High on the Desert Cochise County Master Gardener Newsletter

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The University of Arizona and U.S. Department of Agriculture Cooperating

The Virtual Gardener—The Habitat Network YardMap Project

Given a choice, would you rather play, learn something new, or work by collecting data for a science project? Mrs. Virtual Gardener found a website that allows you to do all three of these things at the same time and suggested I pass the information along to you this month. I checked out the website and found a treasure trove of exciting new possibilities to explore. Read on to see what I found!

The website is the home of Yard-Map.org, an educational/research tool and social network that is a component of the Habitat Network. YardMap was developed by the Cornell Lab of Ornithology and was funded by the National Science Foundation. It went online in 2012 and in 2016 Cornell was joined by The Nature Conservancy as a co-sponsor of the project.

YardMap focuses on gaining a better understanding of urban/suburban wildlife habitats and is designed to both educate the public and gather data from the public. Citizen participants in the project are provided with tools to create a wildlife habitat map of their yards or other properties and given information on how to improve the quality of those habitats. Once participants have made their maps, they are invited to observe and report significant events happening in their backyard habitats and share them with other participants.

As of this writing over 22,000 sites have been created and nearly 360,000 acres have been mapped. The maps, together with other data reported by participants, will help provide a better understanding of how much urban wildlife habitat exists and how it benefits both wildlife and humans. Here are some of the specific questions the project is seeking to answer:

1. What practices improve the wildlife value of residential landscapes?
2. Which of these practices have the greatest impact?
3. Over how large an area do we have to implement these practices to really make a difference?
4. What impacts do urban and suburban wildlife corridors and stopover habitats have on birds?
5. Which measures (bird counts? nesting success?) show the greatest impacts of our practices?

Single maps provide valuable data on isolated islands of wildlife habitat, but maps of groups of multiple habitats can

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College of Agriculture and Life Sciences
Cooperative Extension
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show how these islands define corridors that connect rural natural habitats together. The more people who participate in the project, the better scientists can understand the relationships between wildlife and humans and the impacts of urban encroachment on the health of the environment.

To become a full participant in the project, it is necessary to create a password-protected account in the system. If you are not quite ready to become a full participant, you can still benefit from the many educational benefits of the program. To check out some of these benefits, simply go to the YardMap website.

An *Explore* item in the main menu allows you to enter your zip code and see information about your local area, including maps showing the "ecoregion" you are located in and your local USDA plant hardiness zone. Other items found in this section include a document discussing pollinators for your ecoregion, lists of native plants for your state and local sources for them, and more.

Furnishing a zip code for anywhere in Cochise County will show that we are located in the Chihuahuan Semi-Desert Province as defined in the US Forest Service ecoregion classification scheme developed by geographer Robert Bailey. This scheme uses a combination of geology, physiography, vegetation, climate, hydrology, fauna, and soils to define regions with similar ecological characteristics ("ecoregions") and provides the basis for managing their ecological health and productivity.

Also found here is a 24-page pamphlet, *Selecting Plants for Pollinators—A Regional Guide for Farmers, Land Manager, and Gardeners in the Chihuahuan Desert Province*, which alone is worth a visit to the YardMap website. This beautiful little booklet discusses the importance of pollinators, briefly describes the characteristics of the Chihuahuan Desert Province, and introduces the reader to the pollinators active in this region—bees, butterflies, moths, flies, birds, beetles, and bats. Some of the most useful features of the booklet are tables showing the traits of plants—color, odor, nectar, pollen, and flower shape—that are most attractive to the different pollinators, bloom times of flowers, and a list of bee-pollinated flowers.

"Also found here is a 24-page pamphlet . . . which alone is worth a visit to the YardMap website."

In the *Explore* section you will find a link to the Ladybird Johnson Wildflower Center showing a list of recommended native plants for Arizona including scientific names, common names, and pictures. The list can be filtered for many different plant characteristics—light and moisture requirements, bloom times, size, and leaf characteristics. Selecting individual plants from the list brings up a data sheet with tons of additional information about the plant.

Other information available in this section includes a link to the local Cooperative Extension Office, lists of local nurseries and other sources of native plants and seeds, commercial landscape professionals, and community gardens. For those of you who are birders, there is also a link to local eBird reports.

The eBird reporting system— a real-time, online, checklist of bird sightings—is also a project of the Cornell Ornithology Lab. YardMap shows a list of all birds reported to the eBird system within 20 miles of your zip code during the last 30 days. In addition to the name of the bird, the data shown includes the date and location of the sighting. Locations are shown by place marks on a Google map which allows the user to zoom in and pinpoint the exact coordinates of the sighting.

