Doug Dawson is a retired math professor and does extensive botanical travels to areas of the world where succulents grow. These include Mexico, Chile, Argentina, Yemen, Soccotra, and Africa as well as our own state of Arizona. In recent years, he has organized eight botanical exploratory trips to South Africa and Namibia, camping on local farms and public areas by night and exploring the surrounding mountains and hills by day.

For many years, one of his key interests has been seed-growing of cacti and succulents. Other interests are photography and PowerPoint presentations with succulent content. He has delivered many workshops and speaking engagements in Arizona and other states.

To aid in his travels, he has a background in languages. These include German and French. Nowadays Afrikaans has become a much more useful language for him in rural South African areas.

Doug’s private plant collection has an emphasis on seedlings, lithops, other mesembs, Arizona natives, and other cacti. He is a member of the Cactus and Succulent Society of America, Central Arizona Cactus and Succulent Society, the Tucson Cactus and Succulent Society, and the Desert Botanical Garden.

Doug will give a PowerPoint presentation that will include many species unfamiliar to many of our members.

Nowadays many succulent enthusiasts do not have room for our signature large Arizona natives. It is important to introduce knowledge of the smaller plants which can be found in our own state. These can be grown in pots small enough to be easily moved about. Unfortunately many of these species are not readily available in nurseries. Doug has as a goal to make them available to our club members in the months and years to come.
See more of Doug’s photos on page 9 and 10.
2013 CACSS Officers

President: Wayne Whipple
480-460-3623
w7676@msn.com

Vice-President: Deborah Mulholland
480-650-5624
dm@deborahmullholland.com

Secretary: Lois Schneberger
480-946-8373
lschneberger@cox.net

Treasurer: Tom Rankin
tom@sascpa.net
602-904-2734

2013 CACSS Officers

2013 CACSS Officers

Directors-at-Large

Serving through December 2014

Wendy Barrett
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wbarrett@cox.net

Jo Davis
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Mike Gallagher
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Steve Martinez
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Dan Smith
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Lynda Michaelson
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Lynda@itsgs.com

Serving through December 2015

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Nancy Mumpton
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barnesinaz@gmail.com

Beth Kirkpatrick
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Jim Oravetz
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oravetz@cox.net

CACSS Program and Committee Leaders

Archivist/Historian Lois Schneberger
Audit Committee Mike Gallagher
CSSA Affiliate Representative Sue Hakala
Facebook Coordinator Open position
Finances, Accounting Tom Rankin, Ingrid Swenson

Holiday Party - December 2014 Open Position
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 Jim Oravetz, Joe Barnes, Jeanne Ann Brush, Chuck Brush
October Silent Auction Open Position
Plant Rescues Open Position
Private Plant Sales at General Meetings Sue Tyrrel

Programs Deborah Mulholland
(Speakers, Workshops, Open Gardens, Special Interest Groups)

Pumice Sales Gard Roper
Refreshments Kat Hanna
Show & Sale – 2015 Position Open
Website Beth Kirkpatrick

Telephone Numbers, Emails, and Addresses can be found in the CACSS Member List emailed periodically to members by Beth Kirkpatrick.

2014 Meetings

Sunday May 18
Board Meeting 11 a.m.
General Meeting 2 p.m.

Sunday, June 29
General Meeting 2 p.m.

(Members are welcome to attend Board Meetings in Farrington Hall)
President’s Letter
May 2014
Wayne Whipple

This is a short note to let you know that I will not be with you at this month’s General Meeting or Board Meeting. By the time you read this, I should be on a river cruise in Russia, going from St. Petersburg to Moscow. Karen and I booked this vacation quite some time ago, long before the invasion into Ukraine. We had always wanted to go to Russia, especially to visit the Hermitage Museum in St. Petersburg. So it could be now or never.

Our Vice President Deborah Mulholland will be in charge of the General Meeting and Board Meeting on May 18. Please contact her if you have any agenda items so she can add them to the schedules. I am sure both meetings will go well, and I will see you in June.

