Palace, named for Catherine, Empress and wife of Peter the Great, of the Romanov dynasty of Russia. Originally built by Catherine and then rebuilt in a baroque style by her daughter Elizabeth during the 1700's, the palace and gardens were used in the summers by the Romanovs until the line ended with the assassination of Nicholas and his family in 1918. The property was occupied and then destroyed by Hitler's army during the Siege of Leningrad but was rebuilt again in the late 1940's. Exterior palace details, the interior and the gardens have been painstakingly restored as public policy and money permits. Salvaged woodwork, tiles, statuary, art, and so on, have been used to recreate the look of the 1700's. The restoration continues.



The garden has two elements, a formal French garden behind the palace and a less formal English Garden surrounding it. The French Garden includes two large bathhouses, one used by the royal family and one by the staff, a moated Hermitage (pavilion for meditation), also used for teas and dinners, and many statues. The plantings are annuals, roses and artfully sculpted trees and hedges. (Picture set 1) To one side of the French Garden is the Cameron Gallery (used for entertainment) (picture set 2) which also overlooks the English Garden containing the Great Lake, the domed Blue Grotto pavilion, stone bridges and monuments, small canals, and walking, riding and carriage paths. Grass lawns and small forests characterize this area. Unique chevron-painted sheds contain tools used by the many gardeners. A sweet Russian tradition brings brides and grooms to famous locations such as this garden for pictures after their weddings.

It will probably surprise you to learn that, despite the bitter winters in northwestern Russia, the garden trees and plantings resemble those found in much of the U.S. Particularly prevalent in the English Garden are birch and linden trees—and this is true throughout much of western Russia.

The tradition of leaving the city in the summer for the country continues in Russia today due to the lack of air conditioning, although the average person has a "dacha" which looks more like a cabin or ramshackle shed. Average people grow vegetable gardens, relax in their "banyas" (saunas) and swim in the local lakes and rivers near their summer homes. It was reported that the Romanovs exercised and meditated in their opulent gardens daily. Today they are a tourist attraction and along with the Palace are a symbol of Russia's history and wealth. To gardeners, they are a reminder of the universal appeal of the outdoors, water and natural beauty.

Fodor's Travel, Moscow and St. Petersburg, 2014.

Kudos to Master Gardener Ambassador Paula P.

Recently, a request was made to Paula to add information for a volunteer opportunity. Here is what the requestor wrote back:

Hi Jo, Just wanted to let you know I am grateful for all Paula's efforts. A request I made last evening is already out on SUG this morning. Bravo Paula!

Great going Paula!

Have you Considered WWOOFing?

By Sheryl Stradling

An old friend stopped me in the cafeteria last week. She surprised me by grabbing my arm excitedly and announcing, "Jim and I are quitting our jobs! We're going WWOOFing!" "Oh, that's great, Amy," I said, somewhat surprised. "Roofing? You mean you're starting a roofing business?"

"No, no!" she exclaimed. "W-W-O-O-F –i n-g – we're going to work on an organic farm."

WWOOF stands for Worldwide Opportunities on Organic Farms. It's an international organization that links visitors with organic farms, promotes educational exchange, and builds a global community conscious of ecological farming methods. Originally started in the United Kingdom by Sue Coppard in 1971, it was called "Working Weekends on Organic Farms." Its goal was to provide London urbanites an opportunity to participate in the organic movement in the countryside. It has since expanded and now operates in over 100 countries. Each country operates its own program. The federation of WWOOF Organizations was founded in 2013 to unite, protect and promote the movement worldwide. WWOOF-USA is a federation member.

WOOFers spend at least a half day on a farm doing whatever chores are needed by the host. In turn, the host provides room and board and determines the length of stay according to their needs. There is no currency exchange.

WWOOF is a membership organization for both hosts and guests. Hosts can sign up on the organization's website for a contribution of \$5.00 to \$50.00 for one year. They provide the specifics about their farm, their needs, and what they expect from guests. They are encouraged to clarify expectations with a phone conversation with potential guests. Some farms welcome children and pets. The advanced search directory can be used to find these farms. WWOOF-USA hosts are listed in a directory of over 1,900 organic farms. Not all are USDA certified. Any farm or community garden project using organic methods can join.

