



## Upcoming Program: *Snow and Grow*



Please tell your friends that the Master Gardeners will be presenting ***Snow and Grow*** on **January 16, 2010**, at the Warren Public Library. Program topics include *Take Thyme for Herbs*, by Josie Gerardi, *Keeping a Garden Journal*, by Rebecca Ryan, and *Gardening with Birds*, by Sarah Hatfield of the Jamestown Audubon Society.

The program begins at 10:30 a.m. and will include three programs and refreshments. The Program should end around 1:00 p.m. You should show up around 10:15 to get a good seat.

To pre-register, call 723-4650. There is a minimal charge (\$5.00).



### Next Meeting

**December 3, 2009**  
**6:00 p.m.**

**Jefferson Defrees Center**

In lieu of a regular monthly meeting, the December gathering of the Master Gardeners will celebrate the holidays and the harvest. Please bring food to share and a small gift of nominal value (for the gift exchange).

*Please note that this month's meeting deviates from our usual time, location, and date.*

### Myth Busted: Poinsettias are non-toxic

Contrary to popular opinion, poinsettias are not poisonous to children and pets. In 1971, Ohio State University scientists determined that rats exhibited no adverse effects when given large amounts of poinsettia parts. A study by Children's Hospital of Pittsburgh, which examined 22,000 reports of poinsettia exposure, found no significant toxicity. The poinsettia's milky sap, however, can cause skin irritation.

So where did the myth originate? Allegedly, a child in Hawaii died after consuming a plant. The plant was mistakenly identified as poinsettia.



## Free, downloadable Classic Garden Books

According to *HortIdeas*, classic gardening books are available at [www.archive.org](http://www.archive.org). These books are no longer protected by copyright law, but their contents are still valuable. Examples of available books include: *Old-Fashioned Gardening: A History and Reconstruction*, by Grace Tabor; *The Planning and Planting of Little Gardens*, by George Dillstone; and *American Gardens*, by Guy Lowell.

To access these historical texts, go to [www.achive.org](http://www.achive.org). Click on the “Texts” tab and then enter in the search engine the topic you desire to find. This site has texts dating to the 1700’s. Perusing the texts is entertaining, but also can be a source of useful historic information, such as methods of fertilization and pest control or discovering the advertisement of new species and cultivars in the plant magazines.

From this site you can access individual open source, digital databases, such as *Project Gutenberg* or *Biodiversity Project*. These sites include scanned texts, video, and audio files.

## A Short Natural History of Mistletoe By Dan Sorensen



There are five families of plants that are called mistletoe and over 1000 species. All of them are at least partially parasitic, living among the branches of trees and shrubs and drawing most or all their nourishment by attaching themselves to the host plant's sapwood. Most are tropical.

The Eastern Oak Mistletoe (*Phoradendron leucarpum*) is the species found in the eastern United States from Florida north to USDA zone 6. Despite its common name, oak is only one of dozens of host plants it will parasitize. If you are driving through the southeastern states, especially in the Piedmont and coastal plain of Virginia and the Carolinas in the winter, you can easily see the mistletoe's ball shaped clumps of evergreen foliage high in the trees along the roadway. Because the plants are green and do some photosynthesis, they are considered partially parasitic, or hemiparasites, but their viability totally depends on the host plant. Because they are unable to survive on their own they are true parasites. Mistletoe seed is coated with a viscous sticky substance that makes it stick to a branch when a bird that has been eating the berries defecates on the branches. When temperature and moisture conditions are correct, the seed will germinate sending a probe-like radicle through the bark of the host, ultimately connecting to the tree's phloem and xylem. If the seed is planted in soil, it may germinate, but unless it can get itself attached to a suitable host plant in a short time, it will die.



## Holiday cactus By Christine Jarzab

In addition to poinsettia and holly, the Christmas cactus (genus: *Schlumbergera*) is a favorite holiday plant. *Schlumbergera* is tropical epiphyte from Brazil, quite unlike its desert cousins in both appearance and habitat. In its native habitat, this plant grows in the detritus that accumulates in the crooks of tree branches. Tropical rainfall quickly slides off the smooth surface of the cactus, thus *Schlumbergera* houseplants grow well in humid air and moist, but not wet soil. Houseplants perform well in a mixture of coarse peat and perlite.

*Schlumbergera* are characterized by phylloclade stems, meaning they have segmented stems that look like flattened leaves. In fact, the plant does not have true leaves. Blooms are either actinomorphic, meaning the floral parts radiate equally in all directions, or are zygomorphic, meaning the flowers are irregular in shape but have bilateral symmetry. Bloom can be varying shades of white, yellow, pink, red, or purple.

