Germander (Teucrium sp.)
by Nora Graf

This little-known herb could be a nice addition to your landscape. Depending on the species they can be herbs, shrubs or sub-shrubs but all are perennials. Originally found in the Mediterranean region, parts of Europe and Syria, they have spread throughout the world. Germander is a food plant for several butterfly species. It will attract a number of other insects, including bees. It might be a good plant to put near the vegetable garden to encourage bees to spread a little pollen about although one source said that while bees were mobbing the germander they weren’t paying attention to other plants. You might also try it in areas where there is a problem with deer and rabbits. They may not eat it. Depends on how hungry they are; one can always hope.

Germander is sometimes used as miniature hedges for knot gardens. It takes well to pruning for hedges and bonsai. Because of its creeping roots it works well on slopes. Its height runs between 12 and 18 inches. (Depending on the variety, it can be 4 inches to 8 feet tall. The most common one sold is about 12 to 14 inches tall.)

The plant has rose-colored flowers and the oval-shaped shiny leaves turn reddish in the fall and during dry spells. The leaves are quite aromatic when crushed. The plant (depending on species,) spreads to about 10 inches. A little pruning in the spring or fall will give the plant a nice shape and keep it branching.

The foliage has a garlic-like aroma and can be used in wreaths. The rosy-purple flowers which are on the plant all summer long can be dried and used in arrangements and crafts.

There are a number of species of germander; the most common one found in nurseries is Teucrium chamaedrys. It can be started from seed but it may take up to 30 days for the seeds to germinate. Easier to just buy the plants and then take cuttings, make divisions or even layer the plant if you want more plants. It is quite easy to start from cuttings. There are some interesting outside-of-the-box germanders. One is T. fruticans which is a bush or tree germander. It can grow up to 8 feet tall and has silver leaves with blue flowers.

Germander likes a well-drained soil and does not like wet feet. Plant it where it receives full sun. It is susceptible to mildew and mites. The plant can be used to fill in empty spots in the garden, create small hedges or mass them and use as a ground cover.

Historically, the plant has been used to treat snakebites, skin irritations and high fevers. I am sure it isn’t very useful for snakebites and check with your doctor before using it for any other...
purpose. Emperor Charles V is said to have been cured of gout by taking a decoction of germander for 60 days in a row. Also, if you have worms, try making a tonic from the flower tops—it is supposed to help. It is also known to be toxic, causing liver disease.

Just for fun: Germander appears in the Harry Potter books. Germander was used to make treacle fudge and Hagrid grew it in his garden.

Sources
Mountain Valley Growers
http://www.mountainvalleygrowers.com
38325 Pepperwood Rd.
Squaw Valley, CA  93675
1-559-338-2775
They have a creeping variety that only grows about 4" tall. Great for planting underneath flowers.

Plant Delights Nursery
http://www.plantdelights.com
9241 Sauls Road
Raleigh, NC 27603
919-772-4794
They have two unusual varieties, *Teucrium cossonei*—Pineapple Germander which is about 4 inches tall and 4 feet wide. *Teucrium marum*—Kitty Crack (their name for it as apparently cats just love it.) You might need a cage to protect it.

Joy Creek Nursery
http://www.joycreek.com
(503) 543-7474

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**MG News**

**By-laws Change Proposed**
In compliance with the minimum 30-day notification of a by-laws change, a proposed change to Article IX was announced at the June 20, 2012 MGA meeting. An e-mail will be sent in early August with the proposed change, and the opportunity to submit an electronic vote; ballots will also be available at the August 15th MGA meeting.

**Congratulations!**

on completing 50 hours volunteer service
Tony Valadez, mentor Eric Downing.
Jamie Carter, mentor Kay Gaffney
Roni Kennedy, mentor Tom Konzem

In this hot summer, a reminder of cooler days ahead!

**Iris Rhizome Sale**
Prescott Area Iris Society (PAIS) Annual iris rhizome sale with hundreds of Iris for sale, all colors of the rainbow. Proceeds used to purchase educational materials for library system and maintain Iris beds at Yavapai College Sculpture Garden. For information call Judy (928) 776-7217 or Dan (602) 300-5791. http://www.prescottirissociety.org.

