Events & Activities

MG Association Meeting, Wednesday, Sept. 21 6:30pm Speaker: Emerson Jones, Verde River Growers.

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

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

Prescott Orchid Society, meets 3rd Sunday of the month, 2pm at the Prescott Library, call Cynthia for information. (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

Check out the new MG blog. More garden information, events and pictures.
http://yavapaigardener.blogspot.com

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When we think of bees we tend to think of introduced honeybees but did you know that you can find a 1000 (yes 1000!) different species of bees in the Sonoran desert? The Tucson area has more species of native bees than nearly any where else in the world. With a little work you can attract native bees to your yard. In fact you might even have some already and not even realize it.

Native bees have been ignored for years as important pollinators of not only native plants but cultivated plants as well. In the Sonoran desert approximately 80% of the plants are adapted to bee pollination; 30% of our agriculture crops depend on bees. The diversity of plants and the foods we eat and use are very dependent on bees. It has only been since the problems with honeybees, first mites and then colony collapse disorder, that much attention has been focused on the native bee populations. In Arizona there are a robust number of bees that can be found from the southern deserts and into high elevations, although the number of species diminishes the higher you go.

Bees may resemble wasps but they are more robust and hairier. They also have specialized structures that allow them to carry pollen back to the nest. In bees, only the females sting. Sting evors evolved from the ovipositor (egg-laying tube). The size of bees varies tremendously. Arizona has the smallest bee in the world, Perdita minima. At 2mm he is just a speck, while the large carpenter bees can measure an inch and half. Depending on the species, the bees will nest in the ground, pithy dried stems and even abandoned tunnels of wood-boring beetles. Except for a few species, bees are herbivores feeding on pollen, nectars and oils. A few species are parasitic, feeding on other bees (Parasitic cuckoo bees). Native bees are nearly all solitary. The female creates her own nest. Bumblebees, the exception, are social.

Nesting habitat varies with species. Some collect small pebbles, plant hairs or floral resins as building materials. Some use mud to create nests. Leafcutter bees remove circular pieces of leaves to create nests. So next time you see those circular cutouts in your leaves, don’t panic. The majority are ground nesters. They create cells in the soil, depending on species, anywhere from a few inches to over 6 feet down (in sandy soils). The burrows are lined usually with a waxy secretion that helps maintain the humidity and
prevents fungus from destroying food and the young larvae. Females create the burrow, provision it and then lay an egg. Once that is done the nest is on its own.

Even though called solitary bees, some species may gather together to create aggregated nest sites. The common cactus bees (*Diadasia rinconis*) which pollinate a variety of cactus may consist of thousands of individual nests that cover an area as large as 2 or 3 tennis courts. Some bees use the abandoned tunnels of wood-boring beetles in dead limbs or trees. These are the leaf-cutter bees and mason bees. They locate a tunnel and then line it with leaves, resins, pebbles or mud to create cells and a plug.

Like most insects they are active in the warmer months, slowing down as it gets cooler. Some go through just one generation per year while others might have multiple generations.

The exception to the solitary aspect of native bees is the bumblebees (genus *Bombus*). Colonies of bumblebees are annual. The colony is established by a queen when she emerges from her winter quarters. Her first job is to find an underground cavity to nest in. In the cavity she will lay eggs. Her time is then spent in collecting food for the newly hatched larvae until they are old enough to fly. This first group of progeny emerges as workers. The colonies are small, rarely more than 100 bees. At the end of the summer new queens and males are produced. The new queens and males mate, the males die and the newly fertilized queens find a place to spend the fall and winter underground. In the spring the cycle starts over.

We tend to think of pollinators as either nectar or pollen eaters but there is a very specialized group that has scrapers on their legs and they harvest oils from glands on the undersides of certain flowers, (Ratany and malpighia families). They mix this oil with pollen for a nutrient-and energy-dense larval food.

Populations of native bees are threatened by civilization. While they can exist in an urban environment, they need all the same things that birds need—nesting sites and water. Pesticides, monocultures and clean tillage (loss of nesting sites) all threaten the native bees. The evidence is conflicting but honeybees may also damage native bee populations. One study showed honeybees may actually kill bees, making them a threat to native bees.

