**Events & Activities**

MG Association Meeting, Wed, June 20 Prescott, 6:30pm

Alta Vista Gardening Club, Prescott, fourth Tuesday of the month, 12:30pm. Call 928-443-0464 for information.

Prescott Area Gourd Society, third Tuesday of the month, 6:30 pm, at the Smoki Museum.

Prescott Orchid Society, 3rd Sunday of the month, 2pm at the Prescott Library, (928) 717-0623

Prescott Area Iris Society call 928-445-8132 for date and place information.

Verde Valley Iris Society call Janet Regner at 602-370-4836 or email her at jkregner@aol.com

Mountain View Garden Club, Prescott Valley, Dewey area, 2nd Friday of month, 1:30pm, call 775-4993

Native Plant Society Meetings - Prescott. 2nd Thursday of the month, 6:30pm. Attending the talk qualifies as Continuing Education. Non-members are welcome. Highlands Center for Natural History, 1375 S. Walker Rd. (928-776-9550).

The Verde Thumbs Garden Club, Cottonwood 2nd Tuesday, 6:30 pm at The Seventh Day Adventist Church. (928) 634-7172

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Did you know that Orchids are a HUGE family of plants? While we are familiar with the dendrobiums, cattleyas and oncidiums sold in the big box stores and grocery stores, do you know that Arizona has native orchids? There are approximately 23 species, some of them a lot more striking than others. They are not something you are going to grow in your garden but they are an interesting sidelight into the native plants of Arizona.

One of the most striking is the calypso orchid, fairy slipper (Calypso bulbosa). Get on your knees to see it as it only stands about 8 inches tall but it has lovely rose-pink flowers with yellow hairs. The flowers are 2 inches long and 1 ½ inches wide, one flower per stalk; the stalk is pinkish. Leaves are dark green about 2-½ inches long. It has a bulbous root. They bloom May to July. They can be found between 8000 and 10000 feet in Arizona. Calypso orchids grow in other parts of the world. They like cool, moist spruce-fir forests. I saw them for the first time when I worked in Yellowstone National Park. There was actually a large stand of them behind where I lived. I had the opportunity to see them up close and personal for a long time. They are probably the orchid that created my interest in growing orchids. There is a commercial market for calypso orchids. I saw a couple of websites that sold them but they are protected in Arizona, so do not pick, do not dig, and do not disturb any orchids in the State.

The other dramatic orchid is Cypripedium calceolus var.pubescens, the yellow slipper orchid. This orchid species is extremely rare in Arizona but does grow in other locations. Cypripedium orchids, known as slipper orchids, are sometimes collected (mostly illegally) and sold commercially. The flower is a beautiful golden yellow...
to yellowish brown with one, sometimes, two flowers per stem. The foliage is dark green. It likes well-shaded moist forests between 6000 and 9000 feet elevation. It blooms in June and July.

There are two genera and several species of the Coral Root orchids: Coral-lorhiza striata, maculata, wisteriana; Hexalectris warnockii & spicata & grandiflora (crested coral-root). These orchids are mostly leafless, lack chlorophyll and rely on fungal associations for nutrition. The flowers don’t have striking colors; mostly shades of brown, purplish-red, cream to white and one is spotted. For the most part they grow from 6000 to 10000 feet in elevation. Depending on the species, they bloom from May through July. These were so bizarre I remember spending a lot of time trying to figure out what they were. Not a common sight.

You might not even recognize the Rattlesnake Plantain orchids as orchids (Goodyera repens & oblongfolio). There are two species in Arizona—the Giant and the Dwarf. Flowers are white to pinkish. Long flower stalks rise from a basil network of leaves. The giant variety has mottled leaves, resembling rattlesnake skin. Depending on the species, they bloom July to September. They like moist forests and both have been found near Greer. The Giant likes lower elevations 8000 to 9500 while the Dwarf (G. repens) prefers 9000 to 10000 feet.

The bog orchids, have a very confusing taxonomy. They have had several names and some sources say four species in Arizona, others five and one even said it was unlikely they are even in Arizona. If you are interested in learning more check out the genus name of Habenaria or Platanthera. Species are limosa, saccata, hyperborea, sparsiflora and viridis depending of the source. Common names include the Slender Bog Orchid, the Sparsely-Flowered Bog orchid and the Long-Bracted Habenaria. All have light green flowers. These live in elevations ranging from 5000 to 9000 feet in wet moist forests along mountains streams, bogs, springs. Even if you saw them you might not pay much attention to them. Depending on the species they bloom June into October.

