



Mohave County Master Gardener Program

101 E. Beale Street, Suite A, Kingman AZ 86401-5808 • 928-753-3788 • Fax: 928-753-1665
Email: mohavemg@gmail.com <https://extension.arizona.edu/mohave-master-gardener>

Table of Contents

Featured Article "Dodder: Is That Silly String Growing on My Plant?"	1
Amy's Corner	3
Bullhead City Master Gardeners	4
Kingman Master Gardeners	6
Lake Havasu City Master Gardeners	7
"New Insights from an Old Class"	8
"Uninvited Guest"	10
"Pique Assiette Mosaic"	11
"Container Gardening using a Boat"	12

Featured Article

by

Sharon Gomez, Lake Havasu Master Gardener

Dodder: Is That Silly String Growing On My Plant?

Author's Note: this was originally written for our monthly Master Gardener's article published in the Today's News Herald. I thought it might make for an interesting read for our Mohave County Master Gardeners. I have tweaked the article to make it more technical and informative for your benefit.



Have you ever seen a plant that appears to be covered with something that resembles rusty-orange silly string or spaghetti? I've most often observed the plant while driving Hwy. 95 along the sides of the road. Or when traveling through our residential streets, I've seen these plants in vacant lots and the washes. Sometimes, even on a resident's landscape plant!

This vine-like mass is a parasitic plant called dodder. Dodder was once classified in the morning glory family, but recently given its own family: Cuscutaceae. According to the USDA Plants Database there are over 150 species of dodder worldwide. Dodder is a warm season annual that germinates in early spring depending on soil moisture. Seeds are spread by wind, rain, and wild life. Even desert hikers and off-roaders can bring a seed or two home upon their return to the community.

Dodder is a true parasite: the host plant receives no benefit from the dodder and dodder must have a host plant to survive. Dodder appears leafless (having small scales) and lacks sufficient chlorophyll to produce any significant amount of its own food. It attaches to a host plant with slender, twining or threadlike stems which allow it to extract carbohydrates, water, and nutrients. Dodder is generally rust-orange colored, but can also be tinged with red or purple (rarely green). Dodder is found throughout the U.S. and in temperate and tropical regions of the world. This parasitic plant is rarely found in cool temperate climates, with only four species native to northern Europe.

There are many folk names attributed to dodder: strangle tare, scaldweed, beggarweed, lady's lace,



fireweed, wizard's net, devil's guts, devil's hair, strangleweed, and witch's hair. There are many more, none indicating a very appealing plant.

The flowers on dodder are numerous in shades of white, pink, and pale yellow, and measure 2 to 4 mm long. Flowers normally appear from early spring to the end of the growing season. The flowers produce small 1/8-inch fruit that contain 2 to 4 seeds. Dodder seeds drop to the ground and germinate the next growing season. The seeds may remain dormant for up to twenty or more years. The seeds require moisture and sunlight to germinate and can survive several days without a host. If it doesn't come into contact with a host within 5 to 10 days, the seedling will die. However, if a host plant is nearby, it will attach itself to the plant.



Once the above-ground connection is made, the original connection to the soil is no longer necessary and this portion of the dodder shrivels away. The dodder will continue to grow on the host plant. When other suitable hosts are nearby, dodder shoots spread from host plant to host plant. Dodder is an annual plant and does dies each

winter. However, as mentioned earlier, the seeds can remain dormant for many years, just waiting for the spring rains.

Dodder can be a menace to commercially produced plants such as alfalfa, flax, clover and potatoes. For the farmer dealing with an infected field, swift action is required. Recommendations include pulling up the host crop immediately, particularly before the dodder produces seed, and use preemergent herbicides such as Dacthal in the spring. Then planting a non-host crop for several years. Non-host crops include grasses and many other monocotyledons.

Ornamental plants, annuals and perennials in our home landscapes may also be attacked. Successful dodder control involves a systematic approach using an herbicide such as glyphosate applied to the flowers if they haven't set seed. More than one application is required and you usually can't eliminate dodder with a single treatment or in a single year. Dodder is one tough cookie!

Another way to control dodder is to manually remove the seedlings and host plant when possible. When you see dodder in a vacant lot or wash next to your property, you should remove all of it to protect your own landscape plants from the spread of seeds. Carefully place the remains in a plastic bag to prevent seeds from spreading. The earlier you see the dodder invading a plant and remove it, the more likely you will be able to prevent future infestation. If a landscape plant has been invaded by dodder, you may prune the affected area if it won't disfigure it. However, pruning is of little benefit unless only one or two branches are affected and can be removed without destroying or disfiguring the entire plant. But the best remedy is total removal of plant and dodder.

