

# CACTUS COURIER

Newsletter of the Palomar Cactus and Succulent Society  
The North San Diego County Cactus and Succulent Club

Volume 67, Number 5

November 2021

## 2021 NOVEMBER MEETING INFORMATION

Third Saturday,  
November 20, 2021  
10:30am - 2:30pm

(Note: no access to the building before 10am  
and no access through the back gate.)

The Park Ave. Community Center mask policy -  
**Masks must be worn in the building at all times.**

**Refreshments:** We will have coffee.

**The Plant of the Month is Ariocarpus.**

**Brag Plant Table:** Plants must be labeled and on the  
table **no later than 11:45am** to be judged. Please bring  
no more than 3 plants.

**Exchange and Benefit Drawing Tables:** Yes

**Auction:** This month's Auction will include a plant  
donation from Ralph Evans.

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Photo by Ron Regehr

## NOVEMBER SPEAKER - RON REGEHR

### *Cacti & Succulent Seed Sowing Technique*

Growing cacti and succulent plants from seed can be challenging and, at times, frustrating but the rewards are very gratifying. This talk and demonstration will alleviate some of the challenges and frustrations associated with growing from seed. This technique is well suited for the hobbyist and is what I use for my small-scale wholesale nursery. The beginner will learn how to get started and those with more experience may learn a few things to help in their pursuit. This live demonstration is accompanied by hand-outs including detailed sowing instructions, material resources, etc. Your questions are welcomed.

Starting in 1968, at Cactus Jack's Indian Rock Nursery in Vista, CA, Ron Regehr has worked at six different cactus nurseries through the years. Early on he joined PCSS to educate himself by "consuming" the library. He has been collecting and growing for over five decades. As owner/operator of Cactus Canyon Succulent Nursery for over twenty years he has supplied many plants to the landscape industry. Most notable project is Sunnylands in Rancho Mirage, CA. Several retail nurseries are supplied also. He has contributed to most of Jeff Moore's popular books about cacti & succulents and has performed consulting services for landscape architects, city government, and the San Diego Zoo Wild Animal Park. Now, it will be his 1 of 10 pleasure to share with you.

NOVEMBER 2021

# President's Corner

BY ROBERT KOPFSTEIN

A very heartfelt thank you is due to Jeff Moore of Solana Succulents for his informative and interesting talk on his new book Agaves, Species, Cultivars and Hybrids. Not only were the photos stunningly beautiful, but the information accompanying them was really educational. How fortunate we are here in San Diego County to have nurserymen like Jeff who are so knowledgeable and enthusiastic about the plants we all love.

Our speaker for November, Ron Regehr of Cactus Canyon nursery in Valley Center, will be presenting a program on growing from seed, a must for many species of succulents and cactus because they do not produce vegetative offsets (pups). For example I recently had an *Agave nayaritensis* bloom, so the only way to replace the plant, which does not produce offsets, and which dies after flowering, was to collect and plant the seeds. And then wait . . .

Through history, even though people were well aware of seeds and their importance to human life, the mechanism of seed production and the key role that seeds play in natural selection and plant diversity was poorly understood until the mid-nineteenth century. Until that time even well-educated and renowned scientists accepted the idea of the immutability of species and the concept of spontaneous generation –the idea that life forms sprung fully viable from essentially nothing. After all, in Genesis was not man formed from a lump of clay? And if species can change over generations how can this be reconciled with the concept of creation as recorded in the Old Testament? Was modern science threatening the very bedrock of religious dogma?

In 1859 enter mild-mannered Charles Darwin and his publication of his findings on his voyage on HMS Beagle twenty some years earlier. To say that Origin of Species created a furor would be a gross understatement. Even today 162 years later the book engenders lively argument, if not hostility and outrage. In 1926 in Dayton, Tennessee biology teacher John Scopes lost his court case (and his job) for the teaching of Darwinian theory.

In the plant world natural selection and diversity could not take place if it were not for seed production.

