

Yavapai Gardens

Master Gardener Newsletter

Feb-March 2019



Dying to Garden? Plant Pisum sativum.

(Originally printed in the Feb 2008 Yavapai Gardens.)

by Nora Graf



Gosh, it's February already. My vacation's over and it's time to hit the books and find something to write about. How about Rutabagas — well, maybe not. Lima beans— NO WAY!!! Melons, lovely, but too early for them. How about Peas—PER- FECT! Peas are cool-weather vegetables. The first hot day of the year and they shrivel up faster than the speed of light. So, now's the time.

Peas are annual plants and, while we call and treat them as a vegetable, they are really a fruit. Don't get your knickers in an uproar, the fruit—vegetable argument is so over! Just enjoy them.

Peas are legumes; nitrogen-fixing plants distantly related to beans, peanuts and mesquite trees. Under the right conditions, the roots form nodules that can fix free nitrogen. So, when the plant fries in the summer sun you will have helped improve your soil. You can start peas inside early in the year and get them out as soon as it gets above freezing. The best time, though, might be to plant them in the fall. They will grow as long as the weather is warm and then hold their own through the winter. When the temperatures warm up in the spring, they are ready to go. There are a variety of different peas you can grow—shelling peas, fresh peas, pea pods, French baby peas and sweet peas.

Let's start with a little history. Peas are thought to have originated in Middle Asia and the central plateau of Ethiopia. By 3000 BC the seeds had spread across central Europe. The Greeks and Romans were avid pea growers. At one point growing some 37 different varieties. The Italians are the creators of the pea known as the "petits pois" (little pea). At one time peas were very expensive and considered a great delicacy. It was the dried pea that was the most common type at first, being used in stews and soups. Fresh peas didn't become popular until the 19th century when improved varieties became available. The very first sweet-tasting pea was developed by an 18th-century plant breeder named Thomas Edward Knight of England. Most modern varieties trace back to Knight's selection and the reason why it was "English peas" that most people ate until the 20th century. (On average everyone in Britain eats nearly 9,000 peas per year.)

One last tidbit of history—the "pea-soup fogs" of England were called that because of the density and color of the fog, really smog

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from coal burning fires. Well, I lied—here are more tidbits: The proper etiquette for pea eating is to smash them with the back of the fork first, not chase them around the plate trying to stab them. In 1969 the Birds Eye frozen pea commercial was the first TV ad to be broadcast in color.



There is a discussion on whether inoculating your seeds before planting actually improves the plants. (An inoculator is a symbiotic rhizobial bacteria that forms a mutually beneficial relationship with the plant, in this case fixing nitrogen in the roots.) Anyway, some say yes, some say no. If you have a good rich soil it's probably not necessary but feel free to give it a try. Pea inoculator is available through catalogs. The benefit is that when you

plow the pea plants back into the soil the nitrogen is available for the next crop of plants.

You can plant peas in soil temperatures as low as 65°F if the soil isn't wet. I'd suggest planting them late summer into the fall, but early spring is fine. Peas will do well until it heats up, which seems to be happening way too early lately. Plant peas 1 to 1-1/2 inches deep, one inch apart. Put rows 18 to 20 inches apart. Most peas are climbers and would benefit from trellising, although there are bush varieties. They prefer even moisture, so mulching will make them happy.

Peas are generally segregated into three types: Garden, Sugar Snap and Snow Peas. Sweet peas are grown for the flowers and are in a completely different genus than edible peas but you should plant some of those anyway. Look for varieties that are selected for fragrance—that's why they call them sweet peas!

Garden peas are picked when the pods are filled and round. The peas should be slightly immature for the best eating. Past their prime they become hard and starchy. Sugar Snaps are best when the pods first start to fatten but before the seed enlarges. The pods should "snap" when broken and you can eat them pod and all. Some varieties have strings along the seams that should be removed. If you leave the pods too long you can still use them as shelled peas but discard the pods, as they get fibrous as they age.

Snow Peas are grown to eat pod and all when the peas are small—not much larger than a BB. The pods will be flat with just little bumps where the peas are. If they get away from you, they can be shelled and you can still eat the peas. The pods have a high sugar count, which is what makes them so tasty. Snow peas also hold up well in the refrigerator for up to two weeks.

