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"CONTINUALLY STRIVING TO EXPAND OUR HORIZONS AND
CONTENT IN THE INTEREST OF CACTOPHILES EVERYWHERE."

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MAMMILLARIA MADNESS

Part II

William A. Pluemer

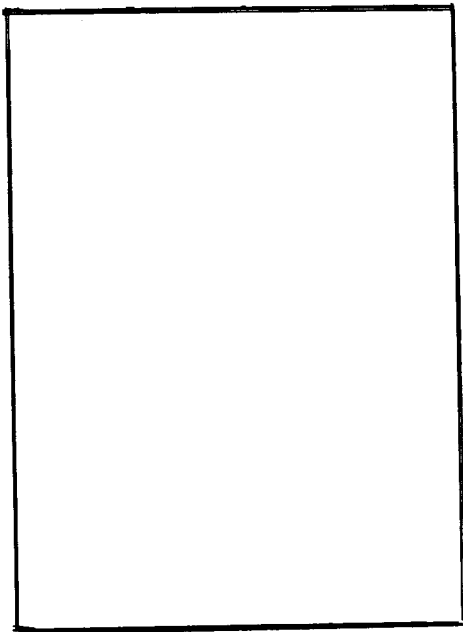
In driving from Durango to Zacatecas, on the trip down, we successfully identified the area of the skyline shown in Fig. 29, page 111 of the C&S Journal of May-June 1970. However, we found the land on both sides of the highway fenced, with access controlled by cattle guards and gates; one gate leading to the mountain approaches and the opposite to a ranch house in the valley far below. We discussed the feasibility of trespassing and, with no one in sight, opened the gate and proceeded toward the Sierra de Santa Maria range. The further we drove, the more uneasy I became as we seemed surrounded by nothing but black bulls. They were well kept and stood their ground as we passed. The road finally terminated at a stone wall where we decided not to pursue the hunt further at this time. Once again on the highway headed toward Zacatecas, we noticed a sign reading "Valparaiso". No village or cross-road existed here, about 120 miles south-east of Durango. Should we fail in our search for *M. Moelleriana* near Zacatecas, we resolved to return here en route home, visit the ranch house, and try our luck. Now to continue with our story.....

The day following our abortive climb up the mountain from Rio Florida, we left Zacatecas and drove east on highway 49, stopping and making collections for some 30 miles. We made an early camp, cleaned and

packed plants and generally loafed the late afternoon away. Early the next morning we were again on the road, arriving at Valparaiso within three hours. As we neared the ranch gate, I was busily trying to put together enough Spanish to gain permission to cross the upland pastures.

Although no one was in sight as we turned through the gate, it seemed the whole ranch was out to meet us when we pulled up in the courtyard. A very chic, dignified senora approached and, after listening politely to my spastic Spanish, finally queried in English: "What do you wish to do?" By now, the Senor had joined in the conversation. Surrounded by ranch hands, we explained we collected cacti; a fact that left all of them a little bemused. We then showed them the C&S Journal and asked permission to cross their range to get to the mountain and collect the plant shown therein. The Senor was adamant in his refusal. It now came to light that they raised bulls for the rings in Mexico City, Juarez and several points in South America. These bulls, we were told, were very unstable and dangerous, and the Senor did not want to take the responsibility for our safety. Intuition is a funny thing. I began to realize why something had told me to turn back a couple of days ago. Little did they know that we had already trespassed amongst the brave bulls!

Certain that *M. Molleriana* was "up there", we were not about to let this opportunity slip by. So: we discussed bulls,



MAMMILLARIA MOELLERIANA
Boedeker

chillitos, four-wheel drive vehicles, general botany, and a host of non-related subjects. I think the Senora softened her stand first when she offered me three or four fine bulls for the Blazer, spot transaction! Following this, the Senor began a lengthy explanation on how to work safely around his animals, and we knew we were making progress. After quite some time, he gave reluctant approval. Our instructions were most specific: should we meet a bull head-to-head, stop, stand still, look him in the eye for a minute or so. Then, slowly lean down, pick up a small pebble or stone and toss it toward him. The brave bull would behave himself and retreat to more interesting pastures. NEVER, NEVER, run away!

Now young Manuel was summoned from the crowd to guide us to the furthest drivable point in the foothills. After profuse thanks and more words of caution, we left the ranch and started toward the mountains. Manuel was probably about eight years old. Riding in the jump seat of the Blazer was to him a rare experience, made especially exciting by my tuning in a local station on the car

radio. He led us through many gates and corrals and finally left us far up on a grassy slope. Bulls were everywhere. We gave Manuel a bag of hard candy, and with a broad smile, he started his long trek back to the ranch, now barely visible in the valley below.