We spend many hours and dollars on our landscapes to keep them attractive. Dodder is NOT something we want added to the mix!



Amy's Corner

As Master Gardeners affiliated with the University of Arizona, we have committed to providing science based gardening advice to the community. I would encourage each of you to consider the current COVID-19 pandemic situation with the same measured approach. Scientific models show that widespread social distancing now can help to slow the rate of infection, which can help to mitigate the stress on our medical institutions, and hopefully buy some time to develop treatments. To that end, the University of Arizona has cancelled all face to face Cooperative Extension events through July 2020, or until further notice. We understand that this will affect the ability of volunteers and associates to obtain the required number of hours this year, and will make adjustments in that regard if necessary.

In the meantime, annual reports are in, and the Master Gardeners provided another year of invaluable service to the Mohave County community and its citizens! In 2019, our organization completed just over 5,000 volunteer hours, and held nearly 150 events that provided science based gardening information to well over 5,000 citizens.

Our current Master Gardener Training Class is the largest ever in our new single class model – with

36 students enrolled! The recent restrictions on group meetings due to COVID-19 are forcing us to get creative with our few remaining scheduled classes, but we have plans to move most of the sessions to a virtual platform so that our newest cohort is fully trained and ready to join the ranks as Associate Master Gardeners in the fall.

We had also planned to hold our annual recognition luncheon in Lake Havasu City at the end of April to try and include many of our snowbirds who have often left town by the time we normally hold it in mid to late May. Unfortunately, that has been tabled as well with the current situation. Given the uncertainty of safely holding group functions for the next several months, we will most likely reschedule it for the fall.

As we head into the last few months of tolerable weather here in the desert, why not take advantage of the social distancing mandate to spend some time in your garden? We've included several creative ideas in to try out, or serve as an inspiration for your own creative twist. Enjoy, and be well!

Amy Nickel, Instructional Specialist Sr.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Jeffrey C. Silvertooth, Associate Dean & Director, Extension & Economic Development, Division of Agriculture, Life and Veterinary Sciences, and Cooperative Extension, The University of Arizona. The University of Arizona is an equal opportunity, affirmative action institution. The University does not discriminate on the basis of race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, or genetic information in its programs and activities. Persons with a disability may request reasonable accommodation, such as a sign language interpreter, by contacting the University of Arizona, Mohave County Cooperative Extension office at (928) 753-3788. Requests should be made as early as possible to allow time to arrange the accommodation.



Bullhead City Master Gardeners

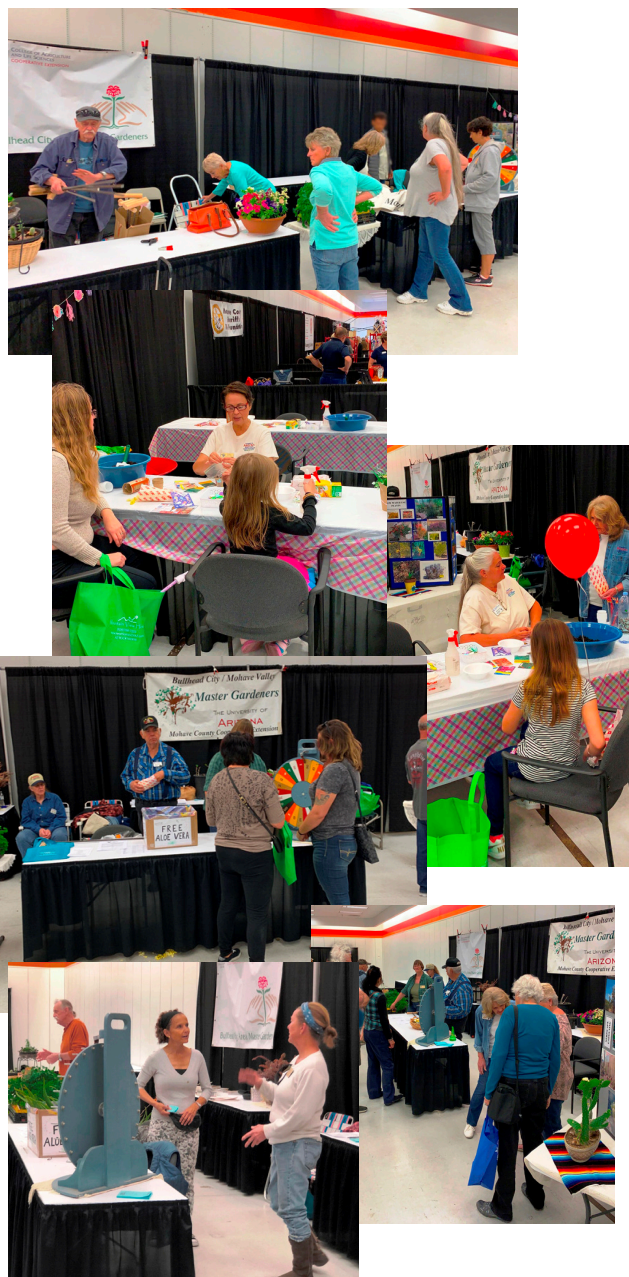
Debbi Miller, Coordinator
Leroy Jackson, Co-coordinator
Bonnie Muir, Secretary
Bill Stillman, Scribe

