

Central Spine



July 2013
**Newsletter of the Central Arizona
Cactus & Succulent Society**

An Affiliate of the Cactus & Succulent Society of America **On the Web at www.centralarizonacactus.org**

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July Meeting: Sunday, July 28
2 p.m. Dorrance Hall
Desert Botanical Garden
CACSS 40th Anniversary
Celebration

Scott McMahon's Photos-Plant Name Corrections
2013 Cactus and Succulent Society of America
(CSSA) Convention by Beth Kirkpatrick
CACSS 40th Anniversary: A Memorable Trip
by Lin Leivian
Coir (Coconut Husk Fiber): A Universal Potting
Medium? by Mark Dimmitt



At the April meeting, Nancy Mumpton cuts one of the birthday cakes honoring the CACSS 40th Anniversary.
Photo by John Crumney

August Central Spine Deadline: August 14, 2013

2013 CACSS Officers

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CACSS Program and Committee Leaders

Archivist/Historian	Lois Schneberger
CSSA Affiliate Representative	Sue Hakala
Facebook Coordinator	Nick Diomede
Finances-Accounting	Tom Rankin, Ingrid Swenson
Holiday Party - December 2013	Wendy Barrett
Library	Paul Schueneman, Marty Shahan
Membership	Beth Kirkpatrick
Members-Keeping-In-Touch	Jo Davis
Mailed Newsletter Subscriptions	Sue Tyrrel
Newsletter	Diana Decker
Nominations for Board Officers, Directors	--
	Mike Gallagher, Dan Smith, Jackie Vasquez
October Silent Auction	Jo Davis
Plant Rescues	<i>Open Position</i>
Private Plant Sales at General Meetings-	Sue Tyrrel
Programs (Speakers, Workshops, Open Gardens,	
Special Interest Groups)	Gard Roper, Doug Dawson
Refreshments	Cindy Capek
Show & Sale – 2013	Sue Tyrrel
Show & Sale – 2014	<i>Open Position</i>
Website	Beth Kirkpatrick, Leo Martin

Telephone numbers, emails, and addresses can be found in the CACSS Member List emailed periodically to members by Beth Kirkpatrick.

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2013 Meeting Schedule

August Meeting: Sunday, August 25

2 p.m. Dorrance Hall

Presenter: Greg Starr

Greg Starr's Top Five Agaves

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PRESIDENT'S LETTER

July 2013

Wayne Whipple

As I write this letter on July 15, 2013, I am waiting for the first summer monsoon to arrive - but not for the dreaded haboobs. We always need rain here in the Valley but find no benefit in the red dust that can engulf us. As always, the heat can make us miserable, and I think our plants do not like it either, especially when it does not cool down at night.

Every month, it seems, one of our member's gardens is featured in *Phoenix Home and Garden* magazine. The August issue features the garden of Joe Miracle and Kent DeYoung at their former home in Mesa. Many of us enjoyed visiting this magnificent garden last March, and all of us were sorry to see them move to Santa Fe where I am sure they will be happy. Our silent auction last month was a great success reflecting the large donation of plants by Joe and Kent.

As we learned at our last General Meeting, our Board has agreed to host the 2017 convention of the Cactus and Succulent Society of America. The last time we hosted this convention was in 2005. I know the date sounds like a long ways off, but planning for such an event takes much time, and we need to start now. Steve Martinez spearheaded the effort to have the convention hosted by the CACSS, and Beth Kirkpatrick has volunteered to be the convention Chair.

A couple of important dates should be on your calendar for CACSS events. As always, we are looking forward to the annual October auction. There is no better way for a collector to enlarge and enhance a collection of cacti and succulents than by winning the bids on great plants donated by our members. This event's success depends not only on the bidding for plants, but also on the donation of high-quality plants. Jo Davis is this year's Chair, and I am sure she will get all the help she needs from members. The date is October 20th, and there will not be any other meetings in October.

