

Yavapai Gardens

Master Gardener Newsletter

June-July 2019



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Unexpected Visitors

By Nora Graf

Arizona is a hotbed of insect activity. Some welcome, some not so much. Regardless, they are interesting and some of them beautiful. (Just so you know, I was going to write about the virtues of tomato hornworms but thought I would get drummed out of the Master Gardener Association.)



Fig Beetles (*Cotinus mutabilis*):

Sometimes known as June Beetles. These are the iridescent wonders you frequently find feasting on your fruit. They are a beautiful iridescent green with a yellow margin. When they fly you can see iridescent purplish-black wings. The head sports a short square horn and the antenna are short and leaflike. The antenna may not be visible always as they hide them under their head most of the time. While the color is amazing it's hard to forgive them their love of fruit. Often there are so many of them it's hard to even make out the fruit underneath them. About the only way to protect your harvest is to bag the fruit before it ripens. Once they decimate your orchard they can be found on prickly pear fruit. The larva is a large white grub about 2-inches long. If you find a larva that doesn't curl up when you dig it out of the garden chances are it's a fig beetle larva. If you flip it onto the soil surface it walks upside down to escape. The larva is beneficial when it comes to making compost. They love highly organic areas and will pupate in the soil over the winter.

Glorious Beetle (*Chrysina gloriosa* or *Plusiotis gloriosa*):



This lovely beetle is somewhat similar to fig beetles. At first glance, it seems like an odd faded version of a fig beetle. It is of similar shape but smaller and is more bright green with narrow black stripes and crazy iridescent silvery-gold stripes and has light blue eyes. They feed on juniper leaves at higher elevations and their color allows them to blend in quite well. They are considered pollinators as they like to use flowers to hide in, mate in and store food and in the process spread pollen about. The larvae are yellow or white and curved. Once they finish growing they drop to the ground and pupate in the soil often at the roots of grasses and are also found in decomposing

sycamore logs. The beetles are most active in June and August. I have seen them up in Jerome but considering how many juniper trees are in the County I'm sure they can be found elsewhere. A quick note about the names: Plusiotis is Greek for wealthy and Chrysinia is Greek for gold.

Puss Moth Caterpillars (*Megalopyge sp.*): One of these came into the Camp Verde office last year. It appears to be soft and fuzzy, pale tan with some small dark markings. Don't be fooled though, these can be a real hazard. Within that soft outer coat, hollow spines are hidden. The spines break easily and can deliver a dose of painful venom. Small children are especially at risk as they like to handle things and this caterpillar looks pretty cute. The caterpillars are found on oak trees and a few other trees and some shrubs. They get to be about an inch long, reaching full size in autumn. Once grown they pupate into a hard-oval cocoon and emerge as moths the following summer. If you handle a puss moth caterpillar and get stung, you should see a doctor and certainly take any children to the doctor.



Pinacate Beetles (*Eleodes obscurus sulcipennis*): You would know this black beetle if you have ever seen it. It's the one that sticks its head down and its rear end up in the air when disturbed. There are several species. In fact, they are characteristic of the desert and can be found in diverse areas. I used to see them in Jerome quite often. They feed on dead plant material. Pinacate Beetles are active both day and night although they hide in cooler locations during the heat of the day. Why do they stand on their heads? It isn't idle posturing, they have defensive glands in the rear and the scent and taste of it put just about every predator off. Grasshopper mice have figured out a way around their defenses though. The mouse grabs the beetle, stuffs it's behind in the sand and eats the front end. Nature is wonderful! You can sometimes find the bottom half of them if you look close enough. The black carapace is extremely hard and while it turns white over time, it persists for years. Pinacate beetles show up in Native American creation stories.



Tarantula Hawks or Wasps (*Pepsis chrysothemis*): Over the years I have seen a few of these in my yard and while they aren't dangerous to humans I have heard that if



you do get stung by one, the pain is excruciating. So, don't handle them. Let them do their thing which is to hunt tarantulas. They are one of the largest wasps in the Southwest. They can be up to two inches long, are quite robust with metallic blue-black bodies with either blue-black or bright orange wings. In the summer they feed on flowers. Their primary mission is to find a tarantula so they can lay an egg on it. If you see one of these wasps running around on the ground somewhat crazily it is hunting for a tarantula burrow. They hunt by scent and once they find a burrow they try to lure the tarantula out by vibrating the spider silk at the entrance. If the tarantula comes out, the wasp will sting it and paralyze it. The wasp then drags the tarantula to a hole she has dug, pulls it in and deposits an egg, then covers the hole. The still living but paralyzed spider serves as food for the larva.