Taking along a few small cans of fruit juice, we studied the terrain ahead and picked the most rapid path of ascent. We also studied the position of several bulls along this path. Our ascent took us through dense brush. Everything, it seemed, was armed with long, vicious spines or thorns. It became a slow and frustrating process, with the crest seeming no nearer after an hour's hard work. Bulls were also in the brush. Their crashing noises gave them away as we swallowed our pride to let them pass, remaining motionless behind whatever cover was available.

Our efforts finally brought us to an interesting and fairly open rock outcropping. If our plant was to be found, this seemed the likely place. No Moelleriana, but a small, very dessicated echeveria subridgida went into my bag. The ridge we now stood upon formed one side of a mountain saddle. To us, as always, the grass appeared greener on the far side, so we began a slippery, rock-hanging slow advance across the saddle. Midway across, in rather deep shade and barely visible in moss, Frank discovered a small mam. This was the quarry! Spirits rising, we negotiated the dangerous traverse and made the far slope. Again, beating through heavy underbrush, always climbing, we broke out on a sheer cliff far, far above our starting point. Panting from exertion, I hunkered down on a boulder to retie a boot lace, and directly in front of me was a fine, robust specimen of *M. Moelleriana*! So often small plants are found more by chance than design. Had not the lace come loose, I may have walked right over it. Now we began the search in earnest. Several more were found in rock crevices, but the chasm towering above seemed to be the logical hunting ground. Our ascent up an almost vertical cliff was exhilarating, as with almost each hand hold we found another plant. There were no colonies, or families. The plants were scattered and had

to be searched out. We noted some variation in the central spine coloration, with most running toward a deep, burnished, manzanita-like hue. Emerging from a sun-burst of golden-yellow radials, the color contrast is striking. When at last we reached the crest and looked down upon the valley, we were amazed at the distance we had climbed. From our high vantage point, we plotted a quicker, easier route of return to the car which, however, was not then visible to us.

Company was waiting as we came over the last rise to the car. Some 15 bulls, in what I believe the US Navy would call "line abreast", were emplaced about 20 yards beyond the car, eyeing our every move. With each measured step, we calculated the remaining distance to the car, allowing perhaps 10 seconds to unlock the door and jump in. We drew closer and the bulls stood their ground. Considering our investment in time and energy over the past days, and with M. Molleriana now safely in our collecting bags, we were not about to become unwilling participants in a last minute corrida. We continued toward the car. The bulls remained motionless. A few more steps. The bulls became restless. We continued. Ten feet from the car, all caution was thrown to the winds and we scrambled aboard. Our cries of "Bravo El Toro!" filled the clear mountain air as we drove past our friends. Jubilation over our new find continued all the way to Durango, where the city lights were just coming on as we arrived at the Motel El Arco.

CACTUS & SUCCULENT SOCIETY OF AMERICA BIENNIAL CONVENTION, San Diego, California, May 12-16, 1975. Bahia Motor Hotel, Mission Bay. LECTURES -- "Cactaceae of South America", Alfred Lau. "Agaves", Howard Scott Gentry. "South African Succulents", Philip Downs. "Cactaceae of Mexico", Hernando Sanchez Mejorada. "Uses of Cacti", Joyce Tate. "African Succulents", Frank Horwood. TRIPS AND TOURS -- Visits to local gardens. All day tour of North County Nur-

series. All day bus trip to Anza Borrego Desert State Park. Also, Balboa Park and San Diego tour trips. DELEGATES MEETINGS. I.O.S. programs by American members. AND MORE. Everyone is invited to attend. T C B S should have at least 8 members attending. Your AFFILIATE DIRECTOR, Josephine Shelby, will keep you informed of details. Decide NOW to attend and REGISTER EARLY. (r.)

