

CENTRAL SPINE

May 2026



Opuntia 'Fruit Punch' by Robert Sacha.

SAFEGUARDING OUR DESERT ICON: INSIDE THE SAGUARO INITIATIVES
AT DBG Presented by Dr. Tania Hernández a Research Scientist, New World
Succulents, Desert Botanical Garden

The program starts at 2 p.m., but come early to socialize, get free plants, and bid on plants in the silent auction.



The Saguaro Initiatives are a suite of research, conservation and community-science programs led by Desert Botanical Garden to understand, protect and restore saguaros across the Phoenix valley and our changing desert.

Tania will share what they are learning about saguaro genetics, health, survival, and resilience in the face of increasing heat and drought and how these efforts connect science, volunteers, saguaro owners, and long-term conservation. She will also highlight ways CACSS members and the broader community can participate in safeguarding this iconic species for future generations.

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AWARD-WINNING PLANT: *REBUTIA KRAINZIANA*

AWARD: Best Junior Novice Cactus in the 2026 show

GROWER: Eleanor Luiten

PLANT NAME: *Rebutia krainziana*

PURCHASED: I got it sometime around 2019.

POT: It got a new six inch light green ceramic pot this year.

FERTILIZER: I use a low concentration of balanced fertilizer with every watering.

POTTING MEDIUM: The potting medium consists of about 50% pumice, 25% coconut core and 25% potting soil.

SUN EXPOSURE: My cactus lives in a greenhouse with about 40% shade cloth.

WATERING: I water it about two times a month in the summer and once or twice in the winter.

FROST PROTECTION: I do not put a cloth over it in the winter because we have a heater in the greenhouse.

OTHER NEEDS/COMMENTS: This cactus is not very hard to care for, and it is quite easy to handle because it has short spines. It flowers a lot in the spring. I would recommend it because it is a great species to add to your collection. We bought it on the clearance rack at Lowe's when I was just three years old. It had a glued on flower.



Eleanor Luiten

HELP NEEDED FOR CACSS INDEXES By Sue Hakala

I hope that you have been investigating the CACSS newsletter indexes on the club website. All of the articles from all the newsletters that could be found since 1975 have been added to the indexes to make them readily available to members. The important thing about these articles is that they are written by people who are growing cactus and succulents in this environment.

I've been entering the articles in the indexes since the beginning and have now decided that it's time to pass the responsibility on to someone else. It takes about one hour per month, and maybe an extra hour at the end of the year to make sure everything is in the right place. It's not a big time commitment for something that is so important to our club. I've always worked with a proofreader. I'm willing to be the proofreader for the first year and to train the new person in how to do it all. It's not that hard. It is important to be consistent with the format/listings as a lot of folks have had input in what articles are included, how they are arranged, and helped add all the weblinks.

If you are interested in knowing more/have questions/want to volunteer for the job, please contact me at cacsscentralspine@gmail.com and put my name in the subject area.

Here is a sample of articles that can be found in the indexes. Click on the link below (the underlined part), and it'll take you directly to the newsletter that has the article in it. Yes, you'll be adding the links too. Don't worry, it's easy.

[Beginner's Corner: An Introduction to Shade Cloth](#) by Lynn Friedman, 5/20, page 9

[Watering Cactus and Succulents During the Summer—Proceed with Caution](#) by Tom Gatz, 5/13, page 5

[Top Dressing](#) by Scott McMahon, 4/22, page 10

[An Acid Trip for Your Plants?](#) by Lee Brownson, 9/07, page 6

[How Do I Graft a Cactus/Succulent?](#) by Dean Patrick, 8/18, page 1

AWARD-WINNING PLANT: *PTEROCACTUS FISCHERI*

AWARD: Best Advanced Cactus of the 2026 show

GROWER: Tristan J. Davis

PLANT NAME: *Pterocactus fischeri*

PURCHASED: Grown from seed sown May 2022.

POT: Handmade by Brooke Sykes.

FERTILIZER: I use Superthrive Bloom Liquid Plant Food (3-12-6).

POTTING MEDIUM: I use 50% pre-made cactus and succulent mix and 50% small pumice.

SUN EXPOSURE: Grown under 40% shade cloth.

WATERING: Watered every two weeks in summer.