The annual Holiday Party has been set for Sunday, December 8th, and will be held at the Mountain View County Center, the same place that it has been held for the past three years. This is always a fun affair, and I am sure it will be this year as well. Wendy Barrett is the Chair of the event, and, as in the past, Dana Hiser has booked the facility for us.

We are still in need of a General Chair for the Show & Sale, which has been scheduled for the first weekend in April 2014. But we won't be able to have it unless a member or members agree to organize it. Think about it, and let me know if you would like to help with the organization of this long-time great event.

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**Please bring boxes
with you to the meetings
so you can carry your new
plants home more easily.
Jo Davis**

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Please Wear Your Name Tag at Monthly Meetings

Board Member Jo Davis asks members to wear their name tags at monthly meetings and other club events. Members then can more easily spot guests and talk with them about the guest's interests and CACSS. If you need a lanyard to hang the name tag around your neck, see Jo at the meetings.

Raffle Winners for the 40th Anniversary of CACSS at the June General meeting, June 30, 2013

Member's name

Corrine Smith

Doug Dawson

David Johnson

Guest

Name of plant chosen

Mammillaria

Trichocereus hybrid

Agave 'Sharkskin' hybrid *Victoria Regina*

X Scabra

Trichocereus hybrid

PLAN AHEAD:

*Central Arizona Cactus and
Succulent Society
2013 Annual Holiday
Luncheon
Sunday afternoon,
December 8, 2013*

*CACSS
Annual October Auction
Sunday
October 20, 2013*

**Contact the *Central Spine*
Editor**
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for article and photo submissions for
the *Central Spine*.

**When you send emails with photos
of members to the Central Spine
editor, please include the members'
first and last names.**

Welcome To New Members

**Cheryl Dickson
Pat Pierard**

Membership Chair: Beth Kirkpatrick

**Plant Name Corrections on Two Photos by Scott McMahon of Recent Bloomers from the Desert Botanical Garden collection
(Plant names were switched.)**



Echinocereus websterianus



Mammillaria baumii

2013 Cactus and Succulent Society of America (CSSA) Convention

Article and photos by Beth Kirkpatrick

I flew to the CSSA Biennial Convention in Austin, Texas, on June 15 and was greeted at the airport by Nellann Roberts, my friend and a CACSS member, who drove from Dallas, her hometown. The Sheraton Hotel at the Capitol served as a perfect venue for the convention.

The lineup of speakers was impressive and diverse. I particularly enjoyed Bob Barth's two enlightening talks on succulent plants of South Africa. I learned about Welwitschias, which are large-leaved, low-growing plants sometimes called living fossils, from Ernst van Jaarsveld. Giuseppe Orlando spoke very enthusiastically on the succulents of Yemen and Somalia, and was of great interest to me. James Mauseth, our keynote speaker, gave a rousing presentation on the Biology of Cacti interspersed with lots of humor. There were many more interesting speakers, too many to mention, but all very good.

It was fun to sit with people we didn't know at the closing banquet and learn a bit about their interests. Of particular interest was a young woman from the Ukraine who shared with us some of her adventures working in her cactus nursery. Everyone is always so friendly at these conventions and we were able to meet, socialize and learn from interesting folks from around the world.

The vendor area had many interesting cacti and succulents so I had to add to my collection. Fortunately, Steve Martinez agreed to drive my plants home. A silent auction and a live auction provided even more opportunity to collect. I won a very nice *Sansevieria 'Las Anod'* Lav.24977 at the live auction and a *Sansevieria masoniana*-variegated at the silent auction.

Tuesday was a day of wonderful CSSA sponsored field trips. Because we had a car, we set off on our own, joined by Steve Martinez. First we went to the Lady Bird Johnson Wildflower Center and then Johnson City, about an hour west of Austin, to visit the childhood home of Lyndon B. Johnson and learn more about him. The highlight of the trip for us was a visit to Bob Barth's home in the hills overlooking Austin. He graciously invited convention members to visit his place on Friday. WOW! What collections! He has five absolutely pristine greenhouses filled with an incredible assortment of plants as well as beautiful grounds with large and interesting specimens. It was like being in a wonderland of lovely plants.

