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Holiday Cactus: A Case of Mistaken Identity

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Although poinsettia dominates flowering plant sales around the holiday season, there are alternative plants that deserve consideration. One such plant often is marketed as holiday cactus. Few plants seem to create as much confusion as this plant, at least when it comes to botanical nomenclature. In fact, holiday cacti usually are either Christmas or Thanksgiving cactus plants. The two are closely related and both are epiphytic, tropical cacti native to the coastal mountains of south-eastern Brazil, in the state of Rio de Janeiro.

Thanksgiving cactus normally begins flowering in mid to late November and continues into December. Other common names for Thanksgiving cactus are crab cactus and claw cactus. The names come from the pointed "teeth" that exist on the flattened, jointed stem segments botanically known as phylloclades. Its flowers, whose upper side is differently shaped from the lower side, are held slightly above the horizontal.



"Toothed" phylloclades of Thanksgiving cactus. (credit: University of Wisconsin)



Comparison of Christmas cactus (left) and Thanksgiving cactus (right) phylloclades. (credit: University of Wisconsin)

Alternatively, Christmas cactus normally begins to flower in mid to late December and continues flowering into January. The phylloclades of Christmas cactus are more rounded and do not have forward-pointing teeth. When young, both plants have an upright growth habit. As plants mature, their branches tend to arch downward resulting in a very graceful appearance. With age, the base of the stem becomes thick and woody, helping to support the weight of the younger stems and flowers.

Holiday Cactus: A Case of Mistaken Identity

The flowers of both cacti are similar in appearance. Each flower has 20-30 tepals. The latter is the term used when flower parts cannot easily be classified as either sepals or petals. The outer tepals are short, unconnected and spread out or curve backwards. The inner ones - those towards the tip of the flower - are longer and usually become progressively more fused at the base to form a floral tube. The term "flower within a flower" often has been used to describe their appearance.



"Flower within a flower" of Thanksgiving and Christmas cactus.

In nature, flower color ranges from deep pink to red. Today, named cultivars are available in colors of pink, purple, and deep red. Additionally, many cultivars bear bicolored pink, purple, or red with white flowers. If there is any confusion as to the identity of the plants, they can be separated from each other by flower structure. Flowers of the Thanksgiving cactus have anthers (male flower parts that bears pollen) which are yellowish in color, while Christmas cactus bears pink to purplish-brown anthers.

Taxonomically, the confusion between these two plants has been equally great, to put it mildly. Thanksgiving cactus, once called *Epiphyllum truncatum* and *Zygocactus truncatus*, is now named *Schlumbergera truncata*. Likewise, Christmas cactus at times also was incorrectly called by one of the two older botanical names. Now, its current accepted botanical name is *Schlumbergera x buckleyi* (a.k.a. *Schlumbergera bridgesii*) and is thought to be a hybrid between *Schlumbergera truncata* and *Schlumbergera russelliana*. The latter species has rounded opposed to toothed phylloclads and passes this morphological trait along to *Schlumbergera x buckleyi*.

Whatever the true identity of a holiday cactus, all require similar growing conditions and cultural needs to flower. At this time of the year (early December), those who have Thanksgiving cactus plants should see flower buds well-formed or in bloom. Christmas cactus plants should just now begin to show some small flower buds. If buds are not evident by this time, there may be few if any flowers this season.

Both Thanksgiving and Christmas cactus are tropical, epiphytic cacti and not the "desert types." Therefore, their needs are somewhat different from other cacti. Because they are epiphytes, in nature these cacti like to grow in tree crevices where branches develop. Their native habitat is somewhat shady and fairly humid. Although they cannot endure frost, the plants are endemic to higher altitudes and prefer cool temperatures, especially to develop flower buds. Flower buds will not develop when night temperatures are 70 degrees F or higher for extended periods of time. High night temperatures also may cause small buds to drop from plants purchased at a retail outlet. If possible, locate new plants in a cool room or close to a cool window. Never place them near hot air ducts or appliances that produce heat.

