Sunflowers
by Nora Graf

Wow, this is a big topic because the Sunflower family, taxonomically speaking, is the largest family of vascular plants. For us old-timers I’m afraid it will always be known as the Compositae family. The flowers are composites—more later on that. As with many things taxonomic, names have changed. Today it is known as the Asteraeae family (means star). Things change all the time—better get used to it. Anyway the family contains 22,750 species that range from trees, shrubs and vines to our familiar marigolds and zinnias. They are found throughout the world except for Antarctica. One can’t cover the entire family in a short article or even a really long one so my focus is going to be a lot narrower and focus on what we refer to as sunflowers. The big ones.

But first a little botany. The flowers of sunflowers have some interesting characteristics. What we call the flower is actually made up of two different flower types that come together to create the “big” flower. This is where the name Compositae came from. It is a composite of two types. Superficially (because it can get complicated) the bloom is made up of disk florets and ray florets. The disc florets are the small-tubed flowers that form the center of the bloom. The ray florets are what form the petals. Both are real individual flowers which is why when the plants go to seed you have many seeds. Each seed comes from its own flower.

Did you know that lettuce, chicory, globe artichoke, safflower, chamomile, Echinacea, Mexican Tarragon, wormwood, asters, chrysanthemum, gerbera, dahlias and goldenrod are all members of this family?

When we say sunflower, though, we mean the large–flowered *Helianthus annuus*. It is native to Central America and the name comes from the large sun-colored blooms. Sunflowers were first domesticated by approximately 2600BC. They may also have been domesticated by others in the Mississippi Valley and Mexico. The earliest known do-
mesticated sunflower north of Mexico was found in Tennessee and dates to around 2300BC. It was used as a symbol for the sun among indigenous peoples. Pizarro was the first European to see the sunflower. By the 16th century gold images of the flower and its seeds made it to Europe. By the 18th century sunflower oil had become popular in Europe.

Travelling across North Dakota once I had an opportunity to see fields of sunflowers in full bloom and it was an amazing sight. I have a certain fondness of North Dakota just because of that. Imagine fields of towering plants topped by a golden disc. Myth-busting alert: sunflowers don’t track the sun but do display a characteristic called heliotropism. Typically the flowers face East, the leaves and buds of young sunflowers change their orientation from East to West as the earth rotates. Once mature, the movement stops. Still pretty cool.

Most people have seen the wild sunflowers that grow everywhere along roadsides in Arizona. It is the same species as the giant sunflowers you grow in your garden. Obviously the plants and flowers are smaller than some of the giant sunflowers but they are a great source of food to birds. Sunflowers are great for attracting pollinators.

Today’s sunflowers come in a variety of colors and sizes. The Mammoth Russian and Mammoth Gray are known for their giant-sized flower heads. There are dwarf varieties, red varieties, lemon yellow ones, fluffy ones like Teddy Bear and Sungold. If you want to see some great pictures of different varieties go to: http://www.swallowtailgardenseeds.com/annuals/sunflowers.html

Some sunflowers are better for birds than others. Look for the black-seeded or oil types, types which have thinner shells for the birds to get through, like Black Pere-dovik, Hopi black dye, Mammoth, Kong, Sunseed, Red Sun, Soraya, Valentine, Autumn Beauty, Floristan, Holiday, Big Smile (dwarf), The Joker and Vanilla Ice.

Sunflowers are one of the easiest plants to grow. It seems if you stick the seed in the ground it will grow, but a few things will improve its growth. It does like a rich soil. Not surprising since it is a fast-growing plant of substantial size. The soil needs to be well-drained. If you are going for the monster-sized heads, lots of compost and mulch helps. Full sun is a must. Since the roots of the plant grow deep and wide they are somewhat drought tolerant. The twenty days before harvesting are critical to the seed formation so make sure the plants are watered well. Drought stress damages seed formation.

For all their seeming strength and hardiness there are some pests and diseases that can reek havoc with them. Verticillium wilt and downy mildew can harm them. Whiteflies, cutworms, grasshoppers and caterpillars can impact sunflowers. Every year I’ve grown sunflowers the leaves have been decimated by caterpillars but they continue to grow and flower. Since I am reluctant to spray I’ve let them have their way. I would like to believe I am creating a safe haven for some butterfly species. (The caterpillars look like the larvae of a type of checkerspot butterfly but that might just be my imagination—but I hope.) Anyway they still bloom and go to seed. Some people grow the sunflower to harvest their own seeds. In that case I would suggest not spraying the plants with pesticides if you are close to harvesting. (Read the label of your pesticide!!) I leave my seeds to the birds and certainly do not want to spray. I am repaid with a parade of finches, sparrows and other birds feeding on them in the fall.

