



## Events & Activities

MG Association Meeting, Camp Verde, Wednesday, August 19, 6:30pm. MG Recognition Picnic, Prescott, Sept. 12

Alta Vista Gardening Club, Prescott, fourth Tuesday of the month, 12:30pm. Call 928-458-9508 for information.

Prescott Area Gourd Society, third Wednesday of the month, 10:30am, at Miller Valley Indoor Art Market, 531 Madison Ave, Prescott

Prescott Orchid Society, 4rd Sunday of the month, 1pm at the Prescott Library, (928) 717-0623

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

Mountain View Garden Club, Prescott Valley, Dewey area, 2nd Friday of month, 1:30pm, call 775-4993 for location as it changes.

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

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

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University of Arizona Yavapai County Cooperative Extension

# Yavapai Gardens

## Master Gardener Newsletter

August/September 2015

## SQUASH BUGS

By Helen Brown



*Anasa tristis*, the squash bug, is common throughout the United States. It primarily attacks squash and pumpkins, but can also attack other cucurbits, such as cucumbers.

The squash bug is a flattened large insect, measuring 5/8-inch long and 1/3-wide. Adults have wings and are grayish brown in color. The underside and edges of the insect have orange to orange-brown

stripes. The nymphs range in size from 1/10 to 1/2-inch length as they progress through five stages called instars. When the nymphs hatch, they have a light green abdomen and black heads and legs. As the nymphs grow larger, they first turn light gray, then progressively turn brownish gray with black legs and antennae.

These insects over-winter as adults in sheltered places such as plant debris, under rocks, and around buildings. When adults emerge in spring, they fly to growing cucurbit plants where they feed and mate. They lay eggs individually in small clusters of about 20 commonly on the undersides of the leaves, especially between the veins where they form a V shape. Females usually start appearing in gardens in early June and continue to lay eggs through mid-summer. Eggs hatch in about 10-days. Nymphs require about four to six weeks to mature to an adult.

Squash bugs have piercing-sucking mouthparts that suck the sap out of leaves. Their feeding causes yellow spots that turn brown. This also interrupts the flow of water and nutrients, which can cause wilting. Young plants are much more susceptible to damage and may die from the feeding. They are the vector of a newly recognized disease of cucurbit crops known as Yellow Vine Decline. Melons, watermelon, and pumpkins are susceptible to the disease. Results are yellowing, wilting and death of a plant.

Physically remove or knock off and kill nymphs and adults by dropping them into a pail of soapy water. They move quickly so it can be challenging to catch them. Crush eggs on the underside of the leaves. Trap bugs by laying out boards or pieces of newspaper where they will congregate underneath at night, to be collected in the morning. Remove plant debris around the garden during the





growing season to reduce places where squash bugs hide.

*FYI: East Coast and Midwest gardeners do not set out their zucchini before Flag Day, June 14th. This cuts off the season of their most active time of mating and laying eggs.*

*(ed. Note: In Arizona the most damage from squash bugs seems to be from mid to late summer.)*

## The Squash Vine Borer



The Squash Vine Borer, *Melittia cucurbitae*, is a moth that resembles a wasp. It is a key pest of squash, gourds and pumpkins. The moth has an orange body with black dots and a set of metallic green wings. Unlike most

moths they fly about during the daytime.

The moth lays an egg at the base of the plant. The caterpillar moves into the stem and starts to devour it from the inside, unnoticed until the damage appears. Symptoms appear in mid-summer when the plant wilts suddenly. Sawdust-like frass near the base of the plant is the best way to see the damage. The stem will be split open to reveal several borers. The caterpillars reach a length of one-inch and have a brown head and a cream body. They over-winter as a full-grown larva or pupa one to two-inches below the soil surface.

These insects are difficult to control once the caterpillar has entered the stem. Since the pupae overwinter in the soil, don't plant squash in the same bed year after year. Till the soil along with any squash debris between crops. Watch for the moth and check for eggs and remove them. Chemical controls are only effective after the egg hatches and before the caterpillar enters the stem. If you see an egg, remove it.



Home gardeners may have some success with deworming the vines at the first sign of the sawdust-like frass. Split the vines above and below where the sawdust is visible. Slice the stem longitudinally near the entrance hole with a very sharp blade and remove the caterpillar. Cover the stem with soil above where the damage was done. Closely monitor this area for a few days to be sure it stays covered and has proper irrigation. There are some pesticides that can be used but general spraying will not help. You must target the caterpillar when it is outside the stem. Carbaryl and permethrin are two chemicals that have been approved for squash vine borers. Read the label of the pesticide container to make sure it is effective against them.

## Farmers Market

Farmers Market are a good way to get the Cooperative Extension Master Gardener message out. As farmers markets continue to grow in Yavapai County, we need more people to staff the tables. Volunteer, it's fun and you can buy some fabulous produce!