Make your trip enroute to this convention exploratory and informative for yourselves. As you drive through San Diego County, identify its cacti as follows --

CACTI OF SAN DIEGO COUNTY

Bergerocactus emoryi

Echinocereus engelmannii (hedgehog)
Echinocereus munzii

Ferocactus acanthodes (desert barrel)
Ferocactus viridescens (coast barrel)

Mammillaria dioica (pincushion, fishhook)
Mammillaria dioica incerta
Mammillaria tetrancistra (desert fishhook)

Opuntia acanthocarpa ganderi
Opuntia basilaris (beaver tail)
Opuntia basilaris ramosa
Opuntia bigelovii (jumping cholla)*
Opuntia chlorotica (golden prickly pear)
Opuntia echinocarpa (silver cholla)*
Opuntia ochinocarpa parkeri
Opuntia fosbergii
Opuntia littoralis (coast prickly pear)
Opuntia megacarpa (mountain prickly pear)
Opuntia occidentalis (prickly pear)
Opuntia occidentalis piercei (desert prickly pear)
Opuntia parryi (Valley cholla)
Opuntia prolifera (coast cholla)*
Opuntia ramosissima (pencil cholla cactus)*
Opuntia serpentina (snake cholla)*

* with sheathed spines. ---Espinass y Flores April 1974, San Diego C&SS.

CACTUS CAPITAL CHATTER

Also, you can tour Death Valley National Monument in California-Nevada, during your convention trip. The following information will guide you in identifying the cacti of Death Valley --

CACTI OF DEATH VALLEY
NATIONAL MONUMENT
California - Nevada

Thirteen species of cactus are known from Death Valley National Monument. Cacti occur from an elevation of 800 feet above sea level to the summits of the bordering mountains, over 11,000 feet high. No cacti grow on the floor of Death Valley.

Three species most commonly seen along roadsides which cross gravelly alluvial fans are cottontop cactus, strawtop cholla, and beavertail. Calico cactus is uncommon along paved roads but is locally abundant above 3,000 feet on the Racetrack road south of Ubehebe Crater. Mojave pricklypear occurs in canyons of the Panamint Mountains accessible via rough gravel roads. Mound cactus occurs in similar habitats. Grizzly bear cactus is the most common species in the pinyon pine - juniper woodlands and may be seen on the gravel road above the Wildrose charcoal kilns. The remaining species are infrequently seen from roads.

Opuntia basilaris	Beavertail	abundant
Opuntia echinocarpa	Strawtop cholla	abundant
Opuntia erinacea	Grizzly bear cactus	common
Opuntia mojavnensis	Mojave pricklypear	uncommon
Opuntia ramosissima	Pencil cactus	rare
Echinocereus Engelmannii	Calico cactus	common locally
Echinocereus mojavnensis	Mound cactus	common locally
Echinocactus acanthodes	Barrel cactus	uncommon
Echinocactus Johnsonii	Beehive cactus	rare

Echinocactus polyanctistrus	Mojave fish-hook	rare
Echinocactus polycephalus	Cottontop cactus	abundant
Mammillaria microcarpa	Pincushion cactus	uncommon
Mammillaria tetrancistra	Corkseed cactus	uncommon

(Scientific names from Munz, A California Flora. Common names are locally used in the Death Valley region).

May 1973

1975 PROSPECTS FOR ANNUAL FLOWERS IN THE SONORAN DESERT
Robert R. Humphrey

As of January 7, there seemed very little possibility of many annual flowers in the Sonoran Desert in 1975. The late winter rains upon which the flowers depend have been very deficient. It will require exceptional precipitation during January as well as in February and March to bring the flowers out. It has been my observation over the years that a spring with exceptional flowers requires consistently high precipitation, preferably starting in November, but at least no later than December, and continuing through January, February and March. My recent rambling in the deserts of southern Arizona and Sonora, Mexico have shown few or no signs of the annual plants that should be growing by January if we were to have a good spring.

Between Tucson and Punta Cirio the situation is bleak. The grasslands around Nogales benefitted from fairly good summer rains, but as one again drops down into the lower desert areas of Mexico, the winter rains have been deficient, and there seems little or no more promise of a spring flower show there than here, in our own part of the Sonoran Desert. The rains should have little effect on the cactus blooms since, as all good cactophiles know, each cactus species blooms at its own set time of the year, pretty much without regard to rain. I note that there is a common misconception among non-desert people in this regard. They tend

to expect the cacti flower in the spring in response to precipitation. And this, of course, they don't do. By this, I don't mean that none of them blooms in the spring, for some, such as Echinocereus, do. Even this though, is not in response to moisture but to the genetic makeup of the species. I don't know what actually triggers the urge to blossom, but day length may be as good a guess as any.

WILD FLOWERS FOR
THE HOME GARDEN

By Verne Owen

The fact that many beautiful wild flowers grow in the desert prompts many people to assume, erroneously, that good wild flower gardens can be had by merely scattering a few seeds in any vacant area, then sitting back and waiting for a riot of color come spring. Unfortunately, this isn't usually true.