If you are growing the sunflowers for seeds you can pick them green or leave them on the plant until ripe. Once the heads have stopped moving from East to West and start bowing to the ground the back of the flower head will become light yellow, the center florets will shrivel and the seeds will look...
plump. Cut off the head at this point and hang upside down to dry. Cover with paper bags or cheesecloth to catch falling seeds. Once the head is dry, use a knife to scrape the seeds out or thrash them on a sheet. Seeds that you are saving for the birds can just be stored in an airtight container.

To roast seeds: put seeds in a solution containing ¼ cup to ½ cup of salt in 2 quarts of water. Make sure all the seeds are covered with the solution. Let sit 24 hours. Drain and spread on paper towels to dry. Roast on a cookie sheet at 300°F for 30 to 40 minutes or until golden brown.

Other sunflowers you may be familiar with are the Maximilian sunflower and the Mexican sunflower which are different species. The Maximilian sunflower (*Helianthus maximilanii*) is a perennial sunflower that has tall spires covered in blooms. It is a tall, rangy plant that can spread. Newer cultivars have been developed that are smaller or have different colored flowers—different shades of yellow anyway. The Mexican sunflower is *Tithonia rotundifolia* and is just distantly related to North American sunflowers. The sunchoke, or Jerusalem artichoke, is a perennial sunflower and is closely related to the common sunflower.

---

**March**

*by Nora Graf*

This winter has been a long cold one. There was snow on the ground twice this winter! If this continues I’m going to have to move to a lower elevation. The good news is that spring is here. I saw the first wildflower in bloom the other day. Well maybe it was more a weed than a wildflower, but it was blooming! This of course means we have to get busy. Some of the tasks for March are below.

Extend your seasons by using cloches.

Prune your roses and finish up pruning any trees you have.

It’s time to plant bareroot stock: fruit trees and shrubs, raspberries, blackberries, grapes and strawberry.

If you didn’t do it last fall, add compost and any other organic matter you have to the soil.

Especially in lower elevations get your cool weather plant seeds started. Things like lettuce, broccoli, cabbage and cauliflower can be started now. Don’t forget to get early spring blooming flower seeds. Carrots, peas and radishes can be started directly in the soil by mid-month. Asparagus, onions and potatoes can be planted now.

Check out your irrigation systems. The first time I turn mine on after really cold weather like we have been having there are always a few repairs to be made. Don’t leave it to the last minute otherwise you will be scrambling to water something and the hardware store is closing in ten minutes….you know that scenario!

You can put out pansies, snapdragons and a number of other cool weather flowers. They should start showing up in the nurseries now!

Plant potatoes at the end of the month into early April depending on where you live. I’m sure I’ve said it before but the difference between a store bought potato and one right out the ground is amazing.
Since I will be the main speaker at our March 16th meeting, I thought it would be appropriate to introduce myself by sharing some of my background. I grew up in San Francisco where I obtained my M.A. and teaching credential. The majority of my adult life was spent in Bishop, CA where my career included teaching all grades 1st-8th, being a library and computer resource person, serving a year in Scotland as a Fulbright exchange teacher, becoming a County School Administrator, initiating and completing the construction of a 4.5 million dollar school for delinquent and probationary high school students and finally ending up in San Mateo, CA as Asst. Director of a 24,000-student adult school. I was married for 18 years with no children. My hobbies included show jumping, spinning/weaving and travel. I have travelled extensively - 26 countries and 19 states. I retired early and moved to Prescott in 2005 because my mother had moved to the Phoenix area.

I love this area and since arriving I have become involved in many areas of interest to myself and of service to the community. This includes being on the board of the Highlands Center for Natural History, being the Conservation Chair of our local Audubon organization, becoming a volunteer teacher for the Extension's "Project WET" program, volunteering as an usher at the PFAA, being active in the geology club and the native plant society as well as being an avid hiker, kayaker and keen environmentalist.