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In addition to cool temperatures, flower bud initiation in these cacti is influenced by the length of day. In nature, they are short-day plants which means they set buds in response to a critical period of darkness (12 hours or more) each day. In essence, short-day species really are "long-night" plants. At cool night temperatures (50 to 60 degrees F) some flower buds will form even if the plants are not exposed to long nights. An example of the latter would be plants located in a room that is lighted well into the night. For optimum flower bud formation, however, cool temperatures and natural day lengths (short days) are best, beginning about mid-September. If exposure to these conditions is delayed, flowering also will be delayed.

A slight reduction in watering at the beginning of bud formation also is helpful to prompt flower bud initiation. However, plants should never be allowed to wilt. Epiphytic cacti need growing media high in organic matter with good drainage. If plants become wilted or shriveled even though adequate water has been provided, root rot is the likely cause. The latter usually results from overwatering. Fortunately, stem segments (phylloclades) of epiphytic cacti root easily. Therefore, even when a plant's roots have died, removing some stem sections from the plant and using them to start new plants is a good way to "salvage" the plant.

Christmas cactus in bud form



Stem segments of Thanksgiving or Christmas cactus are easy to root in a porous medium. (credit: University of Wisconsin)



Example of an "heirloom-size" Christmas cactus. (credit: Wikipedia Commons)

Properly cared for, both Thanksgiving and Christmas cactus can live for years, producing more flowers with each passing year. They often become "heirloom plants" that are passed down from one generation to the next. If you have not started this tradition in your family, now is a perfect time to start, since these cacti are readily available around the holiday shopping season.

TRI-COUNTY SENIOR CENTER PROJECT

led by Mike and Pam Gardner

Lesson learned - don't bite off more than you can chew - BUT - what if you don't know how big the bite really is!

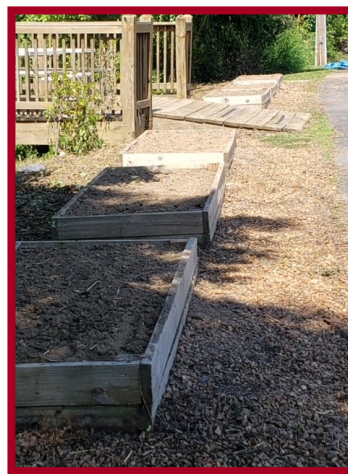
Last spring Mike was asked to be on the Board for the senior center. The state of the landscaping was one of the topics at his first board meeting. Shortly after that our neighbor was appointed to the Director's position. She contacted us to see if the landscaping was something Master Gardeners could help with. The center had been closed for a year (due to Covid-19) and the landscaping had not been maintained for many years. When we met to discuss the project and look it over it was apparent that this would be a multi-phase project. First priority - give the landscape area along the street in front of the build a facelift. After that meeting we (Mike & Pam) looked at all that was needed, broke it into smaller parts and took it to the board. They looked at the plan and said, "okay, go for it, but there is no budget for this." The Senior Center is a not-for-profit; they get grants from the United Way and the City of Pacific, but no state support.

In June Karen Leslie looked it over with us. She also did a landscape plan reusing most of the plants that were already there. Then she helped us prune back two of the 3 established overgrown trees. The rest would wait until the end of summer.

Phase I: Clean out the planter boxes along the back of the building to make ready to hold plants from phase 2. To accomplish this I thought it might be a good community service project for the local 4-H club. Their leader thought so also. Besides I had an ulterior motive - I wanted to introduce my grandkids to 4-H. Before they could go to work Mike & Jim (Terry's husband) did the weed eating all around the boxes. In August we had 8 members of the Fireball 4-H club with parents, leader, Heather Frey with her family and my grandkids with their Mom all turned out to help and by the end of the morning they were weed free, tilled and new topsoil added.



before!!



after!!





Garden before demolition!

Phase 2: Demolition! On a Saturday in September a crew of volunteers gathered to take out, relocate and remove the weeds & grass. There were 5 Master Gardeners (Karen Geisert, Kathy Heeger, Pat Schneider, Mike & Pam) and 6 community volunteers including Terry & Jim and a 94 year old active Senior Center participant. We got overgrown plants dug out, the remaining plants relocated to the waiting planter boxes and then only weeds grass remained. To our horror we found landscape fabric buried under 6 inches of soil and roots. This was not going to be easy.