Sharlot Hall Museum
415 N. Gurley Street, Prescott, AZ
Saturday, July 21, 2012 11:00AM to 5:00PM
Sunday, July 22, 2012 12:00PM to 4:00PM

Lavender Tea House
1097 N. James, Chino Valley, AZ
Friday July 27, 2012 10:00AM to 2:00PM

Dan’s Garden
17618 Foothill Road, Yarnell, AZ
Saturday, July 28, 2012 10:00AM to 2:00PM

Don’t forget there are Farmers Markets all over the county this summer. Explore them sometime!
Summer is a great time to start new plants by taking cuttings from shrubs and rooting them. Many varieties of shrubs respond well to cuttings taken in the summer. Some root best on softwood cuttings while others form roots best on semi-hardwood.

Softwood cuttings are taken during a period when plants are putting on a flush of new growth. This growth flush often occurs in July with the onset of our monsoon rains. Softwood cuttings are taken before the stem stiffens and becomes woody. Shrubs that root well from softwood cuttings include Texas ranger, butterfly bush, pyracantha, photinia, jasmine, eleagnus (silver thorn) and euonymus.

Semi-hardwood cuttings are also taken from the current year’s growth, but after the stem has matured and stiffened. Stems of semi-hardwood cuttings will usually “snap like green beans” when broken. Shrubs that root well from semi-hardwood cuttings include cassia, Texas mountain laurel, bougainvillea, oleander, hibiscus, pittosporum (mock orange), cape honeysuckle, and ligustrum (privet).

For best results, cuttings should be taken in early morning when the plant’s moisture content is highest. Cuttings should be made with a sharp knife, safety-razor blade, or sharp hand pruners. Prior to cutting, sterilize the cutting blade with rubbing alcohol or Lysol to prevent contaminating the cutting with disease organisms.

Cuttings should be 4 to 6 inches long, taken from the outermost growth. Select stems that are free of flowers. If that isn’t possible, then remove flowers and flower buds from the cuttings. Flowers take energy away from root and shoot formation. Immediately place the cuttings in a bucket of cool water to keep them moist. Prior to sticking the cuttings in the rooting media, remove the leaves from the lower half of the stem. If the cuttings are from large-leafed shrubs, cut the remaining leaves in half to reduce moisture loss.

Some species of plants are more difficult to root than others. For this reason, it’s advisable to apply a root-promoting hormone to the cuttings, preferably one containing a fungicide. Do not put the cuttings directly into the bottle of rooting hormone. This will contaminate the supply for later use. Just place a small amount of hormone powder in a paper cup. Any powder that remains after treatment should be discarded and not returned to the original container. Stick the cuttings in the hormone powder, covering the stem all the way up to the remaining leaves. Be sure to tap the cuttings to remove excess hormone before sticking them in the rooting medium.

The bare end of the cutting should be placed into the rooting medium. At least one leaf node, and preferably more, should be in the media. A leaf node is the point at which a leaf was attached and where roots are most likely to emerge. Moisten the media prior to sticking the cuttings and keep it moist.

An excellent rooting medium can be made by mixing equal parts of peat and perlite. Both of these ingredients can be purchased in small bags at local garden supply stores. Coarse sand may also be used but it must be sterile. You can sterilize the sand by moistening it, placing it in a pan, and heating it in a 220° oven for one hour.

A greenhouse is not necessary for successful propagation of stem cuttings; however, maintaining high humidity around the cuttings is critical. If you are rooting only a few cuttings, you can use a flowerpot. Maintain high humidity by covering the pot with a bottomless milk jug or by placing the pot into a clear plastic bag. Cuttings can also be placed in plastic trays covered with clear plastic stretched over a wire frame. Pots and trays must have holes in the bottom for drainage. The plastic will help keep the humidity high and reduce water loss while the cuttings are forming roots.

Put cuttings in a location that has bright light but no direct sunlight. Excessive heating will kill the cuttings before they root. Do not let the cuttings dry out. In three or four weeks, check them to see if they are rooted by giving them a gentle tug. Rooting may take up to eight weeks.

Newly rooted cuttings should be gently pried out of the media with a knife blade and transplanted to a separate container. Keep the young plant well watered and out of direct sunlight. In mid-October, place the plant in a location where it receives morning sun. After a few weeks, it’s ready to be planted in its permanent location in the landscape.
One of our greatest trees is named after David Douglas, the Douglas fir. But oddly its Latin name is Pseudotsuga menziesii. Archibald Menzies (1754-1842) was one of the first explorers of the American Pacific Northwest. Due to an unfortunate set of circumstances, Captain Vancouver, who commanded the ship Menzies was on, confined Menzies to his ship quarters for using the ship’s crew to collect plants. Poor Menzies missed an opportunity to be one of the first explorers in the region. David Douglas was the one to explore the wonders of the region, hence the naming of the fir tree to honor two men.