It must be remembered that spring flowers in the desert are good only when we have had rainfall sufficiently spaced from germination to flowering time. Rains spaced once or twice a month from November to March are ideal. Less than this will result in fewer blooms as well as much smaller plants.

FOR HOME CULTURE they should be planted in an open, sunny location.

1. The soil should be cultivated three or four inches deep. (A four-pronged cultivating rake is ideal for this.)

2. Take a regular rigid garden rake and go over the loosened area in one direction leaving 1/4 to 1/2 inch deep furrows.

3. Plant seed. California poppies, lupins and phacelias, for instance, may be sown at the rate of one ounce per 1,000 square feet. Small seed, such as desert marigold, nama and linaria, will require approximately 1/2 ounce for the same space. In order to get even distribution, a good practice is to mix three parts of screened, dry peat moss to one part seeds.

4. Rake the ground in the opposite direction across the planted area. This will supply the necessary cover. A light mulch of compost, manure or ground bark will help to conserve moisture.

5. Sprinkle often enough that the soil is kept moist until the seeds germinate and the plants develop their fourth leaf. After this, a good, heavy sprinkling every ten days to two weeks -- or better still, when the plants show slight wilting.

6. Remember that wild mustard and several other cool weather weeds will probably germinate along with the flowers. For goodness sake, pull them out.

FLOWERS TAMED IN YARDS

In the view from behind the lawnmover, they may be weeds. But one man's weeds are another man's wildflowers planted and encouraged deliberately. They can be a likely way to ease the back as well as the eye. Gardening with wildflowers is becoming such a favorite hobby that wildflower seeds are hard to come by at the few city nurseries that specialize in them. Wildflower gardening began in England in the 1970's with William Robinson, an eminent landscape architect who daringly mixed cultivated plants with native ones. Many garden favorites -- azaleas, rhododendrons, poinsettias and zinnias -- were first discovered in other countries in their wild state.

Grown from seed or transplanted, wildflowers are proving ideal for gardens with northern exposures, sunless backyards, stony ground, steep banks, and other problem places. More than that, in the definition of one enthusiast, "wildflower gardens are man-made landscapes expressing our love and reverence for nature, balm to the spirit in this troubled world." Unconvinced neighbors may be less loving and reverent if the weed-wildflowers migrate into their lawns. Nevertheless, the back-to-nature yen in roof-tops, even window boxes can be coaxed into color with wildflowers. Conservationists urge wildflower collectors to try to beat bulldozers to construction and highway projects. The rescued wildflowers they say, are easily moved with dug-up dirt around their roots in small plastic bags that retain moisture but also let in air. ---AZ DAILY STAR.

THE BOOJUM AND ITS HOME - *Idria columnaris* Kellogg and its Ecological Niche, by Robert R. Humphrey, has been read and enjoyed by two more T C B S members whose comments follow.

THE BOOJUM AND ITS HOME, by Robert R. Humphrey, and, I might add, its immediate associates, is a fine book of love and empathy; an intense, anatomical interest in a field to which Dr. Humphrey and his wife, Roberta, have devoted themselves. Mrs. Humphrey shows pleasure in the unique contortions of the Boojum (*Idria columnaris*) in her fine sketches. Certainly, a unique quality of the tree (?) is its confinement to a geographical area in Baja and a small coastal part of the Sonoran Desert. Dr. Humphrey gives those of us interested in the BOOJUM a close study of conditions affecting and contorting; the granite soil, extreme dryness, and the prevailing chubascos. Interest in the BOOJUM has been expressed in the writings of men like Erle Stanley Gardner, Joseph Wood Krutch, and movie-director Ray Cannon, men of varied talents who were drawn to the charm of the BOOJUM. This is an interest justly deserved and so well expressed in this book by Robert Humphrey.

----Dorothy Levering.

The Boojum and its Home can best be described as a scientifically researched book on a little-known desert plant, the boojum. I believe the layman would be most interested in the climatic location of the boojum in Baja California and Sonora and precisely why it grows where it does. The chapter on the appearance and growth would interest the same type of reader, especially the photos of variously contorted plants. The discussion at the end of some chapters would give a fair summary of important points without wading through scientific details.

