

CACTUS CAPITAL CHATTER 1972

The Staff of CHATTER 1972 is being organized with hopes of publishing the best newsletter ever. Staff members will be announced in the next issue of CHATTER. I plan special reporting by qualified members on the subjects of Haag Memorial Cactus Garden at Desert Museum; the proposed change in the Arizona Native Plant Law; exploring Baja and Mexico for rare cacti; gardens and gardening in the Southwest with native plants; succulent culture - conservation. As always, I invite members of Cactus Club to submit to me at any time, material that they think might be suitable for CHATTER. Dependable and prompt mailing to all members in Tucson and Green Valley for 1972 is assured. Lura Fuller and Lena Marvin again take on this work which they have performed for you for several years. We are most grateful for their work.Editor: J.K. Shelby.

PUBLISHED BY

TUCSON CACTUS & BOTANICAL SOCIETY

P. O. Box 3723 College Station

Tucson, Arizona 85722

PURPOSE of Tucson Cactus & Botanical Society shall be to function continuously in study of cacti and native flora; to further the protection of cacti and native flora of Arizona; to sponsor a botanical garden in Pima County near Tucson, Arizona; to sponsor plantings of cacti and native flora in other suitable places. --- BY-LAWS of the Tucson Cactus & Botanical Society, Inc. Article I Section 2.

VOL. VIII

1972

No. 1

1971 ANNUAL REPORT OF CACTUS
CAPITAL CHATTER

Number of periods published -- each of the four quarters of 1971. Number of copies mailed to members in Tucson and Green Valley -- 320. The fine mailing work was done by Lura Fuller and Lena Marvin. Number of copies mailed to other addresses - 180. This included: 4 Tucson Public Libraries. University of Arizona: The Library, The Herbarium, Boyce Thompson Southwestern Arboretum. Desert Botanical Garden. Other cactus societies in Missouri, Texas, New Mexico, Colorado, California. Cactus clubs in foreign lands - New Zealand, Australia, Scotland. Out-of-state subscribers in 8 states USA, Africa, Asia, Europe, New Zealand. CHATTER operated in 1971 on a \$200.00 budget.

PRESIDENT HORST'S 1972 MESSAGE TO EACH MEMBER

Are YOU an ACTIVE member of Tucson Cactus & Botanical Society -- the kind of a member who would be missed? Or -- are YOU just contented that your name is on the list? Do YOU attend all meetings and mingle with the crowd? Or do you stay at home and complain both long and loud? Do YOU take an active part to help Cactus Club along? Or are you satisfied to be the kind to just belong? Do YOU ever go to VISIT a member who is sick? Or, leave the work for just a few, then talk about the "clique"? There's quite a program scheduled for 1972. That means SUCCESS if done, and it can be accomplished with the HELP OF EVERYONE. So ATTEND the meetings regularly. HELP with HAND and HEART. Don't be just another member; TAKE AN ACTIVE PART. THINK IT OVER, members -- are we RIGHT or are we wrong? Are YOU an ACTIVE MEMBER, or do you just belong?

(From Berks County Chapter of The Izaak Walton League, and including some variations by CCC editor).

CACTUS CHATTER SUBSCRIPTIONS ARE DUE AT ONCE. CHATTER is free to paid-up members of TCBS, \$1.00 to U. S. addresses, \$1.50 to foreign addresses. Please make subscription checks payable to Tucson Cactus & Botanical Society.

A TINY BAJA TREASURE

William A. Pluemer

The story of Yale Dawson's discovery of the Baja mammillaria bearing his name (C & S J1 XXXII) has always fascinated me. Perhaps because the time of his discovery roughly corresponded to that time in my life when I first became interested in cacti. However, I was to wait another forty years to collect his namesake, after two abortive attempts.

Again accompanied by cactophile Joe Kellet of Los Angeles and neighbor Ray Lucas, who came along to break in his new Blazer, we made El Arco our southern terminus, arriving there mid-morning October 31, 1971. From here we planned to take the Guerro Negro road to the Rancho La Espinita cutoff, continuing on the coastal road to Miller's Landing and beyond. But the strange vagaries of Baja's roads were to change these plans before the day was out.

Before departing El Arco, we revisited the type locality of *Lophocereus schottii* var. *monstrosus* near Pozo Aleman. Much to our dismay we found the surrounding hills heavily scarred with newly bladed access roads. Copper ore had been located some 400 metres underground in the area. Since this plant appears limited in range, our fears are great for its survival, as the new roads are encroaching from all directions. How fragile the life-thread of nature's gifts in the face of the almighty dollar!

Two miles North of El Arco we turned West toward Guerro Negro. (See map inset). The road here was one of the better ones, winding through lush desert scenery. The heavy growth of epiphytes on ocotillo, machaerocereus and cardon provided good photographic subjects. Then the desert flora began to thin rapidly toward the sea. As hard as we looked and cross-checked mileages we found no indication of the turnoff so plainly indicated on our maps. In England years ago I had left all my supersitions behind me upon completing thirty missions over Germany as a B-17 pilot. Now, somehow, the thought crossed my mind that, after all, this was Halloween, and Baja could just as well be "tricking" us as "treating" us. All doubts were removed as Guerro Negro finally appeared on a windy, chilly afternoon. In retrospect we felt perhaps we were lucky at that. The flat, monotonous country offered nothing but sand, dust, and low scrub. Not a comfortable place to camp on a windy night.

With daylight rapidly fading, the new Motel "Dunas", bravely advertising hot showers, received three more customers. Earlier arrivals had depleted the archaic hot water supply, but even cool water does wonders to Baja grime. The motel has no electricity as yet, but perhaps this is too much to ask for at \$4.80 US per night. The camp stove and lantern were set up in Ray's room, and we held a map study session over post-stew coffee.

Next morning found us waiting for the cook at the "Los Pollos" Cafe in town. Excellent bacon, eggs, toast and coffee were consumed with relish. Our tanks were topped off with 100 octane fuel at the new Pemex station operated by two Japanese gentlemen. (No English - speak Japanese or Spanish, please). Then, after two very confusing false starts, we found the road leading to Rancho La Espinita.

Taking the left fork from the now-deserted ranch site, our maps indicated a "packed sandy road". After several hours it was apparent that either the cartographer had let his imagination help smooth the way, or Baja's Summer monsoons had resurfaced the road in their own inimitable manner. The coastal region through which we were passing was uninteresting, with a multiplicity of unmarked roads appearing and disappearing at will. Long after our indicated map mileages ran out, we finally raised the sea in early afternoon.

Several spot checks along the coastal slopes failed to reveal any plant material. We continued in a Northerly direction, always taking the road closest

to the sea, but becoming more and more uncertain of our position with each passing hour. Suddenly the road turned sharply inland, disappearing over a sharp rise. Certain that we must now be running out of coast road, Joe and I decided upon one last search in a deep wash fairly close to the water's edge. Here was a very small colony of wind-splayed and dwarfed ocotillo and Torote. (Elephant Tree). Ancient and weathered, none appeared more than three feet in height.

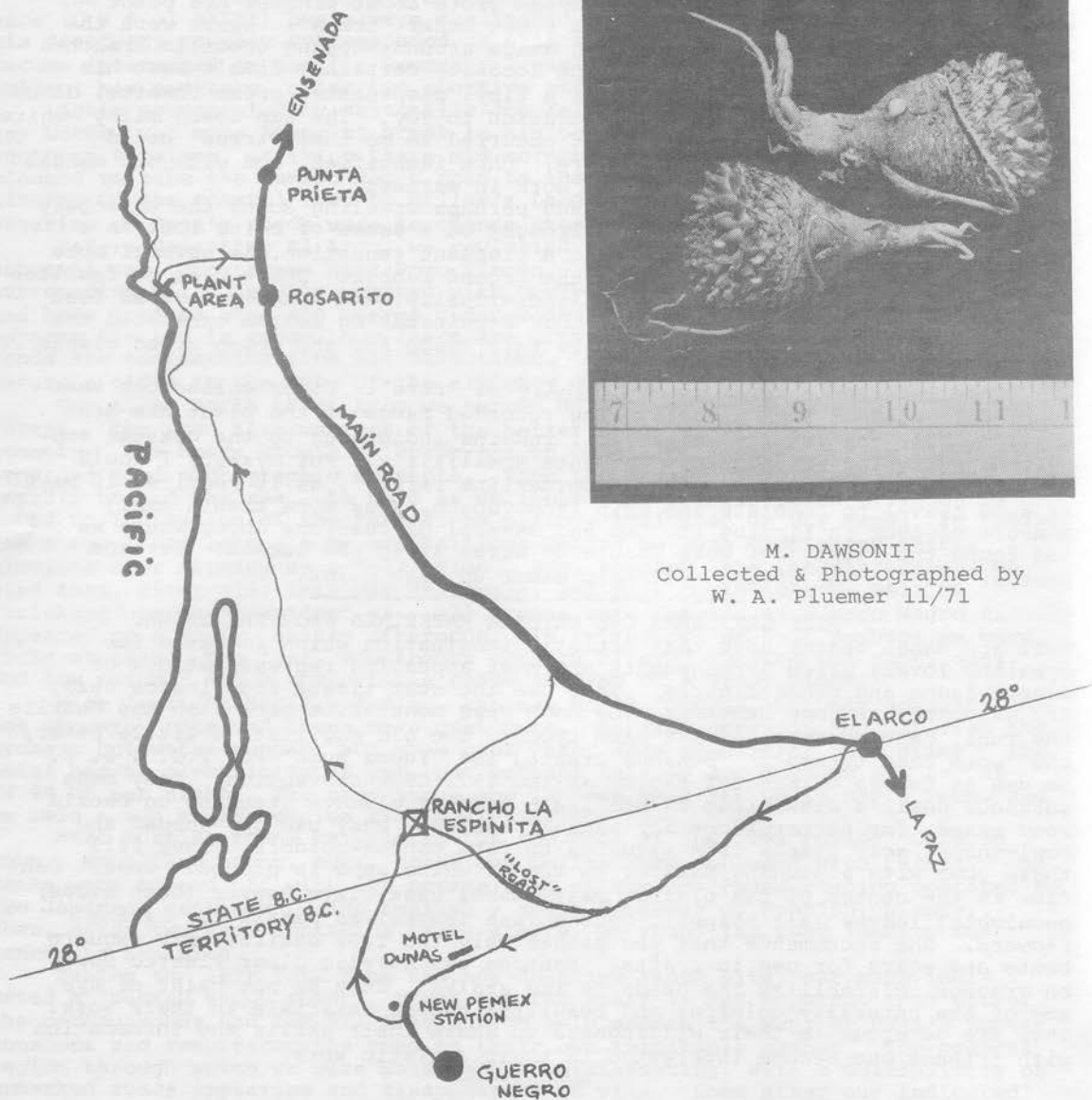
If my memory is correct, Yale Dawson wrote about finding his plant by scratching around on his hands and knees under "trees". Where were the trees in this desolate spot? Pushing aside ground-hugging ocotillo branches I began my search, although I felt the locality certainly didn't meet his description. The sudden discovery of a tiny, deep-seated green rosette, almost invisible in the rubble, turned frustration to joy. The sap oozed milky -white, confirming my find. Now, at last, it occurred to me that "trees" could mean torotes, as shrunken as they were. Once identified, and with our mental images registered, Joe and I went to work in earnest.

Squatting down, kneeling down, and perhaps crawling among the strangely stunted and awry ocotillo and torote brought on a sense of being lost in a Brobdingnagian bonzai dish. But what a pleasant sensation, as several more of the midget mams were found among the ground rubble. There were no families of *M. Dawsonii*, each had to be found individually, and usually several feet away from its nearest neighbor. An hour's painstaking search exhausted the small wash, but our aching backs were fair trade for the dozen or so plants now in our bags.