Antlions (Family *Myrmeleontidae*): We don't always see this insect but it is easy to find the larvae. If you have ants around, look for conical depressions up to two inches across in sand or dry soil. The antlions lurk below the surface at the bottom. The larva are about a half-inch long, round, and have a long pair of curved jaws. The antlion lies in wait until an ant slips into the hole and because of its shape and the dry soil, the ant finds it difficult to get out. The antlion strikes using the large jaws to grab it. The adults are considerably larger than the larva, up to 1 ½ inches long. They have slender wings that they hold against their body. They look similar to damselflies.



Grape leaf Skeletonizer (*Harrisina brillians*): Is a native southwestern and Mexican pest that was here before humans started planting vineyards. Originally, they were found on native wild grapes but after humans arrived and started planting more grapes the skeletonizer took advantage and became a major pest. You will probably first notice them when your grape leaves turn brown and all you see are the dried veins. This is caused by small caterpillars that are only about a quarter of an inch long. They have curious habits and color changes. In the first two stages, they are a cream color. When they reach the



Rhinoceros Beetle, (*Dynastes granti*): This is a big beetle that is hard to miss. It is one of the largest beetles, 2 to 3 inches long and with a rhino horn on the males.. The hard carapace is a light greyish-green with black spots with some being mostly black with a little gray-green. Females lack the horn. Found in Arizona, Utah, and Mexico especially where ash trees are found. They like the tree sap and beetle chew marks can often be found. The species is mainly nocturnal. These beetles are collected and raised for the pet trade. Since the adult males fight, they are sometimes pitted against one another in insect cockfights. While they are not considered endangered, they do not harm humans or are an agricultural pest. My idea is just to watch if you come across them and let them go on with their lives.



Cochineal (*Dactylitis confusus*): If you have lived in Arizona for awhile you have seen this insect. It's that whitish fuzz on prickly pear. Under that white fuzz is an insect. If you grow houseplants you probably know about scale. Scale are irritating hard insects that are difficult to kill or remove. They can overwhelm your plant.



Cochineal scale exudes a white waxy material to protect themselves. Underneath that, the scale is a red ¼ inch insect that has a beak that penetrates the plant which allows them to feed on plant juices. The red color is an anthraquinone pigment that helps protect the insect from most predators. There is a moth caterpillar that seems to be immune and is one of the few carnivorous caterpillars. Cochineal lay eggs which hatch into a stage called crawlers. These move to new feeding sites and start producing long wax filaments. At some point, they move to the edge of a prickly pear pad and wait for the wind to carry them away. Once they find a new site they create the dense wax layer. You may have seen incredibly thick infestations but they rarely kill the prickly pears as the plant is so fast-growing. They are also found on cholla cactus. Cochineal means scarlet-colored and is the source of a red dye that dates back to the Aztecs and was carried to Europe by the Spanish. Michelangelo used it in his paints, the British used it in their Army Uniforms (the redcoats of the American Revolution), Turkish fezzes and the first US flag. It is still used today as a fabric and food dye.

Leaf-Footed Plant Bugs (*Leptoglossus zonatus*): Leaf-footed bugs have leaf-like enlargements on their hind legs, which make

identification simple for even an amateur gardener. They are medium to large insects that like to feed on immature seeds. They are often found in groups. Their eggs are laid in an end-to-end string along a stem or leaf midrib. Eggs hatch into small dark nymphs colored orange to reddish-brown. The adults have a white zig-zag pattern on the wings. Adults will overwinter in places like woodpiles and out-buildings, under peeling bark, in palm fronds, citrus or juniper trees and in tree cracks and stay until the weather warms. then they disperse to feed first on winter weeds and flater into gardens and orchards. Leaf-footed bugs have piercing mouth parts used to feed on plant juices. The damage is generally not life-threatening to the plant but when they feed on fruit, they can cause problems. With small tomatoes, the fruit might abort. In larger fruit they cause discoloration. The fruit is edible just not perfect. Pomegranates, citrus, and pecans are some of their favorites but they also feed on agave and yucca pods. Pomegranates are preferred because they produce fruit over long periods of time and the seeds remain soft. Citrus fruit, pecans, agave, and yucca only have a short time while they are susceptible to the insect.