Guests, or WWOOFers, can join for a year for the cost of \$40.00 for online access and \$50.00 for a hard copy directory (updated yearly). Potential guests must be 18 or over to join (under 18 must have permission and be accompanied by a legal guardian for visits). Guests then have access to the host farm directory, maps, and can contact potential hosts or communicate in online forums to get additional details. International travel and visas for WWOOFers are their own responsibility.

For both WWOOF USA guests and hosts, there is a preliminary on-line safety/security screening form with four questions related to conviction of a felony, sexual or drug offense, arrest/conviction for violence or property destruction. Once this is satisfactorily completed, registration may be continued with personal information with the caveat that hosts may request identification to match the guest's profile. Potential hosts are requested to input name and accurate location information so the property can be added to the WWOOF map.

Without becoming a member, you can browse the USA online map and see areas that have organic farms but cannot obtain details. Arizona currently has 41 listed farms. They are located all over the state, primarily in the Tucson, Phoenix and Flagstaff areas.

So why take a WWOOFing "vacation? Guests say it's a great way to meet people, see the country or world, learn about sustainable agriculture, exchange information, support the organic movement, enjoy a healthy, active lifestyle, and absorb culture. Why *not* consider WWOOFing?

More information: international - <http://www.woof.net/> United States - <https://woofusa.org/>

Traveling Gardener

By Linda Larson

"Destination: The Oregon Garden"

Some ideas take a long time to grow, and *The Oregon Garden* is just such an idea. The Oregon Association of Nurseries (OAN) had long wanted (since 1940) a demonstration garden to highlight the incredible variety of plants grown in the area. Since 1968, the citizens of Oregon have been leaders in protecting the climate, air, water, and landscape. In the early 1980's when the city of Silverton, Oregon (an hour south of Portland) needed to manage treatment of its waste water and maintain wetlands for wildlife, naturally, all kinds of ideas began to sprout.



A bold idea was proposed to combine a destination botanical garden with an integrated waste water treatment system, wildlife wetlands, and forestry education center. The resulting garden is an example of collaborative solutions for complex problems we face in managing environmental issues. Visiting the garden keeps citizens engaged in the realities of working together to protect our natural resources.



Water is used in abundance throughout this garden; fountains, rills, and pools are placed beautifully in the design. In addition, such a garden requires a good water supply to keep the plants vibrant. There is a series of descending pools built to cool the treated waste water. The water provides habitat for wildlife, water for irrigation of the garden, and gravity fed water features. The collaboration between the city and the OAN members has engaged engineers, erosion specialists, wildlife biologists, garden professionals and innovative designers to solve these serious problems, resulting in a world class garden destination.



This is a beautiful and diverse garden using the best sustainable practices of gardening today. Designed to inspire the home gardener, the 80-acre site includes 20 types of gardens for visitors to experience. The Silverton Market Garden showcases many of the 147 agriculture products grown in Oregon, with grapes, berries, stone fruits, hops, and vegetables thriving to the point of producing 7000 pounds of produce donated to local food banks.

The children's garden entrance is highlighted with sculpted topiaries of flowers and hearts. Mr. and Mrs. Pots and their son Clay invite visiting children to explore the Hobbit tunnel, a dinosaur dig, and a houseful of potted furniture.



The conifer display garden was built in cooperation with the Western Region of the American Conifer Society. The garden is a scientific reference site for conifer plant enthusiasts, but for home gardeners it is a magical display of the enormous variety of conifers available

Traveling Gardener *continued...*

today. Sweeping, soaring, twisting, evergreen trees and shrubs come in all shades of green with needles short and soft to needles lacy and long. The possibilities for design seem unlimited.

The Pet Friendly Garden illustrates plants that are safe and sturdy enough for home gardeners to use in their own pet sanctuary. The Water Garden features a creature from the deep sculpted in succulents.