Some references refer to *M. Dawsonii* as "rare". Other collectors seem to find it without much trouble. The recorded range of the plant has been expanded over the years, but it still remains indigenous to the coastal topography centering around Bahia de Santa Rosalillita. For myself, I would rate it "hard to find", or even a "borderline rarity", as it required 10 days of hard travel to complete the trip from Tucson, plus more than a small measure of luck in finding it. We had several discussions about where we had found the plant, but were unable to agree as to the locale. Perhaps another trip in the Spring will help clear up that point.

----- FINE CRAFTSMEN USE NATURAL MATERIALS FROM THE DESERT

Earl and Mabel Benton have that artistic imagination which is basic for creating lovely dried arrangements and most appealing representations of desert fauna and other figures. They use the scar tissue from inside dead, dry saguaros, and one beholds: The Loch Ness monster, a blow fish and Charlie the Tuna, dancing frog, an elk head trophy, the old pugilist, a little otter, the "worm that turned"! Bentons created 150 "Yucca Bugs" for T.C. & B. S. to use as favors on banquet tables at the 1971 CSSA convention. They made gorgeous devil's claw birds of brilliant feather plumage standing on cholla wood bases, for centerpiece for banquet tables. They use cup-shaped and bowl-shaped scar tissue from saguaros to form candle-holders. They fill these cups with platching plaster on top of which sand is placed. Insert candles in the center of the plaster mass. Mabel uses olive leaves (both sides) eucalyptus leaves (all shapes), bottlebrush leaves, as petals for making flowers. She recommends that you gather only the 100% entirely dry saguaro boots and scars for use in crafts. Bentons use Acrylic Clear Plastic Spray on grasses to stabilize the heads on the stalks. They do not paint or dye any of the naturally colorful and beautiful nature materials in their work. They are generous in their willingness to share their skills and information with friends who become interested in their artistic work.



M. DAWSONII
 Collected & Photographed by
 W. A. Pluemer 11/71

ECOLOGY AND CACTI

Paul S. Henshaw

Ecology is more than the study of pollution. It deals with the Law of Supply and Demand as it operates in nature. It is a study of the way things, including living things, interact and affect each other. The task in Ecology is to understand the interacting forces that enable a species of plant or animal to survive and perform.

Naturally enough, cacti have their environments the same as any other thing or species of organism, and to a considerable degree we are aware of the central determinants of their existence. Among these are the soil nutrients, water, sunlight and heat (temperature). In the desert one can see, perhaps more clearly than in other environments, the interaction of these elements and how their interrelated variations make such a difference in the vigor and survival rate of plants. We are aware of how cacti are adapted to conserve moisture, for example, by having waxy surfaces to prevent evaporation, and by having chlorophyll in these same surfaces to absorb light without the necessity of moisture-losing leaves.

Cacti, like all other organisms, have their enemies--their predators and their detrimental environmental agents. There are bacteria, insects and birds that feed on them and mutilate them. Also there is man who insists on the right to have the land on which cacti live, the right to put things into the atmosphere that are detrimental to cacti, and on the right to take the water on which cacti depend.

There are also the human friends of cacti--people who admire and love them. Such people, in their desire to protect these plants and have them appreciated more, move them from natural environments into yards, gardens and parks, often not knowing nor even asking whether the new ecologic setting is one which cacti can tolerate. Thus, the friends of cacti--despite affection and good intention--may unwittingly and unintentionally be the enemies of cacti.

Now cacti, it is evident from the study of evolution, emerged on the earth by natural selection and survival of the fittest, and in time came to fit a particular ecologic niche--the niche consisting of the comparatively limited desert areas. It is a safe assumption that most cacti would not do well in other than desert environments or they would be living there already. As we know, cacti are fairly fragile, and already the friends of cacti are aware of their deterioration and are concerned about their lasting potential.

Let us take note of the change that has occurred during the short history of the TCBS. When this society was formed, less than ten years ago, there was comparatively little concern about the depletion of cactus populations. Now we have a law that prevents indiscriminate collecting of "native" cacti, and, as we are aware, discussions are occurring about the need for still stricter regulations.

Now, as easy for every one to see, human society is at the point of an intensifying impasse--not only from the standpoint of cacti, but other species of organisms as well. We have on the one hand the real estate developers, the farmers, the miners and others, who assume the right to exploit their properties as they choose; moreover, they are backed in this assumption by our system of free enterprise, by our constitution and by precedent extending back almost indefinitely in time. On the other hand, we have the environmentalists, who,

on the basis of strong scientific evidence, are calling attention to the ecologic confrontation due inevitably to occur and which is coming in our time.

Conceivably, man could live without cacti, but suppose that in the process of letting it go--assuming we might be willing to let this happen--we would let the palo verde, the oaks, the pines and the wild life, including the algae of the streams and the plankton of the seas, go at the same time, doing this as we build our highways, promote our land developments, operate our smelters, spray our crops and use our automobiles. It is now completely clear that freedom to grow and to exploit will not be feature characteristics in the period ahead.

Human society is on the verge of major change and the lowly cactus is helping us to understand the problems and helping to point the way.

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February 13, 1972 at 2 p.m. Tucson Cactus & Botanical Society will meet at Wilmot Branch of the Tucson Public Library, 530 North Wilmot Road. The program will feature a talk by Paul S. Henshaw, Ph.D., University of Wisconsin, on the subject of Ecology and Cacti. Dr. Henshaw, a biophysicist, has done extensive cancer research and has been associated with the Atomic Energy Commission.

 NEWS FROM NATIONAL CACTUS & SUCCULENT SOCIETY FOR EACH OF YOU

1. \$7.50 is the new rate that individual subscribers will now pay for the annual subscription to CACTUS & SUCCULENT JOURNAL.
2. The 7TH ANNUAL CACTUS SHOW "CACTUS EXPO '72" presented by Cactus & Succulent Society of America, Inc. is now being planned. Special attention will be given to attract entries and visitors from Affiliates all over USA. There will be openings in Open, Advanced, and Novice Classes; programs and seminars will be held during show hours and evenings; tours to interesting gardens. These efforts will entice members from other areas to spend a Cactus Vacation at Cactus Expo '72 over the long Fourth of July week-end 1972.
3. Myron Kimnach, FCSS, President of CSSA, does not believe that its present organization is satisfactory. He says the Society should be composed of chapters all of whose members subscribe to the CACTUS & SUCCULENT JOURNAL. This would make the Journal independent of present subsidizations. News items of the present "Affiliate Reporter" could be an insert or enclosure to be sent with each issue of the Journal. All members of CSSA should consider these possibilities so that CSSA can be guided in the proper direction.

SECOND ANNUAL CACTUS SHOW TO BE PRESENTED BY TUCSON CACTUS & BOTANICAL SOCIETY

Date: April 8, 9 1972. Place: Randolph Park Recreation Room, Tucson, Arizona. Hours: 10 a.m. to 10 p.m. April 8th; 10 a.m. to 5 p.m. April 9th. The national convention of Men's Garden Clubs will be held in Tucson in April 1972. Over 2000 members are expected to attend. An advance group of its members will arrive in Tucson during the week-end of our ANNUAL CACTUS SHOW. This is a world-wide group in membership. The welcoming committee of the Tucson Men's Garden Club will coordinate with Tucson Men's Garden Club in arrangements for making our Cactus Show available to the visiting delegates. Our members are now beginning to groom their plants to be shown. Scale and mealy bug must be eradicated. Plant pots must be cleaned. Plants must be firmly established in their pots. Plant owners should now decide on and secure any pot dressing and decorations they prefer. They must be absolutely sure of the correct nomenclature of all plants exhibited.

TWENTY-FIFTH ANNUAL CACTUS SHOW sponsored by the Phoenix Gazette and the Desert Botanical Garden. Date: February 20th and including February 27th, 1972. Place: Webster Auditorium, Desert Botanical Garden, Papago Park, Phoenix, Arizona. Hours: Open daily 9 a.m. to 5 p.m. Admission is free. Classifications: Cacti, Succulents Other Than Cacti, Desert Trees and Shrubs, Arrangements, Arts Desert Subjects, Educational Exhibits, Junior Class, Open: Non-Competitive. TCBS members are eligible to enter this Show. For specific information, phone 1-947-2800. Write to Desert Botanical Garden, P.O. Box 5415, Phoenix, AZ. 85010.

HAAG GARDEN NOTES: P. G. and Alta Nichols have given gifts of many plants to be placed in Haag Memorial Garden. The Nichols were close friends of Cactus John Haag who founded Tucson Cactus Club in 1960. They gave three barrel cacti and two dozen small-flowered agaves parvaflora. The 12-headed barrel cactus will be in its place in Haag Garden by March 12th and can be seen by our members there on that date. This magnificent cactus was donated to Haag Garden by Mrs. Harry Anderson, in memory of her lately deceased husband. The Haag Garden Committee met at the Garden on January 15 for a planning and gardening period of work. Don Ducote directed the work done by: Dr. & Mrs. Thos. Kesson, Mr. & Mrs. Roger Dean, Christine Henshaw, Dorothy Levering, Louise Hillgert, Alma Steininger, Elsie Niehus, Josephine Shelby.

March 12, 1972 at 2 p.m. our meeting will be held at Arizona-Sonora Desert Museum. The program will be in charge of Don Ducote, Curator of Plants there. Don will present a movie, "Desert Dwellers" as an informative portrayal of desert flora and fauna.

1972 OFFICERS OF TCBS: President: Carl O. Horst, serving a second time. Vice President: Paul S. Henshaw. Secretary: Mrs. Lois Clarke, serving a second time. Treasurer: George Snyder.

REMEMBERING OUR FRIENDS: Admiral Halloran has been hospitalized in San Antonio Texas for brain tumor surgery. Joe F. Brick reports satisfactory progress in his post-operative recovery from cataract surgery. Alta Nichols (Mrs. P.G.) tells us she is feeling as well as possible after recent major surgery. Betty Blackburn has followed a strict daily schedule for several weeks to recover from phlebitis. Mrs. Hugh Dobbins lately underwent major surgery and is reported recovering very well.

NEW PUBLICATION GUIDES CACTUS CLUBS TO SUCCESSFUL CACTUS SHOWS: C.S.S.A. has published a booklet, "SHOWS", written by its Judging Standards Committee. This serves as a guide for affiliate cactus societies that stage cactus shows. The Committee has endorsed the following Arizonans as qualified judges for cactus shows: J. A. Robbins, Sierra Vista, AZ.; Alan Blackburn, Tucson, AZ; W. H. Earle, Phoenix, AZ.

NEW ZEALAND CACTUS & SUCCULENT JOURNAL SENDS US THIS INVITATION: Write them about the plants we grow; our successes; our failures; conditions under which our plants grow well; our methods of cultivation. Please also tell them something about yourselves personally. Send them photographs of yourselves and your plants. All will be welcome. All will add to the interest of all New Zealand members. Write to: 208 Campbell Road, Green Lane, Auckland 5. New Zealand.

YOU borrowed from our Cactus Library Vol. 22, National Cactus & Succulent Journal - long time ago. Search memories! Search bookshelves! Return this valuable book TODAY to our Library. Seriously!

MEMBERS! HAVE YOU

1. READ THE BY-LAWS OF TUCSON CACTUS & BOTANICAL SOCIETY?
2. READ THE ARTICLES OF INCORPORATION OF THE SOCIETY?
3. Become well acquainted with a good percentage of our membership so that you can nominate some of them, from the floor, for officers at election time every November?
4. Read the Cactus Club History which is in charge of our Historian? It helps you become a better informed member.
5. Ever used our little Library for good information on cacti and other succulents? Why not?
6. Read your CACTUS CAPITAL CHATTER NEWSLETTER each issue, to keep abreast of pertinent news offered to you?
7. Visited HAAG MEMORIAL CACTUS GARDEN at Desert Museum?

PERSONALS;

Our members, Lee and Lura Fuller, will present the tremendous contrasts of fabulous Old-World cities and stark, barren plateaus in Spain, at the February 16th program of "Travel Through Photography" series presented by the YWCA. In the same series, our members, Mr. & Mrs. B. N. Smith, will present "Quail Trail Parade" by popular request. Their slides feature the birds' antics in all seasons against a backdrop of desert fauna and flora.