Enter one of my heroes in American literature: Henry David Thoreau, who lived all his life in Concord, Massachusetts. His most famous work is Walden, an account of his experiment with living a simplified life in a tiny cabin in the woods near Concord. His goal there was to live in and with nature, observing and recording the daily interactions of the flora and fauna that most of us miss in our hustle-bustle lives.



Photo by Ron Regehr

# President's Corner

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One of Thoreau's final manuscripts (he died of tuberculosis in 1862) was finally published in 1993: it is called Faith in a Seed, edited by Bradley P. Dean. The book is very readable, as are most of Thoreau's writings, and it argues that plants do not spontaneously grow from nothing, but rather they spring from seed produced by parent plants, and the seed is dispersed by wind, water, and animals including man. If a farmer's field is left untilled, eventually there will spring up plants, shrubs, trees from seed that has lain fallow in the soil, or from seed introduced by natural forces. In the text Thoreau asserts,

*Though I do not believe that a plant  
will spring up where no seed has been,  
I have great faith in a seed.  
Convince me that you have a seed there,  
and I am prepared to expect wonders.*

And these wonders were partly explained by a contemporary of Thoreau, an Austrian monk named Gregor Mendel, who studied the genetics of garden peas, and he found that there was a pattern in the offspring when he crossed parent pea plants which were different. The dynamics of this result were not fully explained until the 1950's when Watson and Crick discovered the double helix molecule of DNA.

In any sexual reproduction, be it plant or animal, the combination of DNA allows the offspring to demonstrate the traits of its parents, yet it also allows it to be unique, and this uniqueness gives rise to variations that produce the "wonders" that Thoreau expected. This uniqueness also provides the chance for species to "evolve" in response to environmental changes.



Photo by Ron Regehr

# President's Corner

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Go back early enough in the earth's history and there were no seeds. The ancient plants, like ferns, reproduced by spores. But eventually the seed ferns evolved (and from them the cycads -- around 210,000,000 years ago). The cycads were, and are, dioecious: pollen-producing and seed-producing plants are separate and both "male" and "female" plants are required in order to produce viable seed. By the time that angiosperms (flowering plants) come on the scene, the pollen anthers and the seed structures -- ovules -- are contained in one flower structure on the same plant.



As a result today we have a very wide diversity of seed-producing plants, and an extremely varied range of pollination strategies, seed forms, and dispersal techniques. The largest known seed comes from the coco-de-mer (*Lodoecia maldivica*) a threatened species of palm that grows on two islands in the Seychelles in the Indian Ocean. The seeds can weigh up to 55 pounds and be 20 inches long. The seeds are collector's items and can fetch \$2,000 each on the black market.

Contrarywise, the smallest of the seeds, some visible only under a microscope, come from the myriad types of orchids, many of which have ingenious techniques for attracting pollinators, as do many other types of plants.

Last October 31 the corpse flower (*Amorphophallus titanum*) flowered at the San Diego Botanic Garden. This bulb from Sumatra gives off the scent of rotting meat in order to attract flies to do the pollinating. At the height of the odor the plant at the Garden also raised its temperature from 75 degrees to 97 degrees F, a process called thermogenesis.

So the end result of plants evolving to produce seeds is the seeds themselves, many of them a biological wonder. They contain wonders and surprises, none of which can be accurately predicted before they germinate. Seeds can also persevere, unlike some other forms of plant reproduction. Not many years ago a ceramic jar containing the remains of stored dates was found at Masada, an archeological site in Israel. The seeds were from a species of date that went extinct in the 5th century AD, and when they were taken to a laboratory and planted, they germinated. There are stories of lotus seeds germinating after lying dormant for 1,000 years. Freezing also preserves seeds. As a result there are Noah's ark facilities around the world to help preserve what is left of earth's plant biodiversity. If you grow from seed you can never be sure what may come up, so like Thoreau you should prepare yourself to expect wonders.

