

CENTRAL SPINE

August 2026



Ronald Souder's beautiful ocotillo.

USE OF SCENT DETECTION DOGS FOR RARE PLANT MONITORING with Steve A. Blackwell

The August 23 meeting starts at 2 p.m. in Dorrance Hall at Desert Botanical Garden. Come early to socialize and to bid on plants.



Steve and a search dog.

Steve will be presenting information on his work with rare and endangered cactus species during his 17 years as the conservation collections manager at Desert Botanical Garden. He will touch on some of the seed germination studies, propagation, plant salvage, species reintroductions, and the newly created tissue culture lab for growing rare species in vitro. He will also be presenting his recent work with three rare *Pediocactus* species using ecological scent detection dogs for detection and monitoring populations.

Steve is responsible for collecting, propagating and curating Desert Botanical Garden's living collection of rare, threatened and endangered plant species. He manages the Garden's seed bank, and is tasked with both research and preservation of seeds from thousands of rare and common plants. His interests lie in rare plant conservation through salvage, reintroduction, propagation, and other techniques such as tissue culture. He works not only on cactus, but orchids too, and is exploring innovative approaches to raise public awareness about plant conservation.

THE PRESIDENT'S PRICKLE By Stephanie Halcrow

Greetings fellow cactus and succulent lovers. Sue Hakala has put together another sharp *Central Spine*. You won't want to miss her article on how to get a drink from a cactus, as well as an informative expose by Kathleen McCoy on the little-known world of orchid cactus. If you are dreaming of cooler weather, check out Tom Gatz's article on providing shade for cacti and succulents in the early fall.

You may have received a recent email with the minutes from the May Board meeting. Your Board is committed to transparency; providing copies of the minutes from the Board is part of this effort. You will continue to see improvements in the process, but we wanted to share the information as we iron out the distribution details. With all that said, you are always welcome to join our Board Meetings which are held prior to the CACSS monthly meetings. Specific times and locations can be found on the CACSS website under events.

Fall and winter are lining up to be exciting. Look for details on upcoming monthly meetings, the MEGA Auction, the fall hike to Boyce Thompson Arboretum, and a holiday party. Planning for all of these events is underway.

Stay prickly!



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.



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

BLOOMING BOOJUM By Lee Brownson

Did you read Tom Gatz's excellent boojum tree article in last month's *Central Spine*? If you want to grow one of these iconic trees, Tom provides the blueprint to follow. When you do, you will become a successful boojum grower.

Many, if not most, growers have been told that the *Fouquieria columnaris* (boojum) plant is very hard to grow. My experience is just the opposite. I have found that they aren't any more difficult to grow than most other succulent plants. The key is the time of year they actively grow. As Tom said in his article, they grow during the winter months and are dormant in the summer. They are easy to overwater when they lose their leaves in the spring and look like they are on death's doorstep. You must resist the temptation to water any but the smallest boojums. Generally, it is best to wait until you see new leaves on the branches.

The plant in the pictures is about 20 years old and is ten feet tall. It grew about eight or nine inches last year. A couple of weeks ago, I discovered it had flowered for the first time. I was amazed because boojums usually bloom in the fall.



Left, my 10 foot boojum tree and right, with a few flowers.

WINTERIZE YOUR GARDEN From Desert Botanical Garden website

Although winters are generally mild in the desert, here are some garden tips to keep your plants healthy as the weather cools. Keep your plants warm. Now is the time to begin planning for frost events. Purchase or stage your frost protection so that if and when an event occurs, you are prepared. Use a fabric such as N-Sulate (medium weight, permeable, UV-treated cloth), burlap or old sheets; never use plastic as it causes plants to burn where they come into contact with it. Frost cloth such as N-Sulate can be found at various garden centers. If used correctly, it adds several degrees of warmth underneath. Drape material so it touches the ground around the edge of the plant in order to trap warm air and any heat radiating from the soil. N-Sulate frost cloth does have about a 30% shade factor, so although it can be left on for several days in a row, do not leave it on the plants the entire winter or for long periods of time.

