



High on the Desert Cochise County Master Gardener Newsletter

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

Manzanita Time

Have you had an itch to bring this beautiful native into your landscape only to find the particular species unavailable at the nursery? Frustrating, I know, and such is the case with many native plants. Sometimes a lack of demand does not justify production, but often the plants just will not tolerate nursery propagation, containerization, or transplantation enough to guarantee survivability.

Such was and is the case with Manzanita and Arizona Madrone. So several years ago I experimented with propagating one of our most common Manzanitas, *Arctostaphylos pungens*, commonly called Pointleaf Manzanita. This favorite native broadleaf evergreen is found on many chaparrals, dry hillsides, and mountain foothill ranges throughout Cochise County. The name *Arctostaphylos* can mean 'bear bunch' (like a bunch of grapes) and *pungens* means 'ending in a sharp point.' The Spanish translation of Manzanita is 'little apple' as the dried fruit resembles just that. At that time, experimentation was

restricted to seed propagation and showed limited success of germination.

Even with seed provenance consideration and soil medium collected from parent site, I just could not get enough plants growing to meet my expectations and eventually I abandoned the effort. Since those days I have watched several specimens located in the Huachuca's Garden Canyon to see how nature provides for the continued reproduction of young plants. In recent years, as a result of continuing drought, not much has been happening with the seeds dropping, but many plants are being produced by the process commonly know as tip layering more appropriately called stem layering here.

The vegetative propagation discipline, known as tip layering, is a common practice in the nursery trade for replicating the exact inherent qualities of the parent blackberry, boysenberry, and other plants with
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somewhat flexible stems by burying the tips of stems and waiting for new shoots to appear indicating the creation of a new plant that may be cut away from the parent.

My observations conclude that when a branch or stem of a Manzanita is in rough contact with the ground, eventually the scarred area sends out material from adventurous buds that are adapted to be roots in the truest sense, processing both root cap and feeding root hairs. The contact is not at the tip of the stem, but rather several inches to many feet up the stem from the tip.

I have successfully forced this discipline on other Manzanitas, both in nature and in cultivation in my landscape. What I do is simply select a pendulous stem, bend it to the ground and weight it with a common clay brick. I then pick up the brick and use it to lightly scar the area of the stem that was in contact with the ground and then put the brick back on top of the stem with the scarred area in contact with the earth. I mulch the area around the contact point with leaf material from the site and wait.

Patience is a virtue here. I have found that root initiation sometimes is true in a couple of months, but with a year's time the plantlet is surely ready for severance from the parent plant and will have a substantial enough root system to allow for transplant to a new desired location. When severing the parent plant, one should also shed the major down stem portion of the plant. Several plantlets may

be established off a single stem, at the same time if the length is adequate.

New plants have a whorled branch attachment to a considerable burl formed above the area of root initiation that may be left intact or cautiously trimmed off to accentuate apical dominance for one or several stems. When transplanting these wonderful specimens, I wait until the parent plant has finished its late winter flowering, mark the plantlet for orientation and remove as much of the soil surrounding the root system as feasible. I then containerize or transplant these plants to a desirable location of like drainage immediately remembering that roots should be kept out of direct sunlight, and that reorientation mimics natural occurrence. I water judiciously for several days and then investigate a proper watering regimen.

There you go, a new Manzanita just like the one hoped for. Give it a try. I have a 90+% success rate so far and with much pleasure.

Happy gardening!

DeForest Lewis, Master Gardener

High on the Desert

There's still time to register for
the 11th annual
High Desert Gardening &
Landscaping Conference
March 12 & 13, 2004
at Buena High School in
Sierra Vista.
If you use the registration form in
this newsletter the late fee
will be waived!

We hope to see YOU there!