FROST PROTECTION: None

OTHER NEEDS/COMMENTS: None



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When this journal arrived at the CACSS library, it created pleasant brain waves of interest. The *Journal* does not have an author, per se, but the editor, Peter Breslin, has interesting comments in his introductory column. He states, "Taxonomy in Cactaceae has a long and often confusing history. Combine this fact with several different concepts of what constitutes a species, or even a genus, and you get disagreements ..." It seems that while one respected source recognizes 24 species, another respected source lists 100 species. The editor explains that "The *Journal* especially is a platform for any perspective that provides reasonable treatments of various taxonomic questions regarding existing taxa, or new descriptions, based on sufficient evidence." No, this is not what created pleasant brain waves, but be sure to read the entire editorial column. The last paragraph contains intriguing, surprising news.

Each article ("chapter") is about something different. In one, Greg Starr, with the assistance of two accomplices, tells about an Arizona godfather. He was not a man of illegal activities, but a man who promoted the understanding and cultivation of cacti and succulents in southern Arizona. His name was Dan Bach. One activity of Dan's was to promote thinking abilities in children who visited his grounds. The authors explain, "Dan ... used to have various 'toys' to give primarily to kids but often gave them to so-called adults. These 'toys' consisted of things like a circular piece of material on a chain, that if you mastered the technique ... you could pull the metal ring off of the chain!"

After visually pondering that conundrum, you may want to relax your brain. The pictures accompanying Debra Lee Baldwin's descriptions of her trials while learning how to grow plants in "the foothills north of San Diego" are beautiful and mentally relaxing. Yes, this is the item that has spawned pleasant brain waves. Six of Ms. Baldwin's fascinating and useful books are in the CACSS library for the enlightenment and enjoyment of CACSS members.

Unusually shaped plants catch the reader's eye in the article from the Namib Desert. Another article has detailed instructions for growing aloe plants from seed. And the final article carries the theme of the editorial.

Books by Debra Lee Baldwin that are in the CACSS library:

- *Designing with Succulents*, 1st edition, 2007, copy 1 (continued)

- *Designing with Succulents*, 1st edition, 2007, copy 2
- *Designing with Succulents*, 2nd edition, 2017
- *Succulent Container Gardens: Design Eye-Catching Displays with 350 easy-care plants*, 2010, copy 2 (I do not know where copy 1 is)
- *Succulents Simplified: Growing, Designing, and Crafting with 100 easy-care varieties*, 2013, copy 1
- *Succulents Simplified: Growing, Designing, and Crafting with 100 easy-care varieties*, 2013, copy 2



Ferocactus pringlei by Jan Emming.

PUMICE PILE

The pumice pile is a cheap resource for pumice. CACSS does not buy the pumice or profit from the sale of pumice. The nursery buys the pumice and sells it to us very cheaply. We pay the owner the money we collect at the end of the day. About 30-40 members took advantage of the great price of \$5 per bucket this April.



Bob Hopfner (left) coordinated the pumice pile and helped members put the buckets in their cars. Thanks Bob!

GROWING *PUNA CLAVARIOIDES* GRAFTED

Photos and text by Elton Roberts

When I was transplanting my plant, a head got knocked off. I found it laying on the back of the pot. It was not all that easy to see where the head was detached from.



Photo 1

Some years ago, a cactus nursery that I worked at had a grafted plant. It was so big that it flowed down to the table top and spread out on the table. It did not look natural, so I never grafted one. Photo 1 (left) is of my plant.

Photo 2 (below left) is the head after it had been grafted two months. The head was no larger than about the diameter of a pencil when I grafted it. At two months, you can see that it is a lot larger than that. In that time, the head went from 7 mm



Photo 2

in diameter to 2 cm across. It has three offsets that are held by barely a thread. In habitat, the plants almost never have heads growing on heads and never three or four high. You will never see a clump of much more than several heads, if you are lucky. Before my largest plant lost its roots, it was over 30 cm across and was more impressive than the plant in photo 1.

Photo 3 (next page) shows two more heads that I took off a plant once I saw that they grow quite easily on a graft. I have always been told that you have to graft *Opuntia* on *Opuntia* stock. Well, this is just not so. The graft stock I used is *Trichocereus spachiana*. It is a hardy and even growing plant. It is not super fast like some stock, and it is easy to grow. The only downside of using it is the spines.

Are there three heads on the graft stock? The one in the middle is the base of one of the other heads.

I thought that since I had three heads of graft stock, I should try grafting the bottom of one of the heads. As you can see, it is making four offsets. The root end has nowhere to grow, so it is making offsets. The two tops are



Photo 3

just getting larger, although they are showing signs of maybe wanting to offset also.

Photo 4 (below) shows the first graft I did after three months. It is growing those weird finger-like growths on the back head and starting them on the right hand head. People have asked what causes those growths, and my answer is that the plant joints have no growing point. The head is growing so fast that they grow these fingers as a way of putting growth somewhere.