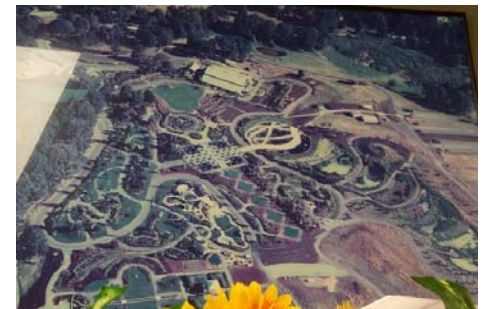
The Axis Garden is a grand sweep of beauty, taking full advantage of the sloping site. Symmetrical pathways define diamond sections of turf and colorful flower beds leading down to the rose petal fountain and a tall stainless steel sculpture of lupine blooms.

The garden encourages learning about plants and our environment in so many ways. The 15-acre Rediscovery Forest is a working forest of Douglas Fir trees. The 25-acre Oregon White Oak grove showcases the beauty of trees. Drought tolerant plants illustrate that compromises due to limited water sources need not mean lack of gardens.

Forestry is a significant focus for the Northwest, with management of tree products, waste, and forestry health a crucial industry. The mission of the garden is "to welcome and inspire all visitors with an appreciation for the extraordinary ecology of the Pacific Northwest, and to provide a meaningful, educational experience for gardeners of all skill levels and ages." The garden partners with industry groups to provide a program of outdoor and environmental lessons in science for over 50,000 fifth grade children each year. The Rediscovery Forest Program also offers programs and field trips for students of all ages to understand the scientific and commercial importance of forests.

When I think of Oregon I think of pine trees, roses, stone fruits, grapes, and flowers of all kinds. This is especially true in the Willamette Valley of Oregon. Since the mid 1800's this area has been a magnet for horticulture study and development. According to the OAN website, early settlers from Iowa arrived with fruit trees, young plants and seeds. Anyone who visits today will leave inspired and informed about the possibilities of their own gardens. A greater awareness of the variety and importance of Oregon's rich production of plants and trees will result from wandering through this incredible garden. The entire world benefits from the plants and trees that grow so well here.

Gardens require thoughtful design, careful tending, and time to become something wonderful. *The Oregon Garden* has truly achieved all of this. The garden opened in 2001, which is young as public gardens go, but the idea proposed in 1940 of a demonstration garden to showcase the diversity of plants and trees growing in the Northwest has been realized and will make its mark in this century. Now in 2014, there is so much to enjoy. Some ideas just take a long time to flower. Visit this garden, and you'll see that it was worth the wait.



Images courtesy Rich Larson

Learn. Grow. Eat - Peas

by Pam Perry

Vertical vegetable plants are always welcome in a garden; the harvest is so accessible! Peas certainly fit the bill. A fence on the north or west side of any bed where they can get 6-8 hours of sun minimum all winter will ensure you get a great crop and not shade other crops. Peas are a vining, twining plant and appreciate something to support them. Fencing is classic but 4 or 5 foot tall branches pruned from trees or shrubs stuck deeply into the ground work, too. Branches should be pretty 'brushy' to offer support. We use sidewalk rebar and Sheppard's crooks as our support system at the demo garden. This offers flexibility; they can be easily repositioned as needed throughout the garden.

Peas grow well in regular vegetable garden soil. As legumes, planting them to follow melons, squash, tomatoes, okra or other fruiting veggies helps maintain soil fertility. Some folks soak the seed briefly to insure quick germination. *In the low desert we plant peas from the end of September thru the end of February.* Otherwise, follow planting instructions on the packet. An early, fall planted crop of a 'short days to maturity' variety will continue to bear until temperatures in April reach into the mid 80's at which point the plants become stressed, magnets for spring aphids and powdery mildew, and production falls off. Several months of harvest is great payback for making the effort to get them in before mid October! Protecting the plants from very hard freezes will keep your harvest from being interrupted.