*Camp Verde Farmers Market photos by Joy Inman*



*Beth Snider & Ron Zmyslinski*



*Cornville Farmers Market*



*Sandi Kelleber, Jo Cabill & Linda Kimberly*





# The Coyote Among Us

By Pat Carmody



The coyote is a native of North America and is smaller than its close relative, the grey wolf, being roughly the North American equivalent of the Old World Golden Jackal. The coyote, *Canis latrans*, weighs in at

15-50 pounds, height 1.9 to 2.2 feet tall, gestation 60-63 days and maximum speed 40 mph. Their rounded bristly tails are usually held straight and aligned slightly below the plane of their backs. Low desert and Valley coyotes weigh much less than the mountain ones, only about 20 pounds, compared to the latter, which can reach up to 50 pounds. Coyotes found in mountain regions have a coat that is bushier than their desert cousins, and have longer, darker hair.

The coyote is found throughout North America from eastern Alaska to New England and west and south through Mexico to Panama. It originally ranged primarily in the western part of North America but since the 19th century the coyote has been steadily extending its range. Sightings now commonly occur in Florida, New England and eastern Canada.

Coyotes are opportunistic feeders and learn to associate humans with easy meals. Coyotes already know food can be found where people live, with easy pickings from garbage cans and compost heaps, county dumps and recycling stations. Coyotes will help themselves to pet dishes on the porch, ripe melons in the garden, the bag of fruit left overnight on the back steps and the more they are rewarded for stalking suburban neighborhoods -- ample calories with hardly any expenditure of energy -- the more raids and numbers will increase.

Charles Cadieux, who worked for over a decade as a coyote control officer for the US Fish and Wildlife Service reported that between 1937 and 1981, 80,000 coyotes were killed per year. One method he advocated was trapping which worked up to a point -- when trapping is intensified their numbers keep growing. The coyote's response

to undue pressure -- traps, poisons, M-44 charges, hunters -- is to have larger litters. Most species, when food is scarce, will give birth to fewer young, or like the wood stork, refrain from nesting altogether. Wolves either tailor the size of their litters to available game or don't breed at all.

Coyotes, unlike wolves, are not confined by rigid social organizations. Coyotes want to stay alive and somehow their reproduction systems know to kick in when life trials become more arduous. The result can be litters of up to 12 pups, a large number in difficult times, adding more young to the number of coyotes looking for available space to call home somewhere between Alaska and the Panama Canal. It is fruitless to kill coyotes in a specific area simply to get rid of the coyote. A coyote will move into an empty territory within days or weeks after the previous occupant has died or experienced some disruption.

How do you know you have coyotes? You have to be a detective. Coyote tracks are oval-shaped and about 2-1/2 inches wide with the print on the middle two nails appearing close together. (Dog tracks are more round and the toenails are farther apart.) Coyote feces has twigs and other things in it that most dogs do not eat.

When coyotes claim a new territory, they will announce their claim with a range of different howls. If, on your property, a coyote is making itself obvious, if it's no longer attempting to stay hidden, then take every opportunity to discourage it. We often make our yards a fast food

source for coyotes. Make sure you remove any potential food sources. Don't keep pet food laying around. Remove bird feeders. Make sure your garbage is secured. Pick up any fruits on the ground, fence your garden. Keep your yard cleaned up to remove places for them to hide. Hazing the coyote may help. Bright lights and noise will discourage them. Throw tennis balls at it, bang pots and pans, spray water, whatever is handy. If it moves away continue whatever you are doing until the coyote is off your property. The coyote's ability to adapt and to do so with such speed that eradication is impossible.

If you live in an area where coyotes have been seen, small pets and children should be supervised when outside. Outdoor dog runs and chicken pens should be covered with strong wire. A friend of mine lost her beloved small dog because she wrongly assumed that a coyote could not scale her 6 foot cement block wall. Always use caution around wild animals.





# Monsoon Madness

On behalf of the Monsoon Madness Committee, I would like to thank all of you who volunteered for the Monsoon Madness sale! What a successful year we had! Here are some important numbers to consider:

91 volunteers took part, seven of whom were family members (not MGs). We grossed approximately \$9812.00. We netted about 7942.00 after expenses.

Knife/tool sharpening helped 60 customers (23 of whom were Master Gardeners) and made \$688.00 (over \$200 increase from last year).

853 customers came to the sale, almost 200 people more than last year—thank you publicity team!

You all have much to be proud of! Thanks for making Monsoon Madness 2015 a terrific event! If you have ideas to make the sale even more successful please email me ([mmsandeen52@gmail.com](mailto:mmsandeen52@gmail.com)). We appreciate your feedback so that we can keep improving what we do.