Since I was a teenager, one of my favorite quotes has been “Life is what happens when you’re making other plans”. Never has this been more true, as we adjust to a world with Coronavirus and try and adapt to the many changes it is bringing into our lives. There is definitely a bright side—we have more free time to deal with the weeds the rains have brought forth! And we have more time to tend our own gardens rather than educating others how to tend theirs.

We were able to participate in our favorite Spring event before the massive shutdowns—the annual Mohave Contractors Association Home and Garden Show in mid-March. We always have a large booth and reach hundreds of interested people, both year-round residents and some winter visitors who enjoy gardening while they’re here. In addition, we staff a seed-planting activity for kids, slightly altered this year to keep multiple hands (and multiple germs) out of the potting soil. Our across-the-Garden-Show-aisle neighbor Ace Hardware supplied the needed planting materials. We appreciate the help of six of the Kingman MGs who traveled to Bullhead to help man the booth. We always enjoy working with the other groups of Master Gardeners at these events.

The Bullhead City area Master Gardeners out-did themselves with decorating the booth this year. Our picture boards are always of interest to the attendees, and a wheel of fortune game allowed them to win seed packets donated by our local big box stores. We had vegetables growing in bags of potting mix and styrofoam coolers, cactus gardens and flowers growing in bowls, and pots of desert plants all around, all brought in by our active members. Our Associate, Geneva Carreon, provided aloes which we gave away to all who wanted them, and she spent some of her volunteer hours running home to dig up

more! We must have given away hundreds of them during the 10 hours the show was open.



January and February were busy months as well, but with our more routine activities during those months—our monthly Home Garden Day, and our regular Library presentations. January focused on Pruning and February was “All About Citrus and other Fruit Trees”, both of which were updated and expanded this year. Bill Stillman, Dennis



(BHC continued from page 4)

Lesowsky and Leroy Jackson gave these programs, and all are supremely knowledgeable on the subjects they discuss.



All the programs this year have included a wonderful new segment presented by Sally Stevens. Basically she covers what to do in the garden, and what to be thinking about, each month. February was her “weed” session, and everyone in the audience, and all the Master Gardeners, listened attentively to her comments about identification, eradication and control. We may all specialize in growing different kinds of things, but we all are plagued by weeds, moreso this year because of the heavier rains.

Our school gardening programs are finally settling into a routine. This was something we had wanted to do for years, but something always prevented us from getting it going. We are now working twice a month with Bullhead City Middle School and Academy of Building Industries (AOBI). The middle school program is a garden club held after school, and AOBI occurs during school hours, held in a greenhouse the students constructed inside of a repurposed school bus. Both schools have problems: the middle school garden beds are too shallow and are filled with Bermuda grass, and AOBI’s bus is either too hot or too cold and has irrigation issues as well.

We are working through these challenges and eventually we will get some crops grown. Maria Waitas and Becky Leisle are coordinating the school garden efforts.

Hotline calls have been strangely quiet this quarter, and those we’ve had have been easily handled. We prefer the ones where we have to do research and learn new things, not the “improper watering” and “no, avocados won’t produce fruit here” calls.