Protect your Desert Rose (*Adenium* sp.) from frost this season. Move your Desert Rose to a protected area, such as a covered patio, to protect it from frost and winter rains. In case of a severe frost, bring the plant indoors for a short period of time. Check out our [Desert Gardening Guide](#) on *Adenium* for more information.

Cut back on watering as it cools. Continue to cut back on watering. Water container plants twice per month or even less for cacti and succulents. Succulents generally do not enjoy being cold and wet. By the end of the month, your irrigation system should be shut down for the winter. The ground is cold, stays moist longer and plants won't be growing, so they need the rest. This will also harden off the plants for any frost that occurs. If the month produces no rain, consider an overall watering at the end of the month.

You can continue to plant most of your desert plants with the exception of frost-sensitive plants. Now is a good time to plant vegetables like beets, broccoli, brussel sprouts, cabbage, chard, lettuce, spinach, and green onions.

Prune thoughtfully. Most trees are dormant by the end of November. Deciduous trees, those that lose their leaves, can be pruned now as it is easy to see flaws that need correcting, such as crossed branches. Prune also for health and safety. Avoid lion-tailing, which is excessive interior thinning. This forces the growth of branches outward, straining and weakening them. Avoid pruning Palo Verde trees (*Parkinsonia* sp.) in the winter. More vigorous trees, such as mesquites, should receive a light pruning now. And always remember the golden rule of pruning, never remove more than 25% of the canopy in a season!

AWARD-WINNING PLANT: *Adenium arabicum* 'Black Skin'

AWARD: Best Adenium of the 2026 Show

GROWER: David Marmion



PLANT NAME: *Adenium arabicum* 'Black Skin'

PURCHASED: This *Adenium* was given to me as a gift five years ago.

POT: The plant is currently growing in a 13 inch wide x 5 inch deep ceramic pot purchased from SummerWinds Nursery. It's been in this container for approximately three years and has now outgrown the available space, making repotting the next step.

FERTILIZER: I use Osmocote Smart-Release 20-20-20 as my primary fertilizer. During the active growing season, I supplement with a weekly diluted kelp-based fertilizer that is low in nitrogen and higher in phosphorus and potassium to encourage vigorous flowering while maintaining compact growth.

POTTING MEDIUM: I use a custom, fast-draining mix consisting of FoxFarm Ocean Forest potting soil, coco coir chunks, lava rock, and 3/8-inch pumice. The finished mix is approximately 65% inorganic, providing excellent drainage and aeration while retaining enough moisture for healthy root development. For growers looking for a ready-made option, Tank's Green Stuff Cactus & Succulent Mix is an excellent alternative.

SUN EXPOSURE: The plant receives full sun under 30% shade cloth throughout the growing season in Phoenix. Shade cloth is removed in the fall and replaced in the summer.

WATERING: *Adeniums* naturally become dormant during winter and typically drop their leaves. I withhold all water during dormancy and do not resume watering until new growth appears and nighttime temperatures consistently remain above 50°F. During the

peak of summer, I water nearly every day due to the extreme heat and the fast-draining soil mix. As temperatures cool in the fall, watering is gradually reduced. Once nighttime temperatures again approach 50°F, I stop watering completely for the winter dormancy period.

FROST PROTECTION: During the winter months, the plant is kept completely dry and protected from both rain and frost.

OTHER NEEDS/COMMENTS: This specimen has been grown with an emphasis on developing a wide, symmetrical caudex and balanced branch structure rather than maximizing height. Regular observation, patience, consistency in watering and fertilization, and adequate sunlight have been the keys to its development. This plant has never been trimmed or pruned.

MARICOPA COUNTY MASTER GARDENERS NEED HELP By Editor Sue Hakala

The volunteer Maricopa County Master Gardeners (MGs) need expert cactus and succulent advice when answering questions from the public about plant care. They maintain a hotline that the public can call to have gardening questions answered. They have lots of resources available to help them, but sometimes they need expert help.

They contacted me to see if there were any experts in the CACSS that would be willing to help when the MGs get stuck on a cactus and succulent question. I offered my own help and said I'd ask for others to help also. It won't take a lot of your time. Let me know if you are interested, and I'll pass your name and contact information along.