In addition to the Explore section, there is a *Learn* menu item that contains a collection of articles on different aspects of wildlife habitats. As of this writing there are 149 articles covering a wide range of topics ranging from plants to water to critters and much more. Although many of these articles are written from the perspective of environments far removed from the desert southwest, there is much food for thought to be found here.

This month has been a brief introduction to the YardMap project. Next month I want to continue this topic with a discussion of creating a habitat map and other things you can do when you sign up to become a member of the Habitat Network. In the meantime, check out the short three-minute video from the Cornell Ornithology Lab to learn a little more about the Habitat Network.

Until next time, happy surfing!

Gary Gruenhagen, Master Gardener
virtualgardener@cox.net

November Reminders

- This is a good time to install a drip system
- Replace summer mulch with fresh mulch
- Start a winter herb garden
- Protect plants from frost

A Passion for Passion Flowers

When I lived in Key West, a very different place from my high desert home now, I fell in love with the vast variety of lush tropical flowers that flourished there. The colors and the sensual fragrances that would assault your senses as you wandered down the street, (sometimes mingled with a whiff of odiferous garbage rotting in the heat) could knock me off my feet. My favorite vine in that subtropical farce that they call paradise was the Passionflower. Little did I know that my passion for Passionflowers can be sated in my own high desert paradise!

Passionflower, or Passion vine, of the genus *Passiflora*, has about 500 species of flowering plants. Most are found in South America, Asia, and New Guinea. Nine separate species are native to the United States. All Passionflowers are vining plants with climbing tendrils. The flowers are showy, multicolored affairs, with a base of 5-10 tepals, resting on top of which is a fringed corona, and on top of that are 5 stamens & 3 styles in a whorled pattern. Although there are white varieties, the usual flower found is blue or purple. This flashy flower lasts only one day, but it's well worth it. The Passionfruit is seeded, and can be sweet and aromatic, used in beverages and salads. The fruit is usually found on the tropical varieties. *Passiflora mexicana* is native throughout southeastern Arizona between 2,500'-5,000'. *Passiflora foetida* ranges from southern Arizona and southern New Mexico to Texas. Other species are planted as ornamentals. Passionflowers are evergreen or semi-evergreen and bloom all summer in full or part shade. They need a warm place out of wind, against a wall or under an overhang, and should be mulched well in winter. Other species are root hardy perennials in the high desert.

The passion in Passionflower refers to the passion of Jesus in Christian theology. In the 15th and 16th centuries, Spanish Christian missionaries adopted the unique physical structures of the flower as symbols of the crucifixion. The unusual flower has also reminded people of a clock in Israel, Greece, and Japan. In Hawaii, it is called *liliko'i* and in India its blue flower evokes the divine Krishna's aura.

But there may be more to that passionate name than religion alludes to. In some cultures it has been used in tea as an aphrodisiac. Native Americans used the fresh or dried leaves of *P. incarnata*, or Maypop, to make a tea used for insomnia, epilepsy, rapid heart rate, cough, diarrhea, and as an analgesic. These uses were later adopted by the European colonists. Its effects have been studied most in generalized anxiety disorder, substance withdrawal, and it has been used in sedative products in Europe. However, in 1978 the FDA prohibited its use in over-the-counter sedative preparations. It should be noted that it can interact with other supplements and medications. As always, one should take these preparations with care.

The sheer beauty of the flower produced by this vine is astounding, but I should warn you that some varieties stink. If you are collecting the flowers in full bloom for medicinal use, the potency of the smell is an indicator of the potency of the medicine.

I have been looking for a Passionflower vine ever since I discovered they grow here in the high desert. Alas, it was to no avail until just recently when I was gifted a start from a fellow gardener's plant. "My paradise is complete," I thought. But then, as I started the long wait until next summer for my passion to be realized, I thought of just one more beautiful flower from the tropics that will grow and thrive in my backyard high desert paradise. Ah, but that is a story for another day.

