CACTUS CORNER NEWS

Fresno Cactus & Succulent Society

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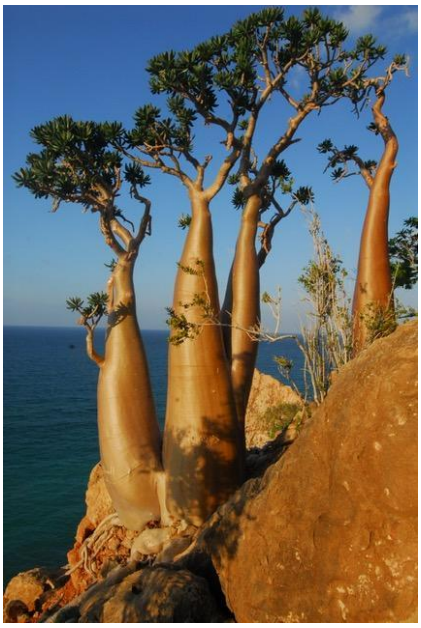
NEXT ZOOM MEETING: Thursday, February 4th, 6:30 p.m.
Meeting ID: 817 5577 9576 Passcode: 759751

Socotra

Wendell S. (Woody) Minnich 2005



Socotra is one of the three most exciting islands in world. Along with the Galapagos and Madagascar, Socotra offers some of the most unique and endemic plant and animal life to be found anywhere. This island, about an eighth the size of California, is almost directly south of Yemen and the greater Arabian Peninsula. It is from this special relationship with the Arabian Peninsula and the northeastern coast of Africa, that Socotra gets its amazing environment.

At the confluence of the Indian Ocean, the Arabian Sea and the Red Sea, in the Gulf of Aden, Socotra gains its special meteorological conditions. The seasons vary from extremely hot and wet to warm and dry, and often the dense fogs dominate most of the island. The island is primarily calcareous uplifts and limestone plateaus with only one mountain range blending the Hamaderoh-massiv to the highest peaks of the Haghir mountains.

Socotra's history is also unique in its human habitation. Its primarily Arabic descendants have been living off the sparse landscape for hundreds of years. Most of these people have been goat herders, fishermen and minimal farmers. Due to the basics of living off the land, many of the plant populations have been pushed back to inaccessible regions where people or herbivores can not go. Socotra is also very unique in that its endemic mammals are less than a hand full. There are no major predators and no major native mammals, but lots of cattle, burros, goats and some horses. The insect, bird and reptile populations are reasonably represented. Most of them are fairly safe, as there appears to be minimal feral cat population. And where the feral cats exist, in the cities, they seem to be happy feeding on the introduced rats and mice.

The succulents of Socotra are most represented by their famous *Dracaena cinnabari* and the magnificent *Adenium socotranum.* There are a fair number of other succulents ranging from the giant *Euphorbia arbuscula* to the great caudiciform *Dendrosicyos socotrana,* not to mention the wonderfully tortured Boswellias. The Boswellias are the legendary source of Frankincense. Many other smaller genera occur which include: Aloe, Caralluma, Cissus, Dorstenia, Echidnopsis, Edithcolia, Euphorbia, Jatropha, Kalanchoe and Plectranthus. Along with these interesting succulents, one will often find a variety other beautiful plants, such as Begonias, Hibiscus, Ledebouria, palms and Sarcostemma. Continued…

We'll travel from Socotra's one airport near Hadibu, the capital city, up through the Diksam plateau and all around the entire island. Camping out on this island is a real treat, and hiking in the canyons and up to the mountains, is really exciting. Almost everywhere one travels you're sure to to see the Dragons Blood trees and the fantastic sculptured *Adenium socotranum.*

Today, visiting Socotra is almost impossible for Americans, as Socotra in considered to be part of the country of Yemen. We were some of the last Americans to visit this region, as we just followed the bombing of the USS Cole in the port of Aden. Since then, things have only become worse, so come vicariously travel with me to Socotra, a place that many of us may never be able to visit again.