Our Czechoslovakian friend, Dr. Vit Hrabec, sent best wishes for Merry Christmas and a Happy New Year 1972 to all members of TCBS.

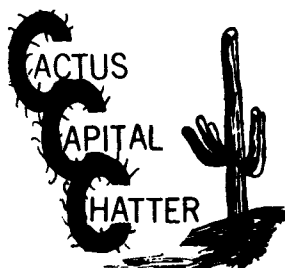
CORRIGENDUM Chatter No. 4, 1971: "Helpful Hints For Your Cactus Gardening" by Alan Blackburn. Corrected statement: "Nurseries sell Vita Bark Potting Soil with shredded redwood which is good to use for cacti needing an acid quality in the soil."

HEARING SET ON SAGUARO PARK PLANS

A hearing to receive public comments and suggestions regarding the establishment of a wilderness area within the Saguaro National Monument will be held March 25, National Park Service officials have announced.

The public hearing, required by the Wilderness Act of 1964, will be held in the City Council chambers from 1 p.m. until everyone has had a chance to speak.

Copies of the draft master plan for the 78,644-acre national monument, west and northeast of Tucson, will be available at the council chambers beginning at 9 a.m. that day.



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TUCSON CACTUS & BOTANICAL SOCIETY
P. O. BOX 3723 COLLEGE STATION

TUCSON, ARIZONA 85722

VOL. VIII 1972 NO. 2

EDITOR: JOSEPHINE SHELBY

1972 BOARD OF DIRECTORS OF T.C.B.S.:
M. H. Hegarty, J. K. Shelby, H. Nase,
N. Clarke, K. B. Brown, A. Mollison,
A. Blackburn, W. Murch, R. Dean.

1972 COMMITTEES OF T.C.B.S.:
Membership: C. Horst, P. Henshaw,
L. Clarke, G. Snyder,
Hospitality: Kay Stehulka.
Haag Garden: Paul Henshaw,
Chairman, Refreshments: Wanda
Horst, chairman. Affiliate Dir-
ector: J. K. Shelby. Publications
and Communication: J. K. Shelby.

FUTURE MEETINGS OF T.C.B.S.:
May 1972: Mr. Clyde Doran, Super-
visor of Coronado National
Forest will address us on the
theme of Desert Ecology and Plants.
June 1972: Mrs. Eillian Fisher,
member, will report on her recent
trek through Nepal.

TUCSON WINNERS IN 25TH ANNUAL CACTUS SHOW AT DESERT BOTANICAL GARDEN,
PHOENIX, FEB. 20-27

Alan Blackburn: Sweepstakes in Cacti. Trophy in Mammillaria and Best
Cactus. 2 Cups. 31 Firsts. 14 Seconds. 13 Thirds. 8 Fourths.

Betty Blackburn: 2nd, 3rd, 4th in Hoyas. Total awards: 1 First,
3 Seconds. 1 Third. 3 Fourths.

Nancy Clarke: 6 Firsts. 16 Seconds. 11 Thirds. 2 Fourths.

Joe F. Brick won 2nd in Educational Exhibits with his large tray of cacti
seedlings being readied for planting in habitat on federally-owned lands.
This is a successful project of the Pima Cactus Preservation Group.

James Robbins: Sweepstakes in Leaf Succulents. Also Trophy Winner. He
and John once again carried off many Ribbon Awards as they customarily
did when they lived in Tucson and were T.C.B.S. members. Their present
home is Sierra Vista, Arizona.

TUCSON'S LOYAL AUSTRALIAN FRIEND RECEIVES MESSAGE FROM T.C.B.S. MEMBERS:
Tucson's admirer and fine friend, Gill Hopkinson of N.S.W., Australia
sends us taped messages which we answer, as many members know. Last
month, Dorothy Levering, Joe Brick, Joe Kerns, Jo Shelby, and Scott Bate-
man taped an answer to Gill's latest tape sent us several months ago.
Scott played his organ and Joe Kerns played a guitar Flamenco selection
which added interest to the rest of our messages.

T.C.B.S. STAGES ITS SECOND INDEPENDENT CACTUS SHOW: April 8, 9, 1972 in
Randolph Park Recreational Building, 200 S. Alvernon, Free Admission.
A non-judged show. General Chairman: Louise Coan. Co-Chairman: Marge
Lash. Shelving is in charge of Alan Blackburn. Harrison Yocum is re-
sponsible for nomenclature. Plant sales are to be handled by Roger Dean
assisted by Hildegard Nase. Publicity is managed by Carl Horst and in-
cludes Channels 4 and 13 TV stations spot announcements, Green Thumb

radio program, KTUC, brochures of the national convention of Men's Garden Clubs of America, Inc., local newspapers, posters. Theme of this Show is educational in nature, stressing serious study of the cacti and other succulents. Hosts and hostesses from T.C.B.S. will circulate among visitors to answer their various questions. There will be commercial exhibits. Plants will be sold.

THE HAAG GARDEN PROJECT

During the past several months, members of the Tucson Cactus and Botanical Society have done more than 200 man-hours of work in the Haag Garden at the Arizona-Sonora Desert Museum (6 work days, an average of 6 people per work day, and an average of 6 hours per person per work day, approximately).

The Garden is now in fine shape, and the more so because of a unique 12-headed barrel cactus and two 6-headed barrel cacti, all Ferocactus wislizeni. The Garden, it is believed, will be much enjoyed during the summer and fall by visitors who have a curiosity and love for Sonoran Desert cacti in semi-natural settings. The Garden is not as perfect as it could or perhaps should be. More plant groups are needed and the present clusters of plants need enlargement to make the best impressions.

The working groups, consisting of people from ages 13 to 83, who have enjoyed the plants, the sun, the visitors and the company of fellow workers, have included: Mrs. Dorothy Levering, Mr. and Mrs. Roger Dean, Mr. and Mrs. Allan Mollison, Mrs. Louise Hillgert, Mr. W. D. Haselton, Dr. and Mrs. Thomas Kesson, Mrs. Josephine Shelby, Mr. Joseph Kerns, Mr. Scott Bateman, Elsie Niehus, Alma Steininger, Mr. and Mrs. Donald Ducote (Mr. Ducote of the Museum Staff), Mrs. Henshaw and myself.

Plant donations have come from TCBS members and non-members as follows:

Mr. James Robbins--now of
Sierra Vista, Arizona.
250 plants, including:

- 50 Echinocereus pectinatus
var. rigidissimus
- 12 Coryphantha recurvata
- 50 Mammillaria sp.

Additional plants of:

- Echinocactus
- Ferocactus
- Lemaireocereus Thurberi
- Agave sp.
- Echinomastus

Mr. P.G. Nichols, 4471 N. Pomona Rd.
Tucson
43 plants, including:
15 Agave sp.
25 Agave Shottii
3 Ferocactus sp.

Mrs. Harry Anderson, 4333 E. Monte
Vista Dr., Tucson
9 plants, including:

Mrs. Harry Anderson cont'd.

- 1 600-pound 12-headed
Ferocactus wislizeni
- 2 Opuntia leptocaulis
- 4 Opuntia fulgida var. mammillata
(montrose form)
- 2 Opuntia arbuscula

14 plants, not native to the area,
including:

- 5 Agave sp.
- 1 Mammillaria
- 2 Echinopsis

Mrs. Louise Hillgert, 1225 E. Adelaide
Dr., Tucson

- 16 plants, including:
- 10 Opuntia santa-rita
- 6 Agave sp.

Mr. H. D. (Buzz) Braun, 5248 E. 20th St.
Tucson

More than 60 plants:
Materials from the Rose Braun Estate
on Tangerine Road, Tucson (cont'd.)

| | |
|--|--|
| Rose Braun Estate cont'd. | Mr. and Mrs. Carl O. Horst, |
| 2 250-pound multiheaded | 5656 S. Joseph Ave., Tucson |
| <u>Ferocactus Wislizeni</u> | 20 plants (partial list) |
| 15 <u>Ferocactus Wislizeni</u> (regular) | <u>Opuntia ursina</u> |
| 15 <u>Echinocereus Fendleri</u> var. | <u>Echinocereus dasyacanthus</u> |
| <u>robustus</u> | <u>Idria columnaris</u> |
| 1 <u>Carnegiea gigantea</u> | <u>Ferocactus viridescens</u> and var. |
| 10 <u>Opuntia Engelmannii</u> | <u>littoralis</u> |
| 20 <u>Opuntia fulgida</u> and | <u>Carnegiea gigantea</u> |
| <u>Opuntia acanthocarpa</u> | |

Mr. and Mrs. Alan Blackburn, W. Sweetwater Drive, Tucson
 Many valuable contributions in the past, and recently 1 Opuntia invicta

Authority for the above classifications for Arizona cacti is Kearney and Peebles, "Arizona Flora". 1960. 2nd Edition and Supplement.

Both the Society and the Museum are especially indebted to Mrs. Harry Anderson for the 12-headed barrel cactus given in memory of her late husband, and to the heirs of the Rose Braun Estate for the two 6-headed barrel cacti, given in memory of Mrs. Rose Braun, a resident of Tucson from 1925 until her death in October of 1967. They are indebted also to the other donors and to those who have given of their physical strength.

Some of the donations were found not to be native to the Sonoran Desert region and accordingly are being retained for other use by the society.

Obtaining cactus and agave plants for the Haag Garden is now more of a problem than it was when the Garden was first started. This is because of conservation attitudes and restrictions. At the present time, we are limited mainly to gifts from private collections, from land owners who are having land cleared for various development purposes, and from outside the state. Some collecting can be done with the use of special permits, but this approach has not been utilized by the present Haag Garden Committee as yet.

Various things need doing in the Haag Garden, and high on the list of priorities would be arranging for collecting trips, redevelopment of the gateway and present ramada, and development of a rest area at the lower end of the Garden. Donations for support of these and related activities would be helpful and greatly appreciated. Cacti especially needed at the present time are various columinar types; and other plants needed are Agave murphii, Agave coussii, Yucca baccata and Yucca Shottii.

.....Paul S. Henshaw

The 1972 program of Tucson Men's Garden Club includes Alan Mollison's well-known moving pictures of the opening of the various budding native desert flowers.

-----Men's Garden Club news submitted by J. Vick Merrill, TCBS member.

JOHN HAAG MEMORIAL STANDS IN RANDOLPH PARK: a grove of 18 stately trees located south of 3256 Camino Campestre in Randolph Park, Tucson, Arizona, stands as a living memorial to the deceased members of the Tucson Men's Garden Club.

(cont'd. page 4)

"Cactus John" Haag was a member of this Garden Club which planted one tree to memorialize him. His name is engraved on the plaque in the grove, among the names of the other 17 deceased members. "Cactus John" founded Tucson Cactus Club in 1960 and lived only two years thereafter.

SAGUARO UNDER GLASS

Lewis J. Feldman

Carnegiea gigantea, more commonly known as the Saguaro, is a familiar plant to those of you living in Arizona. Yet as dominant a part of the scenery as the Saguaro is, relatively little research has been carried out on the growth and development of this plant. Now, however, with the decrease in rate of natural propagation of the Saguaro, increasing attention is being directed toward them.

If one observes these giants in their natural habitats, they can be found varying in size from seedlings, of a half an inch or so, up to plants 50 feet or higher. Saguaros usually produce arms, branches, when the plant is 50-80 years old, and these cacti can attain an age of up to 200 years. Thus, for a person to study the life cycle of these plants, in their natural habitat, would require that the investigator begin his work when he was very young, and furthermore, that he live to be very old. And even if age weren't a problem, our mythical scientist would have to be able to relate each aspect of the environment, for example the effect of disease, drought, etc., to what was actually going on in the whole plant. Clearly, with such a myriad of environmental factors all operating at one time, the chance that an investigator would be able to deduce which stimuli are responsible for what aspects in the development of the Saguaro, is an almost insurmountable task. Thus, studying a plant in its natural habitat often has a number of drawbacks, and meaningful results are therefore lacking.