Kris Williams, RPh,
Master Gardener

"If we could see the miracle of a single flower clearly our whole life would change." **- Buddha**

Cuttings 'N' Clippings

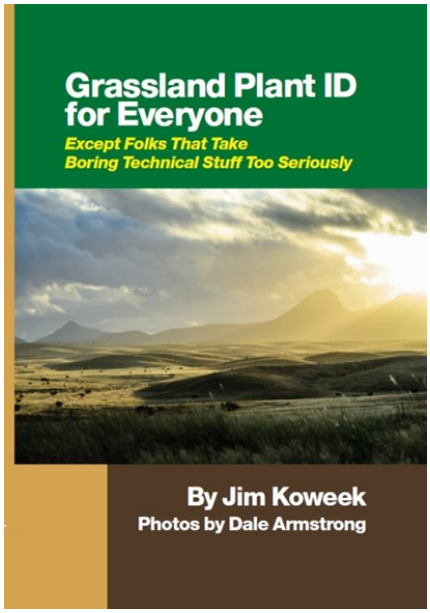
❄ The next Cochise County Master Gardener Association meeting will be held **Thursday, November 10 from 2:00 to 4:00 PM.** For information contact Valerie at: **valeriedavidson@email.arizona.edu**

❄ The 2017 Master Gardener class begins January 25 and runs weekly through May. For information contact Valerie at: **valeriedavidson@email.arizona.edu**
For information on the Cochise County Master Gardeners, go to the web site at:
http://cals.arizona.edu/cochise/mg/
You can also follow them on Facebook at:
www.Facebook.com/CochiseCountyMasterGardeners

❄ Join Water Wise on **Saturday, November 5 from 9:00 to 11:00 AM** at University of Arizona SV for a Septic Care Workshop presented by Kitt Farrell-Poe, PhD, Water Quality Specialist. Do you know how to care for your septic system? When was the last time it was pumped? Just because it's out of sight doesn't mean it should be out of mind. Come learn how to take good care of your septic system.
Contact the Cooperative Extension at 458-8278, Ext. 2141 for more information. Check out the Water Wise web site at:
http://waterwise.arizona.edu/

❄ The Cochise Chapter of the Arizona Native Plant Society's next program will be held **Friday, November 18 at 5:00 PM.** They meet in the Cochise County Community Development Office conference room, 4001 Foothills Dr. Sierra Vista. The speaker will be Jim Koweek, author and owner of Arizona Revegetation and Monitoring Company and Diamond JK Nursery in Sonoita, speaking on *Grassland Plant ID for Everyone.*

Jim has had many years of experience in reseeding projects, native seed sales, and rangeland monitoring for the mid elevations of the Southwest. He will discuss his latest book which is a non-



technical field guide to around 300 species of grassland plants. It includes 60 grass species, trees and shrubs, cacti and succulents, and well over 100 forbs. There are also short sections on invasive plants, grassland plant propagation, and using native grassland plants in landscaping. This book contains over 400 high quality photographs and descriptions of each species. Plants are identified by easy to recognize characteristics. For more information, follow AZ Native Plant Society on their web site:
http://www.aznps.com/chapters/cochise/cochise.htm

❄ "What is that Plant?" ID service is available to the public by Herbarium volunteers. If you are wondering what that naturally growing or naturalized plant is, getting an identification is easy. All you need to do is visit the Cochise County Herbarium website:
www.cochisecountyherbarium.org
and click on the Plant IDs tab to learn how!

❄ Cochise County Master Gardeners are available to answer your gardening questions either by telephone call to the Cooperative Extension Office or on-line on our web site at:
http://ag.arizona.edu/cochise/mg/question.htm

❄ You can get an electronic notification when a new Cochise County Master Gardener Newsletter is posted on-line. Send an email to Valerie at:
valeriedvidson@email.arizona.edu
or give her a call at: (520) 458-8278 Ext 2141 with your request.

❄ The Master Gardeners are at the Sierra Vista Farmers Market on the **first Thursday of each month** to answer questions and offer resources for common garden and landscape problems.

At a Glance Box

It's a Bloomin' Cochise County Native Plant of the Month

Plant: *Artemisia* spp.
Description: Perennial
Blooms: Inconspicuous, wind-pollinated flowers with small rays, late summer to late fall
Use: Attractive foliage in rock gardens and borders
Learn more: Cochise County Herbarium www.cochisecountyherbarium.org
For an in-depth article, see below.

Virginia Bealer, Guest Author
Herbarium volunteer

Artemisia: A Delight for Olfactory and Gustatory Senses

Hiking in the coastal chaparral of California as a youngster, I came to associate the spicy fragrance of California sagebrush, a grey-green shrub with leaves divided into filiform segments, as the signature smell of my first-loved plant community. Later I learned that the plant, *Artemisia californica*, wasn't a sage at all, but a member of the sunflower (*Asteraceae*) family. My dictionary includes the genera *Salvia* and *Artemisia* in its definitions of "sagebrush," demonstrating once again that common names for plants can be misleading. Other common names for *Artemisia* are wormwood and mugwort.