From the Prez…

Hi Members,

The start of the new year brought unseasonably warm weather to the State. It felt like we were having an early Spring. I was watching the buds on a few trees start to swell, with some worry. I received a few emails and calls from members asking if they could start watering everything because of the warm weather. Let me remind everyone that it's only January, and the weather will get cold again. You don't want cactus and warm season growers wet when the cold weather returns. As I'm writing this article, the weather has turned, and we just had our first rainstorm in a long time. We never know what our winters will bring. The winter or cool season growers have really been enjoying the weather and will love having this rain.

We will be continuing to have our monthly Zoom meetings for the foreseeable future. I encourage all members to participate. Rosanna is bringing in wonderful speakers each month for all of us to enjoy during these weird times. Woody Minnich is joining us in February, he's a wonderful charismatic speaker and I hope everyone joins the meeting. Wonderful speakers aside, it's always nice to be able to see and chat with other members.

We also offer workshops once a month, on the third Wednesday. These Zoom meetings are for asking questions and showing off the plants that you have worked so hard on. Every member is welcomed to join us for any meeting or workshop. Please also let me know if you are not receiving emails with meeting links.

I would also like to remind everyone that the club needs a membership renewal form from every member. We have waived membership dues (paper newsletters still require a fee) for 2021 but we need the forms to keep your information up to date. Please email Craig or myself with your completed form. If you are unable to scan the form, please type all the information we are asking for in an email and send that to us instead. Please do not send us an "All of my information is the same". You may also mail the information to the address at the top of the form.

I also come to you to share unfortunate news. Frank Orvis, a long-time member of the club has passed away. I would like to extend my condolences to Marian and their family. Frank was always wonderful to work with, and will be deeply missed.

I hope that all of you are staying safe and continue to be healthy. I am painfully aware that quarantine has gone on for a long time already, and it's hard on everyone. Please stay active and keep in contact with family, friends, and neighbors. A chat can brighten someone's day.

Robert

FEBRUARY BIRTHDAYS:

Brenda Anderson (1st)
Mary Drumheller (8th)
Jannette Bautista (15th)
Rose Rowe (17th)
Alice Rodriguez, Peter Beiersdorfer (25th)
Edie Chaney (29th)

Former member Joyce Quinn has been very busy since moving to Tucson. She has been a docent at the Arizona Sonora Desert Museum, a place that needs to be on your bucket list, if you haven't already been there: www.desertmuseum.org.
The Museum has an active arts program and every year offers a calendar which features the work of their students. Joyce's beautiful portrait of two parrots, done by the scratchboard technique, comprises one page of the calendar. To see it, click on "arts" on the Museum's home page, scroll down to the calendar, click on it and you can access the illustrations.
I wasn't familiar with scratchboard, but you can Google it and see how it's done.

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Did you know that when you boil eggs, the calcium from the shells seeps into the boiling water? Once the water has cooled to room temperature you can use it on your plants. They need the calcium for cell wall development and growth.

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How to grow a bigger Bowiea: "At a recent club meeting someone mentioned that plants grown by laying a segment of the 'peel' on soil develop into much larger, nicer plants than seed-grown ones. Peel the outer segment of skin off, like you would an onion and lay it on soil and it will do its thing." Another person added, "You don't even have to put them on soil. I simply put pieces of peeled skin on the bench and wait. Whenever the skin on your mother plant looks unsightly just peel it off and tear into pieces. When they get big enough (roots showing) just pot them up like the adults."

This is from an old Internet post. The process described sounds like bulb propagation by scaling.

Plants need iron to produce chlorophyll, which is vital for healthy cell function and gives the plant its green color.
Chelated iron is iron that has undergone chelation, a chemical process that binds the iron molecule to another substance, usually an amino acid. This forms a more stable molecule that is easier for the plant to absorb.

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Propagating a Christmas cactus

You can share the beauty of your Christmas cactus with a simple propagation technique. Cut a short, Y-shaped segment, with at least two leaf nodes, from a stem tip. Let the segment sit in water, and within two weeks roots will emerge from the node. Plant the cutting in potting soil or vermiculite and keep it moist in a well-lit area, avoiding direct sunlight at this stage. The cutting will show new growth within a few weeks and should be potted into a larger pot when the foliage extends over the rim of the pot. Cuttings like this will bloom and grow into larger plants.