# OCTOBER Brag Plant WINNERS

## Novice Cactus

### Intermediate Cactus

1 <sup>st</sup> Kevin Smith	Copiapoa humilis #17
1 <sup>st</sup> Alan Chamberlain	Parodia scopa #20
2 <sup>nd</sup> Heather Chan	Cereus forbesii monstrose 'Ming Thing' #21
2 <sup>nd</sup> Kevin Smith	Leuchtenbergia principis #14
3 <sup>rd</sup> May Fong Ho	Mammillaria geminispina #10
3 <sup>rd</sup> Don Nelson	Espositoa lanata #7

## Advanced Cactus

### Novice Succulent

### Intermediate Succulent

1 <sup>st</sup> Don Nelson	Euphorbia polygona #8
2 <sup>nd</sup> David Buffington	Haemanthus albiflos. #6
3 <sup>rd</sup> Sherman Blench	Aloe X Gasteria hybrid #12
3 <sup>rd</sup> Pauline Wong	Graptosedum hybrid #18
3 <sup>rd</sup> Monica Mosack	Haworthia cymbiformis. #5

### Advanced Succulent

1 <sup>st</sup> Julian Duval	Ficus palmeri #3
2 <sup>nd</sup> Julian Duval	Pachypodium lamerei sandersii #13
3 <sup>rd</sup> John Barkley	Welwitschia mirabilis. #2

## Plant of the Month – Novice

## Plant of the Month – Intermediate

## Plant of the Month – Advanced

1 <sup>st</sup> Julian Duval	Bursera microphylla. #19
2 <sup>nd</sup> Julian Duval	Bursera hindsiana. #16
2 <sup>nd</sup> Julian Duval	Bursera fagaroides. #15
3 <sup>rd</sup> Lorie Johansen	Bursera microphylla. #11
3 <sup>rd</sup> Robert Kopfstein	Bursera agavoides #9

## Dish Garden – Novice

## Dish Garden – Intermediate

1 <sup>st</sup> Monica Mosack	Crassula pellucida variegata and Echeveria agavoides #4
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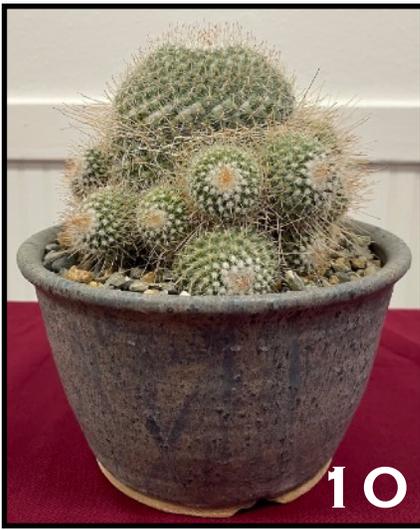
## Bowl Garden – Advanced

1 <sup>st</sup> Julian Duval	Bursera microphylla with Euphorbia stellata #1
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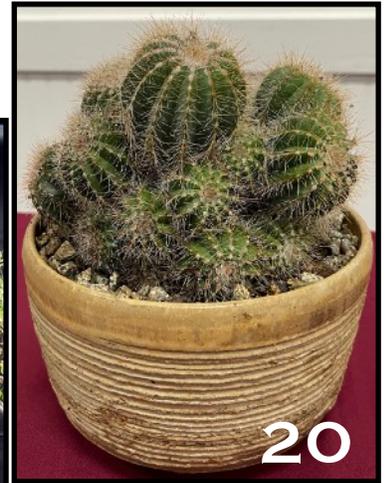
OCTOBER  
*Brag Plant*  
WINNERS

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OCTOBER  
*Brag Plant*  
WINNERS