Adders Mouth (Malaxis corymbosa, soulei, tenuis, ehrenbergii) again are one of those plants that you wouldn’t notice as an orchid. The flowers are yellowish green, less that 1/8 inch long. They are clustered on a single flower stalk about 4 inches long except for the species M. corymbosa. Depending on the species, they bloom July through September. You can find them in mixed conifer forests 6000 to 9500 feet. They grow from a corn.

Hooded lady tresses (Spiranthes parasitica, romanoffiana & michuacana) is one I’ve seen and even recognized as an orchid although it took a few minutes if I recall. It has a pretty striking flower stalk. The flowers are arranged in 3-spiraled rows on the flower spike and can reach 16 inches high. The leaves are light green, shiny, smooth and lance shaped. Depending on species, they bloom from June thru September and can be found in wet meadows, bogs and streams from 8500 to 9500 feet. They form clumps so you might see several in one location.

Listera (Epipactis) convallarioides, (Broad-leaved twayblade) is found only in the Santa Catalina Mountains at 8000 feet. It lives in wet, bogggy areas, blooms July through September and has green flowers.

Epipactis gigantean (Giant helleborine or stream orchid) is found in moist soils at 3000 to 8000 feet in elevation. They bloom April thru July. This orchid is one of the most abundant orchids on the Pacific Coast. It is quite tall, growing up to a meter in height. The flower is showy with green with brownish and purple veining. It likes wet areas. This is one of the few native orchids that can be found in the commercial trade. Before you purchase one make sure it is a cultivated specimen and not collected from the wild.

Once again orchids in Arizona are very rare, do not disturb, do not pick, do not collect.
Meet a Master Gardener: Pete Heisinger

Don’t let anyone tell you differently, it is real hard to garden well in the high desert.

I was born in Placentia Bay, Newfoundland, but grew up on the beach in Port Hueneme California. I’m sure that it was my Dad that put the gardening bug in me. He was always planting something around the house. We had fruit trees full of fruit every summer.

I went into the United States Marine Corps right out of high school, and became an aircraft navigator, and in-flight aerial refueling controller. For four years I traveled around Europe, Asia, and the Pacific. After the service, I went into the computer technology field, and had a 25 year career in California that ended with a 13 year stint as a senior executive at Visa. During my career, I always had a garden, first in southern California, where I had my first garden, and then in the redwood forests south of San Francisco.

I retired eight years ago and moved to Sedona with my wife Dellann. I love to garden, and I had been gardening for 25 years, and I thought I knew a few things about it-- until I came to Sedona. In California, you can use some pretty sloppy techniques, plant just about anything, and it will usually work out. Here in Arizona, you have to know what you’re doing. A poorly planted tree, one not properly watered, or the wrong variety, just won’t make it.

My primary gardening interests are landscape plants and trees and vegetable gardening, so when the chance came to attend the Master Gardener class in 2008, it was a no-brainer. For me, the best part of belonging to the organization is that I’ve learned so much from other Master Gardeners. My biggest inspiration was meeting Merle and Michele Herrick. After getting to know them, and visiting their garden, I converted completely to organic gardening. I never use chemical fertilizers, and have become an enthusiast of composting and integrated pest control. For me, it’s the only way to go.

My vegetable garden is my pride and joy. It’s extremely productive. I feed my family all year long from what is grown in a 600 square foot plot. And I think I’ve cracked the code on growing tomatoes and peppers in this dry heat. The big one is to overhead water the garden twice a day in the heat of the summer. I water every night, and then also spray the entire garden at 1:30 and 4 pm every day for about 5 minutes. It cools the garden off, allowing the fruit to set and keeps the plants below 95 degrees. I never drip the vegetable garden (but everything else in my yard is on automatic drippers). The more of the root zone that can be covered by water, the more lush the plant is going to be. I pack the stuff in pretty tight in the vegetable garden and have a big variety (including herbs, flowers, roses and vines). That diversity keeps the ecosystem in the garden healthy, and the bugs under control.

I have had no pest issues doing things this way for the past three years. Others might not agree with all of this, but this has been my experience, and I grow eight foot tall bushes that are loaded with gallons of tomatoes all the way up until the end of October. I also use fish emulsion. I think it also has a big effect, but I can’t prove it.