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Mark Dimmitt, the "Adenium Guy": When an adenium caudex begins to rot, often the rot will stop at or just above soil level IF the plant is kept completely dry until the next growing season. I have a somalense ssp somalense (tree form) rot off all of its roots each of the last three winters. It has managed to re-root the following summer and put on some growth (it's now 7 feet tall at six years of age.) Don't despair, but don't water, either, until it gets good and hot and you see new roots initiating.
(From another Internet post)

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Bat-pollinated plants often have flowers that reflect ultrasonic waves, making it easier for the animals to locate flowers through echolocation. But one cactus does the opposite, *Espostoa frutescens* absorbs more ultrasound in the area surrounding its flowers, making them stand out against a "quieter" background, attracting its best pollinator, Geoffroy's Tailless Bat.

www.the-scientist.com/news-opinion/ecuadorian-cactus-absorbs-ultrasound

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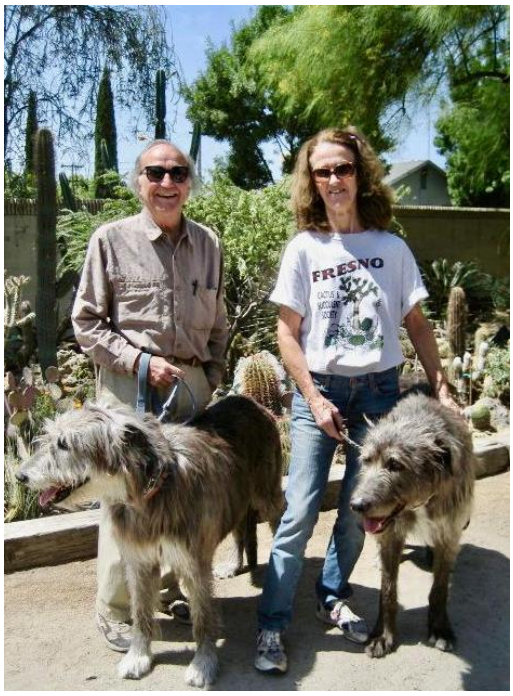
Frank Orvis



Longtime member Frank Orvis passed away January 11th at the age of 83. He and his wife Marian joined FC&SS decades ago and have been active members for years. They organized meeting refreshments, helped out at club events, and collected and stored boxes for club sales. They invited club members to their cactus garden on our spring tours.

Originally from Minnesota, Frank attended school in Spokane WA, Cal Poly and Fresno City College. After working as an architect for a few years, he spent 27 years in the map department of the Fresno County Assessor's Office.

Somewhere in my files I have a photo of a gang of us, including Frank, working on the desert garden that we used to construct every year in the old Wine and Roses Building at the fairgrounds. Most of us remember him as a very nice person, always ready with a funny remark whenever he saw you. We will miss him. Our sympathies go out to Marian, their daughter and grandson.

Sue

JANUARY WORKSHOP: A small group got together by Zoom on Wednesday, January 20th. The workshop subject was Haworthias and Gasterias (and anything else we wanted to talk about.)

The following showed plants: Karen Willoughby, Peter Beiersdorfer, Roz Tampone, Brian Nagles and Rob Scott. Karen showed *Haworthia truncata, Gasteria batesiana* and *Echeveria agavoides* 'Romeo'. Peter showed us some of the winter-growing bulbs that are putting on a show these days, including *Lachenalia* and *Massonia.* He also mentioned that he and Jaan are going back to Namibia in a few weeks to study *Lithops.* Roz displayed some ornamental containers planted with gasterias and haworthias, including *Tulista (Haworthia) pumila.* Brian took us on a video tour of his greenhouse, packed with plants at this time of year. Rob Scott displayed photos of some of his many haworthias and gasterias.

Rosanna Rojas had a question about her *Othonna* hybrid. She decided to transplant it as this is its active growth season. However, the rootball was a hard knot. What should she do? To free the roots she might try soaking the rootball to soften it, then go to work with a fork or chopstick to untangle the roots. Rob suggested that she might even cut off the bottom of the rootball. The object is to encourage the growth of feeder roots.

Christeen Abbott-Hearn said her succulents are looking great. Is this a good time to repot? It was agreed that she should repot winter growers only.