Douglas was born in England in 1799. He displayed a passion for natural history while very young. At 11 years old he apprenticed to become a gardener. He impressed a series of gardeners who provided him an opportunity to get an education in math and science and eventually a job at the Glasgow Botanic Gardens. Under the tutelage of William Hooker, Douglas learned about practical botany. Hooker recommended Douglas for a position with the Horticultural Society of London (now the Royal Horticultural Society) as a botanical collector. Planning on going to China, he was disappointed to discover he was being sent to America. The voyage over was horrific, with extreme bad weather and a food shortage leaving him so ragged-looking that immigration officials refused him entry until he bought new clothes. For four months he traveled through the wilds of New York, which in 1823 were truly wild. Bad luck continued to dog him and on one occasion a cart driver made off with all his belongings, stranding him and leaving him broke. On his way back to Buffalo the boat he was on nearly sank. In spite of the hardships and bad luck, Douglas returned to England with an enormous collection. The Society crowned the expedition as a “success beyond our expectations.”

In 1824 Douglas was sent on his second expedition to the American Pacific Northwest. At that time, ships had to go around Cape Horn to get to that region from England. It took him 8½ months to get to his destination. The western United States was rich in unexplored botanical wonders. From the moment he stepped off the ship it was an exciting botanical adventure. He collected the Oregon grape (Mahonia aquifolium) for the first time and discovered the fir tree we now call the Douglas fir. After some early hesitation, Douglas began to use Native Americans as guides, earning him the name in the Northwest of “Grass Man.”

From the coast, he canoed up the Columbia River to Grand Rapids and Great Falls, withstanding harsh conditions. By the end of 1825 Douglas had traveled 3,932 miles on foot, horse and by canoe. He endured wet and cold weather, mosquitoes, fording cold rivers and sleeping in tents and sometimes not. He became the first European to climb the Blue Mountains, hiking in snow-drifts for part of the journey. On reaching the top he was assaulted by thunder, lightning, hail and wind. (This guy was really a magnet for bad weather; I am just skimming over his journey!) There were eventual side effects to his incredible journeys. In the following years his eyes became inflamed from snow blindness and dust, eventually damaging his vision. At one point he entered a town and the people living there thought he had survived some great disaster he was so tattered and bedraggled.

Douglas returned to Eng-
land in October, 1827 in triumph but apparently it all went to his head. He alienated friends and associates, including some of his past supporters. He was a great plant collector but a poor writer so was never able to translate his adventures into a book. His mentor, William Hooker, intervened and saved his career and Douglas was sent off again to North America in 1829. He traveled the Columbia River, the Cascades, the San Francisco area and Sacramento Valley. On his way “home” he went to Hawaii, then Alaska via Siberia. From there he returned to Hawaii. It was here that Douglas was killed in a rather gruesome accident. The locals sometimes trapped wild cattle by digging a large pit near a water source. The cow falls in and is trapped. Douglas fell in a pit with a wild cow. It is not known whether he lost his footing or his poor vision (by this time he had lost the sight in one eye) caused him to misjudge the edge of the pit but the cow trampled him to death.

Douglas is credited with introducing over 200 new species to Europe, the most famous being a variety of different conifers including the Douglas fir. At the time there were only three known native conifers and Douglas’s finds literally changed the landscapes of England. I have only touched on a tiny fraction of Douglas’s adventures. In this day and age it is hard to image someone putting up with the truly every day dangerous conditions Douglas endured. In a time where we complain when the weather is just a bit too cold or too hot and sue at every opportunity over bad encounters with nature, (after a grizzly with cubs attacked his guide, and roamed around the camp that night, Douglas killed the mother and one cub with his gun) his life is a testament to endurance, perseverance and passion.

Some of Douglas’s introductions:

Lupinus polyphyllus (1826) Bigleaf lupine, precursor of the modern garden lupine, Russell hybrids
Ribes sanguineum (1826) Red-flowering current, now a popular garden shrub
Ribes speciosum (1828) Fuschia-flowering gooseberry
Pseudotuga menziesii (1827) Douglas fir
Garrya elliptica (1828) Coast silk tassel
Abies grandis (1830) Grand fir, Great silver Fir, Western white fir
Abies procera (1830) Noble fir
Pinus radiata (1833) Monterey pine
Paeonia brownii (only N. American paeony)
I'm sure you have seen the commercials, the big headlines in magazines and all the hype on-line. It was the next miracle food that was going to save us from ourselves. Well of course all the stories were a bit overdone, it is hype after all, but there is no reason why you couldn't grow your own and give it a try. The reason why people were so excited is that stevia is naturally sweet and is considered a replacement for sugar.