Send article and photo submissions for the *Central Spine* to the Editor:
Diana Decker
dianadec@cox.net   (602) 220-9825

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.

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

Welcome To New Members
Jennifer and Robin Henry
Eileen Line
Jill Ormand
Diana Stuart
John Thomas and family

Membership Chair:
Beth Kirkpatrick

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# 2014 Central Arizona Cactus and Succulent Society Show Awards

<table>
<thead>
<tr>
<th>Award</th>
<th>Winner</th>
<th>Plant Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best Aizoaceae</td>
<td>Cliff Fielding</td>
<td><em>Lmitaeia</em> muria</td>
</tr>
<tr>
<td>Best Advanced Succulent [rosette]</td>
<td>Lee Brownson</td>
<td><em>Agave</em> victoriae-reginae</td>
</tr>
<tr>
<td>Best Agave</td>
<td>Beth Kirkpatrick</td>
<td>Sansevieria cultivar ‘Los Anod’</td>
</tr>
<tr>
<td>Best Mammillaria</td>
<td>Steve &amp; Julie Plath</td>
<td><em>Mammillaria</em> formosa</td>
</tr>
<tr>
<td>Best Cactus of Show</td>
<td>Steve &amp; Julie Plath</td>
<td><em>Echinocactus</em> horizontalonius nicholii</td>
</tr>
<tr>
<td>Best Ariocarpus</td>
<td>Steve &amp; Julie Plath</td>
<td><em>Ariocarpus</em> otschoubeyanus</td>
</tr>
<tr>
<td>Junior Novice Best Cactus [rosette]</td>
<td>Emily Glenn</td>
<td>Opuntia</td>
</tr>
<tr>
<td>Junior Novice Best Succulent</td>
<td>Emily Glenn</td>
<td>Aeonium</td>
</tr>
<tr>
<td>Best Arizona Native Plant in Show</td>
<td>Steve &amp; Julie Plath</td>
<td><em>Graptotpetalum</em></td>
</tr>
<tr>
<td>Best Advanced Cactus</td>
<td>Lee Brownson</td>
<td><em>Hamatocactus</em> hamatacanthus</td>
</tr>
<tr>
<td>Judges’ Choice for a Succulent</td>
<td>Steve &amp; Julie Plath</td>
<td><em>Euphorbia</em> cylindrifolia</td>
</tr>
<tr>
<td>Best Cactus Collection</td>
<td>Cliff Fielding</td>
<td>Collection of Copiapoas</td>
</tr>
<tr>
<td>Best Novice Cactus</td>
<td>Sue Hakala</td>
<td><em>Mammillaria</em> peterssonii</td>
</tr>
<tr>
<td>Best Euphorbia</td>
<td>Mike Gallagher</td>
<td><em>Euphorbia</em> colliculina</td>
</tr>
<tr>
<td>Best Succulent of Show</td>
<td>Russ Files</td>
<td><em>Dorstenia</em> gigas</td>
</tr>
<tr>
<td>Special Recognition for a Succulent</td>
<td>Russ Files</td>
<td><em>Dorstenia</em> gigas</td>
</tr>
<tr>
<td>Best Novice Succulent in Show</td>
<td>Rita Gosnell</td>
<td><em>Euphorbia</em> horrida</td>
</tr>
<tr>
<td>Judges’ Choice for a Cactus</td>
<td>Steve &amp; Julie Plath</td>
<td><em>Mammillaria</em> candida</td>
</tr>
<tr>
<td>Best Educational Exhibit</td>
<td>Tom Gatz</td>
<td>Bonsai Exibit</td>
</tr>
<tr>
<td>Best Aloe</td>
<td>Steve Mack</td>
<td><em>Aloe</em> plicatilis</td>
</tr>
<tr>
<td>Best Gasteria</td>
<td>Wendy Barrett</td>
<td><em>Gasteria</em> carinata verrucosa</td>
</tr>
<tr>
<td>Best Crest or Monstrose</td>
<td>Sue Hakala</td>
<td><em>Austrocylindropuntia</em> vestita</td>
</tr>
</tbody>
</table>
Best Ferocactus          Steve & Julie Plath          Ferocactus chrysacanthus

