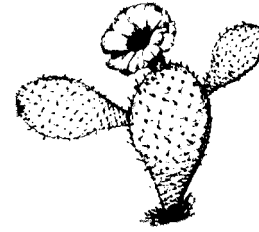




Agave parryi
photo by Stephen Cooley

The Cactus Patch



Opuntia basilaris var. treleasei

Volume 5 **December 2002** Number 12

THE NEWSLETTER OF THE BAKERSFIELD CACTUS & SUCCULENT SOCIETY

This Month's Program

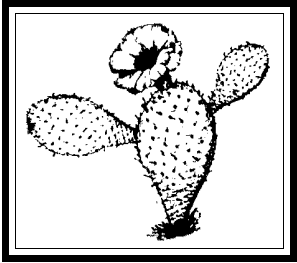
Annual Christmas Party

Monthly Meeting

Tuesday, Dec. 10
Olive Drive Church
5500 Olive drive at 6 PM

(West of 99 freeway on corner
of Olive drive & Victor street)

**The Meeting
Starts at
6pm**



The Cactus Patch

Volume 5 Number 12
December 2002

The Cactus Patch is the official publication of the Bakersfield Cactus & Succulent Society (BCSS) of Bakersfield, California. Meetings are held on the second Tuesday of each month at the times and places noted within.
GUEST ARE ALWAYS WELCOME

2002 Officers

President - Rob Skillin
Vice-President - Lynn McDonald
Treasurer - Maynard Moe
Secretary - Bonnie East
Editors - Stephen Cooley
Linda Cooley

2002 Directors

CSSA Representative - Bobby Williams
Past President - Bruce Hargreaves

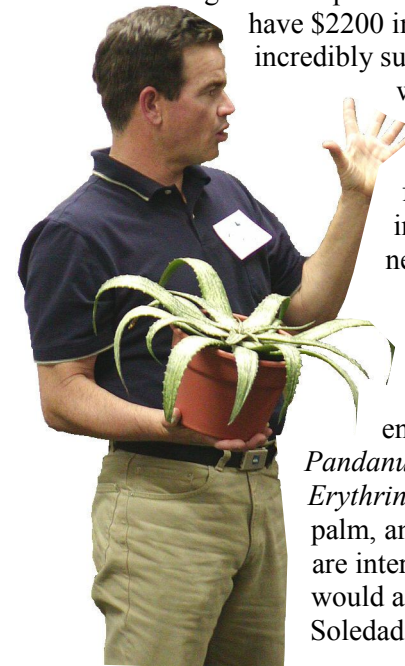
2002 Chairpersons

Refreshments - Bill McDonald
Historian - Bobby Williams
Librarian - Bobby Williams
Field Trips - Dan French

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We welcomed lots of new members and visitors!! It was exciting to see what a great turn out we had for this meeting. We hope to see all of you at the next meeting as well. We started off the meeting with introductions and giving the new members and visitors a free plant. Rob then spoke to us about elections; Bonnie also spoke about the importance of member involvement. She passed around a field trip survey in order to gather some information about what kind of field trips we are interested in. Rob mentioned that Grigsby's (in Vista) was having a sale until the end of the month. We were reminded that a few members with expertise in California cacti need to go out to CALM and help ID plants. Maynard



gave the report about club finances: he reports that we have \$2200 in the bank. The Show and Sale was incredibly successful. The next executive meeting will be at Lynn's house on Nov. 26. Our next meeting will be our annual Christmas potluck, silent auction and free raffle (for members only!) For more info on these events, read the rest of the newsletter!

We then had the pleasure of hearing Kelly Griffin (from the San Diego club) speak about Maui and its rare succulents and other plants. We enjoyed hearing about *Furcraea*, *Pandanus*, Agave (growing on a lava flow), *Erythrina* (also on an old lava flow), traveler's palm, and many others. I believe many people are interested in hearing more from Kelly! It would also be interesting to travel to Rancho Soledad Nursery, where he works as a

propagator, to see all the interesting plants there. Thank you Kelly for a great program.

Following the program, we had our Plant of the month presentation, which featured Mesembs. Stephen and Rob brought most of the plants, which were very interesting and strangely attractive. Then we had the raffle and then we went home. See you next month!



BCSS Executive Meeting

The meeting was held on November 26 at Lynn and Bill's home. Rob, Lynn, Maynard and Linda were there.