Artemisia is named for Artemis, goddess of the hunt and the moon. The daughter of Zeus, Artemis is said to have given Chiron, a Centaur, wormwood to help him "counteract the effects of poisoning by hemlock, toadstools and seadragon," Or, perhaps Chiron's forest-dwelling habit made him prone to worm infestations and he had need of the plant as a vermifuge or deworming agent, for which it is used to this day by herbalists.


A. dracunculus
Photo: Virginia Bealer

Two species of *Artemisia* are common in our area. The flower heads for our species are very small with short or no rays and are wind pollinated, so species are distinguished by vegetative differences. *Artemisia dracunculus* or *dracunculoides*, tarragon, is the source of the common kitchen herb. There is disagreement among sources about whether or not these are separate species. If they are, indeed, not synonymous, *A. dracunculus* is French or "true" tarragon and has a less bitter flavor than *A. drancunculoides* or Russian ("false") tarragon.


A. dracunculus
Photo: Virginia Bealer

The former's foliage is described as shiny and bright green, as opposed to olive green for the latter. The leaves are generally linear or lanceolate, entire and up to 7 cm long. Both have numerous reddish stems up to 1.5 m tall and are native to Europe and North America. *Artemisia ludoviciana's* leaves are white and wooly, and come in a variety of shapes from linear to toothed elliptic and up to 11 cm long. This species has multiple stems the same color as the foliage, up to 80 cm tall.


A. ludoviana
Photo: Ian Bealer

A third species, *A. tridentata*, big sagebrush, is the dominant

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plant of the Great Basin Desert and occurs in northern Arizona. It has a thick, woody trunk and silvery, wedge-shaped leaves with (often 3, hence "triden-tata") teeth at the tip. Stems can reach to a height of 3 m. Therapeutic uses by Native Americans for this species noted in Michael Moore's *Medicinal Uses of Plants of the Desert and Canyon West* include topical treatment for rashes and prevention and treatment of skin infections. The leaves are reported to protect food from insects and rodents when packed with stored foodstuffs.

The flowering period for all three native species is July to November. Though *Artemisia* has no showy flowers, its pleasant scent and pale green, lacy foliage make it an attractive addition to gardens. Several species native to southern Europe, North America and Asia are listed as appropriate for our climate zone in *Sunset Western Garden Book*.

Absinthe, a liquor invented in Switzerland in the late 1790s, derives its unique green color from *A. absinthium*, and its flavor is enhanced with anise and fennel.

Although I could find no references to *Artemisia*'s use by caterpillars, there was a study that showed significant results when herbivorous insects were removed by an insecticide. In spite of their being no evidence of an "outbreak insect species" utilizing *Artemisia*, the insecticide treatment increased inflorescence growth by 22%, flower production by 325%, and seed production by 1053%. (Masaru Takahashi and Nancy Huntly, published online, 2010.) So some insects do "appreciate" wormwood.

Virginia Bealer, Guest Author
Herbarium volunteer

What is a Master Gardener?

The Master Gardener program began in King and Pierce Counties of Washington state in 1972 when an over-worked Horticultural Extension Agent, Dr. David Gibby, began training volunteers to assist him in providing support to the community. Dr. Gibby's program was simple and effective. In exchange for a promise to donate a certain number of hours service, he gave volunteers specialized, university-level training in horticulture. Word of his success in recruiting volunteer support soon spread to other communities and today Master Gardener programs are flourishing throughout the United States and Canada.

In 1987 Horticulture Extension Agent, Dr. Deborah Young, started the Master Gardener program in Cochise County. A yearly, thirteen-week Master Gardener course is taught. Prospective Master Gardeners who take the course study such topics as soil, pest management, botany, gardening, landscaping, and environmental stewardship. Upon completion of the course the person provides educational leadership to the community by donating fifty hours of volunteer time.

In the summer of 1996, Cochise County Master Gardeners formed a non-profit organization to support the educational mission of the Cooperative Extension. The goal of the Cochise County Master Gardeners Association (CCMGA) is to promote food production, landscaping with native plants, and environmental stewardship.

Master Gardener

Become a Master Gardener – Recruiting for the 2017 Class running January 25 weekly thru May

Would you like to become a Master Gardener? Are you interested in becoming more knowledgeable by receiving university level training in horticulture? Do you have the passion, the commitment, and the willingness to serve your community by providing a minimum of 50 hours of volunteer service each year? Are you willing to assist Cooperative Extension by providing educational information to the community in home gardening and landscaping? If you can answer yes to these questions, we would love to have you join our ranks.
For information go to:
http://cals.arizona.edu/cochise/mg/about

Cochise County Master Gardener Newsletter Editor
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