Best Seedling          Doug Dawson          Lithops optina rubra

Best Haworthia          Cliff Fielding          Haworthia koelmaniorum

Best Adenium          Steve and Julie Plath          Adenium arabicum

Special Recognition for a Cactus          Doug Dawson          Tephrocactus alexanderi geometricus

People’s Choice Award          Steve & Julie Plath          Adenium arabicum

Show Chair’s Special Recognition          Dan Smith          Educational Exhibit on Adeniums

Best Succulent Collection          Doug Dawson          Collection of Crassula

Desert Botanical Garden Best in Show for Artistic Merit-Scott McMahon Euphorbia cap-saintemariensis

More Awards

Junior Novice Most Total Points          Emily Glenn

Cactus Sweepstakes for Cactus Most Total Points          Steve & Julie Plath

Annual Cactus Show Most Blue Ribbons          Steve Mack

Sweepstakes Award for Most Points          Steve Mack

Novice Sweepstakes-Novice Exhibitor with the most points in the annual show          Sue Tyrrel

CACSS Annual Show and Sale Chair 2014          Sue Tyrrel

See photos of the 2014 Show & Sale by John Crummey on page 11 and 12.
Who’s Not Eating Our Prickly Pear Fruit?
by Tom Gatz
(Reprinted from the Desert Botanical Garden Volunteer Newsletter ‘The Gatherings’)

Have you ever noticed how so many ripe, red fruits on the prickly pear cactus (Opuntia) often remain uneaten on the plants sometimes well into November, eventually fermenting and drying up, still unconsumed? It’s not just in our backyards either. We’ve noticed this out in the desert as well, especially in areas without cattle or burros to eat them. Why in the world would a desert plant expend so much precious water and energy producing such a large quantity of fruit if nothing is around to consume most of it? After all, the whole point of a plant producing fruit is to get some bird or animal to eat it and spread the undigested seeds contained in the fruit to new areas. Could there be a seed-dispersing animal missing from our modern desert landscape?

Unlike the tiny seeds of saguaros, that are inadvertently swallowed and dispersed by several species of desert birds that consume almost all saguaro fruits the same day they ripen, the relatively larger and very hard seeds of the opuntias are less likely to be swallowed by small birds that consume only a small portion (less than 5%) of the prickly pear seeds that are produced each year. Coyotes, javelina, and desert mule deer are now the largest native mammals that regularly eat opuntia fruits, but there are just too many fruits for them to consume them all, and the fruits located high on pads in the center of an opuntia patch are often inaccessible to them.

Some biologists hypothesize that opuntia fruits, set up high on the edges of the cactus pads and protected from many smaller animals by formidable spines and glochids, may have originally evolved to be consumed by large, plant-eating mammals, known as “Pleistocene herbivorous megafauna” that have since gone extinct. Among the known or suspected extinct megafauna consumers of opuntia fruit were the giant ground sloth and perhaps relatives of camels and elephants that once roamed the western United States and Mexico.
These huge animals could have easily plucked the ripe fruits from the tops of the cactus pads, and they would likely have swallowed many large opuntia seeds when they wolfed down partially chewed opuntia fruits. We know that these hard seeds passed undigested through at least some of these browsing mammals because opuntia seeds have been found in fossilized ground sloth dung in southwestern caves.

Where did these herbivorous megafauna go? Perhaps not coincidentally, they died out around the time that spear-bearing humans colonized the southwest, about 10,000 years ago.