Happy Healthy Houseplants

Growing Orchids in the house

There are many orchids available in the stores now. They are beautiful but expensive and many of us wonder if we can keep them alive and thriving in our homes. Despite what you might think, most orchids available are easy to grow, so go for it. Orchids like very much the same conditions as we humans do. They need heat, light, and humidity with cooler nights than days. Two rooms in your home are very suited for growing these plants—the bathroom and the kitchen, if they have windows. I grow mine in our master bathroom, which has a nice big window made from glass blocks. There is no direct sun. As orchids are not interesting when not in flower, this is the ideal place. As soon as flowering occurs, I bring the plants to our living room for viewing.

The orchids available in the shops are epiphytic. That means, in their habitat they live high up in the trees of tropical forests where they receive plenty of bright light and the sun is somewhat shaded out by the tree's foliage. They root into the fallen leaf matter collected in the tree nodes without hurting the tree.

Orchids form the largest flowering plant family, the family of Orchidaceae. This family includes 750 genera and more than 20,000 species and many thousands of man-made hybrids. There are also terrestrial orchids but those grown as houseplants are mostly epiphytic. Some orchids are monopodial which means single-footed. The second pattern of growth is more common and is known as sympodial. Thick stems that are called pseudo-bulbs because

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Cochise County Master Gardener Training— Spring 2004

Robert Call, County Extension Agent, Horticulture will be presenting the class beginning March 24 and running for fourteen weeks through June 16 at the University of Arizona South. The classes are three hours long and will conclude with a final exam. Fifty hours of volunteer service is required to become a certified Cochise County Master Gardener. For information contact the Cooperative Extension Office at 458-8278, Ext. 2141. There are still a few openings in the class.

Cuttings 'N' Clippings

* Cochise County Master Gardeners Association (CCMGA) next meeting will be March 4 at 5:00 at the UAS Campus, Room 106. Gary Gruenhagen will present a Power Point presentation.

* The March 6 *Water Wise* workshop will be presented by Cheri Melton, an avid proponent of attracting butterflies and birds and a Cochise County Master Gardener, 9:00—11:00 a.m. at the University of Arizona South (1140 N. Colombo). For a complete list of workshops go to www.ag.arizona.edu/cochise/waterwise/events.htm or contact Cado Daily at the Cooperative Extension, Ext. 2139.

March Reminders

- ? Register for the High Desert Gardening & Landscaping Conference!!!
- ? Prune roses
- ? Start seeds indoors
- ? Check cactus for fungus
- ? Plant cool-season veggies
- ? Reconsider your water usage (call *Water Wise* for a free audit)
- ? Remove and replace winter mulches

Robert E. Call
Extension Agent, Horticulture

Carolyn Gruenhagen
Editor



Fruit & Nut Tree Pruning Demo

Free!

Wednesday, March 17, 2004

10:30 a.m. – 12:00 Noon

4540 Flying V Lane, Hereford, AZ

From S.V., take Highway 92 south. Flying V Lane is between Canyon General Store (at Hereford Road) and Miller Canyon Road. Stone pillars mark the entrance. Turn West, continue straight on road. Park on side of road near orchard.

Demonstration given by

Robert E. Call

Extension Agent, Horticulture

U of A Cooperative Extension

458-8278, ext. 2141

Everyone welcome!

The Virtual Gardener—Mapping Your Backyard

Virtually every discussion of landscape planning includes a requirement for a base map of the property to be landscaped. The map is a basic tool used to create the landscape design. The only problem is that most people do not already have such a map, few people know how to create a base map for themselves, and even fewer people are willing to shell out the dollars to have a professional make a map for them. This month I would like to give you some practical ideas on how you can create a base map using simple tools and techniques. The only tools you will need are a long measuring tape (100 feet is a practical length for most jobs), some graph paper, a drawing compass, and a sharp pencil.

A base map needs to be drawn to scale so that all features shown on it are in the same relative positions on the map as they are on the ground. The first step, then, is to determine what scale to use. The scale depends on the size of the graph paper you are using and the dimensions of the area you want to map. In determining the scale, remember that both the length and the width of the area you are mapping must fit on the paper. Begin by measuring the maximum length and width of the area you want to map and counting the squares along the long and short sides of your graph paper. For example, suppose the dimensions of your property are 100 feet by 90 feet and the number of squares along the sides of your graph paper are 50 and 40. If you chose to let one square on the graph paper equal two feet on the ground, the long side of the property would fit on the map but the short side

wouldn't. This means you must go to a smaller scale. Letting one square on the graph paper equal three feet on the ground will allow both the length and width of the property to fit on the graph paper, using 33 squares for the long axis and 30 squares for the short axis.