Several of us attended the Mohave County Health Department “Seed to Supper” series of classes held at Bullhead City’s new Anderson Field House facility. Health Department Personnel asked if we could participate to answer any of the horticulture questions which might arise. We were able to clarify a number of things for the attendees during the three sessions. It was an Oregon State University program adapted for this area, so there were some reality checks needed here and there to adjust for differences in area climate, rainfall and soil. No one but us desert dwellers really realize how difficult it is to grow non-native plants in our poor soil, high heat, high winds and intense sun!

Let’s hope we all remain healthy through this pandemic, and are soon able to get back to our regular activities again.



Kingman Master Gardeners

Linda L Reddick, Coordinator
Melissa Palmer, Co-Coordinator

I bet you are not nearly as ready for spring as I am! Nonetheless, Kingman Master Gardeners have had a very active, successful winter.

We started off 2020 with the fruit tree pruning workshop hosted by Don and his wife Peggy. Jeremiah did an excellent job illustrating fruit tree pruning techniques. Attendance was good, but not too big, so everyone was able watch Jeremiah demonstrate the actual pruning. Thank you Don and Peggy for being such gracious hosts, and thank you Jeremiah for the informative presentation.

Cindy Toepfer led a rose pruning workshop at the Kathryn Heidenrich Center the first of February. The wind was not very friendly, and the traffic noise was disrupting at times; neither of which deterred the public from paying close attention to the actual pruning.

Thank you Debbie, Izzy, and Linda for the pruning demonstration, and Cindy for leading the workshop.

The rose pruning workshop was followed up by a seed starting workshop the end of February. Cindy

took the lead and explained a simple method to start seeds using toilet paper tubes. There was a full house with several adults bringing their children. It is always a plus to see children get involved in gardening. Well done Cindy and Mary M.

March tried to come in like a lion, but all that wind did not discourage good public attendance at the grape vine pruning workshop led by Cindy at the DigIt Kingman Community Garden. In addition to the pruning demonstration, Cindy shared her successful winter garden plot at the community garden as well. To close out March, Bob had planned to present an IPM workshop the end of the month, which has since been cancelled due to coronavirus.

A big “hats off” to all of the Kingman Master Gardeners who not only led the workshops, but also gave presentations, handled registration or helped with publicity, and were there to learn as well as answer other types of questions from the public.

Linda Reddick

Kingman Area Master Gardener Coordinator



Lake Havasu City Master Gardeners

Dan Alberts, Coordinator
Sharon Gomez, Co-coordinator

Spring Greetings to all of the Mohave County Master Gardeners from the Lake Havasu City Master Gardeners. With the arrival of spring, and warmer temperatures upon us, the desert has burst forth with its annual display of color. The hills around my residence are alive with color, and the prospect of more rain will add to the natural beauty of the low desert.

The last few months have been active for us here in Havasu. On January the 16th, the eagerly anticipated Master Gardener Training Course commenced with an enrollment of 36 students. I have personally attended each class and talked with many of the students so as to present a welcoming presence and encourage them to become Master Gardeners.

February 8th and 9th found our group at the Winterfest booth on Main Street here in town. This was another successful year in that many people sought our input on a variety of gardening issues. The weather was also a positive factor for an enjoyable weekend outdoors.



We as a group have been in contact with the City Parks Maintenance Department and are planning a pruning demonstration workshop in the near future. This will be announced once we are back to a normal routine in regard to COVID-19.

The Recognition and Awards Luncheon, which was scheduled for April 30th here in Havasu, will also be rescheduled to a later date. In the meantime, stay safe and happy gardening.



New Insights from an Old Class

By Bill Stillman, Bullhead City Master Gardener Emeritus

When I attend a horticulture class (which I do as frequently as possible) it always amazes me when I come across some brand new information (well at least to me). The old adage of “you can’t teach an old dog new tricks” apparently does not apply to these classes. For example, the way I flushed salts from the soil was to increase my irrigation applications, in theory driving the salt levels down below the root zone. Using my citrus trees as an example, about every 2-3 months, I increase the irrigation run time to 2-1/2 times the routine amount. I then back off what would be a normal frequency cycle by one to two days to reduce the chance of over-saturating the soil.