Green garden peas are a valuable source of protein, iron and insoluble fiber. Sugar snap peas and

snow peas contain less protein but are an excellent source of iron and vitamins. Peas freeze well and can be added to soups and stews right out of the freezer. Now here is where I have to make a confession that I don't like cooked peas much. As a kid, they were one of my mother's favorite vegetables and for whatever reason, I got to the point where I could barely force them down my throat. I've grown up some and have discovered the pleasures of snap peas and snow peas especially. I can even eat them cooked lightly, but I prefer to eat them raw off the vine, even those big old fat garden peas that I particularly hated. Just don't cook the darn things—mushy, icky things. I'm digressing. Fresh peas picked right off the vine are a delight.

Here's a recipe for sugar snap or snow peas that are cooked lightly.

Sugar Snap Peas with Toasted Sesame Seeds

- 1 tablespoon peanut oil
- 3 baby portabella mushrooms, sliced (1/2 cup)
- 2 cups fresh sugar snap peas, fresh snow peas or thawed frozen snow peas cut in half
- 1 teaspoon soy sauce
- 1 to 2 tablespoons toasted sesame seed

Wash and string peas, slice mushrooms, measure soy and sesame seed and set aside. Heat oil in a wok or large skillet over medium-high heat. Add mushrooms and stir-fry until lightly browned. Add peas and stir-fry until crisp-tender, about 2 minutes. Stir in soy sauce. Cover and cook 1 minute longer. Sprinkle with sesame seed and serve. Makes 4 servings.

Want more information? Go to:

www.peas.org



I checked the 2018 Baker Creek Heirloom Seed Catalog for some interesting varieties. Here's a few I found that might be interesting to try.

Garden Peas

Desiree Dwarf Blauwschokkers: How could you resist the name? Besides that, the pods are

Violet-Blue.

King Tut Purple Pea: Another blue-podded pea—this one with fuchsia flowers. Said to be taken out of the tomb of the Egyptian pharaoh Tutankhamun. Servants grew the peas to sustain the pharaoh in the afterlife. Believe it or not; just enjoy the pea.

Snow & Snap peas

Sugar Magnolia Tendril Pea: Lots of purple pods this year but this one is also blessed with an abundance of tendrils.

Golden Sweet: Finally, another color. Brilliant bright lemon-yellow pods.

Meet A Master Gardener—Lori Dekker

By Linda Guy



Snagging busy Lori Dekker for an interview was a bit like roping the wind but rarely have I been so entertained—clearly hers is a life well-lived. Active in many facets of the MGA, she is probably best known for her involvement with the Yavapai County Fair as a board member and Horticulture Superintendent (along with MG Marion Johnston) in the fruit/vegetable area. A retired San Diego County school nurse, she's in her element cultivating the next generation of backyard gardeners as she interacts with hundreds of school kids who tour the fair each year.

Lori is a third generation Californian who has no memories of not gardening, a favorite pastime shared with her dad. This self-proclaimed plant geek simply adores plants, indoors and out. "Thank God I'm not into Gucci purses!" Her guilty pleasure is roses which she grows at her Prescott Heights home in tribute to deceased loved ones. She still thrills at germinating seeds and the near-mystical experience of a plant's growth. But she also considers gardening an "extreme sport" requiring our adaptation to frost, water, wildlife and other environmental issues.



To Lori's way of thinking, hobbies should be self-supporting—even better if a little pin money is generated! She began as a small commercial grower, buying exotic plumeria canes from Thailand, Texas, and Florida at conventions, cultivating them in her San Diego backyard, and selling plants at shows for many years. As plumeria's general availability grew, Lori shifted to beekeeping. A few backyard hives grew to three dozen at a preserve near the San Diego Zoo Safari Park in the San

Pasqual Valley. She also dealt in honey from around the world, noting that "honey is like wine", an expression of climate and terrain.

Then she began her adventures in mycology, cultivating mushrooms (shitake, oyster) at her Escondido residence. Lori says there are hundreds of ways to grow them, but she strongly recommends doing so outside of one's home due to the spores. She is currently resuming her mushroom growing here in Prescott.

Climate change may have caught up with her truffle exploits on a 5-acre farm near Temecula. (Truffles do not like triple-digit heat.) She purchased land there in 2010, added property improvements and planted over 500 inoculated oak and hazelnut trees. "I was bound to end up in either Forbes or Mad Magazine," chuckled Lori. She's loaded with other ideas, following a "riches are in the niches" philosophy but I'll let those be her secret.