1. The first order of business was elections. We discussed various options for new officers, the results of which will be revealed at the December meeting.
2. Then we talked about the December meeting, which will be our potluck, silent auction, and free raffle. It was obvious that someone will have to make that hard trip out to Woody's to pick up some prime plants for this event! That trip was arranged for Dec. 8.
3. Maynard will make sure the taxes are paid.
4. We will have to make a decision about how much money to allocate to library books. We need to find out what kinds of books the members are checking out, how often, etc.
5. The next executive meeting will be held a little early, due to the timing of New Year's Eve. The meeting will be held December 17 at Maynard and Linda's home.
6. January's program will be Jack Kelly telling us about the old Ridge Route.
7. We discussed to the possibility of forming a "standing committee" for field trips and the CSUB garden. We have been treating these topics in a rather haphazard manner

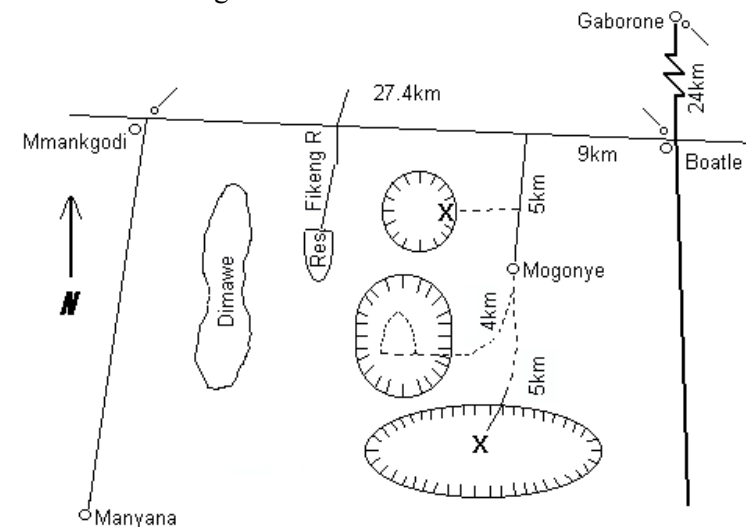
SPRING(s) in Botswana A Letter From Bruce



The September SABONET (Southern African Botanical Diversity Network) News arrived at the end of October. In addition to an article on medicinal plants of Mozambique by Queen Turner (head of our herbarium and now on study leave), it had pictures of three of our staff members at workshops. Best of all, however, was an article on Moretloa Polaki of Lesotho. He is a successful botanist and says it is "largely sparked by the dedication and enthusiasm shown by his botany lecturer, Dr. Bruce Hargreaves." I'm glad to know some students get something out of classes.

A construction company has been awarded the contract for Phase I of our botanic garden. I'm glad to hear it, but I'm not holding my breath waiting. We are going ahead with plans to bypass contractors and put up a shade house on our own. We'll see who finishes first.

On 6 November I finally visited Mogonye Village south of here to see some of the fabulous springs I've heard of there. We spent 6 hours hiking up a very steep gully with dry waterfalls. The Velcro plants (*Pouzolzia*) were large trees and the nettles even larger ones. There were cabbage trees, coral trees, *Stapelia*, *Kalanchoe*, *Plectranthus* etc. which made it worth the effort. Just below the top was a plant of pokeweed (*Phytolacca americana*)! All this was interesting, but not of monumental status. The plateau was level on top and there was a cliff on the other side which we descended partway looking for a spring. We had a fantastic view looking down on the hills of Dimawe where Batswana



fought Dutch south Africans and prevented a take-over. We could also see Manyana Village which has rock paintings and Livingstone's fig, -- a huge tree where he is said to have preached. These are national monuments. When I got back my leg muscles went into cramps, relieved only by a hot, hot bath.

On the 22nd we returned to Mogonye and drove to a shorter hill north of the previous one. A short hike brought us to a muddy spring where cattle had trampled everything. There were twisting vines of the milkweed *Stomatostemma* and Big-leaved Rock Figs, but otherwise the area was unremarkable. I began to wonder if there was anything worthy of being declared a National Monument, but we then drove 5 km south of the village on a dirt track and after an easy hike reached a delightful stream with a fern (*Pteris* sp.) which is unrecorded for Botswana. A little ways upstream we came up under cliffs with a forest of Nettle Trees. Instantly I knew this was of monumental status. There were also bushes of *Euphorbia griseola* as well as clumps of *Aloe leutescens*.

That was a high point. There have been some lows as well. It is spring here and we should have rain, but there has been very little and it is getting hotter (95+) daily. We bought a new car (a Hyundai which they assembled here for a short while) but in less than two weeks it was rear-ended and has a bent hood and trunk (we were shoved into the car ahead). It's mendable and we'll be paid by the fellow who did it, but we don't have time for all that right now -- but more of that next month after the journey of a lifetime.