We will still have to meet by Zoom for a while yet. We plan to have workshops on the 3rd Wednesday for the next several months, until we can meet again in person. Join us!

MATUCANA

The mountains and deep canyons of central Peru is where cacti of the genus *Matucana* are found. About 20 species and numerous varieties comprise the genus, which is named for the town of Matucana, near Lima. The plants can vary in size, are flattened globular or columnar, singular or clustering, with spines that can vary in length, color and density. The body diameter is 4-6 inches and a few plants can reach 20 inches in height. Epidermis is green though this may be obscured in some species by thick spination. Ribs are straight or wavy and have white to pale brown wool.

Species formerly in Submatucana are now in *Matucana.* Globular matucanas flower when still quite small and only 3-5 years old, but the larger cacti must be at least 6 inches tall. They flower in spring and summer. The long-necked flowers are up to 3 inches in length and more or less bilaterally symmetrical. They are borne close to the crown of the plant and are either scaly and woolly or bare. They range in color from yellow and orange to red and violet. The fruits are very small, less than 0.4 inches in diameter, naked or slightly hairy, and greenish to reddish brown when ripe.

They are found in quite varied locations, from well-drained rocky habitats to grasslands. For instance, *Matucana madisoniorum* grows in warm river valleys at an altitude of 1300-1400 feet and thus likes similar levels of warmth. They differ from their Alpine allies in appearance, lacking the thick spination. They are rich green and in cultivation demand a higher temperature. In the winter resting period, temperatures below 50 degrees can cause unsightly cold damage and risk of rot. This species flowers relatively easily.

Matucana haynei and related species grow at altitudes of 9,000 to 10,000 feet and so do not require such warmth, but they may flower poorly in our conditions. If kept dry in the winter, most can tolerate temperatures to within a few degrees of freezing, some below freezing.

Some other species, *Matucana aurantiaca, intertexta* (pictured) and *ritteri* lie somewhere between the two previously mentioned species in terms of culture.

Matucana yanguanucensis grows at an elevation of 15,000 feet in heavy rainfall and a cool climate. They are found in clumps of grass or ferns, or in rocks among moss and lichens.

Matucanas like ample water in summer, an acid potting mix with sufficient feeding. A mix of 50% potting soil and 50% perlite works well as they like a well-draining soil. They like plenty of fresh air and sun. If sunlight is scarce they tend to elongate. Also, good light will encourage the development of beautiful, thick, and varicolored spines.

They are relatively easy to raise from seed, which is the normal method of propagation. Sue

Aeonium 'Sunburst'

HOW DO PLANTS FREEZE?

BY Carol Baird (from *Amateur's digest*, March 1993)

How *do* plants die in a freeze? It is the ice in the tissues of the plant that kills the living cells. Ice outside the cell draws water out of the cell; the cell can die from dehydration or from toxic accumulation. Ice inside the cell ruptures the thin membrane around the cell. But if that is true, why do some plants resist freezing while others succumb?

Only in the last decade or so have we become aware that for ice to form on or in plant tissues there must be *ice nuclei* present. This is simply where a microscopic bit of matter, called an *ice nucleator*, triggers the formation of an ice nuclear around which the ice will form. Potent ice nucleators, particularly certain bacteria, abound in plant tissues. A plant must adopt one of three strategies if it is to prevent freezing:

- It must get rid of 'sensitive' tissue
- It must get rid of water in 'sensitive' tissue
- It must get rid of ice nucleators in 'sensitive' tissue

Some cold adapted plants routinely drop their leaves in winter. Others have inherited a physiology that allows them to shift water out of their winter buds and woody vessels and still survive the resultant dehydration. All these cold adapted plants evolved at high elevation or high latitude and became retrofitted to seasonal cold by the process of natural selection.

All other plants must depend on acclimation to cold conditions. Some of our cycads, in the face of an Arctic blast, become deciduous. Other plants manage to turn off their xylem (woody tissue) flow as the mercury falls. We do not yet know if there are any species that have the option to remove ice nucleators.