Be sure to thin according to packet directions. If you thin when plants are 3-5 inches tall by simply cutting any extra ones away, you can add those shoots to an evening's salad! And those shoots taste exactly like --- you guessed it - peas! You can gently harvest pea flowers and 'pea tendrils', a leaf or two and the adjacent tendril – and add them to salads, soups and stir fries as well. The 'tendril' is the little string that curls around the supports and holds the plant to the fence. Birds think pea leaves and tendrils are just the ticket, too. I protect the vines as they grow up my fence with nylon net to keep birds from denuding the plants of leaves, flowers and finally pods!

It takes pounds of pods to get a meal of shelled peas; pounds! So much easier to buy bags already picked and shelled from a freezer case at the market! However, if you have room for a few they make great snacking as you work in the garden. These, sometimes called English, garden, or shelling varieties, have a fibrous pod that is not eaten. All those pods make great green matter for the compost. The tender peas in the pod *taste of spring!* One needs many plants to generate enough pods to make a meal of the peas....I plant sugar snap and snow peas. Sugar snap peas differ in that the pods are tender and can be eaten along with the peas inside. The pods grow 3-4 inches long and are best harvested when the peas have begun to plump up. Snow peas also have tender, edible pods which grow to 4-5 inches long. They can be harvested *long and flat*, or as the peas just begin to swell the pod. A few plants of either type can offer a harvest of several handfuls at a time; enough to add to a stir fry, salad or pop into a soup at the last minute.

A commonality of all three types is that once the peas have begun to fill the pod tightly and the color of the pod begins to lose that very fresh green color, the peas become bitter. The pods become from all types become fibrous and tough. One ends up with a mouthful of green strings...and bad tasting peas. To maintain production do not allow the pods to remain on the plants that long. Harvest frequently; get them young, sweet, and tender! Alternatively, the peas can be allowed to ripen completely. All the sugars become a starch. Shelled and dried they will they will store for ages and can be cooked into pea soup or 'pease porridge'. ***If*** you are growing ***a*** single, non-hybrid heirloom variety, these dry peas could be seed for next year. Label and store them accordingly.

Do not confuse these vegetable, edible peas with *Lathyrus odoratus* or sweet peas, the flowering plant which are poisonous, but make great cut flowers and are usually quite sweetly scented... and deserve a place in the fall flower patch.

A recipe using Peas can be found on Page 11

Wasp

By Sue Hakala

Wasps, related to bees and ants, have a stinger that can be used repeatedly. A new colony begins with nest building. The wasp colony foundress collects fibers from dry grasses, old fences, boards, or other wood products, chewing them into a paper-like pulp with her saliva. She transports them to her selected nest site. Sites are protected from the elements, especially rain, which will dissolve the "paper." She then attaches a small dab of pulp with her saliva, pulling it out into a thin strand. This strand holds the weight of the whole nest. The first cell is constructed into a cone shape. A small oval egg is cemented into the cell with her saliva. Sperm stored within the female from mating last fall is added to each egg as it is laid. Then other cells are added, eventually flattening out into a six-sided shape. Nests can have as many as 250 cells.

Wasp eggs hatch in about two weeks. They remain in the larva stage for two more weeks being fed pre-chewed nectar and meat in the form of other insects and their larva, beetle grubs, butterflies and their caterpillars. Mom, in some species, taps on the cell tops to announce that the meal is here. She doesn't sting to kill prey, but instead she bites them. As the larvae grow, the cells are enlarged to accommodate them. After their two-week feast, each larva then lines its cell with a silk thread and spins a cover over it. Behind closed doors, as it were, the larva pupates and emerges in three weeks as a female. To watch a wasp building her nest and feeding larvae, go to Youtube.com and search for "Paper wasp building nest and feeding larvae." Mom's tired by now with all this activity and busies herself just laying eggs; she's become a queen. Her daughters become the workers who build, enlarge and repair the cells, defend the nest, feed the larva, and tend to her. If one decides to lay her own eggs, Mom will eat the eggs, tussle with her, and probably eat her too. In late summer, the queen lays unfertilized eggs that become the males. The males are a lazy lot, who sit on the nest, groom themselves, and are fed. They have no stinger. Other special female eggs also are laid. These are destined to be future queens. The queen then dies, her mission successfully completed. After her death, the males fly off in search of females to fertilize, some of whom may be their sisters. After mating, the male dies of predation or old age. The workers left at the nest will soon die too. Rains and harsh weather will dissolve the nest. Fertilized females/future queens will spend the winter hibernating together.