We were also able to say hello to some other CACSS members, Jeanne and Chuck Brush and Steve Plath, at the convention. We had a great time and are looking forward to the conventions in Claremont, California in 2015 and in Phoenix in 2017.



Sansevieria Las Anod



Steve Martinez and Nellann Roberts at the Lady Bird Johnson Wildlife Center



Sansevieria masoniana variegated



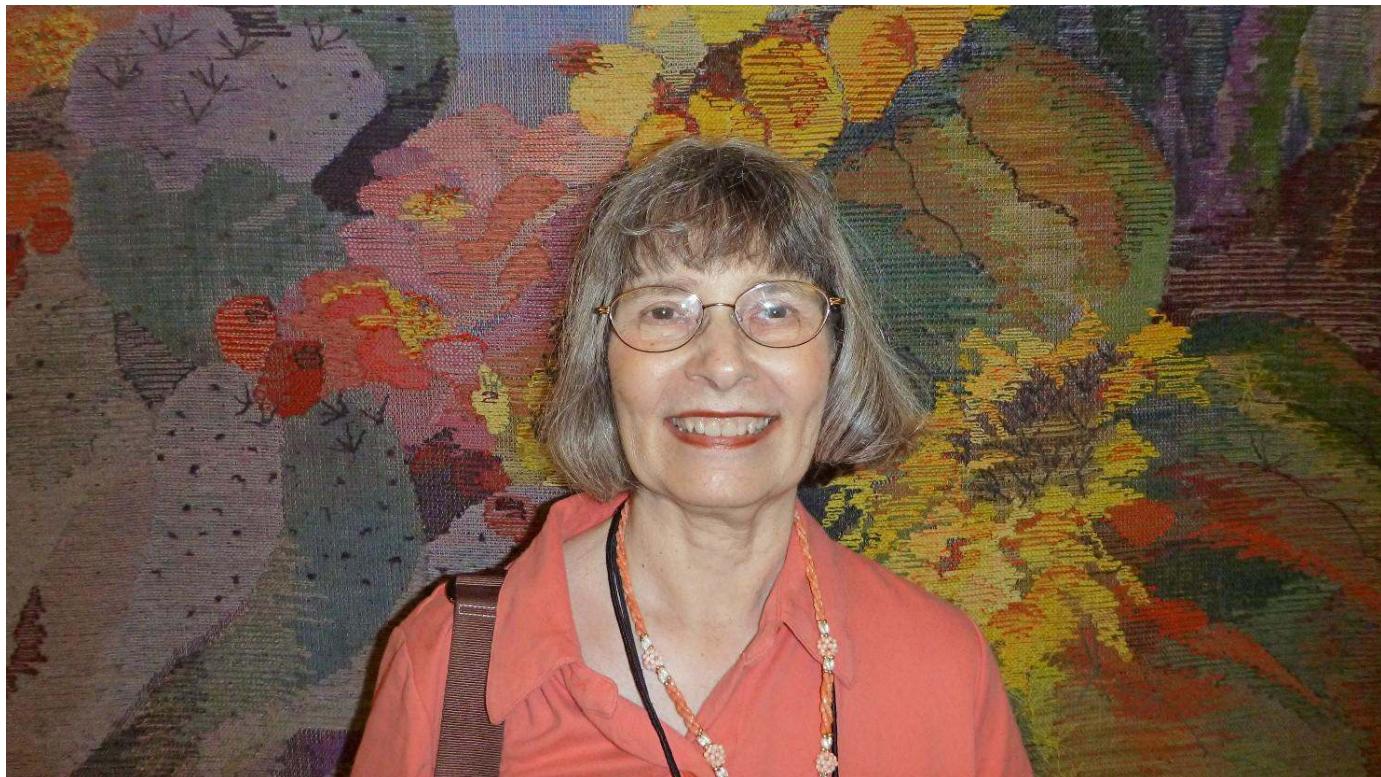
Giuseppe Orlando (left) and Bob Barth stand in one of Bob's greenhouses.