Photo 4

If you go back to photo 1, you will see very little of that kind of growth since I grow the plants quite hard. I have seen other people's plants where they get less light and are watered more often than mine; most heads have had the weird finger growths. Since this is grafted, it is growing fast, which produces the fingers.

At the same time I grafted the heads in photo 4, I also grafted the head in photo 5 (next page). That head is only about 1.5 cm in diameter and is shooting upward. The top of it looks like it might try to crest, through it would not be a crest like on a *Mammillaria* as it has no growing point.

Photo 6 shows the three-headed graft stock, the two heads and one upside down graft after one month of being grafted. As you can see, they are growing quite well. The head on the left has now made three offsets. The main head is about 2 cm in diameter. Its tallest offset is 4 cm tall and 3 cm wide. The graft in the middle is only a bit fatter than when first grafted,

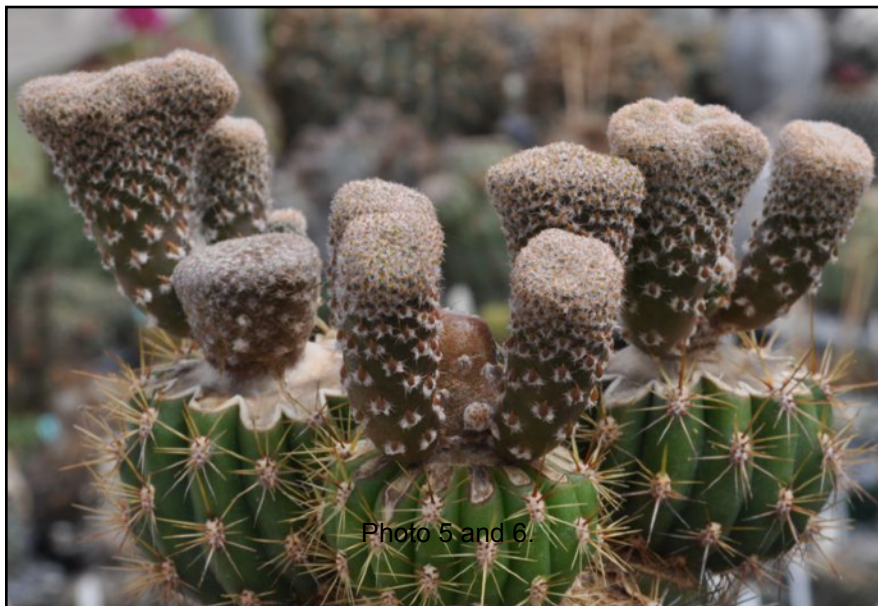
Photo 6 shows the three-headed graft stock, the two heads and one upside down graft after one month of

but it has four offsets, the tallest being 3.5 cm tall and 2 cm wide at the top. Notice that it is thinking about throwing a fifth offset. The head on the right has two good-sized offsets and is making two more offsets.



I will graft the offsets and try and root others. That way, it will make a quite rare plant in the trade more available to others. In the past, I have taken heads that have fallen off and rooted them. This takes a while and it takes several years for a plant to grow two or three offsets and look like it is a normally cultivated plant.

I need to say a word about *Trichocereus spachianus* for graft stock. Unlike some tender graft stock, *T. spachianus* is hardy and is not sucked dry like *Myrtillocactus geometrizans* and *Hylocereus* stock. It is cold hardy. I have several large clumps in my yard from which I take stock when I need it.



Photos 5 and 6

T. pachanoi is another good graft stock, but I have better luck using *T. spachianus*. I have seen many times where some of the other stocks have been sucked dry before the stock wakes up in the spring. Many people graft 'hard to grow' plants on these other kinds of stock. These plants wake in mid to late winter, and the graft stock may not wake till mid to late spring. Thus I do not use, nor recommend, them as graft stock.

PLANT CARE ARTICLES IN THE *CENTRAL SPINE*

Photo and text by Editor Sue Hakala

Go to the CACSS website centralarizonacactus.org and click on Newsletters at the top. Then scroll down to the All Plants Index. This takes you to a listing of all the articles on plants and their care that have been in the *Central Spine* since 1975. If you grow *Adeniums* you may want to review the articles on care for the summer.

If you want information on *Stapelias*, click on the links below to go directly to the articles about their care. That's *Stapelia gigantea* below.