Kissing Bugs (*Triatoma rubida*): Kissing bugs made this list because they made the national news the day I started writing this. The reason for the big news flash; they are invading new territory in the southeast US. They have been in Arizona a long time. These insects seek out humans for their blood.

They prefer the homes of pack rats and armadillos but will fly into human homes. Whether from a packrat, armadillo, dog or human the bug needs blood. They fly at night and often land on faces, which are generally more exposed than other body parts while in bed, hence the name, kissing bug. They inject an anticoagulant and anesthetic to feed without waking the donor. These chemicals can cause pain and itching for a week or more; sensitive people may have an allergic reaction and need medical care. Aside from that reaction the biggest issue is that they can carry the parasite *Trypanosoma cruzi* which causes Chagas disease in mammals. Chagas disease can be life threatening and difficult to treat. Anyone suspecting they been bitten by a kissing bug should seek the advice of a physician.

2019 Wildflower/Native Plant Display

By Judy Kennedy

(Editor's Note: This article came in too late for the last newsletter. This is an annual event so I hope you mark it on your calendars for next year.)

The 2019 Wildflower/Native Plant display at the Red Rock Visitor Center on highway 179 south of Sedona was held March 29 through April 10. As always, a small team of dedicated Master Gardeners gathered plants and put them on display at the center. That group consisted of Toni Coons, Marti Griggs, Judy Kennedy, Betty Loos, Nancy Martin and Carol Young.

Depending on the day of the week, during the months of March and April, the Visitor Center has between 1,000 and 1,700 guests a DAY! That's a lot of people who get to admire the variety of flora in the Verde Valley area. The guests are so eager to see the flowers and plants, that it is sometimes difficult for the team to set-up, clean-up, or refresh the display (which is done on a daily basis).

This year, there was plenty of moisture during the winter and you can see from the pictures that there were many plants. The display used to be called just "Wildflower." However, the winter of 2017/2018 was so dry that the team began to incorporate native

trees (juniper and pine), shrubs (creosote and crucifixion thorn) and grasses (blue grama and side oats grama) which aren't necessarily

"flowering", but the guests seem to appreciate them anyway. The team has continued to include these plants so now the display is called Wildflower/Native Plant.

Working with this display is truly a learning experience since the team has to know or be able to find the common and scientific names of the plants that are put on display.

Sometimes when we just cannot come up with the name of a plant, we leave a "sticky note" with a question mark on it, and guess what? Some of

the guests come up with a name. It is always interesting to find that in different years we find different plants. For instance, this year we had Henbit (*Lamium amplexicaule*) and Shepherd's Purse (*Capsella bursa-pastoris*) which we hadn't seen for several years.

This is an "awesome" project done under the auspices of the Master Garden program, so if you think it sounds like fun, please contact Judy Kennedy at cactus2006@msn.com.



Capsella bursa-pastoris



Lamium amplexicaule



Meet A Master Gardener—Diane Thornbrugh

By Linda Guy



Master Gardener Diane Thornbrugh and husband Ken make their home in a mixed woodland of ponderosa, pinon and scrub oak (including a seasonal creek) at the base of Thumb Butte. On a fine spring morning, Diane led me around their acre-and-a-quarter habitat, sharing her horticultural vision, as well as her lengthy list of activities and interests: Native plant enthusiast. Botanical illustrator. Plant propagator. Engaged volunteer. Busy songbird watcher. Western history buff. Avid hiker. Her schedule is packed!