In 2007 I enrolled in the MG class, after a lifetime of no gardening experience, and since then have loved every moment of my involvement with the people and the program. It has continued to greatly enrich my life. I have tried to give back by answering phones for the last 3 years, serving as treasurer for 2 years, and being an aide for Jeff's MG classes.

I have an intense interest in everything in the natural world and gain much pleasure in working within it and learning about its many interwoven relationships and workings. I have built a garden within a garden - a raised vegetable garden within a drought tolerant native garden. The vegetable garden has by far been the most challenging.

Little did I ever imagine that I would be standing before you all making a presentation but I was fortunate to have had the opportunity to travel to Cuba last November for 10 days specifically to view what that country has accomplished in trying to bring about sustainable agriculture and development of urban gardens for their 11.7 million people. If this sounds interesting to you, I'd be pleased to have you attend and bring all your questions. See you there!

Congratulations!
The following MGs have reached 50 hours

Kim Picard  Barbara Saul
Kathy Lowe   Janice Montgomery
Nancy Oliker
Shade isn’t a part of most southwest gardener’s lexicons. It’s a rare thing around here and most desert plants are better adapted to sun. If you are trying to grow desert-adapted plants, the shade can be a problem but there are a few plants that might solve that problem. While many of these plants will grow in the shade they might not bloom as readily as they would in other conditions or may have fewer blooms.

One of the most striking plants that you might not even consider for your southwest garden is the Golden Columbine (Aquilegia chrysantha). This is native to Arizona and can do remarkably well in deep shade. It blooms prolifically in the spring and doesn’t need as much water as you might think. The plant averages 3 feet by 3 feet and is root-hardy to -30°F. It reseeds easily so one plant can become many, depending on the conditions. (Root hardy means the plant above ground may freeze but the roots will survive and when conditions improve will resprout.)

A surprising choice is the Chocolate Flower (Berlandiera lyrata). Another native Arizona plant, it will grow in the shade but may not bloom the same as in full sun. This plant, while not having the most beautiful structure in the world, makes up for it with the intense chocolate scent the blooms give out. This plant is short but can grow fairly wide—2 feet high by 3 to 4 feet wide and is root-hardy to -20°F.

Tagetes lucida is known by many names, Mexican tarragon, Texas tarragon, pericon and sweet mace among them and is sometimes sold as a replacement for the real herb tarragon. Don’t be fooled, they are not the same plant or even related. (FYI: real tarragon grows really well here (you don’t have to substitute) although it will freeze out. Tagetes lucida can be used as a cooking herb but it is stronger than traditional tarragon. This is a small shrub that grows to about 3 feet by 3 feet. Very hardy—it is root hardy to 5°F. The bruised leaves do have a sweet tarragon-like smell along with a touch of anise. The plant has clusters of small yellow flowers at the ends of the stems. It blooms late summer into fall, so is a nice addition to the late season garden. I have grown this plant twice. I ripped the first one out because it never bloomed but I am giving it a second try because it is cold and somewhat drought hardy. Tagetes blooms attract butterflies and bees so is a good wildlife plant.

Bulbine frutescens is a South African plant that has been a fairly recent addition to the nursery trade. The word bulbine comes from bulbous, meaning onion or bulb, but that is really a misnomer as the plants aren’t bulbous or bulbs. Bulbine has the look of some bulb-like plants and is nice grown in containers or in the ground. This is an evergreen plant that will spread slowly forming clumps. While dormant in the summer, it has lovely yellow, yellow-orange flowers in the spring and sometimes in the fall. It is about 1 foot tall to 2-3 feet wide and is root-hardy to 10°F. Look for varieties Yellow Bulbine or “Hallmark” (dwarf orange).

Few of us need a large shade-lover but in a north-facing site sometimes a large shrub is needed. If that is the case give the Hopbush (Dodonaea viscosa) a try. By large I mean LARGE! It grows up to 8 feet high and 6 feet wide, although I have seen information that lists it as big as 12 to 15 feet high. It may grow slower in a shady environment but I would plan for the larger size, just in case. This is an evergreen shrub that is really quite lovely with glossy dark green linear leaves. In the early spring it will bloom with clusters of greenish-white flowers. The flower pods dry to flat papery wings. You can leave it as a shrub or it can be pruned up for a more tree-like look. The bark has a gnarled look that is attractive. It is cold hardy to 15°F.