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GETTING A DRINK FROM A CACTUS By Sue Hakala

A great fable of desert survival is that barrel cactus and other cacti are water reservoirs. Most of us couldn't get water from a cactus if our lives depended upon it. Some have died trying.

The first problem is cutting a plant open. A pocketknife wouldn't work; a tire iron may be effective on a barrel cactus. The labor of cutting into a plant with formidable spines on a hot day would cause great water loss from sweating, not to mention probable bleeding.

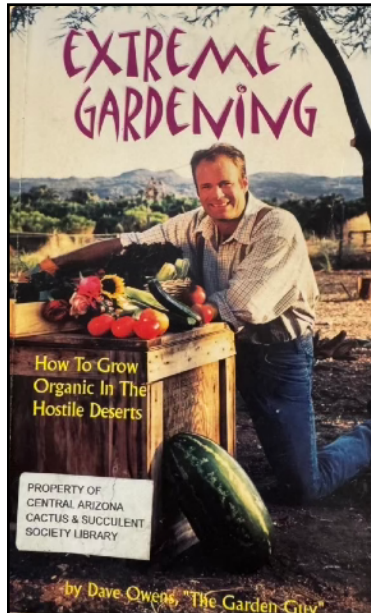
Secondly, have you ever tasted cactus pulp? Cactus tissue is made to hold water. It's not something you could scoop or wring water out of. When propagating cactus plants, I used to run my tongue across the flesh (of the part I was throwing away) to taste it. It can taste very bitter, although I have never sampled a barrel cactus. One time, the bitter taste had me running to the house for something to get the awful taste out that was puckering up my mouth. Some cactus flesh has toxic levels of oxalic acid and alkaloids, and may be what I was experiencing. These elements in small quantities can cause vomiting and diarrhea--not a big help when suffering from dehydration.

Besides, state laws protecting Arizona native cacti make it illegal to take or destroy them. Cutting open a barrel cactus would most likely kill it. Cacti have spines and glochids (tiny, awful, itchy spines) designed to discourage desert animals from doing the very same thing. Contrary to what you may have seen in some old western movies, you really can't scoop out water from a cactus.



Left, the inside of a golden barrel cactus (*Echinocactus grusonii*) and right, *Mammillaria lauii* subsp. *subducta* to give you an idea of what the flesh looks like.

EXTREME GARDENING: HOW TO GROW ORGANIC IN THE HOSTILE DESERTS By Dave Owens Reviewed by Sylvia Lee



Although the author states that you, yourself, can create a beautiful and or bountiful garden, the author makes no false promises. One of his first sentences in his Introduction is, “No, you won’t be able to plant a tree from the rain forest and attract a toucan.” But, on page 7, he goes on to say that as a landscaper, “I landscape and garden thousands of homes every year. If there’s one thing I’ve learned, it’s that you don’t need to pay a guy like me to get a bountiful garden. You can do it. It’s easy. I’ll show you how.”

Turn to page 8, and the author tells you, “The only thing you need is a desire to feel better. I remember when I was 24 years old and in New Mexico working with an old man who had a garden at his small rural home. He taught me that the soil, the plants and the wildlife each have something to contribute to the others. By tending his beautiful place, he provided a sanctuary for himself, his family and for nature.”

Are you getting interested now?

Items from the Table of Contents will give you an idea of the completeness of this book. One chapter is “Watering,” in which the author gives good advice on the way in which watering properly can provide all the water garden plants need while conserving water. This is necessary advice in the desert. There is “Southwest Desert Soils” which advises about food needed by plants. “Compost” also helps with the feeding of plants.

A very long chapter called “Companion Planting” begins with the sentence, “Ever had a roommate you didn’t like?” The author explains how this pertains to plants. The chapter is intended to help you plan the layout of a garden with emphasis on which plants want to be near which particular plants, and not ever near which other plants.

The author treats each vegetable, fruit and nut separately. Besides food, he writes about roses, sunflowers, herbs and lawns. Section III of the book is 32 pages long and is all about organic control of insect pests and animal pests.

These are only some of the chapters. Read the book to get full information on how to garden in a hostile desert.