The next workday was going to be putting compost down and replanting, but that was not to be. That's when our desperate email went out asking for help. To our delight Randy Smith, a Master Gardener with a skid steer, saved the day. He made short work of ripping out the old landscape fabric. Also in the meantime Terry had been working on donations of material: topsoil, compost, mulch, rock and hardware to contain the rock. Later Randy came back and helped spread the rock along the sidewalk, topsoil and compost. One of the difficulties was estimating what we needed for material; we think this might be a good topic for a FCMG meeting.



Phase 3: Planting! This is the most fun part of any project. It took two mornings because we didn't have as many volunteers. We ended up tweaking the original plan. It seemed as though the space enlarged. As we put the plants in there was a lot of blank space remaining. Master Gardeners brought some plants that had been divided from their own gardens. There are still a couple areas that we will need to add additional plants in the spring, more donated plants. A local nursery has already committed to donating some plants next spring.



Phase 4: Pruning - Late winter early spring will be out pruning a circle of rose bushes around the flag pole.

For us this was our first big project. We learned a lot. Other outcomes - my grandkids have all joined 4-H and Pam has now volunteered to help the Fireball 4-H members interested in gardening projects. Part of that will be putting some plants in those now empty planting boxes at the Senior Center. We're asking those who use the center regularly what type of plants they would like to see there.

Overall we are glad that we have been able to facilitate a facelift of the landscaping at the Senior Center. It now presents a very pleasant welcome to the Pacific community. This will be an ongoing project for us.

EAST CENTRAL COLLEGE ROUNDABOUT PROJECT

led by Brenda Peters and Georgianne McClanahan



A "before" photo of the ECC roundabout

Jack and the city employees loading the sculpture from Jack's and Kathy's house.



Georgianne and Brenda going over the plans!



City employee excavating for the sculpture

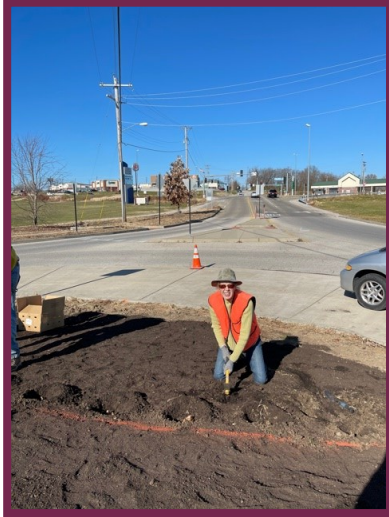
Sculpture being put in place



Sculpture in place with the college in the background

EAST CENTRAL COLLEGE ROUNDABOUT PROJECT

led by Brenda Peters and Georgianne McClanahan



PLANTING TIME!
500 daffodil bulbs
were planted
around the
scallops.

The MGs digging
holes and planting
the bulbs.



THE TEAM!

Franklin County Master Gardeners and Union city employees.



Garden Tour for Gasconade County Master Gardeners at Karen Leslie's Home

Karen gave a tour of all her gardens for nine Gasconade County Master Gardeners on August 3rd. The garden tour had been scheduled since the Gasconade County Master Gardeners toured the MG Demonstration Garden last year.

Doris Malone and Debbie Ciegel provided help during the tour.

The Gasconade County Master Gardeners enjoyed seeing all the native gardens, and the common milkweed with monarch eggs on some of the leaves. They also saw the monarch jars that Karen had in her house.



Karen beginning the garden tour. Karen explaining to the master gardeners how her gardens were set up for the different pollinators, and that most of her gardens consists of native plants.



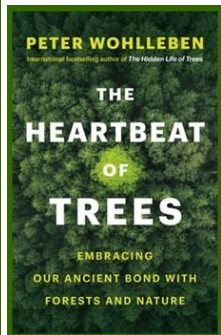
Karen showing the bridge garden which contain lots of common milkweed, purple coneflowers, a corkscrew willow tree, an oak tree, whorled milkweed, coreopsis, hostas, obient plants, goldenrod, barberry bush, dabbled willow, joe-pye weed, red coneflowers, yellow coneflowers, liatris, and river oats, and much more.

Karen answering questions about her plants and what they support.