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## PLANT OF THE MONTH

# Ariocarpus

ARTICLE BY LORIE JOHANSEN  
PHOTOS BY PETER WALKOWAIK

“Why all this romance around these modest but highly prized plants? The answer is rather simple: the genus *Ariocarpus* embodies some of the fundamental qualities that draw us to this hobby in the first place. These unusual plants provide a unique aesthetic, rarity, and surmountable challenge. They are living sculptures, ultimately compact and slow, rare but not impossible to find, not easy but not too difficult to grow.” Andreas Laras—a succulent-obsessed molecular biologist from Athens, Greece

The genus reminds this Minnesota gal of snow-laced conifers with its white wooly top. Beneath the soil line you will find a beet-like tuber that is extremely rot prone. Overwatering assures death! The eight species within this Cactaceae family are native to Mexico and Texas, where they grow in rich rocky limestone soil.

In habitat, all species within the genus are considered threatened, and three species were formally listed as endangered in the 70’s, (*A. agavoides*, *A. bravoanus*, *A. scapharostrus*). These plants were protected by the Mexican government, the United States government, and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The remainder of the genus could be collected and exported legally until June of 1992, when they were also given Appendix I status (most protected status). Until that time, truckloads of collected *Ariocarpus* plants flowed from Mexico to Asia, the U.S., and Europe. There was little pressure to grow plants from seed when large, old, and incredibly inexpensive specimens were commonly available. Today’s astronomical prices are a matter of supply and demand; a growing number of collectors are vying for an ever-shrinking pool of old collected plants.

Notoriously slow growing, at a mature size they are about six inches high by a foot wide. In habitat, they are so low growing, they are nearly buried. In his entertaining historical accounts of *Ariocarpus* exploration in the 1950’s, Edward Anderson highlights “their amazing ‘ability’ to hide from the searcher,” and recounts being “told that it would be impossible to find *Neogomesia* when not in flower, as they were so well hidden.” Click on this link for the fascinating photos of Anderson’s field trip (<http://www.living-rocks.com/reminiscences.htm>):

“Time slowly passed in our search, and we began to believe that we were not going to be successful, but suddenly I saw a few tiny tubercles projecting out of the rocky soil. I kneeled and saw that it was a *Neogomesia*! As we had wandered over the hill in our search, several curious children from the nearby town had come to watch us. We asked them to help us find a few more of these little plants, which they called “dulces” because they sometimes ate them for their sweetish taste. Eagerly they began to crawl among the shrubs, and soon their sharp eyes found enough plants for my studies. These specimens ultimately showed that *Neogomesia*, in fact, belonged in *Ariocarpus* (Anderson, 1962).”

Unlike many cacti, *Ariocarpus* are spineless, but the stiff tubercles have points. Depending on the species, the tubercles may be curved upward and are triangular or conical. Its skin may be smooth or fissured and crinkly. The showy flowers appear in the fall in magenta, pink, cream, and yellow. They transition into black, pear-shaped seeds after flowering.



*Ariocarpus retusus*

## PLANT OF THE MONTH

# Ariocarpus

ARTICLE BY LORIE JOHANSEN  
PHOTOS BY PETER WALKOWAIK  
(CONT. FROM PAGE 8)

**CULTURAL REQUIREMENTS:** Ariocarpus is a summer grower that requires watering throughout its growing season. Use bottom watering, allowing the plant to sit in the drip saucer for a maximum of half an hour. It is best to use rainwater or purified water as our tap water contains many chemicals. Allow the soil to dry out thoroughly in between each watering. After the plant has finished blooming and gone to seed, withhold water until springtime. If you notice salts crystallizing on the surface of the soil around your plants, do a very thorough top watering to wash the excess salts through the soil. To prevent common pests like mealy bugs and scale, provide strong sunlight and air circulation. If pest-afflicted, use an alcohol spray to kill them. Fertilize early in the spring and mid-summer with a one-quarter-strength water-soluble solution with high phosphate and potash content. Use well-draining soil that is loose and coarse enough to allow the water to drain through quickly. During dormancy in the winter, withhold water and fertilizer.