The next step is to locate two or more points on the ground that will be used as references from which to determine the locations of other objects to be shown on the map. If your property is rectangular, the corners of your property would make excellent choices for this. Alternatively, you could use corners of your house. Once these points have been determined, plot them to scale on your map.

Figure 1 shows a hypothetical property and ground measurements translated into squares on the graph paper at a scale of 1 square on the graph paper equals 3 feet on the ground. Once the property boundaries were plotted, Measurements from each of the corners of the

property to each of the corners of the house were plotted (only measurements to corner F are shown). To locate house corner F on the graph paper, spread the legs of your drawing compass 10 squares apart and draw an arc around property corner A. Then set the legs of your compass 20 squares apart and draw an arc around property corner D. Point F is located on the map where the two arcs cross. In a similar way, locate house corners G, H, and I by measuring from property corners B, C, and D and drawing arcs of the appropriate scaled distances. Check your results by measuring the lengths of the sides of the house on the ground and comparing them to the scaled lengths on the map. If your map measurements don't match ground truth, recheck all your measurements (both on the ground and on the map) to make sure you didn't make a mistake. The tree at point J is plotted by measuring its distance on the ground from property corners D and C.

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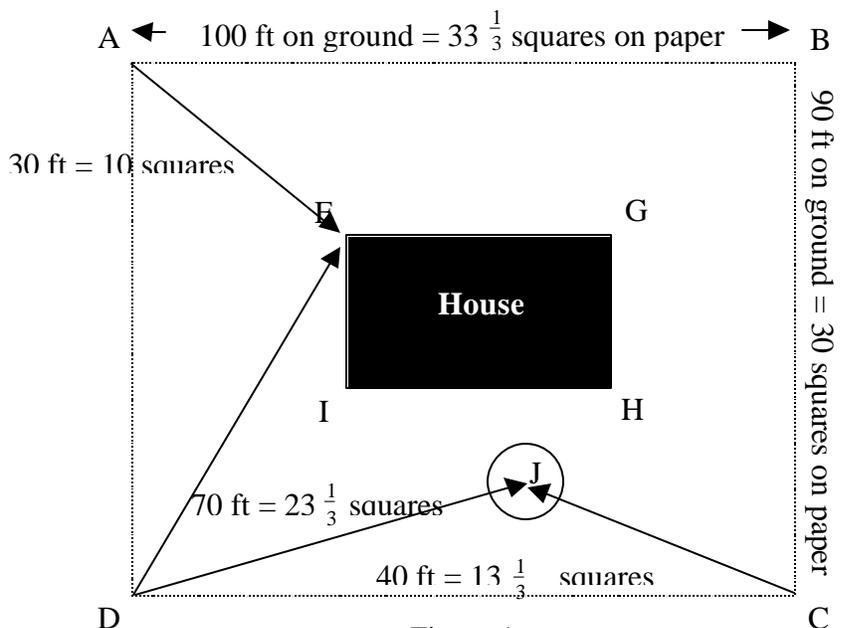


Figure 1

(Continued from page 4)

Continue adding objects to your map using the same technique. When choosing reference points to use in locating an object, try to pick points such that the lines between the two reference points and the unknown point cross at an angle as close to 90 degrees as possible. If the angle is too small, significant errors can creep in. If the distances from the corners of your property become too great or the angles are too small, you can locate new reference points along the property boundaries by measuring from the corners. To plot a curved line on the ground (the boundary of a curved flower bed, for example), find and plot the locations of many points along the boundary and draw the curve on the map by joining the points.