By the way, it is actually a relatively small book; it is 8¼ inches x 5¼ inches with 243 pages of information.

ORCHID CACTUS: AN OXYMORON? By Kathleen M. McCoy



Orchid cactus by Fairchild Tropical Botanic Garden.

Orchid cactus? It sounds a bit like an oxymoron. Can you picture delicate orchids lounging lazily on a spiny cactus? Popular names usually have some basis in reality, but to be sure let's investigate the *Epiphyllum guatemalense monstroense* (*EGM*)*, more commonly known as orchid cactus or Curly Sue. Our curiously named succulent belongs to the family *Cactaceae* in the genus *Epiphyllum*. Firmly ensconced with over a dozen species usually referenced as orchid or climbing cacti, many are hybrids or cultivars. So it is not surprising that they represent a range of shapes and sizes. Most have long, flat, spineless trailing stems, which are smooth and tasseled. This adds movement and a touch of elegance, seeming much like jellyfish tentacles floating in the sea.

The *EGM* has diverged from the family norm. The *EGM* is a mutant! By a quirk of nature, the DNA of the *Epiphyllum guatemalense* found a developmental route not commonly taken. Like many of its relatives, the *EGM*

finds a nearby tree with at least one crook that has accumulated a veritable motherlode of composting debris.

Not a parasite, this jungle cactus takes advantage of readily available real estate found in forks of trees. Physical support and nutrients from the composting leaves nestled in the sturdy bends and twists of branches add to create a successful habitat. Tree height, the higher the better, also provides the added advantage of lifting the plant from the jungle floor allowing greater access to dappled sunlight and surrounding air.

Not averse to ground level living, the slow growing *EGM* can stretch to two to three feet high and wide in soil that holds moisture but drains quickly. Unlike many of its desert cousins, the plant will not tolerate dry soil. A little extra humidity can put additional twists in its lovely green stems that rival a poodle's fur in a drizzle.

Renowned as a hanging plant, the *EGM* reputation is well founded. Apart from most of its relatives with long flat stems, the stems of this tropical cactus spiral and curl trailing up to several feet. Along with aesthetic appeal, these wavy wonders provide the plant with moisture and light.

Like most night blooming cactus, white flowers make a showing only during one night and early morning never to be seen again. Visits by insects are welcomed, but these

self-pollinators can ensure descendants independently. Once pollinated, fragrant orchid-like blooms mature into tiny bubble-gum-pink fruit providing a splash of color against a densely green jungle. Little oval sapphire seeds mature into shapes reminiscent of miniature dragon fruit. Though not a cash crop, fruits are reported by some to be juicy and edible, by others as toxic to humans. Patience is required to test gastronomic value because the plants will only blossom when rootbound. No medicinal value has yet to be found.

Although a trip to the Guatemalan jungles might prove interesting, given the right conditions, the *EGM* is quite comfortable sharing space in your lodging. Prized for unique stem shape, the *EGM* has moved seamlessly from its jungle perch to the domesticated domiciles of many cactus aficionados. Comparatively simple to maintain, this unique eye catcher can live in most households with relative ease; it even has a favorite room which shares many of the same characteristics of its original native habitat.

Avoiding full sun and dry air, the orchid cactus enjoys warm, humid and often indirect light found in most bathrooms. Imagine nice relaxing moments, like you emerged in a lavender scented bath, and the *EGM* soaking up the flower-scented steam.

If you are interested in spending quality time exploring additional information together with your exotic orchid cactus, the following two sites are recommended. For additional information about growing *EGM* consult: <https://ucanr.edu/blog/uc-master-gardeners-diggin-it-slo/article/orchid-cactus>

For plant overview: <HTTPS://TOPTROPICALS.COM/STORE/ITEM/6683.HTMP>

**EGM*: *Epiphyllum guatemalense monstrose* is an unofficial abbreviation.

DATES TO REMEMBER

- September 1, registration and hotel reservations open for the Cactus and Succulent Society of America's biennial conference in Tucson at the Westin La Paloma Resort (\$159 per night) hosted by the Tucson Cactus and Succulent Society, May 19-24, 2027
- September 12, Propagation Education Group (PEG) 9-11 a.m. in Dorrance Hall
- November 1, CACSS Mega Auction held in Dorrance Hall
- March 31-April 2, CACSS Annual Show and Sale in Dorrance Hall