There is one bee that gardeners can attract to their yards. The orchard mason bee can be purchased to release in the garden but you might be able to just attract them. Mason bees are smaller than honey bees, are solitary and a shiny dark blue to black in color. They are native to Arizona. The best part is they don’t sting unless stepped on or perhaps trapped in clothing. In the wild the bees nest in cavities visiting flowers to collect pollen. The pollen is placed in the cavity and the queen lays an egg on it. Once the egg is laid she partitions off the nesting cell with mud and then repeats the process until she reaches the end of the cavity which she also seals with mud. Males are first to emerge in the spring, then the females emerge. This early spring activity makes them excellent pollinators for fruit trees. The larvae develop in the summer, pupate and then the new adults hibernate over the winter. Because they like nesting in beetle galleries it is easy to replicate those cavities to attract them to your yard. something like putting up a birdhouse. It is possible to purchase mason bee houses or you can make your own. Wood blocks drilled with the correct sized holes, bundling natural reeds together—even straws. One of the keys to this is providing a stable and parasite-free home. Wooden blocks seem to harbor parasites so should not be used repeatedly for many seasons. Straws need protection from the elements. They also should not move or be moved as doing this may damage the larvae.

You can find out what all the bees are at:  
http://www.pollinator.org/PDFs/Identifying_Native_Bees_PosterFINAL.pdf
Tips for attracting bees

Select eight to ten species native to your area to help you create a native bee habitat of your own. Figure out which plants attract the native bees. While these bees will use exotics in some cases, starting out with native plants will probably produce better results.

Leafcutter, mason, and other native bees may take up residence in wooden blocks drilled with holes. Cut a 4" x 4" piece of untreated pine into 6" lengths. Drill a variety of 1/8" to 5/16" holes 4-5" deep lengthwise into the block. Hang the blocks in a shady spot near your garden or other flowering plants. Try lining some of the holes with paper tubes.

Try stacking dead branches or agave stalks against a fence or wall to attract carpenter bees.

Mason bees need mud to complete their nests. Provide a muddy spot in your yard by piercing the bottom corner of an empty plastic gallon jug with a straight pin. Fill with water, replace the cap, and use twine to tie the handle to a fence or hang in a suitable location. Allow the water to drip out on bare ground and refill jug as needed. A variety of bees, butterflies and other wildlife may also visit your puddle for a drink!

1. Don't plant pollen-less or double-flowered horticultural varieties.
2. Pick plants that will flower at different times through the season.
3. Integrate patches of bee-friendly plants throughout your garden, especially in and around the vegetable plot.
4. Provide nesting habitat in the form of “bee blocks” as well as dead branches for boring.
5. Leave a bare patch of soil near your garden to attract digger bees. Keep it dry and away from foot traffic.
6. Avoid or eliminate the use of pesticides.

For more information on mason bees go to: www.sare.org/publications/bee/blue_orchard_bee.pdf

http://www.ars.usda.gov/Main/docs.htm?docid=10743
http://www.pollinatorparadise.com/Solitary_Bees/Supply.htm

Register Now!

Don't forget to register for the Highlands Garden Conference.

Pre-conference tours on October 21
Conference October 22
For registration materials and information go to the website below or call one of the extension offices.

http://cals.arizona.edu/yavapai/ahgc/
I was born and grew up in an apartment in the Bronx, NY. My maternal grandparents, immigrants from Sicily, lived in Brooklyn, in a brick house built by my grandfather. He had a vegetable garden, which took up the entire back yard, and into which the grandchildren were not allowed (pity). He also had a flower garden. Although we were not to play in the gardens, they fascinated me. I was particularly drawn to the flower garden. It is said in the family that my first words, beyond “mama” and “dada,” were “pretty flower.” Certainly, that is a love that continues to this day.

My maternal grandfather had a fig tree, which was quite a feat in New York City. He wrapped it in tarpaper each winter, and prized it. We grandchildren were given fresh figs to eat, handed to us personally by him, and we knew how special they were.

In the apartment in the Bronx, my mother and I planted morning glories in coffee cans on the windowsills of the living room windows. I remember how she trained them to climb around the window frames. When I was older, we moved to a house in Pennsylvania, where my father had a vegetable garden, from which my mother canned, and my mother had flower gardens.

I worked with both parents in the gardens, and learned my first real gardening lessons. I learned to call flowers by their botanical names from my mother. My father became a skilled rose gardener and we would discuss different species, and why we loved specific ones. I have found myself kissing rose blossoms…such a quieting and yet satisfying experience, fragrance, softness of petals, beauty of their color, they speak to me.