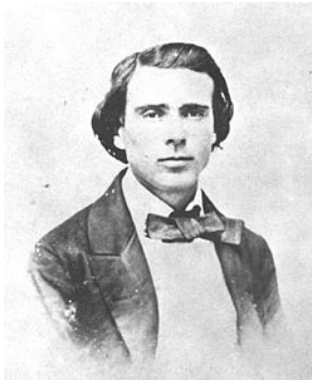
A Master Gardener since 2015, Lori has represented our Speakers Bureau on a number of topics, worked on Monsoon Madness, been a naturalist at the Highlands Center for Natural History and has spoken at OLLI. Flower arranging is a passion, especially the nakedness of ikebana that showcases the beauty of structure. She travels extensively, recently to Appenzell, Switzerland, where virtually the whole town was manicured like Disneyland, even the gravesites (see photo). She is a "born-again Rotarian," who extols its philanthropic goals as well as the opportunity to meet people with different opinions.

I'll let Lori close with her thoughts on the MGA: "These are the most fun people ever. You have a place to flaunt your plant nerdiness rather than bore your partner or family. I'm here to be what I can't be anywhere else: its plant geek heaven! And Jeff Schalau and Mary Barnes are two of the finest people to work with—you don't get a chance like this very often."



Josiah Gregg, Explorer

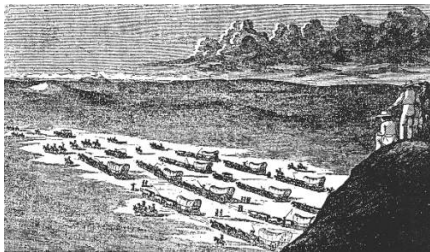
by Nora Graf



Ceanothus greggii (Desert ceanothus), *Salvia greggii* (Autumn sage), *Synthlipsis greggii* (Gregg's Keelpod), *Conoclinium (Eupatorium) greggii* (Blue mist flower), *Acacia greggii* (catclaw acacia), *Fraxinus greggii* (Littleleaf Ash), *Zinnia greggii*, *Dalea greggii* (Trailing Indigo bush), *Mammalaria (Epithelantha) greggii* (button cactus) and *Quercus greggii* (Mexican Oak)

are just a few of the plants named for the explorer Josiah Gregg. There are 47 Mexican and southwestern plants named after him. Gregg was one of the many plant explorers that risked life and limb to explore the West whose name is part of our gardens today.

Born in Tennessee in 1806, he was the youngest child of seven. By 18 he was teaching school in Missouri. There he also studied the law and surveying for a while until he began suffering medical problems which he never really overcame. In the terminology of the times, he suffered from consumption and chronic dyspepsia. In 1831 on the recommendation of a doctor he traveled to Santa Fe, New Mexico following in the footsteps of two brothers. There he began working for a merchant, Jesse Sutton and eventually as a wagon master and business partner with Sutton. He brought the first printing press to New Mexico in 1834 which printed the first newspaper in the area. He created a new trail between Arkansas and Chihuahua, Mexico which was later used extensively during the California Gold Rush.



Many trips followed and along the way, Gregg started taking notes on culture and natural

history. The notes were organized into two volumes and published under the name "Commerce of the Prairies" in 1844. The book was a great success and was translated into French and German. His map of the Santa Fe Trail was the most detailed available and was used extensively by travelers going west. Today the book is still an important source of information on the Santa Fe Trail.

Gregg moved on to other pursuits and entered the University of Louisville School of Medicine in 1845. He graduated two semesters later (makes you think about the state of medicine in the 1800's!) At the start of the Mexican-American War, he became an unofficial news correspondent and interpreter with General John Wool's Arkansas Volunteers, which took him through Chihuahua,

Mexico. He provided an eye-witness account of the Battle of Buena Vista. (It was the last major battle in the war.) Santa Ana retreated and two weeks later the Americas landed troops in Veracruz. During the war he collected plants which he sent to the botanist George Englemann between 1848 and 1849.



When the war was over Gregg was on the trail again, hitting Washington DC, where he met and left unimpressed with President James Polk. From there he took a steamship down the Mississippi River to the Gulf of Mexico, up the Rio Grande and stopped in Saltillo, Mexico to practice medicine in 1847.

More travel in 1849 when Gregg headed to the California Gold Rush. On November 5 he left on a poorly supplied expedition to find what they ended up calling Trinity Bay. The explorers carried only 10 days rations with them. The group ran into Indians who warned them not to follow the river to the ocean but they ignored the advice and ended up running out of rations and subsisting on deer and smoked meat. Six weeks later they finally came to the ocean. The group planned to move on but disagreements broke out, splitting the group. Later they came back together where the disagreements continued to rage. The river they were near was named Mad River because of the problems. They managed to stay together and continued finding and naming Trinity Bay (soon changed to Humboldt Bay) and traveled past present-day Arcata and



Eureka and onward. But dissension stilled haunted the group and they argued about how to get back to San Francisco, splitting into two groups again. Gregg's group struggled through ridges and canyons and near starvation. Gregg eventually fell off his horse and died of starvation. He was buried where he dropped. (This story may not be correct; some sources say he died in February and a third story says he survived at an Indian village.) Regardless of where he died, all his papers, equipment and specimens were lost.