Another large evergreen shrub is the sugar bush (Rhus
This is one of my favorite shrubs and I am glad to see it showing up in more native plant nurseries. You can see them in the Verde Valley growing wild so I know they will grow in our conditions. This is a large shrub 10 feet by 10 feet (maybe larger) that looks similar to privet, but it is so much prettier, in part because it is adapted to our conditions while privet can look pretty lackluster through part of the year. In the spring it has clusters of white flowers which produce reddish berries that you can make a lemonade-like drink with. This is an extremely drought tolerant shrub; it takes minimal water and once established it should survive on its own. Another plus is that it is fire resistant. It’s a slow grower, though, and is hardy to 10°F.

A familiar plant to most of us is the Gaura (Gaura lindheimeri) or whirling butterfly plant. Long stems of flowers create a showy plant nearly all summer long. The varieties you find in nurseries today originally come from Louisiana and the Texas Chihuahuan Desert. New selections seem to be going away from the whirling butterfly effect and giving gardeners just tall spikes of flowers but either way they are a dramatic and lovely plant to add to your garden. The plants grow about 2 feet high and 3 feet wide and are root-hardy to -20°F.

Interest in native grasses has grown by leaps and bounds over the years. Today there are a number of selections that are grown by the nursery trade. Quite a few of them will do well in shady locations. These include: Muhlenbergia capillaries ‘Regal Mist’, Muhlenbergia dumosa (bamboo muhly), Muhlenbergia lindheimeri ‘Autumn Glow’, Muhlenbergia rigens (Deer Grass), Muhlenbergia ridgida ‘Nashville’, Stipa tenuissima (Mexican feather grass, thundergrass).

There are many agaves and yuccas that will also tolerate shade. Among them are Agave bovicornuta, Agave desmettiana, Agave parryi, Agave geminiflora, Agave salana, Agave vilmoriniana, Agave weberi, Yucca pallida, Yucca rostrata, Yucca schotti, and Yucca rupicola.

If you are looking for desert-adapted plants I would suggest you start looking at the Mountain States Wholesale Nursery website. While they do not sell retail to individuals, their website has an incredible amount of information about desert adapted plants. The website is available for anyone to use. They have a catalog, databases, sources, info sheets, a cold-hardiness section and newsletters. You will find info sheets arranged by subject, for example: shade-tolerance, butterflies, grasses, rabbit resistant, hummers and many other things. They also have a great newsletter and a cross index so if you only know the common name and don’t know the scientific name of a plant you can look it up and vice versa. This is a fabulous resource for southwestern gardeners. Armed with information, you can now go to your local nursery and order the plants you really want.

http://www.mswn.com/index2.htm
**MG Opportunities**

**Monsoon Madness Seed Starting Workshop**

Prescott Extension Office, March 12th 10am to Noon. Make reservation with Steve McIntyre, zpsteve@yahoo.com, 443-8547.

Verde Area – none scheduled, but contact Bob Burke if you are interested in having one, bburke@swiftaz.net, 301-0394

**Speakers Bureau Workshops**

Workshops will be held in Prescott and Verde area on March 5th. Contact Tom Watkins, qfd@aol.com, 273-1065, in Prescott and Bob Burke, bburke@swiftaz.net, 301-0394 in Verde.

**Farmers Markets**

Still need chairs for Sedona and Prescott Farmers Markets – contact Sherry Howard, howardpena@cableone.net, 445-5647. If you’d like to help at the Camp Verde market contact Michele Herrick, 567-8687. If you’d like to help at the Chino Valley market contact Lynn Simpson, jismses@hughes.net, 636-7579.

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.

Nora Graf
PO Box 3652
Camp Verde, AZ  86322
mesquite2@hotmail.com
(928) 567-6703

Jeff Schalau
County Director, Yavapai County Extension Agent, Agriculture & Natural Resources
email: jschalau@cals.arizona.edu

Prescott
840 Rodeo Dr.
Building C
Prescott, AZ  86305
(928) 445-6590
FAX:  (928) 445-6593

Camp Verde
2830 N. Commonwealth Dr
Camp Verde, AZ  86322
(928) 554-8999
MG Desk (928) 554-8992
Arizona Cooperative Extension
Yavapai County
840 Rodeo Dr. Building C
Prescott, AZ 86305

Next Meeting
March 16, Prescott, 6:30
Speaker: Suzette Russi, see page 4