*Schlumbergera* is thermoperiodic, meaning bud and bloom is triggered by both day length and temperature. Ideal conditions for blooms are day length of less than 11 hours and nighttime temperature of 55°-65°F. Dr. Kessler of Auburn University reports that *Schlumbergera* require 20 – 25 continuous short-days for blooming and blooms can be inhibited by two hours of interrupted lighting during the nighttime. Nighttime interruption can be advantageous for commercial growers who desire to stimulate periods of vegetative growth.

For what it's worth, here is my personal experience. I have grown several Holiday cacti and find their optimal growing conditions at my house are this:

During the summer, I place the plants under a large maple tree and pretty much ignore them, unless it is very dry, in which case I might give them some water. At the end of September, I drag the plants into the house and place on the sunporch, which is cool (60-65°F). I give them a moderate amount of water and have never fertilized them. The cacti bloom two to three times a year. *Schlumbergera* is easily propagated by pinching off a stem at the joint and rooting in soil. To keep the humidity high and encourage rooting, try placing a plastic bag around the cutting and pot.

### References:

- 1) *Holiday Cactus: Commercial Greenhouse Production*, by Dr. J. Raymond Kessler, Jr., available at: <http://www.ag.auburn.edu/hort/landscape/Hcactus.htm>
- 2) *Growing Holiday Cactus*, by Iowa State University Extension, available at: <http://www.ag.auburn.edu/hort/landscape/Hcactus.htm>

## What's in a name?

*Christmas cactus?*  
*Thanksgiving cactus? Lobster claw cactus? What is it?*  
*Gardeners and scientists cannot agree upon a standard nomenclature for this plant. The genus is often identified as Schlumbergera, Zygocactus, or Epiphyllum. The en vogue term seems to be Schlumbergera, named for the 19<sup>th</sup> century French cactus aficionado, Frederic Schlumberger. This is the genus commonly used by the cooperative extensions.*

*Some gardeners try to distinguish the cacti by stem shape, bloom time, and bloom shape. After much research, I decided to refer to the plant as Holiday cactus of the Schlumbergera genus, not for reasons of political correctness, but rather because my cacti commonly bloom during the period between Thanksgiving and Christmas.*



3) <http://www.desert-tropicals.com/Plants/Cactaceae/Schlumbergera.html>

## Parasite or Epiphyte: What is the Difference? By Dan Sorensen

Many people get confused about the difference between a parasite and an epiphyte because they appear to occupy the same ecological niche. The only similarity between the two is that they both depend on another plant for physical support. A plant growing on another plant is an epiphyte. There are a few examples of this in our cold temperate climate such as mosses and lichens and some ferns which grow on tree trunks and branches. You will find many more examples in warmer climates, the most obvious being the vast majority of orchids and bromeliads. All of these plants merely use the plant they are growing on as a support. All their nourishment comes from their own photosynthesis and whatever nourishment and water they can acquire from the surface of their host plant. It is estimated that there are over 30,000 species of plants that are classified as epiphytes.

Parasites may also be epiphytes, or at least have an epiphytic habit. An epiphytic plant is called a parasite when it derives most or all of its nourishment directly from the host plant, giving nothing in return. It has root-like structures called haustoria which invade the host and attach to the host's living tissue. An example you may have seen in Pennsylvania is dodder (*Cuscuta species*), a twining leafless red, orange or yellow vine looking much like thick colored nylon monofilament that overgrows mostly non-woody plants in the summer. It can be a major pest of grain crops such as wheat and oats. It is sometimes called by colorful names like "Strangleweed," "Devil Guts," and "Witches Shoelaces". Another less obviously parasitic plant is called Indian Pipes (*Monotropa uniflora*). It attaches itself to fungi that are mycorrhizal to tree roots in the forest and appears to be growing in the soil. The above ground portion is pale white and is a clue to its parasitic lifestyle. It has no need of chlorophyll since all its sustenance comes from the host fungus and plant.

So in brief, an epiphyte lives on another plant but is self-sufficient. A parasite lives on another plant and is dependent on that plant for all or most of its nourishment.

## Living Fossils — The Ginkgo Tree by Dan Sorensen



Before the exploration of Asia by westerners, the Ginkgo (*Ginkgo biloba*) was known only as a fossil from the prehistoric Permian period, 270 million years ago. Fossils show that it was widespread throughout the northern hemisphere until about 7 million years ago. In 1691, Englebert Kaempfer, a German physician and botanist, was the first European to encounter the living tree in a garden in Japan. The tree is now native to China and is generally considered to be extinct in the wild, although there are some forests with trees believed to be feral that are over 1000 years old. In Asian culture and religion the tree is revered, and in Asian medicine it is reputed to have many beneficial uses. Botanically this sole surviving species of the genus is most closely related to the cycads and pine trees. It has naked seeds, unprotected by a ripened fruit, but instead protected by a fleshy seed coat.