Missy Sandeen  
Volunteer Coordinator, Monsoon Madness



*Photo by Tricia Michelson*



*Photo by Bob Busch*



*Photo by Helen Boland*





# Straw Bale Gardening

by Nora Graf



Now I have never tried this, nor do I know of anyone who has, so I am just throwing out the idea that seems to be a favorite in some gardening circles. The idea is to use straw bales like a raised bed. Raised beds are nice because they can help you control weeds, you can avoid your native soil

which might have a few issues and helps avoid that kneeling on the ground that a in-ground garden sometimes requires.

What you will need are straw bales, not hay but straw. Look for oat or wheat straw, not barley. Make sure you get the correct type. Hay is green and can contain weed seeds. Sometimes the hay will contain Bermuda grass which is something you do not want in your garden. It is also too dense and won't hold the moisture as well. Hay bales are more likely to mold. Straw should be yellow or golden color. The stems will be hollow which will wick up moisture. The straw bale will break down from the inside out, which in turn will compost well. Just make sure the straw you buy is dry.

Locate the bales where they will get the sun you need. Fresh greens will do better in areas that get some shade. Summer plants like squash and tomatoes will need full sun. Vegetables generally need six hours of sun each day. Place the bales on an east-west axis if you can. Roll the bale over so the narrow side is up. The strings should be on the sides of the bale to hold it together. You can put the bales directly on the ground but weeds will grow through the bales. Some type of landscape cloth underneath is recommended or you can even use flattened cardboard boxes. If you have problems with gophers consider putting hardware cloth or chicken wire under it. If you are growing vines, add your supports.

## Bale Conditioning

Conditioning is the process to get the bales to start composting internally. This will take 10-12 days. Conditioning supports the growth of the plants. You can set up a soaker hose for this or water by hand. There are several different methods of doing this so I have included two methods. A third method is found at this Washington State University pdf on straw bale gardening. <http://cru.cahe.wsu.edu/CE-Publications/FS109E/FS109E.pdf>



## Method 1

The first three days just water the bales. The next six days you can add a water soluble fertilizer, one capful per gallon of water. Or you can add 1 cup of ammonium sulfate each day from day 4 through 6, then ½ cup day 7 through 9.

## Method 2

Each day during the first six days add 3 cups per bale of organic fertilizer. Water the bales thoroughly after each application. Starting on day 7 through 9 use 1.5 cups of fertilizer per bale. On day 10 add 3 cups of bone or fish meal mixed with 50% wood ash. By this time if you stick your finger in the bale it should be hot and moist.

In both methods water every day. You can monitor what is going on by the temperature. If you have a compost thermometer, the temperatures should rise first and then start dropping about midway. It's ready for planting

when the internal temperature of the bale is the same as air temperature. The hand is a very good instrument for keeping track of the temperature also, so you don't have to purchase a thermometer.

## Planting

Make holes in the bale and add some planting mix to cover the roots of your seedlings. You can plant seeds. Just add a one to two inch layer of soil mix

on top of the bale to work as a seed bed. You don't just use the top of the bale; you can also plant things in the side. One article mentioned flowers. Now that's a cool idea. Larger plants may cause the bale to start breaking apart from the weight of them as the season progresses. Remember the bale is decomposing all summer long. Plants like corn and even indeterminate tomatoes that aren't supported could break the bale apart before the growing season ends.

## Summer care

Since a straw bale is not soil, a new watering schedule might take some getting used to but with some attention you can figure out what the straw bale needs. Water will move



out of the bale quickly. You want the straw moist. Even moisture is better than a boom and bust cycle. You will probably need to fertilize more often, every two weeks or





so. Learn the signs of nutrient deficiencies and fertilize when necessary. Nitrogen deficiency is very common in straw bale gardens.

At the end of your growing season, you can compost what remains of the straw. It will be partially composted already.

Below are a couple of links that were written by Arizona Extension Agents

[http://cals.arizona.edu/cochise/waterwise/pdf/Workshop\\_series/Straw\\_Bale\\_rwh\\_gardening.pdf](http://cals.arizona.edu/cochise/waterwise/pdf/Workshop_series/Straw_Bale_rwh_gardening.pdf) (This technique is different than what I described in terms of how the bales are set up and how they are treated. It requires a few additional supplies.

<http://www.joe.org/joe/2013december/tt10.php>



## *Welcome to the New Master Gardeners*

*by Marti Griggs*

The Master Gardener Class of 2015 received a hardy welcome on June 17th at the Mackin Building in Prescott. Master Gardener Association President, Debbie Allen, launched the festivities and then everyone joined in the icebreaker game led by Cathy Michener. Known now as Cathy's Game, it has become a tradition for the Class Welcome meetings. The object being for participants seated together to select ten things they all have in common, and which none of the other tables mentioned. Table #8 hit the mark with an interesting list of true confessions including a shared hatred of taxes and regular use of nightlights.