- [Hand-pollinating Stapelia Plants](#) by Grant Meyer, 1/16, page 6
- [On the Dry Side](#) by Timothy Chapman, 6/92, page 2
- [Stapelia](#) 9/24, page 16
- [Stapelia flavopurpurea: A Sweet Starfish](#) by Mark Dimmitt, 8/11, page 5
- [Stapelia gigantea](#) (growing in the ground) by Michelle Schrade, 12/22, page 16
- [Stapelia gigantea](#) by Sandy Silvers, 11/21, page 4
- [Growing Stapeliads in Phoenix](#) by Leo Martin, 10/98, page 9
- [Growing Stapeliads Outdoors in Phoenix](#) by Michelle Schrade, 12/22, page 16
- [Stapelias and Mealy Bugs Preventing Infestations](#) by Sue Hakala, 8/08, page 6
- [Stapeliads](#) by Leo Martin, 10/00, page 2



PACHYCORMUS DISCOLOR: ONE OF MANY ELEPHANT TREES

By Kathleen M. McCoy

Let's test your vocabulary. What is the common name for *Pachycormus discolor*? If you tentatively translated the term as "strange colored elephant," your answer is not without merit. The common name is elephant tree or more precisely, the Baja elephant tree. The genus *P. discolor* is derived from "pachy" which is Greek for "thick" and "kormos" for trunk or stem. When assembled like a verbal crossword puzzle, the name describes (depending on your number of visits to the zoo) the thick size and pale gray bark of a plant that resembles the trunk of an elephant.

Other descriptions have not been so kind and use terms like grotesque form, bizarre shape, or limbs like the overdeveloped muscles of a personal trainer. Such colorful epithets may be due to the location and season when the caudiciform succulent tree was viewed.

Baja elephant trees, in spite of their bulk, are sensitive to their environment. Endemic to Baja California, *P. discolor* is distantly related but nearly impossible to distinguish from other members of the genus *Bursera*, often also named elephant tree. *P. discolor* only grows naturally in Baja California desert areas and the Vizcaino Desert, the islands of Magdalena Bay, and the western flanks of the southern Sierra de la Giganta, so identification is definitely linked to location.

Full sun is critical for successful growth, although a small amount of shade is tolerated. If there is too much heat, the summer deciduous tree drops its leaves and goes dormant. Watering while the plant suspends active growing can result in rot. Little to no liquid is best for drought deciduous trees like *P. discolor*.

The growing season for this plant is winter. But if the weather is too cold, less than about 25°F, the tree can receive a mortal blow from Jack Frost or, at best, return as a shrubby bush. Where trees have settled along the windy Pacific coast, the plant is usually prostrate or sprawling like the fictional Gollum of the *Lord of the Rings*. In spite of the often bizarre forms of the *P. discolor*, many can grow 30-50 feet tall with a spread of 30 feet. The tree rapidly adds height during late fall and winter.

Water is a fleeting visitor to *P. discolor*. This single species desert plant is privy to moisture for a very short time in the winter. It employs a survival technique that allows it to stay alive during the rest of the year. *P. discolor* develops a caudex, an organ that is part of the base of its trunk or stem. The caudex is capable of storing water which is filled with nourishing juices. *P. discolor* literally saves water from the rainy season in the caudex, advertising its liquid wealth through the size of its swollen trunk. As the tree matures, the base swells from collected juices. The more established the tree, the more obvious the above-ground enlarged trunk. The slow-growing caudex is literally the plant's lifeline. Taking a long time to develop, *P. discolor* only grows during late fall and early winter and then promptly goes dormant until the next rains.

When mature, the trunk exfoliates thin paper-like pieces like overdone empanada flakes. The annual shedding process impacts photosynthesis and structural integrity. A milky sap is released which subsequently dries clear and hardens into a gum resin. If the plant is cut or injured, the sap, analogous to a homemade Band-Aid, makes another appearance.

Immediately following rains, two-inch dark green, pinnately compound leaflets burst forth, only to be dropped with the advent of the dry hot summer. From May through September, odd-looking leafless branches support creamy to yellowish-white, red or pink-colored flowers with pink centers. The five-petaled blossoms present as a loose growth in which each flower perches on its own stalk from a common swollen stem. Small, dry pouched-shaped fruits are produced.

Little to no research has identified the value of *P. disorder* for plants or animals. Yet the *P. discolor* has a worldwide fan club. Because of its unique growth form, plus the impressive seasonal leaf color which somersaults from winter blue green to summer reddish or purplish, young trees have an innate appeal when creating a diminutive living representation of nature. It is an ugly duckling of the tree world transformed into an absolutely enchanting bonsai.

Popular venues to view *P. discolor* are Desert Botanical Garden in Phoenix, Boyce Thompson Arboretum in Superior, and University of Arizona Campus Arboretum in Tucson. A trip to South Mountain in Phoenix will take you to its cousin *Bursera microphylla*, also known as elephant tree.