I graduated from Adelphi University, in New York, with a major in Sociology and Social Work. I did graduate work in New York City, at the graduate Faculty of the New School for Social Research. My first garden of my own was on the terrace of a 17th floor apartment in Manhattan. I grew tomatoes, string beans, cucumbers, basil, and, of course, flowers. I had a plot in Central Park, in one of the country’s first community gardens. I’ve gardened in East Hampton, on Long Island, New York; on Whidbey Island, WA, near Seattle; in the Verde Valley and Sedona; and in Trinidad, CO, a small town just north of the New Mexico border.

My biggest gardening challenge when I moved here was my clay soil’s alkaline pH, and brick-like texture. So in 2008, I took the Master Gardener course. The class was great; it became the highlight of my week. I learned to use native plants, and not overly amend the soil. I only use soil sulfur when planting, and a small amount of greensand. I also learned to dig the holes and water them the day before planting to avoid planting in “bricks.”

Now that I’m a Master Gardener, I enjoy teaching others about best practices that also protect our environment, and encouraging xeriscaping. I currently volunteer at the Camp Verde Extension office, and grow far too many cuttings for Monsoon Madness. I assisted the 2010 MG class, and will do that again. I find it fascinating.

When I’m not gardening, I love to help with my other passions—the Canyon Moon Theatre, Sedona Chamber Music and Sedona City affairs and politics.

My future horticultural plans are to learn to identify more native plants, and to plant more native plants that attract bees, butterflies and hummingbirds, and that DON’T GET EATEN BY DEER, RABBITS AND JAVELINAS! Currently, nothing is blooming in my garden, because all blooms have been eaten! I am now on a path to find native plants that native animals don’t like.

Canker

(From the Cooperative Extension bulletin on Sooty canker.)

Now that's a word that just seems to radiate trouble...canker ... can't be good. Cankers are a variety of plant diseases with similar symptoms-areas of dead tissue which grow slowly. They can be found in both native and cultivated trees and can be devastating. Cankers can be caused by fungi, bacteria, mycoplasmas and viruses which are usually specific to a single host which might be a genus or just a species. Some will affect a variety of species.

One that is common in Arizona is the Sooty Canker. Sooty canker is caused by the fungus Nattrassia mangiferae. It will affect ash, citrus, mulberries, walnuts, figs, oleander, wisteria, sycamore, apple, apricot, chinaberry, poplar and other smooth or thin-barked trees.

The first symptoms you will likely notice are wilting and die back in tree branches. The leaves on a damaged limb will be small and wilt and die during the summer. Somewhere you will find brownish wet-looking areas. As the fungus grows the bark will start to crack and peel. Underneath the bark will be masses of black spores with dark staining of the bark and sapwood.

Humidity is the key for the fungus to grow and spread. The spores need to have moisture to germinate. They find entrance to the tree in wound sites and as the summer days go on the fungus continues to grow, causing more and more damage. While we like to think of bark as a somewhat impervious thing, a variety of factors can damage it, creating an opening for the spores. Things like sunscald is common in citrus and other fruit trees. Pruning creates giant wounds. Trees with thin smooth barks seem to be the most susceptible. The primary infection probably occurs in the winter rainy season when the wind and rain move the spores around. Once infected, the hot summer months encourage its growth. It loves temperatures between 91 and 97 degrees Fahrenheit.

The best way to protect the tree is to make sure it is healthy and try not to damage the bark. Keep that weed eater away and keep pruning to a minimum. If pruned properly the branch and leaf structure should provide some shade for the trunk. With fruit trees and citrus it has been a common practice to paint the trunk with a white latex paint to protect the trunk from sun damage.

If you do get an infection in the branches, remove the limbs at least 6 inches below the infection. If the infection is more widespread wait to remove the limbs in the fall or early spring to help prevent sunburn. Prune during cool, dry periods. This allows the cut to seal quickly. Rinse tools with a 20% bleach solution. You don't want to spread this to other trees!

Fertilizers and Plant Remedies

from: The Practical Flower Garden by Helena Rutherford Ely, 1911

Her Philadelphia garden

The number of plant diseases increase so rapidly that the harried gardener no sooner has conquered one trouble than another appears, and the spray-machine is in constant use in the fight against insect destroyers and microbe diseases. Vigilance which enables one to detect an enemy in the very beginning, and constant care, generally win the fight against everything but the terrible drought, where one is powerless. Even though the water-supply remains sufficient, the continued dryness of the atmosphere, dewless nights, constant winds, with the sun burning down upon the lawns and gardens, destroy their vitality and check their growth. In dry weather, constant stirring of the soil to the depth of a couple of inches to maintain a loose mulch, or a mulch of leaves, lawn clippings or old manure, are our greatest hope. I often feel as if all battles against plant diseases, insects and microbes might be won without serious disaster, and happiness might reign always in our gardens, if only we could have abundant rains; but to see the plants which started bravely into life in the spring begin to wither and starve from drought when midsummer luxuriance should be reached, is almost unbearable for those who love their flowers.