During a recent citrus class presented by Dr. Glenn Wright, calcium sulfate was suggested as a means of reducing soil salinity. When asked of the group by Glenn, “does anyone use this technique”, none of the veteran Master Gardeners attending this class seemed to know of this practice. Glenn stated the calcium sulfate was readily available at the box stores in powder and liquid form. So I am sitting there in the back of the class, wondering what this was --and all of a sudden I realized he was talking about gypsum. When I returned home, I wanted to see what the wonderful world of Google had to say about this. I found one article you could read at your leisure. For me, I know this article seems like it requires a PhD in chemistry to understand. However, near the bottom of the article, there are application rates you might find useful. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs141p2_018280.pdf). (See photograph of ground salt build-up.)



With regard to the spacing of the varieties of citrus trees from one another, I did not give this much thought. When I planted my citrus trees, I knew the approximate size of the varieties I was going to use and planted them accordingly. My objective was to get the trees near one another, attempting to reduce wind and sun stress to the plants. I know for many homeowners best utilization of the available planting space is critical in tree placement.

Pertaining to tree placement, trees planted in close proximity to each other compete with each other and this could affect fruit size. Taking it to another level, if you happen to plant a grapefruit near a high user of nitrogen fertilizer (lemon) you could be giving your low nitrogen user (grapefruit) more fertilizer than needed when you fertilize the lemon tree. Grapefruit trees require less nitrogen than lemons and over-fertilizing the grapefruit tree can cause thick rinds and poor fruit quality.





Another topic this year was the use of the herbicide Round-Up near citrus trees. Leaf and fruit deformities are being found when the product Round-Up Extended in the silver container is being used. It is not the glyphosate (the main active ingredient in Round-Up), but one of the other ingredients (imazapic) used in the Round-Up Extended (silver container) version. The chemical Imazapic translocates into the plants vascular system, deforming the plant leaves and fruit. I have seen this in the past (in oleander leaves), and thought it was Witches Broom disease (*Sphaeropsis tumefaciens*), a fungal disease affecting the plants. Another manufacturer, Ortho, makes “Ground-Clear” which contains a similar active ingredient, Imazapyr. Both the Imazapic, and Imazapyr are water-soluble and can easily move thru the soil into others areas where they were not applied. (See photograph of oleander with deformed leaf structure).

With the time restraints of the class, I felt it best to ask some questions later on. During the following week, in conversation with Dr. Wright, I asked two questions pertaining to the early detection of Huanglongbing (aka: HLB or citrus greening disease).

Using dogs to identify citrus with HLB: articles abound regarding the use of trained dogs in the Florida area to sniff out the citrus greening disease. According to some of the articles, early detection is crucial in stopping the spread of the disease. The bacteria can be present in the plant months to years prior to it showing signs of the disease. Bacteria sniffing dogs have also been in use in California for the past nine months. The use of the citrus sniffing dogs, even though they are in use in these states, has not formally been accepted as a means of an “official” identification of the HLB disease.

Using oak tree extract to treat HLB: In some new research, it was discovered some of the citrus growing near oak trees in Florida had less severe HLB symptoms than citrus trees planted further away from the oak. The findings concluded the citrus leaves treated with oak extracts had a reduction in the presence of the HLB bacteria. Further research indicated there was increased chlorophyll content and plant nutrition. The HLB-affected citrus plants treated with oak leaf extract had improved uptake of nutrients as compared to those trees treated with only water. “This study suggests that oak leaf extract will provide a new management treatment program to protect trees that have HLB,” said Lorenzo Rossi (assistant professor of plant root biology at the UF/IFAS Indian River Research and Education Center). “We will continue to develop a protocol for growers to produce our high-value citrus crops and to reduce the symptoms of HLB on the trees”. (<http://blogs.ifas.ufl.edu/irrec/2020/01/21/oak-trees-may-hold-antibacterial-to-help-infected-citrus-trees/> University of Florida (UF/IFAS)).



Uninvited Guest

By Sharla Peterson, 2020 Master Gardener Training Class Cohort

Left: Front Yard January 18, 2020. Right: March 4, 2020 after hand weeding several times.



Having recently moved to Desert Hills near Lake Havasu City, I was eager to make sure the prolific plants emerging in my yard this January were not the much dreaded scorpion weed I had heard so much about, so I enrolled in the Master Gardener Training Course and started looking for resources to help me identify the various plants on my property. By mid-January of this year, something had all but taken over my yard while I had been trying to identify other plants that might be desirable native wildflowers. My hope was to allow the natives to fill in our rock-mulched terraces.