Wasp Air-conditioning: If the internal temperature of the nest gets too hot, (which would jeopardize the eggs) the wasps cool it off by bringing tiny water droplets back to the nest, placing them in the empty cells and around the outside of the nest. Workers, and the males if present, then fan the nest with their wings providing evaporative cooling. Wasps kill and eat a lot of bugs, and they are pollinators. If a nest is in an out-of-the-way place, be glad you have this free insect control in your yard and leave it alone. If a wasp nest is in a place near where you walk, standing as far away as you can, use a broom to remove the nest. Don't touch the nest at this point, as you may be face-to-face with a pretty angry mama. You can also blast it off with a hose. It's best to do removal activities when the nest is small.

RECIPE: PEAS submitted by Pam Perry

BASIC PEAS: Bring 1-2 quarts of salted water to a boil. Add peas cook 1-2 minutes; longer if frozen; drain toss with butter, herb butters, sautéed mushrooms, and/or green onions, toasted pine nuts, sesame seeds... and serve. Add left-overs to any salad or slaw!

STIR FRIED SNOW PEAS - America's Test Kitchen recipe (serves 4)

Mix ¼ C. chicken broth, ¼ t. salt, Ground black pepper together, and set aside.

Heat over high heat 1T peanut oil add 1 lb snow peas, about 4 cups; tips, tails, and strings removed, Stir frequently until peas are bright green. Push peas to sides of pan, add 2 medium cloves garlic minced or pressed into paste, ½ t minced fresh ginger, and 1 t oil, mash and stir for 30 seconds.

Turn off heat, pour broth mixture over peas and stir to coat, serve immediately

Chandler's Oasis in the Sonoran Desert

By Anna Dalhaimer Bartkowski

The first time I noticed Veterans Oasis Park, the clean lines of the buildings and the surrounding land invited me to investigate. Located at 4050 E. Chandler Heights Road at the intersection of Chandler Heights and Lindsey Rd, it is only 2 miles from my house. I had driven past numerous times and was curious. What did the park have to offer? How was it designed? What vegetation was growing? Who used it? As a Master Gardener intern, new landscape plans intrigue me. I love the idea of a park established as an oasis in the desert and wanted to see how they did it. My dream has been to create an oasis in my own backyard with sustainable, native plants. When I moved here I thought it would take a year to make that transition, but now I realize it is much more like a ten year plan. Perhaps I would be inspired to incorporate some new ideas into my own backyard. The 113 acre park has over 4 ½ miles of walking trails, and they welcome leashed dogs. This was ideal for me as I love to visit new locales with my two pals, Huck and Hermione. What I found is that the City of Chandler has pulled together an exquisite mix of native plants and wildlife to co-exist in an ecological paradise. The plants and wildlife relax the senses, and you are quickly immersed into this gem of a retreat in the Sonoran desert. Jackrabbits are abundant as are prickly pears, mesquite trees, desert grasses, ramadas, wetlands and equestrian trails. Every curve leads you through a diverse native landscape which draws its water from an extensive water reclamation system.



The park itself is remarkable and at the center of this oasis is the community fishing lake. All you need is a valid fishing license, and you can cast to your heart's delight. The lake is stocked with catfish, trout, bass, and Amur. Every time I visited, a number of anglers had lines in the water and were content to absorb the calming atmosphere of the surrounding oasis. The San Tan Mountains add a dramatic backdrop to the serenity of the lake. Adjacent to the park is the Environmental Education Center, which provides classes on a multitude of topics. Classes on the latest calendar range from Bugology to Meet the Creature to Fishing, but the center goes well beyond the current schedule. Staff work with local schools to develop nature-oriented programs and activities that complement schools' curricula. Another highlight of the trails is the butterfly and hummingbird habitat. The park is not just home to fish, insects and birds. There is an environment created exclusively as a desert tortoise habitat. When I visited, I saw one tortoise eating his dinner.