You will now find stevia plants amongst the herbs in garden centers. It isn’t entirely suited for our climate but you can get it to grow here. Stevia is considered a tender perennial and is native to Paraguay and Brazil, both semi-humid subtropical regions, so you can probably figure out why it might struggle a bit in our gardens. In it’s wild form it is found in sandy, acid soils that are moist—not wet. It doesn’t like wet soils, just doesn’t like to have soils that dry out. Since we tend to be dry I would suggest making sure the soil you plant it in has good drainage topped with a very good mulch. Monitor the soil moisture carefully. I would also plant it someplace where it has some protection from wind to keep it from drying out too much.

Stevia is frost-sensitive. It will need protection in the colder areas of the County although one of the sources suggested that a soil temperature of 32°F is needed to kill the plant completely. It is possible that in areas where the soil doesn’t freeze the top of the plant might die while the roots survive. Most of the time the plant is treated as an annual to be replaced each year. Even if it does survive in your yard it is considered a short-lived perennial and you will probably have to replace it in a few years. Plant outside after the soil temperature reaches 60°F and place it where it will get some filtered afternoon shade.

In your garden create a sandy loam or loam soil. If you have a clay soil add lots of organic matter. Stevia is naturally found in soils with a pH of 4 to 5, but will thrive in soils with a pH as high as 7.5. It will not tolerate saline soils, which may be a problem in some areas. To get the best growth and flavor hold back on fertilizer. Use only low nitrogen or organic fertilizers/compost/manure. Too much nitrogen causes the plant to have long leggy stems and poor flavor.

Stevia seeds tend to be poor quality. Even if you find good seed, it only remains viable for a short time. It is easiest to start with plants. The stems can be brittle so take a little care getting it home and, as a mentioned above, protect from the wind. You might even try growing it in a cage of some sort.

Insects don’t seem to be a problem with stevia but the plant is susceptible to a couple of fungal diseases. Good weed control, making sure there is no standing water around the plant and keeping the leaves dry prevent the problem. That means NO overhead water. Use a drip system or some other type of irrigation to keep water off the leaves.

The sweetness is greatest just before the plant flowers. Flowers form as the days start to shorten mid-summer to fall. If you wait too long to harvest, the leaves become bitter or have a dirty flavor. Harvest before the first frost or as soon as the plant begins to bloom, whichever comes first. Cut the entire plant to about 6 inches above the ground. Dry the stems by hanging upside down in a warm airy place. The leaves are the sweetest so, once the stems are dry, remove them from the stems and store in a clean glass container. The faster the plant dries the more sweetness the leaves retain. Apparently dehydrators can cause a bitter flavor also.

“Stevioside” is the substance that causes the sweetness; it is about 300 times sweeter than sucrose (regular sugar). Use the whole leaves as a tea or you can turn them into a powder to add to any recipe that calls for stevia. You cannot replace sugar with stevia on a one-to-one basis so look for recipes that have been formulated for stevia. When the leaves are used as a tea, it is nice combined with mint leaves. The leaves are sometimes cooked as a vegetable. Even though it is sweet, it has minimal calories and does not affect blood sugar levels.

Oatmeal Currant Cookies with Stevia Recipe
Makes 50 servings
Not too sweet, low-carb oatmeal cookies using stevia extract in place of granulated white sugar.

1 1/2 cups whole wheat flour
2 cups rolled oats
1 teaspoon baking soda
1 teaspoon cinnamon
1/2 teaspoon nutmeg
1/4 teaspoon allspice
1/4 teaspoon ginger
1/2 teaspoon salt
FROM THE EDITOR: Please send or email articles and announcements 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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Searching the MG Newsletter on the Extension Website

Trying to find something in the back issues of Yavapai Gardens has always been difficult. There is a partial index available. Steve Moody has figured out a way to do it and it works better than the U of AZ’s CALS search engine.

Go to: http://www.arizona.edu/search/google

In the search window type in: “Yavapai Gardens” (including the quotes) and the topic you are looking for. For example:

"Yavapai Gardens" tomato blight

The search engine retrieves all the issues with tomato blight information.

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2830 N. Commonwealth Dr
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Jeff Schalau
County Director, Yavapai County Extension Agent,
Agriculture & Natural Resources
email: jschalau@cals.arizona.edu
Next Meeting

No Meeting this month

Monsoon Madness, July 14
Prescott