Be sure to visit CACSS on the web at: centralarizonacactus.org,
Facebook, Instagram and YouTube at: CentralArizonaCactus,
and members only at: CentralArizonaCactus Swap and Shop.





NEW MEMBER EVENT

For new members and
those who feel like new members

Saturday, June 27, 2-3:30 p.m.
at Papago Buttes Church of the Brethren
2450 N. 64 St., Scottsdale, AZ 85257

Want to learn more about CACSS? Want to meet other cactus nerds? Join us on Saturday, June 27 from 2-3:30 p.m. at Papago Buttes Church to learn more about what events, resources and activities CACSS offers as well as opportunities to get involved in a dynamic, growing organization.

You won't want to miss this opportunity to get to know other people passionate about cactus and succulents and enjoy some cactus-themed snacks.

Due to space constraints, this event is limited to 40 individuals.
If you sign up, please plan to attend.

[Click Here to Register](#)

Questions? Contact stephanie.halcrow@centralarizonacactus.org

OFFICERS, BOARD MEMBERS AND COMMITTEE LEADERS 2026

Officers: President **Don Begley** | Vice President **Javier Gurrola** | Secretary **Jennifer Leavitt** | Treasurer **Tammie Jansen**

Members-at Large

- Serving through December 2026: **Stephanie Halcrow** | **Bob Hopfner** | **Ruthanne LaQua** | **Kathi Metzger** | **Mary Miller**
- Serving through December 2027: **Pat Adler** | **Kim Andrews** | **Mary Dokes** | **Desi Kovacs** | **Lisa Moore** | **JR Trevas**

CACSS PROGRAM AND COMMITTEE CHAIRS 2026

- Annual Show and Sale Committee: **Pat Adler, Bob Hopfner, Joan McDonnell, Kathi Metzger, Ruthanne LaQua**
- Archivist/Historian: **Lois Schneberger**
- Auction Chair: **Javier Gurrola, Ann Winchell**
- CSSA Affiliate Representative: **Don Begley**
- Calendar Coordinator: open
- Donations Coordinator: **Chris Ginkel**
- Education Committee Co-chairs: **Stephanie Halcrow, Desi Kovas**
- Facebook Administrators: **Tom Briggs, Natalie Fruciano, Celeste Gornick, Ken Luiten, Bj Seemuth, Thom Young**
- Facebook Swap and Shop Page: **Tom Briggs, Natalie Fruciano, Bj Seemuth**
- Google Workspace Co-administrators: **Emily Adler, Janet Catlett**
- Graphic Designers: **Bob Hopfner**
- Holiday Party: **Lisa Moore**
- Instagram Administrators: **Natalie Fruciano**
- Keeping in Touch with Members: **Jo Davis**
- Librarians: **Diana Rogers and Sylvia Lee**
- Membership Chair: **Pat Adler**
- Newsletter Editor: **Sue Hakala**
- Outreach: open
- Private Plant Sales at Meetings: **Chris Ginkel**
- Printify: **Natalie Fruciano, Jackie Peel**
- Propagation Education Group (PEG): **Tristan Davis**
- Pumice Sales: **Rich Caravello, Bob Hopfner**
- Recognition Committee: open
- Speaker Coordinator: **Nadia Whiteside**
- Tech and Communications: **Natalie Fruciano**
- Trip Coordinator: open
- Website Administration: **Peter Bockenthien, Angela Stephens, Brian Simmons**
- YouTube Administrator: **Brian Simmons**

SPECIALISTS TO CONTACT WITH QUESTIONS

- **Tristan Davis** Manages the Seed Depot. Specializations include plant propagation and heading PEG (Propagation Education Group).
- **Doug Dawson** Specializations include growing from seed, flora of Namibia, lithops, other mesembs, melocactus, and miniature cacti and succulents of Arizona.
- **Tom Gatz** Specializations include adenium, agave and growing succulent trees as bonsai (bursera, portulacaria, ficus, operculicarya, pachycormus, etc.).
- **Dean Patrick** Specializations in softwood stem-cuttings, plant division and seed starting, rooting cacti, agave, and aloe.

Direct any comments, questions, ideas to
Editor Sue Hakala.

CONTACT INFORMATION FOR MEMBERS WILL NO LONGER BE PROVIDED IN THE NEWSLETTER AS ISSUES HAVE OCCURRED. To contact a board member, committee chair, specialist, or others use the Contact Us form on the club website. When filling in the form, put the name of the person in the subject field that the message is intended for so it can be forwarded to the appropriate person. Just click on the direct link: centralarizonacactus@gmail.com