I enjoy being associated with this fine group of Master Gardeners, and I feel we are doing something very worthwhile for our communities. I have been on the garden tour committee, coordinated the speakers bureau requests the past couple of years for the Verde Valley area, landscaped the dog park at the Sedona Humane Society, and spoken to community gardening groups, among other things. My biggest project for the past two years has been directing the re-landscaping effort at the Immaculate Conception Catholic Church in Cottonwood. Last year we modified the entire irrigation system, and planted over 80 trees on the property. I also have been on the Sedona Humane Society Motorcycle Rally committee, and belong to the Knights of Columbus.

I plan to stay involved with the project at Immaculate Conception to ensure that the landscape we put in place takes hold. For me, it’s kind of a tree growing laboratory. I want to see how our irrigation, planting, and tree variety decisions work out over the long haul. Besides that, I guess I’ll jump onto whatever else looks like it’s fun or interesting.

The best piece of advice I could give to a gardener who is new to the area is to understand that you have to take what the environment gives you. Look around at what is working for others in your neighborhood. What are they planting and how are they irrigating? Don’t waste a bunch of time and money planting what you grew back home. Elevation and micro-climates are critical here. Something that grows 500 feet down the hill sometimes will not grow in your neighborhood.
Welcome to the 38 new graduates of the Master Gardener Program. Seventeen of the graduates live in the Prescott area, and 21 live in the Verde Valley area.

Thirty six class graduates have mentors in the Master Gardener Association (22 mentors) and are well on their way to getting their 50 hours to become certified. The Class welcome on Wednesday counts as credit hours!

Thanks to Barbara Saul, who was the class coordinator, and Betty Loos who was her co-coordinator. The class assistants were Jane Grams, Linda Kimberly, Garry Neil, Donna Hunter, Gwynne Reese.

The Master Gardener Association looks forward to having you as part of our organization.
In browsing the internet for something interesting to write about this month I found a page called “Amazing Facts” from the Colorado State University, Cooperative Extension. Here are a few of those facts. http://www.colostate.edu/Depts/CoopExt/4DMG/Garden/Amazing/amazing.htm

**No, phosphorus doesn’t stimulate root growth . . . .**

*By Robert Cox, Colorado State University Cooperative Extension agent, horticulture*

No matter how often you’ve been told that phosphorus and phosphate fertilizers stimulate root growth, don’t believe it. Many of us think phosphorus promotes root growth because we’re taught to place phosphates in the root zone, below the soil surface where the roots are growing. There’s a reason for putting the phosphate there: If we sprinkle phosphates on the soil surface, they don’t leach into the soil and the roots can’t absorb them.

So, because we’re taught to apply phosphates in the root zone, we’ve concluded they promote root growth. They don’t -- not any more than does zinc, magnesium, nitrogen or potassium.

When you start a new lawn, landscape, vegetable or flower garden, prepare the soil well by rototilling in organic materials and phosphate fertilizers. Superphosphate and treble phosphate are much more effective under local soils than is bone meal (calcium phosphate).

(Ed. Note: Phosphorus is an essential nutrient both as a part of several key plant structure compounds and as a catalysis in the conversion of numerous key biochemical reactions in plants. Phosphorus is noted especially for its role in capturing and converting the sun’s energy into useful plant compounds.)

**Roots don’t really “feed” plants**

*By James Feucht, PhD, Colorado State University Cooperative Extension*

Although fertilizers often are called “plant food,” plants can’t really feed and fertilizers aren’t really food. They are raw minerals that plant roots take up mostly in salt form. These minerals, called ions, are used by plants in photosynthesis to make food (carbohydrates/sugars). The fine roots of plants absorb water and minerals (not food), thus are more correctly called “absorbing roots,” rather than “feeder roots.”

**The myth of companion planting**

*By Laura Pottorff, Colorado State University Cooperative Extension, Horticulture/Pathology*

Do marigolds and nasturtiums repel certain insects? Does basil, planted near tomatoes, enhance the flavor of the tomato? These are nice ideas, but science can’t prove them. The only aspect of “enemy plant” lore that has merit is “allelopathy,” whereby one plant releases toxins that inhibit the development of another plant growing nearby. Even then, the toxins occur in such small quantities that their effects are barely noticeable. So, plant your chrysanthemums and lettuce, garlic and roses, mustard and turnips together. Planted in a suitable location with correct spacing, fertilizer and water, they all will do just fine.