The most interesting part to me was the section on the geologic age and evolution, and its unique adaptations to arid conditions by a water-storage type of trunk and the shedding of leaves like the ocotillo. The

sections on ecology of the boojum were very scientifically oriented, but I found the part on insect parasites, the aphids and tussock moths, of personal interest and the types of epiphytes located on this plant, the Spanish moss and lichens.

The book is soundly researched, full of scientific data, maps and ecological composition tables. The layman should selectively read, and the botanist should read in full.

---Edna Zeavin.

DESERT STORY SERIES 1975 PART I

Paul S. Henshaw

The first of the Tucson Cactus and Botanical Society DESERT STORY series for 1975 was given by Dr. Lawrence M. Gould, Professor of Geology, University of Arizona, Room 201, PMM Building, University of Arizona campus, at 8 PM Thursday, January 16. His topic was "Personal Experiences with Desert Environments".

Dr. Gould is a distinguished scientist and he has lived in the Tucson area of the Sonoran Desert since 1963. He has been active in the field of Geology since the 1920s, when, among other interesting activities, he was second in command of the Byrd Expedition to Antarctica. These experiences, together with emerging developments, stimulated his interest in the polar regions and especially in the study of glaciers. At the age of 79 he is teaching a course in Glaciology.

Dr. Gould pointed out that if we use lack of rainfall and lack of water in liquid form as criteria for deserts, Antarctica contains by far the largest desert in the world. He then drew attention to similarities and differences between deserts with blowing sand and those with blowing ice and snow--how in both cases life holds on tenaciously despite the rigorous conditions, and how man must manage the environment immediately around him in order to survive at all. With respect to differences, he stressed that whereas in sandy deserts, the rainfall--the small amount that it is--disappears quickly by evaporation or by absorption into the soil,

Tucson Cactus & Botanical Society



AS A PUBLIC SERVICE

ADMISSION FREE

Announces the Annual Desert Story Series for 1975

THURSDAY, JANUARY 16, 1975 — 8 p.m.

"Personal Experiences with Desert Environments"

DR. LAURENCE M. GOULD

Professor of Geosciences, University of Arizona
Renowned scientist, author, member of Byrd Expedition

THURSDAY, JANUARY 30, 1975 — 8 p.m.

"The Role of Desert Insects"

DR. FLOYD G. WERNER

Professor of Entomology, University of Arizona
Noted entomologist, author, authority on beetles, economic insects of the Southwest

THURSDAY, FEBRUARY 13, 1975 — 8 p.m.

"An Evening with Ray Manley"

RAY MANLEY, Arizona's Master Photographer

World traveler and famous for his contributions to Arizona Highways Magazine

**All programs will be held in the auditorium of the
Physics and Mathematics Building on the University of Arizona campus**

that in polar regions the small amount of rainfall there tends to accumulate—in fact, in such a way that the existing ice layers comprise an important record of the past extending back for millions of years. Of particular significance, he pointed out that by examining the ice layers carefully, it is possible to detect and determine just when DDT and industrial lead poisons first began to accumulate in the earth's atmosphere.

Dr. Gould called attention to a remarkable situation in the polar regions. This is that vast quantities of potential water suitable for plant and human use exist there, but that because of the prevailing temperatures it is as unavailable as it is in sandy desert regions. He emphasized nevertheless that icebergs contain enormous amounts of potable water and conceivably could be towed to other parts of the world and used for crops and various other human purposes.

Throughout his talk, Dr. Gould radiated excitement and enthusiasm for life, and continuously he revealed his own great admiration and respect for the operation of nature's processes. Surely it was a very

special privilege for the Tucson Cactus and Botanical Society to have had Dr. Gould for its first speaker in its 1975 DESERT STORY series.

DESERT STORY SERIES 1975

PART II

May Watrous

Dr. Floyd Werner, Professor of Entomology, University of Arizona, talked about the role of insects in desert ecology, at the second evening program of the Desert Story Series 1975. He is a noted entomologist, author, and an authority on beetles, economic insects of the Southwest. One reaction of the audience of over 150 persons was that they could have enjoyed another hour of his educational talk. Dr. Werner presented slides of the most common desert insects, briefly discussing the role of each in desert life.