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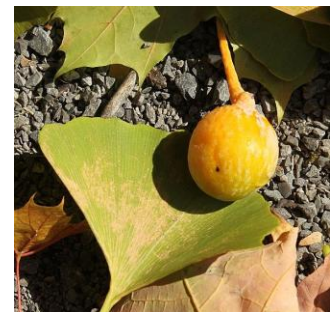
The tree itself can grow to over 150 feet in height. The leaves are fan shaped and have two lobes. The veining is parallel with occasional bifurcations, but never netted. The appearance is similar to large maidenhair fern leaflets, thus the common name of “Maidenhair Tree”. A young tree will have a narrow pyramidal shape, becoming more spreading as the tree ages. In the Fall the leaves develop a clear lemon yellow color before dropping for the dormant winter season. There are no flowers, but catkin-like cones form in the spring on the male trees. These produce pollen which will pollinate inconspicuous ovules on female trees. There are some trees that have both male and female reproductive organs, but most are of a single sex. Occasionally a tree will undergo a sudden spontaneous sex change, but this is not common.

Except for being intolerant of shade, Ginkgo trees are resistant to almost everything else from insects, and disease, to pollution and atomic bombs. Trees growing near ground zero of the Hiroshima atom bomb in 1945, although badly damaged and burned, quickly resumed growth and served as vibrant green reminders of hope and regeneration among the devastation following that terrible event.

The trees are quite tolerant to cold as well, being hardy to USDA Zone 3, so they will easily survive the winter cold anywhere in Pennsylvania, even the cold pockets in McKean county. They will grow in almost any soil that is not waterlogged, but prefer slightly acid conditions with a pH around 6.

The leaves contain very small quantities of a chemical similar to urushiol, the oil found in poison ivy that causes allergic reactions in many people, but the soft fleshy fruit contains much higher concentrations of these oils and is far more likely to produce an allergic reaction. This fruit, which is technically not a fruit but a part of the seed coat, has a generally offensive smell commonly described as similar to rancid butter, vomit, or dog feces, so it is unlikely to attract people to collect, play with, or eat them. This is why most people prefer to plant only male trees in their yards. If you wish to collect seeds for propagation, be advised to use rubber gloves to keep the oil off your skin.

The seeds, sometimes called “nuts”, are edible and are commonly used in China in rice congee, a sort of rice porridge. They are soft and mealy in texture and are considered by the Chinese to have special nutritional benefits and, of course, like most unusual foods, many people believe they are aphrodisiacs. Children have been known to experience convulsions after eating several fresh nuts, so it is best to cook them before allowing children to eat them. Grilled nuts are eaten in Japan as a popular side dish while drinking saki.



Ginkgoes are most reliably propagated by seed. Fruits collected in the fall should be cleaned of the smelly outer pulp and the cleaned seeds then placed in a bag with moist sphagnum peat in a warm location (60-70 degrees) for about two months. Then they can be kept in a refrigerator or other cool location for an additional two months before planting in pots to begin growth. It is also possible to root either softwood or hardwood cuttings by putting the cuttings in a pot of moistened perlite or coarse sand and placing under mist or covering the whole thing with a clear plastic bag and putting it in indirect light for a couple of months. Roots should



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develop on many of the cuttings and they may then be potted up for further growth in sunlight. Treatment with any of the commercial rooting hormones will improve the percentage of successes. Cuttings sometimes do not grow into well shaped trees however, especially if they were taken from side branches instead of the growing tips of the tree.

There are several mature ginkgo trees in Warren. A large male is on the north side of the Allegheny, just to the east of the Hickory Street bridge in Soldier and Sailors' Park. Several others, both male and female can be seen along Crescent Park, east of the bridge up to the railroad tracks. Even in winter they have a distinctive look with their tan rather thick, spur studded branches.

So if you would like to grow a plant that was in existence before there were any flowers, that was fed on by dinosaurs, that grew alongside giant tree ferns, 100 foot tall horsetails, cycads of types rarely imagined today, and among the plants that we are now burning as coal, plant some venerable and tenacious ginkgo trees.

## Holiday Trivia

- Americans purchase approximately 65,000,000 (that's million!) Poinsettias each year.
- *In its nature habitat, Poinsettia can grow to 12 feet tall.*
- The Mistletoe genus, *Phoradendron*, is Greek for "thief of the tree" because it parasitizes some of its host species.
- *America's national Christmas tree is giant sequoia, named General Grant, and located in King's Canyon National Park (California).*
- The largest Christmas stocking was reportedly 35 feet, 4.5 inches long by 16 feet, 5 inches wide.
- *The most popular Christmas trees is the Fraser Fir, followed by Douglas Fir, Balsam Fir, and Colorado Blue Spruce (in that order).*
- On an average Christmas tree farm, there are approximately 2,000 trees per acre.



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