This story is pretty simple and dry but next time you are looking at your Autumn Sage think about the difficulties of traveling in the mid-1800s. Hard for us to imagine when we are zipping around in cars and planes and have doctors that have more than two semesters of training.

Goodbye to Bev Emerson

by Nora Graf



I lost a friend in December. Bev Emerson, a long time Master Gardener, passed away just before Christmas. It was not unexpected but, when that moment actually comes, it's always heart wrenching, no matter how well you think you are prepared.

Bev and I go back a long time. I got to know Bev when we worked together on a committee to create what became the Master Gardener Association. There were a lot of long meetings and discussions to create a structure that would work. That led to getting together outside of the meetings. Over the years we worked together on the Membership Committee, various volunteer projects and most of the Master Gardener Conferences. She was the volunteer coordinator for a long time. It was much more than that though, we became friends and she made me part of her family. There was never a major holiday that I didn't get invited over for dinner. We got together for tea and cookies in the afternoon and had long discussions about the Master Gardener Association, our families, and assorted other topics.

Bev and I didn't always agree but I always admired her organizational skills, her steel-trap memory and her desire to make the Master Gardeners the best they could be. Since I can be somewhat untidy and messy I always appreciated her extensive notes and well-labeled files. Nothing was too small for her to keep track of. When I needed information, she was my go-to person. She made me a better-organized person. But the thing is, what I appreciated the most was her kindness and generosity. She was a good friend and I will miss her.



One of the iris from Bev's Garden

New Master Gardener Officers



President — Tricia Michelson

President Elect — Jenn Moreland



Treasurer — Nancy Christie



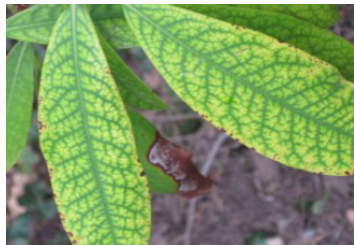
Secretary — Karen O'Donnell

What's wrong with my plant? You're not going to find pat answers.

Form the Garden Professors Website <http://gardenprofessors.com>

If you aren't familiar with the Garden Professors, they have a website along with a Facebook page that provides good science based information. It is not southwest desert oriented but some of the information is still useful. The facebook page often has interesting discussions. The article below is just a reminder that gardening is never as simple as we would want it to be.

As many of you know, the Garden Professors host a [Facebook group](#) dedicated to the discussion of science-based practices for gardens and landscapes. (Side note – if you haven't joined us please do!) Recently we've had a spate of "what's wrong with my plant" posts, usually focusing on some leaf issue and little other information. And far too often an eager group member will jump in with a fertilizer recommendation. So today's blog post has two objectives: explaining why you can't reliably diagnose problems from a picture of suffering leaves and why blanket fertilizer recommendations should be avoided.



Interveinal chlorosis in Rhododendron

To illustrate the problem with armchair diagnosis, consider this photo.

Now there are two ways to ask a question here: the first is "what's wrong with these leaves" and the second is "what's wrong with my plant." We can easily answer the first one: there is nutrient deficiency in the leaves, most probably iron or manganese. But that does NOT mean there is a deficiency in the soil. So we can't address "what's wrong with my plant" because we don't have enough information.

How can we determine what's wrong? My first question to the poster is invariably "have you had a soil test?" Soil test results will indicate whether the element in question is actually deficient, and will provide levels of other nutrients that could interfere with root uptake. If there's no deficiency of the nutrient in question, then adding fertilizer is not going to help! And adding fertilizer unnecessarily can create further soil nutrient imbalances and contribute to environmental pollution.

Lots of iron – no deficiency here!