But there is another dimension to all this talk about ice. Surprisingly, plant tissues do not necessarily freeze when the temperature falls to 32F. They can be supercooled. Supercooling occurs most readily if ice nucleators cannot enter the cells, or if there is relatively low water content in the tissues. But all of our plants have been severely drought-stressed; this perennial lack of water may in fact have helped to save the plants that survived the freeze. By having low water content in the tissues, they may have supercooled and avoided freezing, even though the air temperature was way below freezing. This process most likely occurred in tissues farthest away from the coldest air.

A further confounding factor is microclimate. In the garden a plant can face north or south, east or west. It can be in full sun most of the day or in the shadow of a building or a tree. It may be on an exposed slope or in a protected dale. When an Arctic air mass comes through, daytime temperatures rise above the freezing point. So plants exposed to full sun may have thawed only to refreeze that evening. And winds may have intensified the dehydration effect.

Mortality is a natural process …

The above information should reinforce the fact that plants kept dry in winter may have a better chance to survive a freeze than plants that are wet.

As I type this, it's a nice sunny day outside. It might seem ridiculous to even think of plants freezing, much less consider ice (as in the above article.) Yes, the long-range forecast was for California to have a warmer than average winter—and, so far, the forecast has been spot-on. I've only covered my plants a couple of nights, so far. But I still have the plant covers ready to be deployed, just in case.

It also appears that we're in for an especially dry year. I'll be overjoyed to be proven wrong. But we need to be prepared for more than the usual watering restrictions this summer.

A number of my potted succulents have been out in the rain—what rain we've had, so far—and have borne well the low temperatures we've had. There is no noticeable damage yet evident, though time will tell. If we get morning temps forecast to be 35 or below, I will move some to more protected locations and cover others.

We can get complacent about plant hardiness sometimes. I recall one of our long-ago members who kept a big *Sansevieria cylindrica* on her covered porch all year. It went through a number of cold winters. She thought it was as tough as old boots. Then, one winter, without a fare-thee-well, it just rotted.

Plants can always surprise us.

Sue

CROWN OF THORNS

The "Crown of Thorns" is an easily recognizable succulent. When you find one in a nursery the label will usually read *Euphorbia millii*, though the plant will really be a hybrid or cultivar, of which there are probably hundreds.

It's one of the few euphorbias grown for its blooms (actually bracts; the real flower is the tiny structure in the middle) displaying clusters of red, yellow, pink, white and bi-colored.

Euphorbia millii is native to Madagascar and is part of an array which includes similar euphorbias, such as *guillemetii, beharensis, genoudiana* and *mahafalensis*. All are bushes with round stems and deciduous leaves. The thorny stems are not really succulent but are xerophytic. Some species have stolon-like underground stems and napiform (turnip shaped) water-storing roots.

These plants have been in cultivation for a long time. Back in the mid-1990s we started seeing cultivars with taller, thicker stems and larger bracts. They were known as "Thai hybrids," due to their popularity in that land where they were valued almost as much as orchids. I haven't noticed them in garden shops in a while. (Have they been eclipsed by adeniums?)

I never had much luck with these, I have to confess, treating them as drought tolerant. They are tropical plants; they appreciate generous watering and feeding. In frost free areas they can be grown as garden shrubs, but not in our area, unless you have a very protected area for them.

Propagation is by cuttings.

Sue

EUPHORBIA PROPGATION BY LEAF CUTTINGS

By W. Ewest

Some years ago I experimented with the propagation of Haworthia leaves. This worked very well and therefore I thought I would try the same method with Euphorbia leaves, even though, with the exception of a few species, the leaves of euphorbias are not succulent. For the first test I used leaves of *E. moratii*. Here is the method I used:

- Remove the leaf by pulling it back down the stem. This is to ensure that the leaf base remains on the leaf;
- Put rooting powder on the leaf base;
- Plant the leaf in wet substrate which is suitable for succulents;
- Cover the pot with plastic film to provide high humidity.

Then one has to wait! After some months I was surprised to find that most of the leaves I had planted had developed one or more roots. It is important to keep the humidity up all the time. When the succulent roots have become sturdy enough (10 mm long) you can lower the humidity. One has to wait for many months and then some of the roots will develop a growing point and the result will be a small plant.

The method takes a long time but can be useful for rare plants or if you have only a single plant of a species.

(From: *Euphorbiaceae Study Group bulletin,* April 2000)

2021c

Fresno Cactus & Succulent Society

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