Book Report

by Bill Schwab



**"The Heartbeat of Trees:
Embracing Our Ancient Bond
with Forests and Nature"**

by
Peter Wohlleben

One of the ways many people are remaining upbeat during the anxious and trying days of the pandemic is to spend time outdoors. Parks and trails have been used by record numbers of walkers during this time. It was this observation that drew me to Peter Wohlleben's latest book "The Heartbeat of Trees." This well-respected scientist maintains a leisurely walk in the woods can contribute to positive feelings and hope for the future for humans and trees. The latest scientific findings reveal there is more to the plant world, especially trees, than most people appreciate. In this sequel to his "The Hidden Life of Trees," Wohlleben writes convincingly about the reciprocal and beneficial bonds that historically have existed between humans and trees but are mostly overlooked today. Referencing recent research and using logic, reasoning, and a little philosophy, the author encourages the reader to "sit under these giants, run your hands over their barks and feel secure;" experience "compounds" that calm your senses. Wohlleben maintains the amalgams that maples, oaks, and other trees release into the air to communicate among themselves also have a positive effect on the human circulatory system-- reducing blood pressure-- and altering the subconscious.

In an era when nature is primarily viewed for the income it can generate, and in a time when most people live in densely

populated communities, Wohlleben declares there is a deep-seated need for humans to restore their connection to the natural world.

"The Heartbeat of Trees" is an easy-to-read summary about "the language of the forest, the consciousness of plants, and the eroding boundary between flora and fauna." The thirty-one essays call readers to dig into the physical, mental, and emotional connections people experience with nature. Beginning with chapters on the five senses the forester author looks at the power trees have over human enjoyment, health, and life. Later essays explore the emotional and spiritual human responses nurtured by trees. The chapter on walking in the woods with children is a particular highlight of the book. "The Heartbeat of Trees" celebrates these giants of plant life. It reports curious findings such as how bees read electric fields and how older trees "compost themselves" in their later years in order to survive.

This research is particularly timely when ancient trees and diverse old-growth forests are threatened by climate change, drought, fire, insects, and the pressures of industry. Global warming and deforestation are changing rain patterns affecting forests, agriculture, human health, and the availability of water. Wohlleben leaves the reader with a challenge to visit a forest and reestablish that ancient bond between trees and humans, which has always been there, before it is too late. His latest book is full of astonishing new data and surprising ideas that will fill sensitive readers with awe.

About the author:

Peter Wohlleben spent more than twenty years working for the Forestry Commission in Germany before leaving to establish a forest academy which supports sustainable forest management and adult and youth forest education. Greystone Books is the publisher of this 258-page book.

Washington Fair Fairy Garden Judging

by

Karolina Shook

Types of arrangements:

- ON THE BEACH - An arrangement featuring water, sea shells, and fresh plant material
- IN THE GARDEN - An arrangement using fresh vegetables and plant material in a basket
- IN THE SAND - An arrangement using fresh plant material and featuring a play bucket and shovel
- AT THE JOB SITE - An arrangement using bright colored fresh plant material and featuring a pair of safety glasses
- AT THE FAIR - An arrangement using fresh plant material - Designer's choice
- DOWN ON THE FARM - An arrangement using fresh and dried plant material featuring a farm animal
- IN A SMALL WAY - An arrangement in using fresh plant material, not to extend 6" in any direction

Judges review each entry and make sure they follow the arrangement guidelines, as well as healthy flowers and plants.

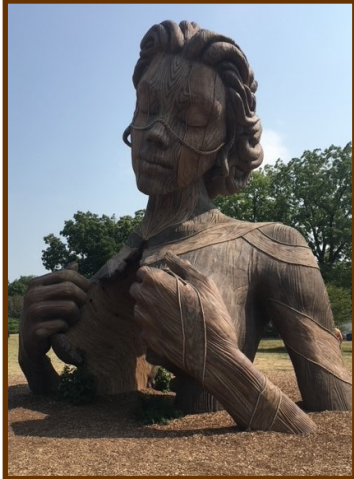


HUMAN NATURE

AN EXHIBIT OF SCULPTURES

work by Daniel Popper

This summer, I attended the Human Nature Sculpture Exhibit at the Morton Arboretum (2,000 acres) in Lisle, IL. The 5 sculptures were placed throughout the grounds of the park. The pieces are made from steel, fiberglass, wood, and natural fibers. I want to take you on this journey like I was able to do.



HALLOW - 25 ft. tall

This piece is entitled “Hallow” and is intended to draw people’s attention to the metaphysical relationship between all conscious beings. Hallow speaks to our inner nature.