Mentor coordinators, Tom Konzem and Betty Loos were introduced and Tom led the individual 2015 class members in a round of introductions, which revealed varied gardening interests and enthusiastic preparations for the upcoming Monsoon Madness plant sale. Betty announced that as of this time 68% of class of 2014 have been certified with another 16% very close to certification.

Social Committee Chair, Ann Baugh, assisted by Karen Maeser and new class members Alice Johnson and Mary Jane Shandley provided an impressive array of goodies including a variety of yummy cheesecake bites. After the break, the executive committee and committee chairs were introduced. The committee chairs gave brief descriptions of individual committee functions. It was a fun gathering for the 75 attendees, and a great introduction for the 35 new associates. Not in attendance, Jeff was on the East Coast for a much needed vacation. The Class of 2015 is an enthusiastic group; sure to make many contributions to the association.



## *Congratulations*

*for reaching 50 hours of service*

*Ken E. O'Finan 2013 – Mentor Bob Gessner*  
*Faralyn Pederson 2014 – Mentor Tricia Michelson*  
*Marianne Jimenez 2014 – Mentor Judy Cowan*  
*Kristin Lobay 2014 – Mentor Tom Konzem*  
*Marti Griggs 2014 – Mentor Faun Vogel*  
*Bev Majerus 2015 – Mentor Susan Peterson*  
*Alice Johnson 2015 – Mentor Patrick Beatty*  
*Peggy Stair 2015 – Mentor Scholly Ketcher*  
*Samantha Turner 2015 – Mentor Scholly Ketcher*



# MG News

## *MGA Recognition Picnic*

Date: Sept 12th

Place: Goldwater Lake, Prescott

Watch for e-mail messages – all Master Gardeners and guests are invited.

## *Arizona Highlands Garden Conference*

Date: Sept 19th

Place: DuBois Center, NAU, Flagstaff

Registration: \$75 by Aug 28th; \$100 after Aug 28th

Details and registration form: <http://extension.arizona.edu/arizona-highlands-garden-conference>



### 2015 Newsletter Schedule

The newsletter comes out every two months. The list below shows the issues, when they will be published and the deadlines for each issue. Longer articles need to be sent in earlier than in the past, so please note that. If the article is time-sensitive, please let me know ahead of time but please get it to me by the deadline. There is a lot more latitude to the short announcements (a few lines) and if you let me know in advance something is coming I can be a bit flexible about things.

Issue	Publish date	Deadline
Feb-March	Feb 1	Articles Jan 5, short announcements Jan 25
April-May	April 1	Articles Mar 5, short announcements Mar 25
June-July	June 1	Articles May 5, short announcements May 25
Aug-Sept	Aug 1	Articles July 5, short announcements July 25
Oct-Nov	Oct 1	Articles Sept 5, short announcements Sept 25
Dec-Jan	Dec 1	Articles Nov 5, short announcements Nov 25

FROM THE EDITOR: Please send or email articles and announcements to the address below. Deadlines are posted at the bottom of the column on the left. Short announcements (no more than 2 or 3 lines) will be accepted until the 25th.

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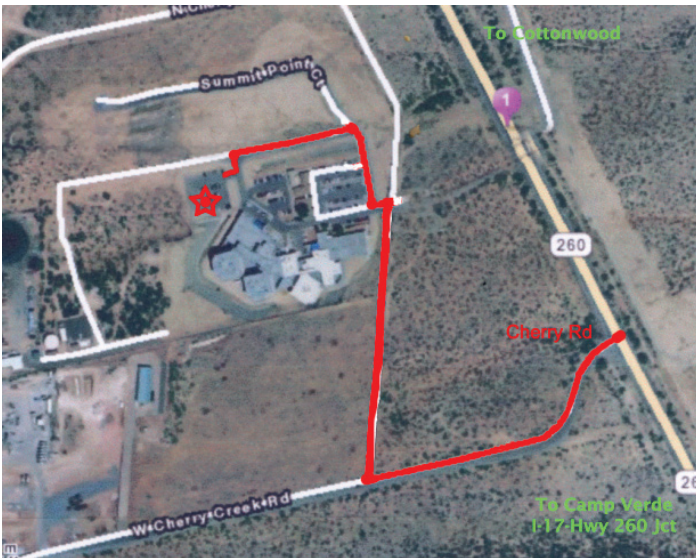
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## MG NEWSLETTER



## *Next Meeting*

August 19, Camp Verde, 6:30pm  
Lloyd Barnett. The topic is Watershed Management and Wildland Hydrology.

September 12 is the MG Recognition Picnic in Prescott. More information will be available at a later date.

Camp Verde Meeting is held at the Superior Court Building off of Hwy 260 in Camp Verde.

2840 N. Commonwealth Dr.