To circumvent problems encountered in the field, botanists have devised ways of growing plants in test tubes, in special environmental chambers. This technique has several advantages. First, it permits one to grow the Saguaro in an environment in which neither drought nor disease are present, unless they are intentionally introduced. Second, various chemicals, in known quantities, can be supplied to the plants, and changes in growth, if any, can then be directly linked with the application of these chemical compounds. Third, growth in the test tube frequently permits one to speed up the life cycle of a plant.

With these three points in mind, Saguaro cacti were grown from seeds in test tubes, in a controlled environment, and with known chemicals in the nutrient medium. The test tubes in which the cacti were grown were filled about 1/4 of the way with a nutrient substance similar in texture to that of solidified jello. Seeds were then placed on this nutrient medium and germinated. The results of this work are drawn from experiments which have been carried out over a two year period. At the outset, however, I must stress that these results are preliminary, and that other experiments are needed to either confirm or refute them.

The original intention of this work was to try to determine what factors accounted for the branching pattern observed in mature plants. As most of you no doubt have noticed, the Saguaros reach a certain size, and then for some reason begin to branch. To elucidate the possible system(s) controlling this branching pattern, various known plant hormones were added to the nutrient medium in the test tubes, and then seeds placed

on this medium and allowed to germinate. It was found that after several months growth in the medium containing a hormone, known as BA, that a form of branching could be induced in plants less than one year old. Since BA is known to exert a control on patterns of branching in other flowering plants, the hypothesis is that here too BA or a BA-like natural hormone in the Saguaro is responsible, or at least partially so, for the branching observed in mature 80 year old plants. The question then arises as to why seedlings, and indeed 40 year old plants, found in nature, are not normally branched. Why must the Saguaro be 50 to 80 years old before branching is observed? A possible explanation is that this hormone is not produced by the Saguaro until it reaches a certain age. An alternative explanation might be that the hormone is always present in the plant, but either the concentration of the hormone is such, or the ability of the plant is such, that a response of the Saguaro to the hormone isn't favored until the plant attains a certain age.

Another hormone, called GA, when added to the nutrient medium, causes seedlings to grow more rapidly than plants in identical tubes, except lacking GA. The GA might thus have practical applications in the production of larger Saguaros in a shorter time than is customary under natural conditions.

Growing Saguaros in test tubes not only allows us to observe the effects of hormones on these plants, but also may have a number of other potential uses. For example, this method would permit one to vary the nutrient medium and thus select that combination of chemicals which would provide optimal growth for the cacti.

Perhaps, however, the area in which test tube growth has the greatest potential is in aiding in the battle against the various pathological diseases affecting Carnegiea gigantea. Since the cactus is growing by itself in the test tube (this is called sterile culture, since fungi, bacteria and other micro-organisms aren't in the test tubes), if we intentionally introduce bacteria into the culture, and obtain a certain effect, we can therefore attribute that effect to the organism added. The problem with analysing diseases of plants in the field, is that a multitude of variables, not just the bacteria, might have induced the damage we observe in cacti growing in the field. Thus, this method allows us to pinpoint what type of damage an organism does to the Saguaro. Test tube growth is furthermore useful in that it permits the investigator to observe the effects of various fungicides and bactericides on both the micro-organisms and the Saguaro.

By growing large numbers of Saguaros in test tubes, and then infecting them, one has, at hand, many cacti known to be infected with a certain disease. This method would thus greatly increase the chances of discovering ways of countering disease. The plant pathologist can now experiment with a vast number of potential anti-fungus/anti-bacteria compounds with the hope that one will be found which will not injure the Saguaro, and yet still be a potent inhibitor of microbial growth. Thus, a great deal of time and effort are saved, since now the investigator doesn't have to spend his time in the field looking for cacti infected with a particular disease. He can thus more profitably spend his time in the lab, and should he discover a likely compound, then field trials would be in order.

Thus, growth of the Saguaro (and in fact many other members of the Cactaceae) in test tubes, has great potential. The challenge at present is to use the new botanical techniques, pioneered and perfected on other plants, on members of the Cactus family.

I should like to acknowledge the co-operation of Mr. Glenwood Bradley and the staff of the Environmental Test Facility, U. S. Army Electronic Proving Ground, Ft. Huachuca, Arizona, for making much of this work possible.

(Editor's note: Presently, Mr. Feldman is a graduate student at Harvard University, working for his Ph. D. degree in Biology. His interest in the Saguaro began while he was stationed at Ft. Huachuca in late years. We thank him for so generously writing this report for our newsletter.)

JUNGLE IN THE DESERT

Harrison G. Yocum

The Sonoran Desert is full of many wonderful surprises. Years ago, it would have been absurd to think that a jungle could ever exist in the desert. But, through the ingenuity of scientists of the Environmental Research Laboratory in applying plastic inflated greenhouses with controlled temperature and humidity, the "jungle in the desert" came into existence.

The primary purpose of the Environmental Research Laboratory (ERLab) is, of course, the experimentation with certain types of plant-growing structures, and with vegetable production for arid lands. Our concern here is with the tropical jungle of plants that arouses much interest upon entering the Laboratory. Temperature and humidity are controlled by circulating fans (with water heated in winter and cooled in summer) in a closed system. Excess moisture condenses inside the top of the greenhouse from which it drops and re-evaporates, thereby simulating the water cycle. Actually, very little water is used in maintaining the plants, particularly during the winter months when practically no water is applied in the high humidity chamber. Hence, the same water is used repeatedly. This is, obviously, of profound significance in conserving water necessary for the ever increasing world population.

The variety of plants growing here is evidently the largest such collection in this area, and possibly even in Arizona. It is, virtually, a Botanical Garden that fills a dire need for the Tucson community. The collection was initiated upon instructions of Carl N. Hodges and Dr. Richard Kassander (of the Institute of Atmospheric Physics, Univ. of Ariz., under which ERLab is functioning.) Consequently, Warren Jones of the Landscape College, Harry Yocum and the author made two trips to select plants from various nurseries in California. This was done in a U-Haul van early April and May, 1969. Large trees and miscellaneous plants were shipped by large trailer truck in June of the same year. Most of the plants were obtained from Horace Anderson and Lawndale Nurseries in California. In addition, many were donated by the Los Angeles County Arboretum and by the author. A few came from Warren Jones (especially some choice varieties of bananas), Longwood Gardens and other friends.

The result is a total list of approximately 418 species in 230 genera, and 70 families of plants. To mention just a few examples, there are 8 varieties of flowering bananas, the delicious Chinese Dwarf Banana, many araliads, philodendrons, bromeliads, orchids, gingers and palms. Among the host of variegated plants are Crotons, coleus, Calatheas and Screw-pines (Pandanus) to name just a few. Some of the immature tropical fruits are mango, sapote, avocado, papaya and guava.

The plants were placed in the natural soil, which was treated with the addition of peat moss and silver spade shredded redwood bark for conditioning purposes. Granular fertilizer was also mixed into the soil. Layout was drawn by Warren Jones, and the plants placed 'in situ' to give the tropical garden effect. Actually, there are two of these which are conveniently called "attached chambers". There is the large high-humidity chamber (80-90%) at the main entrance, and the lower humidity chamber (ca. 50%) attached to the office areas. Temperature is maintained around 65-80% F. in both chambers.

Many visitors, including schools and Garden Clubs, frequent the Environmental Research Laboratory, located at Tucson International Airport, and are impressed with the beauty and variety of the display plants which fill a great aesthetic need.

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TREKKING IN THE HIMALAYA MOUNTAINS IN NEPAL

We call it hiking; the British call it "trekking".

We trekked for twenty-six days, covering some 250 miles in the Kali Gandaki Gorge of the Himalaya Mountains in Nepal. It was winter; that meant that there were few flowers and fewer birds. It also meant that we had an uninterrupted twenty-six days of clear, dry and almost cloudless weather and were always able to see peaks that have challenged climbers from time long past.

Our trek took us through many changes of terrain. We started to walk from Pokhora, some 175 miles east of Kathmandu, the capital of Nepal. Pokhora lies at approximately the same latitude as Hermosillo, and the same altitude as Tucson. To the north are gently rolling hills, the vegetation of which is surprisingly similar to that of Mexico. Parallel evolution has produced many plants of unrelated genera like those of Mexico, but which bear similar appearances and niches to many plants in the Arizona Sonora Desert.

Some of our own native plants have been introduced there and are living in similar terrain. Some of their native plants that are familiar to us are ephedra, poplar and orchids. There is also a poinsettia there that grows to a height of 25-30 feet and towers over the adjacent homes and buildings. It was odd to see it flowering with the peaks of glacier covered Annapurna in the background.

From Pokhora we climbed to 10,503 feet through a rain forest rich in rhododendron, azalea and chrysanthemums. The rhododendron trees housed many orchids, some of which were still in full bloom. The blooming azaleas provided a vestige of a late summer.

From the rain forest we descended into the Kali Gandaki Valley and headed north, again through desert and sparse vegetation. There were juniper trees twisted from the winds and scrubby vegetation

similar to our own Chaparral. We climbed then into thick pine forests that very much resembled our own Catalinas. The pine forests were laced with brooks and streams from the melting ice and snow of the higher elevations. Sedum and grasses grew along the banks of many of these waters. The pine forests took us right up to an arid area covered by low spiny plants that much resembled our own bush cholla. It bears a small yellow flower, in the springtime, but does not resemble a cactus flower. There were also other plants that looked like our own gray thorn, wolfberry and acacia. However, without the flowers, they were difficult to identify.

We left the spiny and scrubby vegetation. Now we were in the glacier country of the Annapurna Massif. We were at Tilicho Pass. From Tilicho Pass we could see straight into Tibet, now a part of Red China, inaccessible to us. The Nepal Government does not permit trekkers to go beyond this point. As far as the eye could see, there was no vegetation at all.

At 15,300 feet we established a base camp. Other than minor breathing difficulties at this altitude, there were no problems until we tried to pick up our packs to climb further.

By the time we became accustomed to the altitude, it was time to trek back through other areas that bore similar life zones to the ones we encountered through our climb.

Lillian S. Fisher (Mrs. Bernard) Member of Tucson Cactus & Botanical Society

I N M E M O R I A M



EDWARD R. HALLORAN
REAR ADMIRAL USN (RETIRED)

Rear Admiral Edward R. Halloran (Retired) passed away on March 22, 1972 in Tucson, Arizona. He and Mrs. Halloran moved to Tucson in 1965 where he served as chairman of the Massing of the Colors Ceremony at the University of Arizona from 1969 to 1971. He was a veteran of both world wars and a winner of 17 medals in the Army and the Navy, among which were the Purple Heart, the Army Commendation Ribbon, and the Legion of Merit. He was president of the Tucson Retired Officers Association, and was a member of the Pima County Crime Council.

Tucson Cactus & Botanical Society proudly chose him as its president for 1967 which is recalled by our members as one of our memorable years of activity and high interest. Admiral Halloran was buried with full military honors at Arlington National Cemetery on March 27, 1972. We respected and admired "The Admiral" wholeheartedly. The members of Tucson Cactus & Botanical Society express to Flavia, his wife, our sincere and heartfelt sympathy.

*"We have no dearer word for our heart's friend,
For him who journeys to the world's far end,
And scars our soul with going; thus, we say,
As unto him who steps but o'er the way--
'Good-by.'"*-----G. D. Litchfield.

CACTUS
CAPITAL
CHATTER



NEWSLETTER OF TUCSON CACTUS
AND
BOTANICAL SOCIETY

Affiliate of the Cactus
and Succulent Society of
America, Inc.