Among the many insects discussed was the native bee, *dabasia rincones*, whose life cycle is perfectly timed to coincide with the blooming of the *opuntias*. As far as we know, the bee visits no other flowers, but feeds on

and pollinates the prickly pear and nothing else. The eggs are laid one foot deep in the desert soil on top of a thimbleful of opuntia pollen mixed with honey. The bee emerges from the ground just as prickly pear comes into bloom. The tiny beetle, *carpophilus dimidiatus*, feeds on petals of the saguaro blossom. It eats only the petals and in no way interferes with pollination and production of fruit. The adult lays eggs on the blossom the first day after emerging from the ground, flying at night from flower to flower. Larvae feed for only one week. Then they drop to the ground and dig into the soil several inches. This forms cells where they wait out another year, emerging as beetles precisely when the saguaro comes into bloom.

We are all familiar with the "hummingbird" moth -- the white-lined sphinx moth that feeds on nectar which it extracts with its long tongue. We many not have known that in its youth it was the beautiful green and yellow four-inch caterpillar which we see feeding upon desert vegetation. These caterpillars by the hundreds, may cover large desert areas. The moth lays her eggs on the wild four o'clock plant, and the caterpillars when mature, dig into the soil, emerging as moths. Only a few survive numerous predators and scarcity of food to become adults. But -- for one glorious month, those who do, fool many of us into thinking that we are seeing hummingbirds at night.

PRESIDENT'S REPORT TCBS - 1974

Paul S. Henshaw

Assumptions: Tucson Cactus and Botanical Society objectives, as set forth in the By-Laws, were interpreted to include a spectrum of interests as follows: (1) culture and preservation of cactus and other succulents, (2) landscaping and display of desert plants, (3) germination of desert plant seeds and the growth of seedlings, (4) protection of endangered species, (5) desert ecology, (6)

land use policies, (7) legislation pertaining to native flora, and (8) development of desert gardens and sanctuaries. Views have been that people belong to the Tucson Cactus & Botanical Society because of a desire to learn more about desert plants, a desire to experience the beauties of such plants, and a desire to participate in organized activities relating to these interests.

Program Steps and Procedures: Stemming in part from experiences as Chairman of the Programs Committee in 1973, and in part from the assumption that members like to participate in organizational affairs, various program functions were identified and put onto a circular which was distributed to members. They were asked to indicate the areas of greatest interest to them, and on the basis of information obtained, various committees were formed. Innovative Developments: Six features can be mentioned. 1. EVENING PROGRAMS. May Watrous was made chairman of this committee. 2. CACTUS SHOW. Wanda Horst's suggestion of holding the Show in the El Con Mall Rotunda materialized very successfully. Will a second show be staged at the new Broadway Center? 3. NEW BY-LAWS. Changes in the By-Laws for clarification and concreteness were approved by the membership. 4. DEVELOPMENT OF SPECIAL RULES OF ORDER. These rules outline program plans, set dues and specify rules of procedure for the current year. 5. ARIZONA ENVIRONMENT. The Bureau of Land Management of Arizona sought comments from TCBS on an environmental impact study prepared by Tucson Gas and Electric Company relating to a proposed power transmission line from El Sol to Vail. Carl Horst, Paul Henshaw, and Josephine Shelby prepared comments. 6 PROTECTION OF NATIVE PLANTS. Lillian Fisher and Carl Horst have taken steps to aid in the protection of native plants.

Comment: In 1974, although the President was duly authorized by the Board of Directors to represent T C B S on matters pertaining to establishment and development of community gardens and sanctuaries, he has for the most part performed a stand-by role, awaiting developments. In view of continuing T C B S interests, and the likelihood that Tucson Botanical Gardens, Inc. will come forth with specific plans for developments during 1975, it is suggested that the subject of community gardens and sanctuaries be given high priority during 1975, and that close cooperation be maintained with Tucson Botanical Gardens, Inc.

PERSON OF THE YEAR. On looking back over T C B S accomplishments of 1974, the out-going President wishes to recognize the firm and untiring efforts of May Watrous. Under her influence, a more efficient set of By-Laws was formulated; Special Rules of Order for guidance purposes were developed; and the Evening Program Series was initiated. Perhaps, because of her efforts more than any other, the T C B S program functions were lifted to higher ground.