UMI - 18 ft. tall

“Umi” means life in Swahili and “Mother” in Arabic. The archetypal mother earth, who welcomes visitors into her womb, and a reminder of our connection to nature, and our responsibility to create, nurture and care for our environment.

HUMAN NATURE

AN EXHIBIT OF SCULPTURES

work by Daniel Popper



SENTIMENT

A being sensitive in perception or feeling.

The daily digital dementia leads to a scrambling of our senses.

This piece speaks to a return to stillness, by being and connecting with nature. Meditation is essential in finding our center in the chaos.



HEARTWOOD - 18 ft.

The Heartwood is the dense inner collection of rings which lie in the center of a tree trunk. The spine or central pillar of the tree, mechanically strong, and resistant to decay, its rings allude to the tree's unique history and identity. When walking through this piece, we remember our history, lineage, and our identity back to nature.



BASILICA - 30 ft. by 30 ft.

Basilica meaning in Greek , royal house. The hands indicate nature simultaneously welcoming us in while at the same time reaching out for us. The roots resemble arteries and veins. A nutrient system transferring energy. When you enter the hands, you are interacting with the space and engaging with the concept of the inner and the outer landscapes within which we live, and the connections between them.



MISSOURI BOTANICAL GARDENS
CLASSES AND WEBINARS

Growing Annuals from Seed ONLINE

Thursday 1/6/2022 12:00 PM - 1:30 PM

Online instructor: Sharon Lloyd

\$21 members; \$25 nonmembers

Registration end date: 1/5 by Noon

Small Space Gardening ONLINE

Tuesday 1/11/2022 12:00 PM - 1:00 PM

Instructor: Sharon Lloyd

\$14 members; \$17 nonmembers

Registration end date: 1/10/22 at Noon

Low-Maintenance Perennials ONLINE

Tuesday 2/8/2022 1:00 PM - 2:30 PM

Instructor: Sharon Lloyd

\$21 members; \$25 nonmembers

Registration end date: 2/7 at 9 a.m.

Growing Annuals from Seed ONLINE

Saturday 2/12/2022 10:00 AM - 11:30 AM

Instructor: Sharon Lloyd

\$21 members; \$ 25 nonmembers

Registration end date: 2/10 by Noon

Native Plant School Webinar Series: Ecological Benefits

Wednesday 2/16/2022 5:00 PM - 6:00 PM

Instructor: Scott Woodbury

\$5 members; \$10 nonmembers;

Price per person, per class.

Registration end date: 2/14/2022 at 9 am

Waking Up Your Butterfly Garden (BH) NEW

Spring has sprung, but is your garden ready? Learn how to clean up your garden for the growing season while protecting and encouraging pollinators and other beneficial bugs that share your space.

Once nature's alarm clock goes off, everything gets growing—don't be late! Saturday, February 26

10 to 11:30 a.m. \$21 members; \$25 nonmembers



MISSOURI DEPARTMENT of CONSERVATION

Attracting Winter Birds (Virtual)

Wednesday, Jan. 5th from 10:30am to 1:30am

Instructor: Jesse Ballard

Registration open

Trees: Winter Tree ID (virtual)

Thursday, Jan. 6th from 10:00am to 11:00am

Instructor: Angela D. Pierce

Online only

Owl Prowl

Friday, Jan. 7th from 6:30pm to 8:00pm

Instructor: Marissa Ginger

Rockwood Reservation, Wildwood, MO.

Native Plants:

Digging deep, an insect's view of the garden!

Thursday, Jan. 13th from 10:00am to 11:00am

Instructor: James Koehler

Online only

Eagle Days

Saturday, Jan. 15th from 11:00am to Noon

Instructor: Dennis Cooke

Powder Valley Conservation Nature Center

Franklin County Master Gardener's

Holiday Party!



FCMG Executive Board from left to right: Nathan Bailey, Bill Schwab, Rick Hays, Brenda Peters, Debbie Ciegel, Deb Klak, Colleen Simons, and Kathy Heeger



**First President: Colleen Simons
Past President: Karen Leslie
Current President: Deb Klak**



Kathy and Jack at the welcoming table



The dessert table

FCMG Projects!



dinner time!

Franklin County Master Gardener's

Holiday Party!