Bruce J. Hargreaves

What Is A Succulent? What Is A Cactus

By Artie Chavez

From The Cactus Chronicle, Newsletter of the
Los Angeles Cactus & Succulent Association

You must own at least one cactus or succulent, or you would not be reading this. Everyone's first question seems to be "How do I take care of this?" If you're afraid to ask this question, you should not be, because answering this question is tougher than one would think, and is also the first question the experts ask when they receive a new plant. With this question in mind let's try to examine how to answer it. The following is a common conversation that we all have experienced, being on one end or the other, "How do I take care of this thing?" Our first instinct is to discuss watering, when and how much. But in order to answer this we need to know what is being watered, so we ask with all

the encouragement and patience as possible, "What is it?" The reply we get, "Well, it's green and has spines, and OH! It's that one that flowers!" Well we asked, obviously we need more information. Our next question, "Is it a cactus or succulent?" That will clear everything up, right, WRONG, the response is that of a blank stare. OK, here it is, the opportunity to show just how much knowledge we have and as we blurt out "Well a cactus is a succulent, but A succulent is not a cactus." Where did that come from? Who knows, but boy did it sound good. Our attention returns to the person that we were trying to help, and we thought we had a blank stare before. The next bit of wisdom we are about to share will clear everything up, after all it came from an esteemed botanist, we begin to recite "A cactus has spines and a succulent has thorns, or is it the other way around?" Before we know it we are standing alone.

Seriously, it is true that a cactus is a succulent, what we need to explore is what makes a plant a succulent. Most simply put, succulents increase their drought tolerance in two simple ways. First, the word succulent means to have juicy tissues. The juice refers to the ability of the plant to store water. Succulents store water in a number of different places in their anatomy, such as their leaves, stems, bodies, trunks (caudex), and roots. Second, succulents have the ability to conserve water in several ways, the most unusual of which, is the Crassulacean Acid Metabolism (CAM), this is considered a high evolutionary feature. First described in the Crassulacean Family. This process is related to the transformation process of photosynthesis and respiration.

Like foliage plants, succulents need to make food in order to live and to grow. Photosynthesis is the process in which plants convert carbon dioxide and water in the presence of sunlight, and the green pigment known as chlorophyll, to form sugars, oxygen, and water. Water and salts enter through the roots, then are pulled up to the photosynthesizing tissues. Air enters through special valves called stomata. When opened it allows the intake of Carbon Dioxide and allows the release of oxygen and water vapors, the stomata open during the day and close at night, ending photosynthesis. At night another process begins that of respiration, which reverses the process of photosynthesis, breaking down rather than building up sugars in the presence of water and oxygen, releasing the energy to the plant.

In succulents the daily cycle is the same, photosynthesis still occurs during the day, but the opening of the stomata is reversed. The stomata remain closed during the day and open at night to allow the intake of air. With the stomata opening at night the evaporation of the plant's moisture vapor is minimized in the cool of the evening. This

reversal also has two other effects, it requires that Carbon Dioxide be stored over night awaiting daylight for photosynthesis and it slows the plants growth rate.

This was a quick lesson in understanding what a succulent is. With all of these interesting modifications these plants will survive under the harshest conditions by conserving and reserving their resources.

Now that we know what a Succulent is, or at least the basis of a Succulent, lets learn about Cactus. Cacti for the most part come from the New World. Cacti not only come from the deserts that they are so often associated with, but they also thrive in mountain, jungle, and rain forest.

One might think the most obvious distinction of cacti is their spines. This is true, but the real difference between Cacti and Succulents, and any other plants, that might have spines or thorns, is where the spines emanate from. This area is known as the aureole, which is the white woolly cushion area where the spines, leaves, branches, pups, hair or wool, and flowers are produced.

Spines are really modified leaves, where the blade of the leaf is undeveloped and the leaf stalk, or stipules are stiff. Why do Cacti have spines? One explanation is for protection, against grazing animals. The spines will also protect the plant from its harsh environment, the intense sun, and in some areas keep the snow off the epidermis. Spines also protect the plant from unnecessary transpiration. Where there are dense clusters of spines or bristles covering the stem of the plant or more important the stomata, the air remains still not allowing the stomata to open. Another theory suggests that the spines act as ducts to collect moisture from the evening fogs and dews. When enough condensation collects the droplets will run down the spine to the aureole which acts like a sponge and soaks it up, (there is still some confusion as to whether the plants at this point will some how assimilate the moisture) and when enough moisture has collected it will run down the body of the plant to the soil line where the roots will take over. There are many types of spines: straight, hooked, plumose, bearded, multicolored, and barbed (which are know as glochids). We may not truly understand the purpose of spines, but there is no question as to the beauty that they add to the plant and their true distinction from lesser plants.