P.O. BOX 3723 COLLEGE STATION
TUCSON, ARIZONA 85722

VOL. VIII 1972 No. 3

EDITOR: JOSEPHINE SHELBY

WELCOME TO THE AMAZING WORLD OF
CACTI AND OTHER SUCCULENTS:

Collecting Cacti and Other Succulents can be fun for all ages. All cacti are succulents, but not every succulent is a cactus. "Succulent" merely describes a plant which stores water within its tissues. This is a low cost hobby. Spend as much or as little time and money on it as you wish. Collections may range from a few dozen plants in yards, patios or even sunrooms to hundreds of varieties.

Plant Sources: You may buy seedlings or mature plants from nurseries. But no-cost sharing of plants is a way of life among friendly cactus hobbyists.

Space Required: Keep them in pots or in the ground - or even in pots sunk in the ground. The latter way

makes you an instant landscape artist. There is a plant size, shape and color for every space. "Green Thumbs" Unnecessary. With reasonable care, these exotic plants will respond with some of the brightest, most varied and beautiful flowers in all the plant kingdom.

YOU ARE INVITED to join the CACTUS & SUCCULENT SOCIETY OF AMERICA. It brings together persons with a common hobby; it helps its members to grow and enjoy unusual plants; it aids in the conservation of such flora; it disseminates knowledge of the culture and the naming of cacti and other succulents. Its dues include subscription to a fine bi-monthly Journal with world renowned contributors. Also, other advantages. Write to Cactus & Succulent Society of America, Inc., 2631 Fairgreen Ave., Arcadia, Calif. 91006.

Cactophiles of TCBS can plan their 1973 vacations around the C.S.S.A. Convention, May 7-11 to be held at Sands Hotel, Las Vegas, Nevada. This can be followed with some of the post-convention field trips.

SAGUAROS' DEATH TOLL INCREASING: MONUMENT OFFICERS DISTURBED BY TREND.

Saguaro National Monument officials are disturbed about the increasing killing and injuring of the giant saguaros and other wildlife in the park. In addition to occasional killing frosts, vandalism, and subdivision development, car accidents have taken a toll of the huge saguaros. Recently a car driven by a 19-year-old girl slammed into a 75-year-old saguaro that weighed nearly two tons. The saguaro was uprooted and killed. It takes an estimated 200 to 250 years for saguaros to reach full maturity. Because of a variety of reasons, including ecological ones, saguaro seedlings are not surviving as well as they once did. The posted safe speed of 25 miles per hour within the Monument is being ignored by too many visitors driving over the narrow, winding loop roads. --quoted from Arizona Daily Star 3/13/71.

1 9 7 2 CACTUS SHOW OF TUCSON CACTUS AND BOTANICAL SOCIETY

1012 visitors enjoyed this successful Show which exhibited choice plants owned by our following members: Harrison Yocum, Kay Stehulka, Hildegard Nase, Carl and Wanda Horst, Helen Housman, Louise Coan, Nancy Clarke, Louise Hillgert, Goldie and Roger Dean, Paul Henshaw, Dorothy Levering, Betty and Alan Blackburn. Non-members exhibiting were: Louis Fodor of Green Hand Nursery, Dr. Archie Deutschman, J. F. Brick. At the front of the Exhibition Room were 3 huge posters artistically created by Chairman Coan to stress the educational theme of the Show: What Is A Cactus? What Is a Succulent? Five Traits That Identify a Cactus. Exhibits included methods of propagation--Hildegard Nase's tray of Mam. Sheldonii seedlings; Louise Coan's dish of seedlings; Joe Brick's tray of native cactus seedlings for reforestation of native species which won a red ribbon award at the 1972 Cactus Show, Desert Botanical Garden, Phoenix. Harrison Yocum showed 14 South African euphorbias. A poster told of cactus as food. Other themes demonstrated were Aloe as First Aid material; Don't Be Pot-Bound, Use Anything That's Around; Dish Gardens; dry, natural uncarved desert material as ornamentation. Plant groupings fell under Mexico, S.A., Africa, U.S.A. Unusual grafts and crests added great interest. Louis Fodor of Green Hand Nursery showed some very unique ones. The Nomenclature division of the Show failed to label all the plants. This is necessary and important detail in a plant show. A number of visitors inquired about the "common names" of cacti, many of which were missing. President Carl Horst stated that he was really pleased with the quality of plants exhibited and that indeed they were of quality for a judged show. Many members agreed. QUESTION: Why did the great majority of our members fail to take advantage of this fine opportunity to exhibit some of their plants?

Credits for the Show's success: Louise Coan as general chairman. Roger Dean as Plant Sales Chairman. Dorothy Levering for advertising. President Carl Horst managed publicity including TV Channels 4 and 13 spot announcements; KTUC Green Thumb radio program, local newspaper reports, and a nation-wide announcement through brochures of the national convention of the Men's Garden Clubs of America, Inc. Wanda Horst and her refreshments committee - Leona Pagel who donated cakes, Marjorie Lash, Rilla Stonechek, Anna Marie Mollison, Betty Blackburn, Mary Hammond, Fannie Greiff, Louise Hillgert, Eliza Merrill, Peg Busch, Loleta Schacht. By arrangement between Tucson Men's Garden Club, host to their National Convention the week of our Cactus Show, and President Carl Horst, the Horsts paid for refreshments. TCBS stands to benefit by receiving any profit over expenses. Credit goes to all those members who served behind counters all over the Show. Credit is due Gene Reid, Superintendent of Tucson City Parks and Recreation Department and to his staff, Gene Laos and Rosemary Crist.

Special guests were a goodly number of delegates to the National Convention mentioned above. A most interesting visitor was Mrs. Catherine Reedy who was a very early member of Tucson Cactus Club during the early 1960's. She still grows cacti and specializes in unusual trees such as horny toad tree, carob, jacaranda. She owns one of the largest Parkinsonii palo verde trees in Tucson. A cross section of Show visitors proves the wide appeal that cacti have. An IBM Development Engineer of UA, a native Swiss, expressed great amazement at beautiful flowering cacti. Dr. L. A. Carruth, President of Tucson Men's Garden Club, escorted to our Show, Dr. J. P. Baumgart, national president of Men's

Garden Clubs. Dr. Vernon J. Forney, Golden, Colo., (Retired Ass't. Surgeon-General, USPHS) expressed great interest in cactus seedlings and in all flora of the Arizona Desert. Mr. and Mrs. W. Hubert Earle of Desert Botanical Garden were enthusiastic visitors. Winifred Langenberg who is "Windy" in her most interesting column in Arizona Daily Star, expressed pleasure in seeing so many plants in bloom. Mr. and Mrs. Frederick Littman, formerly of State Agricultural College, Farmingdale, Long Island, N.Y., were very interested visitors and have now joined TCBS.

Plant Sales. Ten members sold a total of 827 plants, which, added to 22 books sold, garnered \$147.27 for our treasury. Mrs. Christina Walker of our club made a gift of 46 plants to us to be sold. Their sale brought us \$23.50. To you, Christina, our friend and a long-time and faithful member, the thanks of the entire club.

And last, but by no means least, in any sense of the word, there was our Mystery Visitor from Oregon who told CHATTER editor that he preferred to remain incognito. He came to our Show in search of Pink Lady. He said that to be able to identify her would mean a great deal to him. Pink Lady was not at our Cactus Show. As far as we know, she is still eluding our Mystery Visitor.

SAN PEDRO NOLASCO ISLAND

The late afternoon of February 25, 1972, brought a dense off-shore fog bank to San Carlos Bay. An easy breeze filtered the white mist through the harbor entrance and washed it over the surrounding hills. Watching this sight from our villa patio, we wondered if a weather change was in the offing for the following day. At 5:30 a.m. next morning our fears were laid to rest. Serenely calm, the moored boats rested in their slips, outlined by a descending moon. Today, I would certainly add new specimens to my "collected at the type locality" file.

San Pedro Nolasco Island lies but 20 miles due West of San Carlos Bay. A slim, volcanic spine thrust abruptly from the sea, the island rises to 1071 feet a very short distance inland. Because of its precipitous rock outcroppings at the water's edge and steep canyons and slopes, few collectors have visited San Pedro over the years. Mammillaria multidi-gitata and Echinocereus Websterianus are known only from San Pedro. The beautiful white-spined Mammillaria evermanniana occurs here, on Cerravlo Island, and possibly near Loreto on the Baja Peninsula. Since the latter is found only along the highest points of San Pedro, our plan was to secure it first before we might run out of energy.

Dr. and Mrs. Archie Deutschman, with daughters Ann and Joan and myself loaded our packs and gear aboard shortly after 7 a.m. Within thirty minutes we were easing through the awakening boat traffic toward the open sea. San Pedro is easily visible upon emergence from the harbor, and from that distance appears somewhat demure and nondescript. After an hour and a half of cruising, our first impressions were being rapidly revised. The binoculars brought us nothing but sheer rock, deep canyons and steep, barren rock slopes further toward the crest. Our first

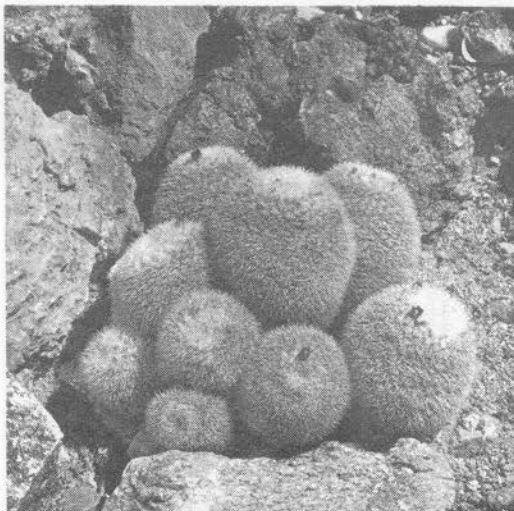
choice of a landing site turned out to be a true cul-de-sac which would challenge any Alpinist. Working the Easterly shore, we decided upon the mouth of a deep canyon which led to a more gently rising inland slope. By this time the girls had decided lolling on the boat would be much more fun. The dinghy was launched and amidst the raucous thundering of a disturbed sea lion colony we put ashore on a small gravel area tucked between huge boulders.

The dinghy secured, the canyon and slope above took on a more severe and challenging look. Who but true cactophiles, sensing new plants for their collections, would ever attempt this? Our first excitement came with the knowledge that our very slow progress was being monitored by numbers of large rock iguanas, whose curiosity over our invasion of their domain made them easy objects of observation. Some of these lizards appeared to reach a full three feet in length. Within the canyon we paused to study the astounding root system of two fig trees (*Ficus Palmeri*) atop the canyon wall. For some thirty feet their white roots lay exposed against the cliff as they searched for water in the canyon bed below.

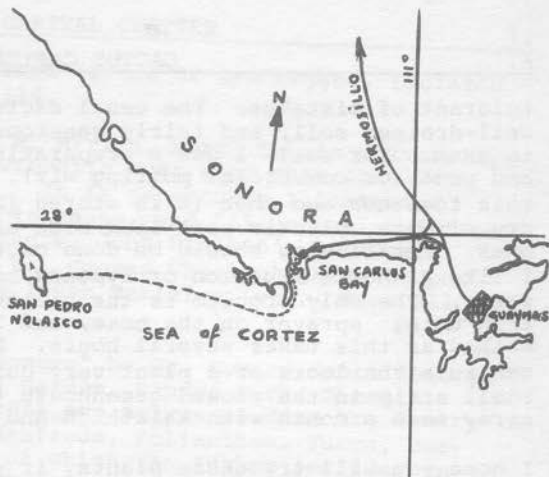
Hacking through ground cover and slowly working our way up, over and around huge smooth boulders, we finally emerged from the canyon into more open surroundings. The incline remained steep, calling for careful footholds along the bare rock outcroppings. The first white clusters of *Mammillaria multidigitata* dotted the rocks everywhere, interspersed with groupings of the golden spined *Echinocereus Websterianus*. But our immediate goal was upward, and the next hour found us soaking wet from struggling to the island's crest. Here we found a subtle change in ecology, with low shrub, dwarfed trees, colonies of *Pedilanthus* and pockets of rich, humus soil. The effort was not in vain. The discovery of the first cluster of *Mammillaria evermanniana* led to several more in the immediate area. The plants were showing flowers, but were not abundant nor easy to find. Our schedule called for thirty minutes along the crest, which was sufficient time to give us each the few plants we could carry. Prior to debarking, the Captain had briefed us on the occurrence of sudden afternoon winds which could cause a problem in getting back to the boat. Therefore, we wanted to be back on the "beach" shortly after noon if possible.