There are two caveats in using this method of mapping. First, all measurements must be made in a horizontal plane. If you have considerable changes in elevations between points, you will have to apply mathematical corrections in order to get the correct horizontal distance. Second, if you use points that have been located by triangulation as reference points for further measurements, you run a very great risk of accumulating large errors. If you feel you must use such a point as a reference, check all your previous measurements very carefully and, if possible, use more than two of your original reference points to locate the new point.

Although many landscape design books describe how to draw base maps, I have not been very successful in finding a good description on the Web. The only Web site that comes close is from Texas A&M at: <http://aggie-horticulture.tamu.edu/extension/homelandscape/home.html>.

Until next time, happy surfing and good luck mapping your yard.

Gary A. Gruenhagen, Master Gardener
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The Agent's Observations

Q I have been out pruning some pyracantha and fruit trees in the yard. I notice some insect eggs I believe. What are they and when they hatch will they harm my plants?

A After looking at digital pictures that were sent it was determined they are katydid eggs. These insects derive their name from the song they make with a shrill *katy-DID-katy-DIDN'T*. They live in trees and on shrubs and are rarely found near the ground. Several species have wing covers that look like leaves. They are well camouflaged from predators. Eggs are inserted into plant tissues, where they usually overwinter. There are several species in Arizona and are in the Family Tettigoniidae and the Order Orthoptera. In this Order are

also found grasshopper, crickets and cicadas, among others. Katydids feed on plant leaves and some species are predators of other insects. They are not considered great predators or harmful to plants. As an insect they are considered fairly harmless to plants and animals.

While pruning look for egg cases of praying mantids. There are several species in our area of Southeastern Arizona. Mantids are in the Order Mantodea, however some taxonomists include them in the Order Orthoptera. They can be green or multi-colored. They are camouflaged to be protected from predators and each other. The egg cases look like paper mâché or a small piece of hardened liquid insulation, the type used to fill irregular and/or small openings. Females will lay hundreds of eggs in her lifetime in multiple egg cases. Adults and young are frost sensitive but the eggs seem to survive freezing temperatures. If there are small holes in the egg case then the young mantids have "hatched." They wiggle out of their egg cases and look like small adults. There is one generation each year. They have voracious appetites, feeding on many types of insects including siblings. Successful adults can be quite large and feed on insects, lizards, small frogs and hummingbirds. While mating the female often devours her mate! (I am glad to be a human!) Mantids are considered beneficial insects, so leave the egg cases on tree limbs. If the limb needs to be removed cut out the section with the egg case and place it on adjacent branches so they can hatch.

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like bulbs they store food and water. Each pseudo-bulb has one or more leaves at its tip. Eventually a flower stem will appear, either from the base or the top of the bulb. Each bulb usually only flowers once and then slowly dries up and dies. A new pseudo-bulb is produced.

The most losses of orchids, like with most other houseplants, are caused by over watering. Even so they like a moist environment, dislike standing water, and will rot easily. Their potting mix should be very porous, like shredded bark, or an osmundo fiber. There are commercial orchid mixes available. Usually it is enough to water orchids once a week. To increase humidity it is good to stand plants on trays filled with pebbles and water, always avoiding any contact

between water and plants, and to mist them with tepid water. Am I doing all that? No. My orchids have to exist on the humidity in our bathroom and the watering they get from me. Some of my orchids are more than 10 years old and have reliably bloomed for me 2-3 times a year. In summer I keep my collection under our ramada in a shaded spot and let the rain do the watering. Orchids love the softness of rain water and dislike the hardness of our alkaline tap water. Do not get tempted and water with the water out of your water softener, this water contains too much salt. From time to time, once a month, it is good to fertilize. African Violet fertilizer makes a good fertilizer for orchids using it half strength. Never over fertilize orchids as this will only bring lush greenery and no flowers.

Angel Rutherford, Master Gardener

(Agent's Observations continued from page 5)

Source: *National Audubon Society Field Guide to North American Insects and Spiders*. 1996. Lorus and Margery Milne. Alfred A. Knopf, New York. pp. 395, 429.

Robert E. Call
Extension Agent, Horticulture



Praying Mantid Egg Case