**Sap doesn’t come up in the spring . . .**

*By James Feucht, PhD, Colorado State University Cooperative Extension*

. . . nor does it go down in the fall. Sap is food energy (mostly sugars). It is made by leaves through a process we call photosynthesis. In trees, much of it is stored as starch and fats in buds and in ray cells of the trunk. Some goes to roots. When spring arrives, the stored starches and fats convert to energy-supplying sugars, right near where they are needed for growth.
I’ve been writing this newsletter for a long time and apparently am getting desperate for topics or maybe just going bananas. Both things are probably true fact with a 6-foot dwarf banana varieties available, if you have a greenhouse, why not. Besides bananas are interesting and did you know that the banana in the store may be in dire peril?

Bananas are heat lovers and do not tolerate frost, so first find them a safe winter harbor. If the roots are well insulated from the cold the plant may resprout after the top is frozen. A banana needs about 18 months before it will flower so keeping it from freezing is crucial to actually producing fruit. Wind is also a problem as the leaves are easily shredded and sometimes toppled, so a spot protected from the wind would be helpful. Too much sun and heat can cause the fruit to turn black and spoil. The plants like plenty of water and needs morning sun at the very least. Depending on where you live they might be able to stand full sun but in the hottest areas they need protection from afternoon sun.

Bananas are not trees, they are herbs. The heart (so to speak) of the plant is the corm—think gladiolus, just bigger. The corm produces pseudostems; each will produce a bunch of bananas after which that stem dies. The flowers are large and spectacular-looking. One of the odd things about the fruit is they are naturally slightly radioactive because of a high potassium content. Don’t panic, you aren’t going to glow in the dark from eating bananas.

There are many varieties of bananas, some a lot more interesting than the Cavendish, which is found in the stores. I fell in love with some little “Apple” bananas when I was in Hawaii. Eating bananas just hasn’t been the same since. There are lots of varieties, including the dwarf sizes I mentioned.

The store bananas have been selected for shipping green, so they are picked before they are actually ripe. The bright yellow color comes from an artificial ripening process. If you grow your own you can pick when ripe. An interesting fact; the skin of bananas will fluoresce when they are ripe, so get your black light out.

Bananas are a confusing group species wise. There seems to be some disagreements about the relationship between species. Plantains are a member of the banana family. The store banana, the Cavendish or Grand Nain (Chiquita banana) are hybrids. Neither produces viable seeds so the plant is propagated asexually either by tissue culture, splitting the corms or removing young shoots. The problem is that they are all susceptible to Panama disease, a fungus disease. Because of the lack of genetic variability in bananas, Panama disease can have devastating consequences and there has been some gloom and doom about bananas disappearing from store shelves.

Research on finding a solution to Panama disease is on-going. Trying to grow your own maybe the best solution, give it a try.

There is a tropical plant nursery in Phoenix.
Tropica Mango & Rare & Exotic Fruit Nursery
10520 E Apache Trail
Apache Junction, AZ 85120
602-576-6948
http://www.tropicamango.com
If you have questions they recommend you ask via their facebook account.
**Master Gardener News**

**Fiscal Year Hours**
Our fiscal year ends June 30th, so please have all your hours for this fiscal submitted by July 5th. 25 Volunteer and 6 Continuing Education hours are needed to remain certified.

**Monsoon Madness Volunteers**
Volunteers are still needed for our July 14th plant and yard sale. Please contact Missy Sandeen to sign up for Friday, Saturday, or clean-up on Monday, rmsandeen@bullerinetworks.com, 771-9856.

FROM THE EDITOR: Please send or email articles and announcements to the address below. All articles must be in my hands by the 10th of the month. Short announcements (no more than 2 or 3 lines) will be accepted until the 25th.

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**Verde Valley Farmers Market, starts June 2 and runs through October. Saturdays 8am to 12pm. At the ramadan next to Fort Verde State Park in Camp Verde.**

**Searching the MG Newsletter on the Extension Website**
Trying to find something in the back issues of Yavapai Gardens has always been difficult. There is a partial index available. Steve Moody has figured out a way to do it and it works better than the U of AZ’s CALS search engine.

Go to:  http://www.arizona.edu/search/google

In the search window type in: “Yavapai Gardens” (including the quotes) and the topic you are looking for. For example:

"Yavapai Gardens" tomato blight

The search engine retrieves all the issues with tomato blight information.

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MG NEWSLETTER

Next Meeting

June 20, 6:30, Prescott