Jubilant over the new finds, we started our descent, selecting small specimens of the other two varieties to fill in all available space. The slope was sparsely populated with *Pachycereus Pringlei*, *Lemaireocereus thurberi* and two species of *Opuntia*. San Pedro is not known to support other types of cacti, nor did we see any unreported varieties.

The return to San Carlos was as smooth as the outbound trip. Not being a good sailor, my imagination had run freely over the possibility of acute seasickness on top of near complete physical exhaustion. Fortunately, the combination was never tested. In two hours we were again moored at the slip. Here the local boat watchers were treated to a rare sight of three "fishermen" debarking with full back-packs, hiking boots, mattocks and canteens. I have many friends whose quizzical and oft-times biting asides about my hobby have sometimes distressed me in this age of enlightenment....There are times, however, when I am tempted to agree. -----William A. Pluemer.



Mammillaria evermanniana 2/72
 William A. Pluemer
 Coll. San Pedro Nolasco Island
 Gulf of California



GROWING MAMMILLARIAS SUCCESSFULLY

Mammillarias are especially appealing to me for several reasons. The plants are interesting to observe even when not in bloom, due to the variety in their color, texture, and shape. This contrasts them to a genus like *Echinopsis* which has gorgeous flowers but otherwise uninteresting because they all look alike. Mams remain a comfortable pot size and do not explode in every direction. The flowers are charming and profuse, and even a small collection can have blooms all year.

My collection has around 200 varieties of mams. Some are special pets and not necessarily due to their rarity. One is the common *M. bocasana*; this bit of fluff is irresistible. It does need a shallow pot and cautious watering. Mams *plumosa* and *Schwarzii* are "pat-able" types. Like *M. bocasana*, *M. plumosa* is touchy on overwatering, but here again, a shallow pot compensates for this and allows it to be watered as frequently as the others. *Schwarzii* is soft and silky as a Persian kitten. It clusters quickly and has appealing pinkish flowers nestling in its white hair. Another favorite is *M. Spinosissima*, its red spines shining in the sunlight. Equally pretty in this respect is the red-spined variety of *M. rhodantha*. *M. nivosa*, with its distinctive cluster of golden spines against a blue-green body, could be a favorite if the red spiders will ever leave it alone. For flowers, can anything surpass *M. glochidiata* whose blossoms look like tiny single pink roses! Or the dainty candy-cane striped flowers of *M. perbella* and *M. bachmannii*! *M. goldii* has a flower larger than the plant and holds it up like a parasol. There is not room to list all the beauties, and I know the omitted ones will give me a reproachful look next time I enter the greenhouse.

I feel most mams should be grown in pots rather than in the ground. They can then be enjoyed at eye level. Also they can be moved to a protected spot in the winter as the majority are natives of Mexico and will freeze in our climate. Most of them are simple to grow and

tolerant of mistakes. The usual cactus advice of filtered sunshine, well-drained soil, and fairly generous watering in the summer applies to them. For soil, I use a preparation of one part sand, dirt, perlite, and peat (or commercial potting mix). The wheelbarrow is handy to mix this together and then it is stored in a garbage can. In this hot, dry climate, plastic pots look nice and keep the roots cooler than clay ones. Fertilizing should be done once a month in the growing season. I like Fish Oil Emulsion or Hyponex because they dissolve quickly in water. The only problem is the plants have to be hand watered, rather than using sprayer on the hose, and I would like to find a faster method as this takes several hours. Red spider is my main pest. It can ruin the looks of a plant very quickly. To fight it, I hung a Shell strip in the closed greenhouse this past winter, and now plan to spray once a month with Malathion and Spectracide.

I hope you will try these plants, if you haven't already done so, and derive as much enjoyment from them as I have. --Nancy Clarke

 CULTIVATION INSTRUCTIONS FOR CACTI AND SUCCULENTS

SOIL REQUIREMENTS. Cacti must breathe through their stems and roots. Stems cannot take care of a plant's oxygen needs completely. Roots must take in extra oxygen from the soil. Oxygen can pass rapidly through a loose, porous soil -- NOT a wet, packed soil. Soil around cactus roots must be loose and porous at all times. Sand is a good soil loosener - sharp, coarse sand which may be mixed half-and-half with good soil. Some cacti and succulents will require a somewhat richer mix than this. Others may grow best with more sand. But all of these will live safely in a general mix. LIGHT REQUIREMENTS. It is safe to place plants in subdued sunlight for a good part of the day. Sun-loving plants insisting on more sun or full sun, will indicate their desire by starting to send up small elongated stems from normal broad stems. Give them more sun at once. Shade-loving plants may show sunburn even with half-shade. Give them more shade. Observe plants often for any signs of trouble. FERTILIZERS. Cacti in general do not like rich soil. They are slow growers and take in minerals at a slow rate. They prefer the soil around their roots to contain only a small amount of minerals at a time. A bit of water-soluble fertilizer like Hyponex may be poured in the pot and watered in. Do not fertilize oftener than once in 3 months during the growing period. WATERING. A safe guide is to water when the soil is dry only. If damp just below the surface, DO NOT WATER. If dry for some depth, it is safe to water. Water infrequently in damp climates and in winter. MALATHION is a good spray for CACTI ONLY. Do not use on other succulents.

 HIGHLIGHTS FROM CACTUS AND SUCCULENT JOURNAL MAY-JUNE 1972

"A New Species of Coryphantha from New Mexico", by D. A. Zimmerman, Dept. of Biological Science, Western N.M. U., Silver City, N.M. Coryphantha organensis grows high in the Organ Mts. of south-central N.M. The entire known range of this plant lies within the boundaries of White Sands Missile Range closed to public entry. These plants

are exceedingly local - perhaps confined to one or two rugged, isolated canyons. Read all about it on page 114.

"The Saguaro -- A History", by Larry W. Mitich, North Dakota University, Fargo, N.D. Every serious-minded cactophile must read this excellent report on the history of the saguaro. It is generously illustrated with plates, famous picture maps, photographs, and "illustrations" from Emory's Notes of a Military Reconnaissance, John Barlett's Personal Narrative, Cactaceae of the Boundary, Lt. George Wheeler's Report upon U. S. Geographical Survey West of the 100th Meridian, etc. Read all of this saguaro story on page 118.

BOOK REVIEWS. "The Agave Family in Sonora" by Dr. Howard Scott Gentry, resident botanist at Desert Botanical Garden, Papago Park, Phoenix, Arizona. Very few botanists know Sonora and agaves as does Dr. Gentry whose book covers the genera Agave, Manfreda, Polianthes, Yucca, Hesperaloe, Dasyliron and Nolina -- all of which the author includes in the Agave Family. His treatment deals with environmental setting, animal associates, historical notes, floral measurements and his concept of species. See page 131 to read further on this. Also, on page 133 read "Excelsa, the Journal of the Aloe" by the Cactus and Succulent Society of Rhodesia, Africa.

TEN COMMANDMENTS FOR CACTUS GROWERS
by Roy Hoke

1. Thou shall not overwater, especially in winter
2. Thou shalt become familiar with each plant's growing conditions.
3. Thou shalt beware of diseased plants and infected soil.
4. Thou shalt not permit poor drainage in pots or beds.
5. Thou shalt not collect large specimen plants or those whose survival chances are very slight.
6. Thou shalt not overcollect rare species.
7. Thou shalt respect the property rights of your host on hunting trips.
8. Thou shalt share thy knowledge with others.
9. Thou shalt support the efforts of conservationists everywhere.
10. Thou shalt return thy library books promptly.

1972 MEMBERSHIP ROSTER: The attractive format is by Helen Housman. The excellent mimeographing is by H. Scott Thomas who owns his own machine. Accurate compilation of membership information is by President Horst and Chatter editor who urges our members to thank these willing member-workers. They volunteered to do a necessary assignment. They did it both promptly and correctly.

 ADDENDA: New Members. J. F. Brick, 5202 Genematas Dr., Tucson 85704. Phone 887-5740.; Dr. Clint Callahan, 2855 W. Anklam Rd., Tucson 85705. Phone 623-7969.; W. A. Pluemer, 4825 E. Camino La Brinca, Tucson 85718. Phone 299-9015. Mrs. Helen Roubicek, 4110 E. Roberts Place, Tucson 85711. Phone 326-7538. Telephone for Elsie Niehus is 889-3052. Change of address for B. N. Smith: 4266 Camino Nuestro, Tucson 85705. Change of address for G. F. Snyder: 607 N. 6th Ave., Apt. B-2, Tucson 85705

 Chester and Evangeline Scott are enjoying "glorious family reunionizing" in the East and in Milwaukee this summer.

 Col. and Mrs. W. M. Young joined an Airstream Trailer Caravan this spring, heading for their second trip to cool Alaska and that North Country for the summer.

 Frederick Littman, one of our new members 1972, tells us with enthusiasm; "I am just an amateur and a beginner in cactus, but I will do my best in every way to be a good member."

 The Los Angeles Cactus Chronicle, May 1972, page 11, carries a report entitled: "One of the Nicest Cactus Men". This editor quoted from CACTUS CAPITAL CHATTER'S report 1971 on Carl O. Horst and his wife, Wanda.

 Joe F. Brick has accepted membership on an important new national committee of the Cactus & Succulent Society of America, Inc. Gary Lyons, chairman of its Conservation Committee, invited Joe to work with them and to write a report on the program of the Pima Cactus Preservation Group for the National Journal.

 Hildegard Nase won the following awards in the April 1972 City Council of Garden Clubs Flower Show in the Class of Potted Cacti and Succulents: 1st Place - *Gymnocalycium quelianum*; 2nd Place - *Rebutia Sieperdaiana senilis*; Honorable Mention -- *Mam. bocasana*, *Mam. wildii*, *Haworthia margaritifera*.

 TUCSON WAS INVITED TO PRAGUE, CZECHOSLOVAKIA. The Tucson Cactus & Botanical Society received this invitation which, regretfully, it could not accept to attend. "PRAGUE CACTUS CLUB, the branch of the Czech Cactus Society, has the pleasure to invite you to the 12th Meeting of the Cactus Friends of Czechoslovakia, which will be held on the occasion of the 50th anniversary of the establishing of the first Cactus Society in Czechoslovakia. From June 17th to 18th, 1972." Tucson sent them our thanks, our regrets, and friendly greetings from our Society to theirs.



CACTUS
CAPITAL
CHATTER

NEWSLETTER OF TUCSON CACTUS
AND
BOTANICAL SOCIETY

Affiliate of the Cactus
and Succulent Society of
America, Inc.

P.O. BOX 3723 COLLEGE STATION
TUCSON, ARIZONA 85722



This issue of CACTUS CAPITAL CHATTER is dedicated to the memory of Eva Copenhaver who, with Marjorie Spring, was co-editor of CHATTER during 1965, its founding year. CHATTER Volume I Number I explains that on the evening of January 8, 1965 "the bud burst forth. About February 1, the blossom opened, revealing the first issue of the quarterly bulletin of the Tucson Cactus and Succulent Society, called the CACTUS CAPITAL CHATTER." Eva drew the saguaro for the masthead; Hugh Copenhaver, president of the Society in 1965, made the three C's and the name. They decided that it was desirable for the Society to have a publication, after they had received many such from other cactus clubs.

Eva Copenhaver died this year in her Las Vegas, Nevada home. She was buried in Bonner's Ferry, Washington.