1975 MEMBERSHIP ROSTER OF TUCSON CACTUS & BOTANICAL SOCIETY. (First Supplement).

1. Keith D. Butler, 707 E. Lee St., Apt. B, Tucson 85719 Ph. 792-1496.
2. Deutschman, Dr. Archie J., Jr., 4860 N. Camino Real, Tucson 85718 Ph. 299-6010.
3. Gustafson, Mr. & Mrs. Walter, 1125 E. Seneca, Tucson 85719 Ph. 622-1418.
4. Klepher, Miss Helen, 1016 N. Caribe Ave., Tucson 85710 Ph. 885-8338.
5. Morgan, Margaret, 505 Calle del Oro, Green Valley, AZ. 85614 Ph. 625-3785.
6. Pagel, Mr. & Mrs. Raymond, 4646 E. Cerro del Aguila, Tucson 85718 Ph. 299-6807.
7. Rigglin, Mrs. Rosella, 3426 E. Bermuda Ave., Tucson 85716 Ph. 325-8922.
8. Roy, Thomas Orme, 746 E. 5th St., Apt. 8, Tucson 85719 Ph. 624-6463.
9. Smith, Mrs. Eleanor, 1231 S. Camino del Sol, Green Valley, AZ. 85614 Ph. 625-2538.
10. Snyder, Mrs. Wilma, 5147 E. Fairmount Ave., Tucson 85712 Ph. 326-6725.

HILDEGARD NASE will BUY cactus seeds from T C B S members. Call or write her: 326-1651. 2540 E. Ross Place 85716.

IN MEMORY OF Carol Almquist, our good friend and a member of Tucson Cactus and Botanical Society for many years: "We have no dearer word for our heart's friend, For him who journeys to the world's far end, - 'Good-by'."

LOUISE HILLGERT of T C B S won two prizes in the annual fall Flower Show of Tucson Men's Garden Club held in November 1974. Her *Euphorbia Splendens* took 2nd Prize. Her 2 pomegranates won a 4th Place white ribbon. She is one of our more enthusiastic and energetic members, and she says: "The best thing I've done is to join T C B S." Our congratulations, Louise, and continued success with your plant hobby. (r.)

GERHARD KAISER of the German Democratic Republic is a good friend of several T C B S members. Bill Pluemer sent him gifts of cacti. Gerhard wrote us on January 26, 1975: One of the *Normanbackeas* and the *Pediocactus paradinei* (Mr. Pluemer's gifts) show buds. I'm very excited, and I hope I can admire the flowers. You see, these plants are so rare here, and it's a sensation to have such species in the collection. If you can have flowers of these plants, then it is the 'ZENITH OF THE SENSATION'. I hope I can do some good slides of the flowering plants." CHATTER editor asks how can any cactophile love his plants more devotedly than Gerhard Kaiser does! (r.)



THE 28TH ANNUAL CACTUS SHOW sponsored by The Desert Botanical Garden, Phoenix, and the Phoenix Gazette, was held, February 16-23 in Webster Auditorium there. This Show was open to all persons wishing to enter in the announced classifications. T C B S cactophiles do not often enter this judged Show, with the exception of perhaps half a dozen members. One obstacle is the 500 mile trip required to take plants to, and return plants from, Phoenix. You may read the results of this Show in SAGUAROLAND March 1975, which you will find on the T C B S Library Shelf at 2800 East Fort Lowell Road in the office of the Nancy Clarke Insurance Agency. Jim Robbins, former T C B S president, and a perennial winner in this Show, exhibited 100 of his succulents.

THE LIBRARY OF T C B S is now located at 2800 East Fort Lowell Road, the new address of the Clarke Insurance Agency. The always willing worker-members, Vick Merrill and Alan Blackburn, moved our books. Collectively speaking, all members express appreciation for their volunteer work. Individually speaking, each of us should thank them.

LETTER OF THANKS TO T C B S FROM LOIS AND NANCY CLARKE. "Mr Richard Wiedhopf, President, Tucson Cactus and Botanical Society. Dear Dick: Mother and I want to thank the Tucson Cactus and Botanical Society for the eight chairs they recently purchased for our office. It was a thoughtful and generous gesture, and the chairs look so nice in our new location. I hope the club members will enjoy them, too, when they visit their library or use the office for meetings. Thanks again.

Sincerely, Nancy Clarke."

REPORTING NEWS ITEMS FOR CACTUS CAPITAL CHATTER and how it is done. Attention --all officers, committee chairmen, board members, and remaining members in general. Please write and submit your own reports of news items which you may think are for publication. Do so, steadily throughout 1975 as news materializes. Keep

in mind that CHATTER is published only quarterly. Type your reports, if possible -- double spaced on 8 1/2 x 11 inch paper. Legible hand-writing is accepted. Mail or hand this to CHATTER editor, Josephine Shelby, P. O. Box 375, Oracle, AZ 85623. Be specific and use names, addresses, dates, facts, statistics, sources, etc.

Mil gracias, amigos.