With two enthusiastic gardeners for parents, Diane grew up in southern California turning compost, watering flowers, and eating from the backyard fruit trees and vegetable patch. Following retirement from finance in the Bay Area/Silicon Valley, CA, she relocated to Scottsdale and was introduced to gardening in the desert southwest. Over 10 years, her success rate with yucca, cactus and other native plants rose as she caged plants from wildlife and resisted adding amendments and overwatering. Phoenix's Desert Botanical Garden is high on her list of favorite public spaces and it is here that she took up classes in botanical drawing.

The couple was lucky to find a Prescott residence formerly occupied by gardeners, complete with a vast irrigation network and an alternative septic system for a future home orchard. Trying to plant in Prescott's rocky alkaline soil ultimately led her to the MG training in 2015. Diane is absolutely committed to the use of native and water-thrifty vegetation and has busied herself with converting the previous owners' turf to lovely flowering perennial gardens for butterflies and pollinators, as well as a welcoming front walkway bordered with beautiful, tough and deer-resistant groundcovers like creeping

thyme, germander, fringed sage and her favorite, partridge feather. She considers the conversion of the orchard floor a personal triumph—she manually removed the puncture vine and other weeds, then over-seeded the area with wildflowers, blue and side oats grama grass just before the monsoon rains. The area reseeds itself nicely each year. New agave and cactus beds are shaping up.

Having bravely removed the electrified perimeter

fence allowing wildlife to once again traverse the property (including a herd of 20+ deer), other areas must now be selectively fenced like her compost operation and future rose and vegetable gardens. Fencing is no use, however,

against her biggest challenge—pocket gophers. She has a few notches in her belt and is now working on the next generation.

Her home's splendid iris beds led to Diane's membership in the Prescott Area Iris Society. She is the PAIS liaison to Sharlot Hall where she helps care for its historical iris beds. She is also the Master Gardener volunteer coordinator for the Sharlot Hall garden and annual rose pruning. She has supported the Monsoon Madness sale through plant propagation, the Yavapai County Fair horticulture intake, and is now satisfying her love of research by working the MG Help Desk at the Prescott Extension Office.

Diane is active in four choral groups, including the Prescott Chorale, which has afforded European travel. She also belongs to the Prescott *Corral* to enjoy talks on American Western history. Camping, birdwatching, and hiking are other passions. She soon hopes to complete the Prescott Circle Trail.



Splendiferous Wildflowers

by Nora Graf

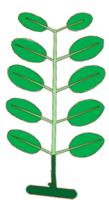
This year was a great spring for wildflowers. While everyone “oohs and aahs” over the poppies there have been other great blooms out there—just in smaller patches. In early May, Payson had stands of Indian paintbrush, hedgehog and claret cup cactus in bloom. They didn’t color entire hillsides but were beautiful in their own way.

One flower that shows up every year in my neighborhood is locoweed.

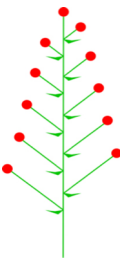


Locoweed is a grab basket term for a bunch of related species, also known as vetch or milk vetch but all are in the genus *Astragalus*. They are sometimes confused with lupine but are distinctly different once you take a closer look. Locoweed or vetches can be difficult to identify by

specific species, in part because there are so many that are similar and few good pictures are available. Usually, only one or two species are featured in wildflower books. With experience it is easy to tell vetches from other similar plants. The one in my neighborhood may be *Astragalus mollissimus* but possibly not.



To identify an *astragalus* look for pinnately compound leaves with narrow leaflets. The plant leaves and flower stems form a rosette. Flowers are in racemes. In the case of this species, there are soft white hairs



on the leaves and stems. *Mollissimus* is Latin for “very soft”. These plants are in the same family as beans and peas but their fruit looks like a short pea pod that has been blown up like a balloon.



They are prolific seeders so if there is one plant soon there will be many. This year because of all the rain they formed large plants with multiple flower stems with striking stalks of purple flowers.

These plants come by the name of loco weed because they contain the chemical swainsonine. Swainsonine is an alkaloid which causes neurologic damage. Animals that eat it become depressed and lethargic. The damage can become permanent but if diagnosed soon enough

and the animals no longer have access to the plant they usually recover. Over time animals become emaciated and lose the ability to find food and eat. The one article I read said that “Although some may die of starvation, most die from misadventure.”