I am infatuated with the historical written accounts about the discovery of these “living rocks.” For the best photos of various cultivars, check out “29 types of Ariocarpus” on the Succulent Alley website (<https://succulentalley.com/ariocarpus/>). Without a doubt, Ariocarpus retusus cv. Cauliflower is one of the most unique and odd of all the cultivars as it has a warty and bumpy epidermis that gives it the appearance of a cauliflower, hence its name.

### RESOURCES:

<https://plantcaredtoday.com/ariocarpus.html>

<http://www.columbuscactusclub.com/ariocarpus.html>

<https://www.living-rocks.com/laras.htm>

<https://xerophilia.ro/wp-content/uploads/2013/11>



*Ariocarpus fissuratus*



*Ariocarpus hintonii*



*Ariocarpus furfuraceus*

## 2022 Membership Fees

- The fee for the 2022 individual membership has increased from \$20 to \$25.
- The fee for each additional household member remains at \$5.
- The cost for a name badge is now \$7.

## December 18 Holiday Party

As with everything else the past year and a half, we have had to make adjustments. We are planning on having bite-sized appetizers and desserts potluck instead of our usual full sit-down meal. So, think of what you might like to bring that is small or can fit on a skewer. There will be some tables to sit at, but also lots of room to walk around. If the weather is nice, we can also be on the patio.

As always, we will have lots of gift plants for volunteers, Brag Plant winners and members.

We need some volunteers to help plan decorations, and help with set-up and clean-up. Please contact Brita if you would like to help. 858-776-7216  
BritaMiller1@gmail.com



Sonja snags some succulents at Lorie's place.  
Photo by Lorie Johansen

## 2021 Meeting Schedule

Date	Speakers & Topic	Plant of the Month
November 20	Ron Regehr - Growing C & S from Seed	Ariocarpus
December 18	Holiday Party	Gift Plants for You!

## PALOMAR CACTUS & SUCCULENT SOCIETY

### BOARD OF DIRECTORS

Robert Kopfstein - President, Show Chair - [president@palomarcactus.org](mailto:president@palomarcactus.org)  
Don Nelson - Vice-President  
Brita Miller - Past President, Meeting Set-Up  
John Barley, Nathalie Nguyen - Treasurer  
Moni Waiblinger - Secretary  
Peter Walkowiak - Member at Large  
Lorie Johansen - Member at Large, Guest & New Member Ambassador, Plant of the Month Articles  
David Buffington - Member at Large, Brag Points

### OTHER VOLUNTEERS

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Dean Karras - Plant Expert, Instagram  
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Dennis Miller - Cash Register at Monthly Meetings  
Sandy Wetzel-Smith, Bruce Barry,  
Jamaye Despaigne & Ellen Pankuch - Refreshments  
Barbara Raab - Librarian  
Kevin Smith - Brag Table  
Francis Granger - Guest & New Member Ambassador  
Brian Magone - Exchange Table  
Chet Reed - Brag Plant Photographer  
Russel Ray - Photographer, Website, AV  
Julie Kort - Name Tag Drawing Plants  
Libbi Salvo - Monthly Meeting Set-up

## Palomar Cactus & Succulent Society

The North San Diego County C & S Club!

### **MEMBERSHIP FORM**

Click here for a printable form:

<https://www.palomarcactus.org/wp-content/uploads/2021/10/PCSS-Membership-Form-Rev-10-23-21.pdf>

## Social Media

Website: [www.palomarcactus.org](http://www.palomarcactus.org)  
Instagram: [Palomar.cactus.succulent.org](https://www.instagram.com/palomarcactus.succulent.org)  
Email: [info@PalomarCactus.org](mailto:info@PalomarCactus.org)

Facebook for admin notices:  
[@Palomarcactusandsucculentsociety](https://www.facebook.com/Palomarcactusandsucculentsociety)

Facebook group for members to post:  
[Palomar Cactus and Succulent Society Group](https://www.facebook.com/Palomarcactusandsucculentsocietygroup)