Other desert plants that some biologists hypothesize also may have depended upon the now extinct Pleistocene megafauna for more widespread dispersal than currently occurs (where cattle are absent) are the cholla cactus (Cylindropuntia) and the devil’s claw (Proboscidea parviflora). Large grazing and browsing mammals plowing through a patch of either of these plants would have made ideal “transportation vehicles” for cholla segments and devil’s claw seedpods. When these megafauna disappeared, and before cattle and city slickers arrived, cholla segments and devils’ claw seedpods had to settle for only the occasional inexperienced jackrabbit or coyote to move them to new areas to take root or germinate. Also, succulent yucca fruits now remain on the plants, ten feet above the ground, long after they ripen. Perhaps they originally evolved to be eaten by the extinct camel relatives that once lived here.

As Dr. Mark Dimmit comments in the DBG docent textbook A Natural History of the Sonoran Desert regarding this possible extinct megafauna/desert plant relationship, “It’s an intriguing theory and, if proven true, further illustrates the already established fact that natural systems are anything but static.”

Thanks to Raul Puente and Dr. Andrew Salywon for helping me track down information for this article.

Now extinct, 9-foot tall Giant Ground Sloths were once one of the seed-dispersers of the prickly pear.

Photo by Dr. D.H.Jansen
## Raffle Winners
March 2014 CACSS Meeting

<table>
<thead>
<tr>
<th>Winner’s Name</th>
<th>Plant or Pot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rita Gosnell</td>
<td>Brown Pottery Pot</td>
</tr>
<tr>
<td>Lucy Rand</td>
<td><em>Agave medio picta alba</em></td>
</tr>
<tr>
<td>Mike Gallagher</td>
<td><em>Aloe greenii</em></td>
</tr>
<tr>
<td>Wayne Whipple</td>
<td><em>Aeonium in pot</em></td>
</tr>
<tr>
<td>Kathy Snyder</td>
<td>Brown Pottery Pot</td>
</tr>
<tr>
<td>Barbara Danielson</td>
<td><em>Oreocereus</em></td>
</tr>
</tbody>
</table>

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### More photos of Arizona Native Plants in Nature by Doug Dawson

*Graptopetalum bartramii*
Lewisia brachycalyx

Mammillaria tetrancistra
Photos of the CACSS April Show & Sale by John Crummey

Sue Tyrrel, left, talks with members who helped with the Show & Sale (left to right): Jo Davis, Steve Plath, Wendy Barrett, Steve Mack, Dan Smith and Mike Gallagher

The Show plants
Volunteers are ready to accept payments

Publications of material in the Central Spine does not imply agreement with the ideas expressed therein by any portion of the membership of the CACSS, nor does it constitute an endorsement or support for any portion of such material by the CACSS, or the Central Spine, regardless of any position or office held by the author.

All such material represents a comment and/or personal opinion of the author.
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. 4.

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

DOUG DAWSON
480-893-1207
dawsonlithops@hotmail.com
Specializations include Growing from Seed, Flora of Namibia, Lithops, other Mesembs, Melocactus, Miniature Cacti and Succulents of Arizona.

MIKE GALLAGHER
602-942-8580
mgallagher26@cox.net
Specializations include Aloes, Haworthias, Columnar Cacti, and Turbinicarpus.

DEAN PATRICK
480-759-0312
desertpatrick@cox.net
Specialization in softwood stem-cuttings, plant division and seed starting (rooting cacti, agave and aloe).

STEVE PLATH
623-915-7615
revedgude1@juno.com
Specializations include General Propagation and Desert Revegetation, Ariocarpus, Astrophytum, Cyphostemma, Echinocereus, Fouquieria, Thelocactus.

DAN SMITH
480.981.9648
smithdans@cox.net
Specializes in adeniums. raising adeniums from seed, grafting and adenium culture in general

BOB TORREST
480-994-3868
robertst9114@msn.com
Specializations include Desert Landscaping, Unusual (including Rare Fruit) Trees and Shrubs, Aloes, Agaves, Columnar Cacti, Trichocereus, and Opuntia.