<https://www.ars.usda.gov/pacific-west-area/logan-ut/poisonous-plant-research/docs/locoweed-astragalus-and-oxytropis-spp/>

Some signs of poisoning are depression, dull hair coat, eyes dull and staring, irregular gait, inability to eat, abortions and animals may become violent if stressed. Generally, livestock won’t eat locoweed if there is plenty of other types of forage. If it becomes a problem the animals need to be removed from the pasture.

Locoweeds are found throughout the west on mountains, foothills, plains, and semi-arid regions. Species may have blue, yellow, white or purple flowers.

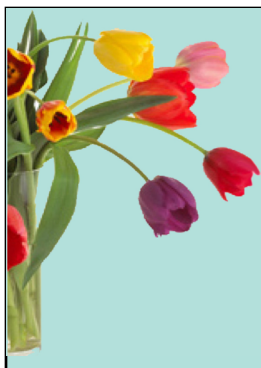
Night Scented Stock (*Matthiola longipetala*)

This plant forms large patches of flowers along roadsides and open areas at elevations between 3000 to 5000 feet. If you see something that looks like this but aren’t sure, take a long sniff. It has a wonderful spicy aroma (like cinnamon, cloves and nutmeg) in the evening when the one-inch flower



opens. As the day progresses the flowers close. The seed capsules are long, 3 to 4 inches, and slender. The plants form dense mounds with the leafless flower stalk rising above the plant. The flowers have four petals and are a light purple to grayish blue. These are tall plants at around two feet. The leaves are simple and narrow and are attached alternately, have soft woolly hairs giving them a soft green look. These are not hot weather flowers, they fade out quickly once the temperature starts to rise.

You can buy seeds of this plant and it is grown throughout the country. This plant is also related to the bedding plant stock you see in the spring at garden centers. Fortunately, the domesticated stock still retains its spicy aroma but I wish they would get over stunting them into shorter and shorter plants. Seeing and smelling a large patch of colorful stock in the garden is a pleasure you never forget.



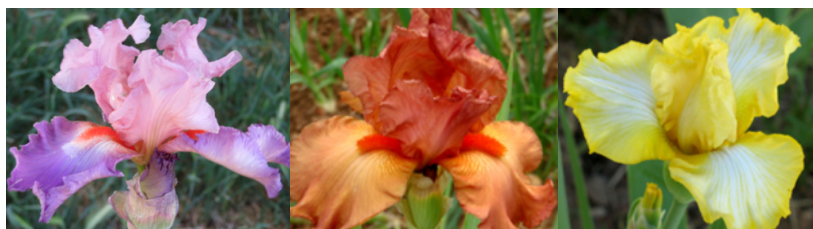
Congratulations *for completing your first 50 hours*

Diane Benjamin

Mentor: Leigh Ann Frankel

Volunteer Hours

The fiscal year ends on June 20th. Please have all your volunteer and continuing education hours submitted by July 5th. Also, watch for an e-mail from Mary Barnes; there will be a change in what hours are reported – effective with the new fiscal year beginning July 1st.



Annual Iris Rhizome Sale, Prescott Area Iris Society

Location: Stoneridge Community Center,
1300 Stoneridge Drive, Prescott Valley, AZ 86312

One Day only - Saturday, July 27th, 2019, 10:00 AM to 3:00 PM

Join the Prescott Area Iris Society (PAIS) for our huge Annual Iris Rhizome Sale with hundreds of Iris varieties for sale, multitudes of colors and forms, recent introductions to historic. Our LOCATION is Stoneridge Community Center, 1300 Stoneridge Drive, Prescott Valley, AZ 86312. Come early for best selection. Free admission. Planting and care instructions given. Portions of the proceeds are used to support numerous PAIS community outreach programs including, Yavapai College Horticultural Scholarships, Sharlot Hall Museum and horticultural education programs in local schools.

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

From the Editor: Send or email articles to the address below. Email is preferred. Please see schedule for deadlines.

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MG NEWSLETTER



Next Meetings

June 19 Master Gardener Association
Meeting, Camp Verde

July 13, Monsoon Madness, Prescott, AZ