Central Arizona Cactus and Succulent Society's 40th Anniversary

A Memorable Trip

by Lin Leivian



Lin Levian Photo by Wendy Barrett

In 1998, I had been a member of our society for approximately 4 ½ years and had attended several national conferences. When the club decided to go on a trip to Northern California, I was really excited. Prior to 9/11, getting through airports was a snap, so we all flew there and then boarded a waiting bus to take us to the convention. At that time Electra and Jim Elliott were planning our trips and they had some marvelous contacts. Among them was Rudolf Schulz, famous for his series on euphorbias and as a publisher of many books on succulents. To get to Rudolf's beautiful estate, the bus had to go up the very winding Coast highway. I became really sick and dreaded each turn we made. I couldn't even enjoy the dudleyas that Electra pointed out on the cliffs. Luckily Elaine Chapman, who was traveling with her grandson, had packed Dramamine. Seeing my distress, she shared them with me. She certainly saved my day, as the visit to Rudolph Schulz's home was delightful. He sold books to us and autographed them as well.

How did we get our plants home? Most of us were prepared to plant our purchases by bare root; with the lack of security, we didn't have to explain strange objects in our carry-ons!



Coir (Coconut Husk Fiber): A Universal Potting Medium?

Article and photos by Mark Dimmitt

(Reprinted with permission from the June 2013 issue of *Desert Breeze*,
the Tucson Cactus and Succulent Society newsletter.)

What is coir?

Coir (pronounced "koyer") is the fiber from the husk of the coconut, the part between the hard inner shell and the outer coat. It has long been used to make doormats, mattress and upholstery stuffing, rope, and fishing nets. But mainly it is a waste product of the coconut industry; mountains of the stuff have accumulated in tropical countries where coconut palms abound.

Coir has been used in the USA as a potting medium for a variety of plants for at least two decades, especially in Florida. Until recently its availability has been undependable and the quality highly variable. These problems have been solved, but few horticulturists are aware of recent developments.

Dispelling coir's bad rap

1. *Coir is soggy muck that drowns plants.* Until a few years ago the main coir product sold in the USA was "cocopeat", a fine dust that looks much like horticultural peat moss (Figure 1). This product holds even more water than peat, and because of its fine texture, it remains saturated for days after irrigation. I have tried it, and even when mixed 1:3 cocopeat:pumice or perlite, it killed nearly every plant that requires good drainage. This stuff is indeed deadly. The product discussed in this article consists of fiber and small chips, with almost no dust (Figure 2). Even when it's saturated, it contains abundant air pockets and therefore roots will not suffocate.



Figure 1: This compressed bale of cocopeat has been out in the Tucson weather for at least five years, and is still largely intact. After days of soaking water has penetrated only a few inches into it, and then it must be broken up by hand. Miserable work! Once wet, it stays saturated for many days. This product is deadly even when mixed with up to three-quarters pumice or perlite.



Figure 2. Close-up view of crushed coir (Riococo's S2 grade), consisting of fiber and small chips. The photo was taken minutes after the sample was saturated. Notice the abundant air spaces among the bits of very wet coir.

2. *Coir is dangerously salty.* Coir used to be washed in seawater, and was therefore quite toxic to most plants. It had to be thoroughly leached before use, especially the larger chunks used for growing orchids. Modern coir processed for horticultural use has been fresh water washed, and is very low in salt. Tucson tapwater is five times more salty than today's coir.

3. *Coir comes in hard bales that must be laboriously broken up by hand.* Cocopeat was usually sold in compressed bales. The bales were very difficult to moisten, and even after soaking for several days they had to be physically broken up. This was difficult and time-consuming. The newer fiber and chip products often come in compressed blocks of one-half cubic foot (Figure 3).