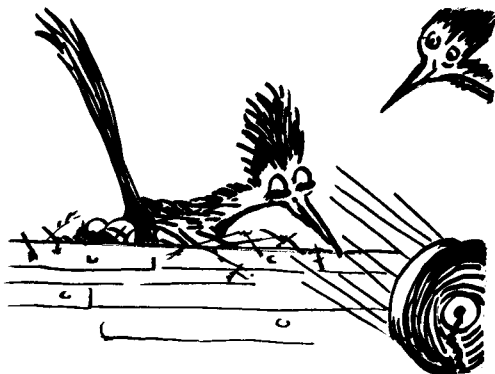
VOL. VII 1972 No. 4

EDITOR: JOSEPHINE SHELBY

ASK YOURSELF.... Am I doing things for this cactus society that are stated in our By-Laws? ARTICLE I Section 2: "The purpose of this Corporation shall be to function continuously in the study of cacti and native flora, and to further the protection of cacti and native flora of Arizona. Also, to sponsor a botanical garden in Pima County near Tucson, Arizona, and to plant cacti and native flora in other suitable places."

Our society is composed of beginners and semi-advanced collectors (those who have collected for a few years and have obtained some rather difficult plants to cultivate). If you are a beginner, are you afraid to ask questions because someone might look down his nose at you? Don't hesitate to ask; everyone learns by asking questions. Even the oldest of pros the world over started by asking many questions. In most cases, you will find the more knowledgeable persons most willing to reach out and help. If you are a more advanced collector, won't you reach out and help the new member? Show him that he joined the right society, by extending your hand, your patience and your knowledge.

.....Quoted from STAR TO STAR 10/72. Vol. IV No. 10
Corpus Christi, Texas



ARIZONA MOTHER ROADRUNNER
RATES AN AIR-COOLED NEST

Devotees of "Senor Paisano" ---long-necked, long-tailed, long-legged cuckoo of the desert, the Roadrunner---are his willing slaves! They feed him ground lean beef; they offer him housing in their gardens, patios, and carpport rafters; they photograph him frantically. But--do you know that one Mother Roadrunner so completely captivated a friend of our that he air-

conditioned her nest in his yard this spring. An electric fan positioned to lave her sweltering body with a cooling current of air did the trick. Ask Alan Blackburn about this deal!

PRESIDENT HORST'S FAREWELL MESSAGE

For the second time, it becomes necessary to write a farewell note as the President of Tucson Cactus and Botanical Society, Inc. It is with some degree of humility and considerable misgiving that this problem is approached. However, there are a few things which stand out and can be expressed. They mostly involve human characteristics. At the start of the year 1972 we attempted to shame the membership into being more active. This is like knocking down a tree with a tack hammer; no luck. Further, as in all organizations, the inevitable disagreements and contentions presented themselves. Some of this type of thing is unavoidable and, in fact, healthy for an organization because it keeps everybody on his toes, but tempers are apt to flare, and it is most difficult to stay pleasant and retain composure. In fact, sometimes criticism is evoked when one does not respond to irritations, but character and personality are improved. This, we suppose is true in life as a whole, and is not limited to organizations or groups as such. It is people.

As mentioned in the former farewell note, it is interesting to study the people in an organization. The last time, we divided memberships into groups: the active (and useful), and the inactive or just belongers. This time we will treat the group as a whole. People, you know, are a peculiar form of animal. In general, they have much more information or knowledge than other animals but have much less intelligence as defined by Webster, i.e. ability and willingness to use knowledge. Further, the pressures of life cause him to develop psychoses, phobias, etc. so that his behavior becomes odd or even illogical sometimes. This is reflected in an organization. At virtually every meeting, the presiding officer or officers will be forced to make suggestions to the membership and ask for comment, for volunteers to carry out duties or for motions from the floor. Almost without exception the response is predictable—nothing. This is very frustrating and forces officers to select, appoint or carry out projects unilaterally.

Now comes the response. Those who did not favor the project gripe. Those selected, as on committees, normally are responsible to their duties and carry out their appointments very well, while those who would like to have been selected (but would not volunteer) gripe again. Others show no reaction. At no time can an executive please the majority of the group except by accident because the group will not make its total wishes known. Even in voting, the vote is either unanimous, non-existent or perhaps represents half of the persons present. This is confusing and unnecessary. It appears to be either a "don't give a damn" attitude, fear of opinion of other members, stage or mike fright or a defeatist complex. We wonder. Perhaps it shows how poor we are as leaders, but it is common to many organizations and might show how unconcerned or how timid the general membership really is. So much for executive gripes.

Another interesting phase is the financial angle. When an organization is very careful to avoid spending excess funds, the money on hand just simply slowly vanishes. When little attention is paid, the funds available gradually increase. The membership votes down spending when money is available and urges purchases or parties when it is scarce. This gives treasurers, secretaries and other executives a bad case of heartburn or worse unless they adopt the "so what" attitude, and then it is fun. One can sit back, watch and enjoy himself over the unpredictability of the finances and can amuse himself with the problems of the next administration. It is fun if

this degree of detachment can be achieved.

Then there are the programs. It seems that people feel there must be a speaker at each meeting, and speakers are hard to come by. But, either there is a lot of work to get each speaker, or speakers fall in your lap and some must be denied. Unfortunately, the hard-to-get speaker is the general rule, and then he changes his plans and cannot come at all. This is another source of indigestion---which usually turns out as fun when the program finally comes into being.

This has been a lot palaver about reactions of an executive in a small organization. It must be much more trying for people in a large group or a nation. However, this is really intended to show that the plurality of headaches of an executive are not really causes to worry, but are an interesting study in psychology, of the executives of the group and of the human race. In short, this whole article negates itself and, although we shudder to think of each new problem, in the end, it has been fun. Fun again which we are not anxious to repeat.

There are a few reasons for pleasure and gratitude. One is the feeling of relief when one realizes that, more or less independently of the officers, the year is closing without complete deletion of the treasury. Another is the cooperation of other officers, even when faced with serious personal problems, and the completion of duties assigned. Then there is loyalty and the service rendered by helpers. We must remember those who obtained speakers, publicity; talked to prospective and actual new members; obtained and handled refreshments and gave moral and actual help.

Circumstances were such, as pointed out above, that much of this work was done by the president's wife and others not actual society members. We suppose that there are those few gems in most organizations, and it is a sure thing that they are the actual heart of accomplishments. We wish that the percentage of such people were higher than it actually is.

-----Carl O. Horst.

AN ACTIVE AND INTERESTED 33% OF CACTUS CLUB MEMBERS RESPOND! Lately, CHATTER Editor mailed to all of our members a simple Questionnaire. This was done in order that we might consider objectively the value of CACTUS CAPITAL CHATTER, our quarterly newsletter, and other activities in relation to all of our members. Hence, the complete cooperation of our membership was sought! A segment of 34 cooperating individuals reacted by answering it!! (Par for the course). 92 members did otherwise. Col. and Mrs. W. M. Young mailed us their answers from faraway Fairbanks, Alaska. Mr. and Mrs. Edward Busch sent us theirs from distant Saskatchewan, Canada. 17 of us admit to being novices in cactus culture. 17 others consider themselves as being reasonably experienced. 29 collect both cacti and other succulents. 2 do not collect. Most of us grow our plants outdoors in the ground. Many use pots and planters outdoors. 4 members use lath houses or greenhouses. These 34 members have been collecting plants in a time period ranging from 60 years ago to 40, to 34, to 20, 10, and down to 1 year. Answers express URGENT REQUESTS to 1973 PRESIDENT AND PROGRAM CHAIRMAN AND CHATTER EDITOR for the following kinds of useful practical information:

Ecology of Desert Plants. How Cactus Society can actively function in saving our beautiful desert habitats for plant and animal life. All the technical knowledge that we can get. Reports on field trips on cacti collected during the 1960's. An ORGANIZED plant-exchange program with our members. Cactus education preferably from seeing and comparing living plants, rather

cont'd. page four

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 than entirely from books. General information in understandable form. How to use desert plants other than cacti in home landscaping. Plantings around a home. Which plants take sun? Which take shade? Take 1 cactus each month. Tell where it comes from. How to maintain it. Give practical information on growing plants. Culture of other than native species. Proper time to transplant cacti and all other desert flora. Suitable soil for all of them. Soil mixes for potting plants and seed growing. Care and growing of cacti. Diseases of cacti and their treatment. Control of fungus diseases on seedlings. Cacti reforestation. Identification of plants. Cacti of Mexico. Information on the Saguaro. Interesting news about our members. Write-ups on new members.

 DES MOINES, IOWA'S VERY SUCCESSFUL CACTUS SOCIETY
 OR
 THE STORY OF TUCSON'S MEMBER---VIRGINIA WICKLIFF

The Des Moines Cactus and Succulent Society, Inc. was formed in 1938 at the home of Mrs. Virginia Wickliff in Des Moines, Iowa. Five women who shared an interest in Cacti and who had dug up various plants on western trips, (it was not illegal in those days) met to discuss raising and learning the names etc. of these plants which were strangers to Iowa. They decided to form a club for the purpose of studying all aspects of cactus and succulent life. By-laws were drawn, setting forth rules such as limiting membership to 25 members, for at that time, meetings were held in private homes. Later they continued to draw interest, and applied to the City Fathers for permission to hold their meetings in the City Greenhouse. This was immediately accomplished, and one whole house was set aside for the group. In turn, they agreed to serve as hostesses at the annual Fall Mum Show. Besides studying the Cactus tree with its many branches of families, their peculiarities etc., they decided to promote the value of using cactus and succulent material in flower arrangements. They asked and obtained space and classifications for cactus and succulents in Garden clubs throughout the state and at the Iowa State Fair. Their members possess many blue ribbons to show for their efforts.

We built gardens in the greenhouse, saw that all the plants were properly named so that school children and the public could visit and learn botanical names and common names together. They wrote to many dealers throughout the country who were happy to send many cartons of plants to further their exploitation of Cacti. On their tenth anniversary they were given considerable publicity as they had never taken a backward step. Ladislav Cutak of the St. Louis Botanical Gardens made a special trip to Des Moines to formally dedicate their garden of many hundred plants. Another thing they required of their members, was that they present some sort of paper at their meetings, of their own study. They continue to limit the membership. They want only those persons desiring to learn instead of just being "joiners".

My own collection started with a group of ten small plants and it mushroomed to over 400. Yes, these had to be taken up every fall and removed to our basement as they could not stand Iowa climate. I left them on shelves, roots exposed all winter and replaced them in April after all chance of frost was passed. They were placed in a raised garden with good drainage. Names were placed on the plants. Once a year, the garden was open to the public, as were many other gardens of members. We enjoy our annual plant exchange; also a plant exchange for members only. When I left Des Moines, I turned over most of my plants to the City Greenhouse. Des Moines is also starting to build a new Botanical Garden and our club has

assisted in this matter financially.....Virginia Wickliff

NATIVE FLOWERS OF WESTERN AUSTRALIA THEME OF OCTOBER MEETING

W. H. Earle, Director of Desert Botanical Garden in Papago Park, Phoenix, Arizona, for many years had wanted to be in Australia during its spring-time. He wanted to photograph the tremendous explosion of flowers indigenous to that continent, and to Western Australia in particular. In September 1971, he was so fortunate as to be able to photograph 120 species around Perth, Western Australia. At the same time, he had a permit to collect the flowers which he photographed. He collected 3 plants of each species, to be given to: (1). The Herbarium of Western Australia. (2) The Herbarium of Kings Park of Perth. (3). Desert Botanical Garden, Arizona. At the October 8 meeting of T.C. & B. S., Mr. Earle gave a slide show and talk about these experiences.

A Very CEREUS Story

The Sound and the Fury? You worried about the pronunciation of botanical names? Read the following story aloud. It goes along only by sound, not by the true meaning of the words. If the story makes sense to you, then you are doing all right. Never mind the meaning of the WORDS! Hildegard Nase will get you on that the next time.