The most efficient remedy for the thrip, the small yellow-white fly, which settles upon the under side of the leaves of the rose bushes, and so devours them that soon only the skeleton of a leaf remains, is spraying with a solution of whale-oil soap; two applications a week apart will destroy them, but the odor from the whale oil is unpleasant for twenty-four hours, particularly so at the sunset hour; it is a good plan, therefore, to be absent when the whale-oil soap is used.

Helena Rutherford Ely has been called the American equivalent to Gertrude Jekyll. She wrote her first book “A Woman’s Hardy Garden” in 1903, followed by two others. She urged a move away from the rigid Victorian gardens dominated by tropical annuals to more informal beds filled with a mix of perennials and annuals for continuous waves of colour. She especially favoured hardy native plants. This was a quite radical departure from contemporary gardening fashion and she significantly influenced garden style in North America. Her writing is straight-forward and informal, filled with helpful gardening snippets of the time and lists of turn-of-the-century plants for the garden.
Phacelia spps.

Everyone has seen one of the species of this flower! You would have to be blind not to have seen this flower unless you never set foot outside. It is sometimes called scorpion weed or wild heliotrope. There are 200 species of Phacelia, 30 of which can be found in Arizona.

The name scorpionweed comes from the flower spike which curls in a manner of a scorpion tail, although in the opposite direction. It is an annual and blooms February to May. The flowers vary in color from purple to bluish to white. Blooming starts at the bottom of the spike and moves up. The stamens are rather striking, sticking straight out of the bloom and white or cream colored. Leaves vary in shape. Some are fernlike and lance shaped, finely hairy and toothed while others are ovate. Phacelia is native to desert scrub and chaparral between 1000 and 4000 feet elevation. It can be found along washes, flats and rocky slopes, forests, roadsides and even your yard.

While the plant is kind of scraggly looking the bright blue flowers are really pretty. You might want to get to know this plant and leave it alone in your yard. In large masses it can really brighten up a spring garden.

New Mexico Locust Robinia neomexicana

I spent two summers working at Slide Rock State Park. While the job had its downside (too many people!) it is really one of the most beautiful places in Arizona.

Since I was outside nearly all the time I was able to see the vegetation change as the seasons passed. In late spring the New Mexico locust bloomed. Clusters of pea-like rosy-purple flowers hung from the branches. What most of the time looked like weedy thickets became a wonderland. From the flowers come fat green and fuzzy pods. The tree (sometimes more shrub-like) is small with crooked branches and an open canopy. The downside is the paired thorns on the branches. The leaves are compound with round leaflets while the bark is reddish brown and rough, becoming furrowed and scaly.

Found throughout the Southwest and into Colorado, Texas and Mexico in mid-elevations, 4000 to 8500 feet—along streams, bottoms of valleys and the side of canyons. It forms thick stands, making it difficult for some conifers to reseed. It has been a problem in some areas where there have been forest fires. On the other hand, it has also been planted for erosion control.

The flowers are edible: Native Americans ate them. Deer browse the leaves and quail and squirrels eat the seeds. There does seem to be some conflicting information on whether the seeds are edible. Some sources list the seeds, bark and roots as poisonous to humans, others don’t mention it. Stay on the safe side and don’t eat those parts of the plant.

Seeds do seem to be available and are easy to grow. Because of its propensity to create thick stands of thorny vegetation, it might not be the best choice for a yard but it is beautiful to look at when it is blooming.
Annual Potluck Recognition Picnic
Oct 8th, noon
Thumb Butte picnic area in Prescott.

RSVP please to Kathy MacCauley,
prescottgirl@qwest.net, 443-8934
with what you will bring and how many
in your party. Families are welcome.

FROM THE EDITOR: Please
send or email articles and an-
nouncements 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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Next Meeting

September 21, 6:30p
Camp Verde

Emerson Jones from Verde Valley Growers will be our Sept. speaker. He will be talking about his business, building a hoop house, hoop and greenhouse growing and challenges of growing perennials and veggie starts in our area.