**To have your article printed in
The Cactus Patch get in touch with:**

Stephen Cooley, editor
thecactuspatch@bak.rr.com

Linda Cooley, editor

Show Results from the 3rd Annual Bakersfield Cactus & Succulent Society Show and Sale (part 1)

People's Choice Awards results were tallied Saturday evening, and awards placed for display for the remainder of the weekend. The public did a fine job at sizing up the characteristics of the plants, and several came back the next day to see the results of their voting. In several cases, the scores were very close, and there was even a tie-breaker. This was a really fun event!

People's Choice Awards

Most Dangerous: Ed Colley's *Trichocereus chilensis*

Most Resembles a 'Cow-pie': Rob Skillin's *Raphioacme ernestiona*

Most Out-of-This-World: Rob Skillin's *Adenia glauca*

Best of Show, People's Choice: Rob Skillin's *Haworthia truncata*

Most Dead Looking: Maynard Moe's *Euphorbia platyclada*

Fuzziest Looking: Rob Skillin's (#1068)

Most Feminine: Maynard Moe's *Pleisopilos nelii*

Several Club members, and Dina Hester (the event coordinator for the East Hills Mall), were given 'Club Recognition' ribbons to distribute. They were told to place the ribbon next to the plant they believed most appealed to them, for whatever the reason. The results brought even more attention to individual plants, and caused event goers to stop and reflect on those chosen. This was another great motivational event for our Show and Sale because it helped to generate even more interest in the plants. Way to go, everyone, and special 'Thanks!' to our judges!

Club Recognition Awards

Maynard Moe: *Euphorbia greenwayii*

Rob Skillin: *Cyphostemma bainsii*

Rob Skillin: *Cyphostemma currorii*

Rob Skillin: *Melocactus glaucescens*

Linda Cooley: *Aloe fleurentianum*

Rob Skillin: *Haworthia truncata*

Bobby Williams: *Mamillaria laui*

I will continue with the 'official placing results' as soon as I have the time to type them in!

Terry Skillin

PROGRAM NOTES

The December meeting will be our annual Christmas Meeting, featuring a potluck dinner, Silent Auction, and free Raffle. **The meeting (dinner) will start at 6:00** (5:30 to help set up). The Auction and the Raffle are open to members only. The potluck is a "true" potluck; bring whatever you want!! We are not going to assign anyone a certain kind of dish. The Silent Auction will feature many beautiful plants and other cactus/succulent related items. The free Raffle will also feature marvelous plants, with each member receiving a free raffle ticket (family memberships receive 2 tickets). Everyone is sure to win a plant they want! You might want to bring a box to carry all your loot home with!! It's a lot of fun.

CALENDAR

- Dec 10 BCSS meeting; 6:00 pm. Olive Drive Church**
Program: Annual Winter Party, silent raffle, potluck, etc.
- Dec 17 BCSS Executive: Maynard & Linda's house.**
- Jan 14 BCSS meeting; 7:00 pm Olive Drive Church**
Program: The Old Ridge Route
Speaker: Jack Kelly
- Mar 29-30 Colorado C & SS Show and Sale, Denver Botanic Gardens,
9am to 5pm each day.
Brad Johnson, Show & Sale Co-Chair
Kenneth Wilkie, Show & Sale Co-Chair

For more information concerning calendar events, contact the editors

ANNOUNCEMENTS

REMINDER: the December meeting will start at 6:00, not 7:00. If you want to help set up, come at 5:30!

There is a rumor that there might be a T-shirt design contest coming up in the New Year! Start thinking about what you would like to see on a club T-shirt and work on a design!

COLORADO CACTUS & SUCCULENT SOCIETY SHOW AND SALE

Saturday, March 29 - Sunday, March 30 - 2003
9:00 a.m. to 5:00 p.m. each day

Denver Botanic Gardens
1005 York Street, Denver, Colorado 80206
(10 minutes east of Downtown Denver)

Admission to the indoor Colorado Cactus and Succulent Show and Sale is included with the General Gate admission to the Denver Botanic Gardens \$5.50 Adults - \$3.50 Seniors - \$3.00 Children 4-15
DBG Members and Children under 4 FREE

Additional General Information:

Denver Botanic Gardens 720-865-3544 www.botanicgardens.org

Membership in the Bakersfield Cactus & Succulent Society costs \$10 per year for an individual and only \$15 a year for a family. This extraordinarily reasonable price not only includes twelve issues of The Cactus Patch but entitles you to participate in club field trips to far-off (out-of-town) and exotic places (more exotic than Bakersfield). You will also receive a nifty name tag that will be your ticket to the members only plant raffle held every meeting featuring the best plant from the raffle table! All this is in addition to the wonderful programs and people at the meetings. To become a member contact:

Maynard Moe, treasurer
Lithops44@bak.rr.com