And, as if that wasn't enough, the City of Chandler has more uses for this park; as an outdoor amphitheatre, a unique, learning-oriented playground, interpretive signs and exhibits including a Solar System Way, a true Veterans Memorial, a police substation, a human sundial and an Owl's Nest Store. Ramadas and rooms can be reserved for a small fee so the door is open for you to come here and be inspired. Especially with cooler weather coming, even if you have to drive to get here, this park is well worth the visit. Bring your fishing pole, your camera or your favorite four legged friends and breathe in the wonder of the Sonoran desert. Or, just settle into the serenity and dream of the oasis you will build in your own backyard.

Sources:

Photographs taken by Anna Dalhaimer Bartkowski from August 30 through September 6, 2014.

http://www.azgfd.gov/h_f/urban_lake_veterans_oasis.shtml

<http://www.chandleraz.gov/default.aspx?pageid=682>

http://www.chandleraz.gov/content/vop_equestrian_trails.pdf

Who let the Frogs Out

by Pond Gnome

If you have a living water feature, you may be hearing, and even seeing, an increase in frog and/or toad activity. We're taking this as a good sign that the weather is starting to change to Fall! And we'll probably be seeing egg sacks and tadpoles a little later on, as well.

We are lucky enough to have endangered Lowland Leopard Frogs on our property, which migrated there during a particularly heavy monsoon season about 14 years ago from the Agua Fria River bottom. Because they're endangered, it is illegal to transport them without a special permit from the State. This species has declined in abundance and distribution across its range in the United States, so Arizona Game & Fish keeps a tight rein on it. They make a lovely purring-type sound and are actually fairly shy about showing themselves.

What most people have in and around their yards are Sonoran Desert Toads, which are the largest western species of toad and considered to be one of the more aquatic of the southwestern toads. They dig into the dirt and hibernate during the dry times to avoid desiccation, and then come hopping out during wet and humid seasons. Desert toads make a distinctive sound, like a child's short screech, and some people find this rather annoying. If you're one of them, don't sweat it, the toad season doesn't last long, and they'll be dug back into their hidey holes as soon as it dries out again.

One amphibian you DO NOT want around is the Bull Frog. They eat native wildlife species like birds, small mammals, dragonflies, butterflies, lizards, frogs, turtles, and fish – pretty much anything smaller than them that they can catch. We've even seen a photo of one with a bat wing sticking out of its mouth. They are prolific reproducers and considered highly invasive and can travel 8 miles in one season to seek a new habitat. Their sound is VERY loud and annoying, and even your neighbors will know you have one around. If so, get rid of it – permanently. And if you're the adventurous type, this is the species used for culinary frogs legs.

For more information on various amphibians in Arizona, visit www.azgfd.gov.

Butterfly, Hummingbird & Bee-Friendly Plant Sale

Saturday, October 4

9 a.m. to 4 p.m.

Butterfly Wonderland

9500 E. Via de Ventura

Scottsdale, AZ 85256

Are you ready to attract butterflies, hummingbirds and bees to your yard? Stop by the Butterfly Wonderland Plant Sale 9 a.m. to 4 p.m. Saturday, October 4, where you will find an assortment of butterfly, hummingbird and bee-friendly plants.

Check out our variety of educational booths that will be present such as Hummingbird Society, Southwest Monarch Study and AZ Queen Bee. Visit with AZ Queen Bee Emily Brown who will give suggestions on bee-friendly plants that will support local bee populations. Milkweed seeds will be available to purchase as well. Plant prices range from \$6.95 to \$19.95. Proceeds will support the Butterfly Wonderland Foundation that helps children from low-income Title One schools attend field trips that they otherwise would not be able to attend. CASH OR CHECK ONLY (Checks made out to Butterfly Wonderland Foundation).

For more information, contact Adriane Grimaldi at [480\) 800-3000, ext. 207](tel:480-800-3000).