When I was researching the desert native wildflowers to keep, I couldn't identify the plant that was taking over so quickly, but a Google search finally helped me identify it as *Brassica tournefortii* aka Sahara mustard; an invasive weed that doesn't play well with our native wildflowers! This University of California, Riverside (UCR) Center for Invasive Species Research article <https://cistr.ucr.edu/invasive-species/sahara-mustard> was alarming, and made me glad my husband and I had been earnestly removing this plant. I thought it might be scorpion weed, but it turns out what we had may be much worse in some ways.

The UCR article gave a statistic that in control plots of land where Sahara mustard was growing with native plants, "There was a 90% reduction in the natives' reproductive success on the control plots (measured in numbers of flowers and seed pods)

compared to the weeding treatment plots." Weeding treatment plots were hand-weeded to remove Sahara mustard.

Now I'm constantly on the lookout for Sahara mustard, and I weed, weed, weed; leaving only the native wildflowers I want. The before and after photos show the native plants that emerged after I removed the Sahara mustard from the rockery. My plan is to now let the native plants re-seed so I can have a naturalized area that won't need supplemental water.

A few resources I found helpful in identifying native wildflowers are the website <http://southwestdesertflora.com/> with organization by categories such as flower color or plant type, along with several pictures of each flowering plant; and the Arizona Highways publication, Arizona Wildflowers A Year-Round Guide to Nature's Blooms (2006), an enjoyable read that groups plants by desert regions and blooming seasons, with fantastic color photos. Best wishes in your yard and garden!

January 18, 2020: The rockery with Sahara Mustard emerging amidst a few native wildflowers



March 4, 2020: The rockery with what I think are native Lupines, Pincushion Plant, Sand Verbena, Pygmy Poppy, Gander's Cryptantha (Popcorn Flowers) and Desert Palafox. I'm delighted!



Pique Assiette Mosaic

by Carol Bruch, Lake Havasu City Master Gardener

Pique Assiette is French for ***Stolen objects***. This particular mosaic art incorporates all kinds of found objects. I first saw this type of mosaic in 2005 when I attended the Brucemore Art & Garden show in Cedar Rapids, Iowa. The artist was Melissa Miller from Des Moines, Iowa. Melissa learned the art of Pique Assiette from the Book, “Making Bits and Pieces Mosaics”, by Storey Publishing, written by Marlene Hurley Marshall. After developing her skill and creating some additional techniques, she was able to work at her craft on a full-time basis.

In 2006, I was chair of the vendor committee for a 7 state-wide “Midwest Master Gardeners Conference” held at the Marriott Hotel in Cedar Rapids, Iowa. The Linn County Iowa Master Gardeners were the 2006 host for this conference. As the chair, I had to arrange for multiple vendors for this conference and I immediately asked Melissa Miller to be one of our vendors. Then in the fall of 2006, I attended a workshop that Melissa conducted at a floral shop in Palo, Iowa and learned how to create this art form.

Here is her website where you can view her creations:

<http://www.melissasmotif.com/MotifAboutMe.html>

In 2009, our Linn County Iowa master gardeners were raising money to purchase a greenhouse in partnership with Lowe Park, Marion, Iowa. We needed to raise an additional \$7,000 to fulfill our part of the endeavor. So a group of about 13 met at my home to make our own version of this mosaic art form. We also did other crafts, sewing, had a raffle and served homemade soups, desserts & breads during a Christmas Bazaar in early December of that year. We managed to raise \$11,000. The event was promoted on a local TV station every Friday when a master gardener answered listener’s call-in questions that were aired. We utilize this greenhouse to raise lots of Heirloom tomatoes, peppers and flowers for our annual plant sale. The funds that are raised are used to promote various free public events during the year.

Since then I have conducted several workshops for my art friends as well as the Lake Havasu Agave & Succulent Society group.



Container Gardening Using a Boat

Shared by Shelley

I was given permission to share this unique idea of a raised bed/planting container.

- It is set on blocks and holes have been drilled into the hull for drainage.
- The watering system is on a timer utilizing PVC pipe that is divided into zones.
- A small portable hot house is the width of the boat and covers approximately four to six rows of plants so it can be easily moved as new seedlings are started.
- Soil is about 10-12" from the top edge.
- Wire mesh is at the stern of the boat for climbing vegetables.
- The 4X4 posts mimic the shape of the boat and have shade cloth stretch over the top 2x4s.



Spring 2020 Wind & Weeds Assembled by Shelley, Master Gardener