PROVIDE ADEQUATE SHADE FOR CACTUS AND SUCCULENTS IN THE EARLY FALL By Tom Gatz

Cactus and succulents that enjoyed filtered shade under our trees all summer long are often exposed to more intense sunshine when branches or trees blow down during monsoon storms. Also troublesome is in the early fall when the sun moves lower in the sky, peeking below the tree canopies in our yards, while mid-day temperatures remain high. Be prepared to provide supplemental shade if needed this time of year.



As the sun gets lower in the early fall, plants once protected by tree canopies are sometimes exposed to more intense sunshine, and shade cloth is needed until temps cool down.

Sunburn can quickly occur in just one afternoon on a scorching day, so keep some shade cloth on hand for emergencies. In a pinch, you can even provide shade using the white frost cloth sold at nurseries. Some folks invest in shade umbrellas like those sold for pool decks to protect sun-sensitive plants from the hot afternoon sun.

You can also use shade cloth to gradually acclimate nursery grown plants that can eventually take full sun. I've had good luck starting with 50% shade cloth and reducing it to 30% shade cloth after a few months (or an entire summer), and eventually removing it altogether, provided that the succulent plants do not begin to turn yellow.

A yellowing cactus or succulent can be restored to its healthy green color, but once it turns white or brown, it is permanently scarred. Purple or red is a natural response of many cacti, *Aloes*, *Agaves*, and some other succulents to strong sun or other stressors and is usually not a concern. Another option is to use multiple layers of 20 or 30% shade cloth to either increase or decrease the amount of shade desired.

Unfortunately, much of the shade cloth sold at garden centers provides 70% shade or more. This is way too much for many desert plants, and they may never acclimate to full sun with this much shade. You can usually find shade cloth of varying densities by shopping around on line or locally from Arizona Bag Company (602-272-1333, 2530 W. Buckeye Rd., Phoenix).

If you just can't stand the look of shade cloth cloaking your plants like a shroud, try cutting a few boughs from a mesquite tree and draping them over the plant needing protection. As the leaves dry, shrink and eventually drop off, the plant will gradually get more sun and, hopefully, acclimate. If it looks okay, remove the branch. If it begins to yellow again, add some fresh branches. Most sun-sensitive succulents can be safely uncovered by early November.

Editor's Note:

My neighbor's tree, which shaded about 1/3 of my yard, came down in a recent wind storm. I needed more shade cloth ASAP. SummerWinds Nursery has several kinds, and they give a 15% discount to seniors on everything every Wednesday. Check them out.

SUMMER HEAT AND WATERING

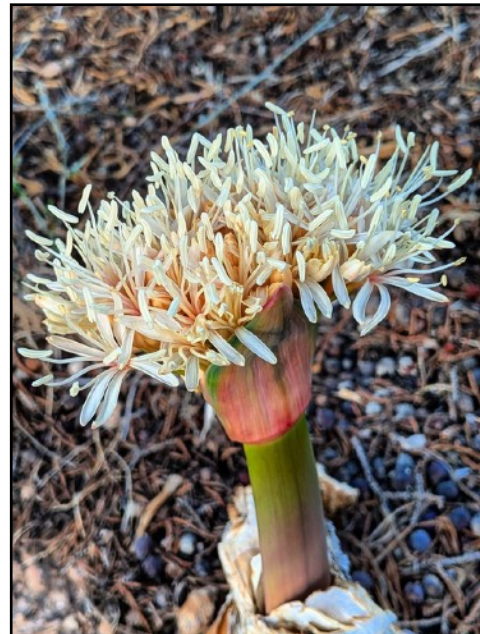
Not sure when to water what this summer? Go to the club website centralarizonacactus.org. Click on the Newsletter tab at the top. Scroll down to the Miscellaneous Index and click on it. Then page down to the Summer Heat Plant Care and Watering headings. Below is just a small sample of what's there to help you and your plants. Just click on the weblink below, the underlined part, to go directly to the newsletter for that article.