When a block is submerged in water, it saturates and falls apart in a few minutes, expanding to two cubic feet (15 gallons, Figure 4). It's very easy to use.



Figure 3. Coir is commonly sold as blocks of about a half cubic foot.



Figure 4. When the block in Figure 3 is submerged in water, in about 15 minutes it expands into two cubic feet (15 gallons) of loose product. When packed into pots, it compresses to about 10 gallons in volume.

My experience with coir

Potting medium is a common topic of discussion whenever and wherever horticulturists gather. A huge variety of ingredients have been used, with varying degrees of success. I've been growing plants since the 1960s, and have spent most of that time experimenting in the hope of finding the ideal medium for my growing conditions and the plants I like. For the past 15 to 20 years most of my media have used peat moss as the primary organic component, amended with different proportions of pumice or perlite for aeration and drainage. (The product is Sunshine Mix, which is about 90% peat with some perlite and pH buffers.) I had good success with these ingredients, but I was never completely satisfied. One of my two main complaints is that the peat retained moisture too long during cool weather, encouraging root rot of sensitive plants. The other complaint is that peat breaks down in a couple of years in our hot climate, so plants needed to be repotted regularly even if they had not filled the pot.

Now I have found a product that thrills me. I discovered good coir in 2008, when I visited Tropica Nursery near Mumbai, India (with Kevin Barber). The nursery covers many acres and produces a wide range of plants, including tropical foliage and flowering plants, succulents, food plants, and orchids. All of them are grown in 100% coir. Owner Dr. Ashish Hansoti has been a pioneer in developing coir as a growing medium. One of his contributions is his research to determine the nutritional needs of plants grown in coir.

I began experimenting with coir when I returned home the same year. After one growing season I was so pleased with the results that I began repotting almost my entire plant collection into coir-based mixes. After four years' experience with it, I have concluded that coir is by far the best all-around organic potting medium that I have ever encountered. Succulents that have performed superbly in media consisting of from 30% to 100% coir include: *Adenium*, *Pachypodium*, *Plumeria*, *Aloe*, *Agave*, *Sansevieria*, *Trichocereus*, *Mammillaria*, *Stapeliads*, *Caralluma*, *Bursera*, *Boswellia*, *Fouquieria*, *Haworthia*, terrestrial and epiphytic bromeliads, terrestrial orchids, and some *Euphorbia* (I have only a few). Nonsucculents have done excellently too, such as citrus, figs, peaches, blackberries, melons, tomatoes, corn, *Asclepias*, *Hibiscus*, and many bulbs including *Gladiolus*, *Lachenalia*, *Scadoxus*, *Hippeastrum*, and *Boophone*.

I have been using 2/3 to pure coir for tropicals, including tropical succulents such as adeniums. For more xerophytic species I use 25-30% coir, with the rest being perlite and/or pumice. The only plants that have not done well are some extreme xerophytes such as Mohave Desert cacti, Ariocarpus, many mesembs, and Caralluma socotrana. But I have never had much success with these plants in any medium.

Horticultural properties and availability of coir

I have found coir to have numerous advantages over all other organic components of potting media that I have ever used, and few drawbacks. The main ones are summarized in Table 1. The number one best trait is that it has both high water-holding capacity and simultaneously retains plenty of air. This means that it's nearly impossible to overwater most plants during their growing season – you simply cannot suffocate the roots. It is highly resistant to oxidation and microbial breakdown; it lasts at least four years with tropical plants when it's kept continuously moist, and longer for more xerophytic ones. Unlike peat, it does not shrink when dry, and is easy to rewet when it's time to awaken a plant from dormancy. Since I eliminated peat-based media, I have had almost no problem with fungus gnats, although others have reported that these flies can live in coir. In my four years of experience with coir, loss from root rot has fallen to a small fraction of that with peat media. In fact, I have had almost no root rot of most plants including adeniums, cacti (except extreme xerophytes), aloes, and agaves. Research indicates that coir suppresses the growth of several pathogenic fungi.