One WINTERIANA evening, the sky was AZUREUS. FERDINANDSIS and OTTONIS were talking about their SOUTH-AMERICANA trip. They had been in ARGENTINENSIS, BRASILIENSIS, PERUVIANUS and BOLIVII. In the PARKINSONI, the GAERTNERI was cutting the GRAESSONI when the first GASTERIAS arrived. Mr. Harrisia MC DONALDI was dressed very ELEGANS, wearing a STETSONIA and a DIADEMATA in PLATENSIS setting on his Lady finger. He was accompanied by Miss HILDEGARDII SCHMIDTII, a fine DAMSI. The maid, Miss SCHULZII, switched on the ELECTRACANTHAE CANDELABRUM while a BEGUINI mized the MARTINIIS and served SALM - on MARGINATUS buttered toast. For DESERTII, they had APRICUS-TORTUOSUS and ZUCCZAIANA MELO (n) FORMIS. Professor SPEGAZZINII started to play an EUPHORBIE by STELLA DESTEMATA. Miss BAUMI MEDUSAE accompanied him on the TRIANGULARIS, and the CANARIENSIS sang in his cage. The men sat under the PALMERI after dinner and TRUNKATUM a lot of beer. OTTONIS told a GRUSSONII story about a TIGRINUM hunt with ELEPHANTIDENS in INGENS: also how he killed a SERPENTINUS with a BOMBYCINA in the SANTA RITA MONTANAS. Mr. MC DONALDI said the music was GRANDICORNIS. That made the professor very WILDII. He took a METALLICA CRUZIGERA off the wall and hit MC DONALDI on the PLUMOSA, but he was very ROBUSTA, got up and said with GRACILIS: "so-LONGI-MAMA."Hildegard Nase.

BOTANICAL INTEREST OF SOME OF OUR MEMBERS

B. N. Smith has collected cacti for 10 years. His main interest is saguaro. He had 100 desert plants over 2 years old, growing on 7 acres. Dr. W. G. McGinnies, founding president of Tucson Cactus Club, has 100 plants over 2 years old, growing on 3 acres in Soffolk Hills. He has specialized knowledge and experience in ecology of desert plants. He is searching for ecological relationships of desert plants. Edward V. Mace has collected cacti since 1938, his main interest being in Arizona-Sonora cerei. He experiments with cereus seeds. He would like more information on control of fungi diseases on seedlings, and growing techniques for them. Emma Walk Finnev, native Tucsonan, has had native desert plants around her all of her life as did her mother. She has collected them all of her adult life, 60 years more or less. She grows her plants on 1-1/2 acres which have never been denuded of desert flora. She is working at transplanting creosote bushes from one spot to another on her acre. She says: "People should be encouraged to grow the creosote bush in their yards." H. Scott Thomas in 15 years of collect-

cont'd from page 5

ing has 400 plants over 2 years old. He would like to hear about cacti collected on field trips during the 1960's. May Watrous is an outstanding conservationist of southern Arizona, and she wants our Cactus Club to actively function to help save our beautiful desert habitat and its flora and fauna. Louise Coan in 6 years' collecting has 140 plants over 2 years old. She would like to learn about cacti by seeing and comparing living plants rather than from printed information only. Harrison Yocum, a collector for 32 years, grows his plants outdoors in rock gardens--approximately 1000 of them. He is interested in new innovations, including layouts of cacti and other succulents in landscape design and their aesthetic and therapeutic effects. He is experienced in planting and growing plants.

 BENEFITS WE RECEIVE THROUGH OUR AFFILIATION WITH CACTUS & SUCCULENT SOCIETY OF AMERICA:

What is an Affiliate? It is a member club that has fulfilled certain requirements, such as: paying the Affiliate fee and the Journal subscription fee; presenting the Club's Constitution and By-Laws, for the consideration of the Executive Board; appointing an Affiliate Director. The Affiliation fee goes to C.S.S.A., primarily to help finance national conventions. It is almost the only source of revenue for supporting the services of the National Society to the Affiliate. Hence it is of vital importance that member clubs maintain their affiliation and also encourage other clubs to become affiliated. We are eligible to borrow the 35 mm color slides of C.S.S.A. (a number of subjects are available). We can send to the Research Board for answers to questions. The Affiliate Reporter put out by the national Affiliate Chairman gives us news of the various affiliates plus National Society news. Delegates representing the various affiliates meet at each convention to discuss the location of the next Convention where one or more of the Affiliates act as host. Each Affiliate has an Affiliate Director who keeps the Affiliate Chairman of C.S.S.A. fully informed of its own activities. The Membership cards which you have received, signed by your Affiliate Chairman and the Affiliate Director, are a good thing to wear at all National Events. They identify you as to name and society.

The CACTUS & SUCCULENT SOCIETY OF AMERICA, is the world's largest Botanical Organization devoted to Cacti and the Other Succulents.

AFFILIATE ACTIVITIES

TRADE SOUTH AMERICAN CACTI FOR ARIZONA CACTI AND OTHER SUCCULENTS. Senor

Miguel A. Muriel of the Universal Cactus Garden in Montevideo, Uruguay, South America, has learned of the existence of Tucson Cactus & Botanical Society. This came about because we are an Affiliate of the Cactus and Succulent Society of America, Inc. We quote from his recent letter written entirely in Spanish which CHATTER editor translated:

" M. Josephine Shelby De mi mayor consideracion: Con la esperanza de poder cultivar nuevas amistades y mejorar mi coleccion de cactus y otras suculentas, me dirijo a Ud., y siempre que no haya inconvenients, para que tenga a bien notificar o consultar a lo miembros y amigos de ese club, si tienen interes en inter cambiar semillas o plantas de mi pais o de otro pais Sudamericano."

This is Sr. Muriel's inquiry. He would like to form new friendships while improving his collection of cacti and other succulents. He asks me to announce to, or talk with, our members about doing this. He would like to exchange seeds and/or plants and other succulents of Uruguay or of other South American countries, for the same from Arizona. Now you are informed. If you should want to write him, this is his address: Sr. Miguel A. Muriel, Universal Cactus Garden, Capitan Tula 5089, Montevideo, Uruguay, South America.

KAKTOPHILES -- WORLD-WIDE -- CALL ON US! Your Affiliate Director has also received letters from: Hamilton, New Zealand; New South Wales, Australia; Perth, Western Australia; West Germany; Belgium; Czechoslovakia; Rhodesia, Africa.

BUILDING A DIFFERENT ROCK GARDEN

Harrison G. Yocum

Being interested in desert plants, I decided to become acquainted with persons of similar interest, upon moving to El Paso from Pennsylvania eleven years ago. Consequently, affiliation with the El Paso Cactus & Rock Club was to have a profound influence in the course of events. Visits to beautiful cactus and rock gardens led to my participation in collecting trips to the desert and mountains around El Paso. Enjoyable and invigorating experiences, and admiration of the magnificent scenery on all trips contributed to my becoming an enthusiastic "rockhound." This new hobby was to alter the course of my activities and give a new purpose of life.

After moving to Tucson, I acquired property which permitted a new landscaping project, incorporating the use of rocks with cacti in a modified version seen in El Paso. Instead of building the rocks up a few feet and then leveling for a flat cactus bed, the rocks are literally piled up resembling miniature mountains. About half of my half-acre property is being developed this way. The need for more rocks necessitates trips to old mine dumps, where mineralized specimens and rocks of unusual shape and color are found. When enough trips are made and various types of rocks are on hand, construction of the garden can begin. Much time and patience are required to assemble and arrange the rocks.

Starting at one edge (or corner), the larger rocks are placed in line to fit together naturally as possible, keeping in mind the artistic effects as one proceeds. When enough rocks are set in place (being buried no more than 1/3 their height), rocky desert soil is added behind the rocks. It is best to use large sized stones to serve as wedges behind the row of attractive specimens. They will provide strong support as the garden is being built horizontally and vertically. Large rocks that can be easily handled are gradually added across the width of the garden, the coarse and rocky desert soil then being dumped on top of them. This fill, as it is called, can be dumped prior to arranging the exterior rocks. When enough of the fill is added, it should be well watered to allow for settling. When dry, it is good to repeat the process. Then, more rocks can be placed and more fill added, and watered, repeatedly upward and horizontally to the periphery for the desired shape until the ultimate effect is achieved. As the garden increases in height, the rocks will, of necessity, become smaller in size. Selection of rocks is important.

When the rocks and soil are all placed and settled in position, and the construction phase completed, cacti are planted among the crevices of the rocks. Smaller types, especially low clumping forms like the Hedgehog Cacti (*Echinocereus*) work best. The rocks give a very attractive setting to the plants, and afford a good climatic protection. Also, the showy flowers of the cacti are enhanced in this setting. The question is often asked, "Is concrete used in holding the rocks together?" While this is possible, and more expensive, it is not done because it would destroy the natural effect and impair the drainage. Building the garden mostly upwards, and outwards only to accommodate the height, gives an important space-saving advantage.

I N M E M O R I A M

Mrs. Marta Patton, a member of long standing in T.C. & B.S. passed away in September. She had often served as hostess at the social hour. She was a good friend of Mr. and Mrs. Alan Mollison and accompanied them to our meetings.

Mr. Herbert Stehulka, husband of our member, Kay Stehulka, passed away in October. We extend our sincere sympathy to Kay who is a long-time member and a very active one.

1972 MEMBERSHIP ROSTER ADDENDA: Jeanne Burbank, 1921 Magic Place, Tucson 85704 Phone 297-3687. Joan Gailar, 1921 Magic Place, Tucson 85704 Phone 297-3687. Miriam Dilatush, 810 S. Kolb Rd. #23 85710 Tucson. Change of address: George F. Snyder, P. O. Box 1646 Tucson 85702.

Mrs. Lois Clarke, treasurer of T.C. & B. S., and her daughter, Nancy, a former president of it, departed on October 14 for a 3 weeks trip to the Orient. Their itinerary includes Tokyo and other points in Japan; Manila, P.I.: Taiwan; Bangkok in Thailand; Singapore; Hong Kong.

MEMBERSHIP DUES !!! Pay yours in early January 1973 when Cactus Club's year begins. If you want a 1973 MEMBERSHIP ROSTER printed in CHATTER early in 1973 as a useful reference, PAY YOUR DUES IN JANUARY 1973-----early.

Mrs. Stella McDonald who was an active member of Tucson Cactus Club for many years, now makes her home in California. Her many Tucson friends may write to her as follows: Mrs. Stella McDonald, The Timbers Apartment 7, 23333 Ridge Route Drive, El Toro, California 92650.

Tucson Cactus and Botanical Society, Inc. has become an affiliate of the Tucson Botanical Garden, by the unanimous vote of its Board of Directors.

1973 CONVENTION OF NATIONAL CACTUS AND
SUCCULENT SOCIETY

Plans are going forward for this convention to be held May 14-18 at the Sands Hotel in Las Vegas, Nevada. The Convention Chairmen are asking affiliate societies to contribute a program; door prizes; a Hospitality Room exhibit--as they choose.

ARIZONA NATIVE PLANTS OF COCHISE COUNTY: Jim Robbins, a former president of T.C.B.S. now living in Sierra Vista, Cochise County, Arizona, writes us about some of the native plants of that area which he and his son, John, have discovered and identified. He writes: "Growing near us is the desert willow (*Chilopsis linearis*), and a small colony of the lovely Agave parryi, variety huachucensis, as well as yuccas and Dasyliron and other xerophytic plants. Cacti are here but well hidden in the grass or under shrubs. This is prairie grassland country with reddish soil. Some cacti that we have found here or near here are: *Echinomastus* (*Neolloydia*) *intertexta*; *Mammillaria wrightii*; *Mammillaria heyderi*; *Coryphantha aggregata* and several *Opuntias* (both prickly pear and cholla)."



The Season's Greetings

WITH BEST WISHES FOR THE NEW YEAR