- [Summer Heat](#) by Scott McMahon, 8/23, page 11
- [Summer Heat and Watering](#) by Sue Hakala, 6/24, page 12
- [Summer Survivors](#) by Sue Hakala, 11/24, pages 9-10
- [Summer Watering and Heat](#) by Sue Hakala, 7/17, page 6
- [Summer Watering](#) found within Leo Martin's From Your President column, 7/01, page 7
- [Summer Watering](#) found within Leo Martin's From Your President column, 8/01, page 1
- [Summer Watering by Species](#) found within Leo Martin's From Your President column, 6/02, page 1
- [Surge Watering](#) by Tom Gatz, 2/11, page 3

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BOOPHONE HAEMANTHOIDES By Jan Emming

My *Boophone haemanthoides* is blooming for the second time ever this week. Below left, is when I first noticed the flower spathe emerging out of the large bulb. You can follow the development until it flowered on July 22, 2026.



This South African relative of the amaryllis family normally blooms during the dry summer months while leafless. Then, it will set seeds and distribute them in time for

when the autumnal rains begin, which is when the leaves start to emerge. The leaves do the photosynthesis during the winter rainy season in western South Africa, and subsist through occasionally freezing nights, storing energy for the summer flower later that year. They go dormant in the middle to late spring. I believe that the heavy rain they got may have helped initiate the flowering process, although I cannot be fully sure of that. It does seem like a possible factor.

I planted this bulb back in 2015. It took eight years to flower, starting in July 2023. Now it is repeating that three years later, and I'm happy about it.

These bulbs live a long time, possibly as much as a century. I have about six or seven of them. To date, this is the only one that has flowered. This species is good for Arizona conditions because, aside from the flowering process, it avoids the summer heat by being quietly dormant, mostly underground, although the thick neck of the large bulb does protrude above ground in nature. It has proven to be surprisingly frost resistant during the winter months, tolerating temperatures, multiple nights per year, as low as 23°F without damage. I hope to get domestic seed production one of these years, if some of my other individuals finally flower at the same time as this one.



A mature plant by Jan Telos.

CACSS OFFICERS, BOARD MEMBERS AND COMMITTEE LEADERS 2026

Officers: President **Stephanie Halcrow** | Vice-president **Javier Gurrola** | Secretary **Nelson Gray** | Treasurer **Tammie Jansen**

Members-at Large

- Serving through December 2026: **Stephanie Halcrow** | **Elaine Hu** | **Ruthanne LaQua** | **Kathi Metzger** | **Mary Miller**
- Serving through December 2027: **Pat Adler** | **Dan Bernstein** | **Mary Dokes** | **Mark Kramoltz** | **JR Trevas**

CACSS PROGRAM AND COMMITTEE CHAIRS 2026

- Annual Show and Sale Committee: **Pat Adler, Joan McDonnell, Kathi Metzger, Ruthanne LaQua**
- Archivist/Historian: **Lois Schneberger**
- Auction Chair: **Javier Gurrola, Ann Winchell**
- CSSA Affiliate Representative: **Stephanie Halcrow**
- Donations Coordinator: **Chris Ginkel**
- Education Committee: **Stephanie Halcrow**
- Facebook Administrators: **Tom Briggs, Celeste Gornick, Ken Luiten, Bj Seemuth, Thom Young**
- Facebook Swap and Shop Page: **Tom Briggs, Bj Seemuth**
- Google Workspace Co-administrators: **Emily Adler, Janet Catlett**
- Graphic Designer: open
- Holiday Party: **Lisa Moore**
- Keeping in Touch with Members: **Jo Davis**
- Librarians: **Diana Rogers, Sylvia Lee**
- Membership Chair: **Pat Adler**
- Newsletter Editor: **Sue Hakala**
- Private Plant Sales at Meetings: **Chris Ginkel**
- Propagation Education Group (PEG): **Tristan Davis**
- Pumice Sales: **Rich Caravello, Bob Hopfner**
- Recognition Committee: open
- Speaker Coordinator: **Lisa Moore**
- Tech and Communications: 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.



Michael Baczynski's dog enjoys a sniff.