Macronutrients (ppm/100cc)		Iron (ppm)		Copper (ppm)	
Phosphorus	300 (Above Optimum)	1	1	0.5	0.5
Potassium	300 (Above Optimum)	1	1	0.5	0.5
Magnesium	443 (Above Optimum)	1	1	0.5	0.5
Calcium	3300 (Above Optimum)	1	1	0.5	0.5

Micronutrients (parts per million)				
Zinc:	Copper:	Manganese:	Boron:	Iron:
26 (Adequate)	3.3 (Adequate)	30 (Adequate)	4.4 (Adequate)	327 (High)

Once we have the soil test results, we can then begin to address "what's wrong with my plant." But not from the original picture. (If you

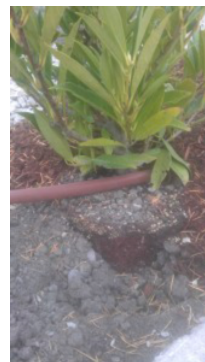
are curious about what else could be causing this problem, check out this [blog post](#) from 2011.)

Let's try another. Consider the leaves in the following photo:



We now know to ask "what's wrong with these leaves?" Ignore for now the deficiencies in the older leaves and look at the size of youngest ones compared to the older. The answer is fairly straightforward here: there was too little water available when the newly emerging leaves were expanding. Leaf expansion depends on turgor pressure – the higher the turgor pressure, the larger the leaves get. Once expansion stops, protective plant biochemicals are laid down which prevent further expansion. By comparing the youngest leaves to the leaves from previous years, you can see that they are significantly smaller. But why?

Again, we need more information before we can answer "what's wrong with my plant." Was there too little available soil water during leaf expansion? It's possible, but this example is from western Washington State, a climatic region with wet springs. Most likely there is an issue with the roots. My first question with these cases is "can you easily move the plant in the ground?" This is my "wiggle test" – a way to determine if roots are established. In this case – and in nearly every case like this that I've seen personally – the roots are NOT established. Often this is because the plant (1) was not bare-rooted at planting and/or (2) was planted too deeply. Without decent root establishment there is not enough water uptake to support full turgor in expanding leaves.



It may be quick and easy, but "pop and drop" is not a good planting method.

Lack of an established root system also account for the interveinal chlorosis you can see in the oldest leaves. These leaves are fully expanded, probably because the plant was still at the nursery when these leaves emerged. But their color is off. A root system that doesn't supply sufficient water for leaf expansion is by default not going to provide sufficient nutrients, either.

Adding fertilizer to this plant is not going to help! It needs to be dug up and replanted correctly or replaced. It is never going to thrive

under the current conditions.

Armchair diagnosis can be accurate and fun if you follow a set of guidelines to extract more information. But simply recommending a fertilizer based on leaf appearance is neither science-based nor environmentally responsible.



Congratulations *for completing your first 50 hours*

Carla Hover

Mentor: Sandi Kelleher



My house, January. Its going to be a tough year, I think.

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2018 Newsletter Deadline Schedule

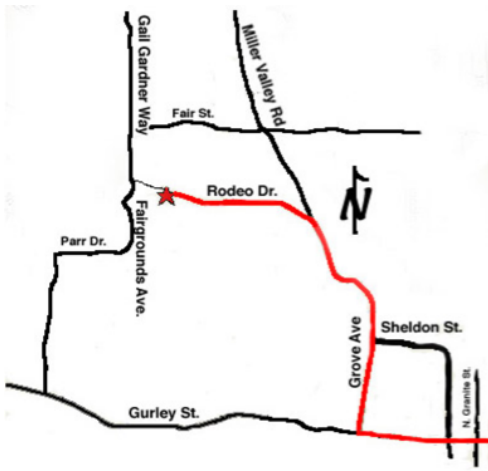
The newsletter comes out every two months. Please note the deadlines.

Publish Date Deadline

- Feb-Mar—Feb 1—Articles Jan 5, announcements Jan 25
- April-May—April 1—Articles March 5, announcements Mar 25
- June-July—June 1—Articles May 5, announcements May 25
- Aug-Sept—Aug 1—Articles July 5, announcements July 25
- Oct-Nov—Oct 1—Articles Sept 5, announcements Sept 25
- Dec-Jan—Dec 1—Articles Nov 5, announcements Nov 25

Arizona Cooperative Extension
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MG NEWSLETTER



Next Meetings

February 20, Camp Verde, Dexter Allen, retired Forest Service Wild and Scenic River Ranger, will speak on the history of the Verde River south of Verde Valley.

March 20, Prescott , Phyllis Jiacalone, "Roses 101."



Driving information for Camp Verde meetings: The entrance to the meeting site is now back at Cherry Rd. While this map doesn't show it yet, there is now a roundabout at this intersection. If you are not used to roundabouts take your time and the good thing is if you miss the exit onto Cherry Rd, just circle around to it again. When I can get a new satellite photo of the intersection I will replace the old map.