Coir lasts two to four times longer than most other organic potting components. In our hot desert climate peat will break down into muck or oxidize to nothing in only a year or two. I have had adeniums in the same pot for four years so far, and the coir is still largely unchanged after all this time of being watered three times a week during the hot season.

Another result I and some others have noticed is that one can grow larger plants in smaller pots. The apparent reason is in the root distribution within the media. With peat-based and other tight media, the roots are concentrated around the inner surface of the pot, especially of clay pots. In coir the roots are abundant throughout the volume of the medium; this is most likely a result of the superior aeration provided by coir (Figure 5).



Figure 5. *Adenium 'Arabian Ruby'* root ball unpotted after four years in a 10-inch pot of pure coir.
The fibers and chips are still largely intact. The plant is four feet tall.

The disadvantages I've encountered so far are minimal. Small pots (up to about 7 inches) need more frequent watering than in peat-based media. This has not held true for larger pots. Coir is so loose that it exhibits little capillary transport; therefore the center of a mass of it tends to remain moist until roots absorb the water.

Coir is also very low in nutrients. It's even more important than with other media that plants are fed regularly with a complete fertilizer containing all macro- and micronutrients. And because it's organic it has low cation exchange capacity, so cations leach rapidly. For that reason I add a small amount of vermiculite (expanded clay) to provide cation exchange. I also add dolomite limestone to provide the macronutrients calcium and magnesium (or gypsum for plants that need a neutral to acid medium). Plants that have not been repotted into new medium for more than a year get topdressed with gypsum annually. (I do this with all plants in all media; calcium depletion results in root death.)

The best news is that coir is now readily available in several grades of uniform quality, from fine granules for seeds and seedlings (this product is much better than the old cocopeat) to large chunks for orchids. Riococo (riococo.com) has eight large production plants in Asia, all with the same equipment that produces identical products that are OMRI-listed (omri.org). These products are distributed by Eco Gro in Tucson, in quantities from single blocks to containers.

My experience so far is anecdotal, although the variety and number of plants I grow is very large. I have just begun controlled experiments to precisely measure the performance of adeniums and several other succulents in coir. Dave Palzkill and hopefully others are doing the same. But I already have enough confidence in this product to wholeheartedly recommend its use for a wide variety of plants. Most will perform superbly in it (Figure 6).



Figure 6. *Adenium* 'Rainbow', a Hansoti selection, grown for two years in a 15-inch pot of 2/3 coir and 1/3 pumice-perlite. Plants grown in coir exhibit excellent vigor and color.

Table 1. Comparison of some common characteristics of coir- and peat-based media.

Trait	Peat-based media (30-50% peat)	Coir-based media (50-100% coir)
Water-holding capacity	Very high	Extremely high
Air content (drainage)	Low to moderate	High, even immediately after saturation
Drying response	shrinks	Does not shrink
Wetting after drying	Hydrophobic; very difficult to rewet	Rewets quickly
Longevity in hot climate	1-2 years	At least 4 years, probably longer
Sustainability	Mined from ancient peat bogs; overexploited	renewable
Biological activity	Fungus gnats and water molds thrive in it	Fungus gnats seldom colonize it. Coir suppresses the growth of several pathogenic fungi.
Chemical reaction	Neutral pH	Very acidic (Sunshine Mix is buffered to be slightly acid)

* Acme Sand and Gravel (Tucson) PotB potting blend, a 1:1 mix of compost and 3/8" pumice. It's used by several area nurseries.



PLANT QUESTIONS??? WHOM TO CONTACT!!!

Many CACSS members have experience with different kinds of succulent plants. I hope they will add their names to the following list. Call or e-mail Diana Decker, *Central Spine* editor. Find contact information on p. 2

For now, the list is simply alphabetical with principal interests. When more members add their information, the list will be cross-referenced by topic.

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