TCBS CHRISTMAS GIFTS TO THE CHILDREN in the Pre-School Exploratory Center for Cerebral Palsy and other Neurological Impairments. They received from our members a collection of toys plus \$60.00 for treats. Gift-giving to the less-fortunate at Christmas is the custom at our annual Christmas party.

T C B S CACTUS SHOW, At the El Con Mall under the Rotunda in front of Penney's. March 28 9 a.m. - 9 p.m. March 29 9 a.m. - 6 p.m. General chairman is Ed Busch - Phone 297-2625. Nancy Clarke is in charge of plant sales - Phone 325-1838. Barbara Rogers heads seeds and seedlings section - Phone 885-6485. EVERY member is urged to take part in this, HIS own show. As in past shows, plants will be sold by T C B S as well as by individual members. Adequate plant security is guaranteed. Show visitors will not be allowed to touch plants. Plant owners should correctly label with botanical names all plants brought for exhibit. Lacking this, qualified members will do so. Features of this Show will be specimen plants; seeds, seedlings, and plant propagating; novelty planters; arrangements; an information booth to answer questions about Show plants, about Tucson Cactus & Botanical Society, and whatever.

TC

T C B S CACTUS SHOW needs MEMBERS' HELP !! Bring millions of cactus seeds to the March meeting. There is a drastic need for seeds to sell at the Show. Call Barbara Rogers about seeds -- NOW. 885-6485. ALSO -- Bring to our Cactus Show for the Plant Sale: pups and cuttings from your plants. Pads from your prickly pears. Young agaves. Young aloes. We sell all plants that we can offer. ALSO --- Bring small boxes to the Show, to package sold plants. Bring milk cartons, cottage cheese cups and others

similar, to the March meeting and to the Show. DO something for the good of your own Cactus Show.

OFFICERS OF TUCSON
CACTUS & BOTANICAL SOCIETY
1975

President - Richard Wiedhopf	790-0946
Vice-Pres. - Paul Henshaw	299-9023
Secretary - Edna Zeavin	296-9746
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TUCSON CACTUS & BOTANICAL
SOCIETY
1975

Alan Blackburn	743-0655
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Tom DeHaven	327-0676
Carl Horst	883-1325
William Pluemer	299-9015
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Roger Dean	326-9867

THE TUCSON DAILY CITIZEN makes outstanding efforts to give its readers extensive and responsible articles and editorial writings on environmental subjects, including: (1) greenbelts and open space;

(2) bulldozing of virgin desert; (3) protection of unspoiled desert growth and wildlife, preserving them as natural habitat parks. Tucson Cactus and Botanical Society should express in writing, its gratitude to the TUCSON DAILY CITIZEN for its highly commendable efforts to preserve and enhance Arizona's environmental resources. (r).

THE CYPRUS PIMA MINING COMPANY has achieved outstanding results in establishing stabilization of mill tailing areas via soil treatment and the growth of desert plant materials. Plants that require little or no supplemental irrigation once they are established, are used. Thus, the natural beauty of the desert is maintained. In this way, the overall attractiveness of the mining community is enhanced. (r).

YOUR DESERT HOME needs a natural setting. Use native rocks for walls and drinking spots for desert birds and animals. Here is one list of desert plants suggested for your use: desert willow, jojoba, Arizona rosewood, acacia, feather bush,

CACTUS CAPITAL CHATTER

celtis, mimulus cardinals, brittle bush and hummingbird trumpet. (r).

THE GIFT OF LIFE

Of the miracles of this planet, none is more fascinating than the mechanism that permits green plants to absorb poisonous gases from the air and replace them with oxygen. For man, this process is more than a biological phenomenon. It is a gift of life.

It is ironic that the United States became the world's leading agricultural power, amassed the greatest reservoir of technological skill and pushed the frontier of knowledge beyond the threshold of space while ignoring the depletion of our atmosphere until it was almost too late. A cruel cycle of pollution now grips every major city. No geographical region is totally free of the threat of contaminated air. Some areas are now so polluted that they are approaching unfitness for human habitation.

Man requires oxygen - and in large quantities to survive. His consumption of oxygen averages 23 pounds daily. The sole source of this

vital, life-giving element is the plant life which he is replacing with asphalt and concrete. Plants complete the ecological chain between animal and plant kingdoms. They absorb carbon dioxide and combine it with energy from the sun, nutrients and water from the soil to convert this poisonous gas into oxygen. Without this process, known as photosynthesis, there would be no oxygen to breathe. Thus, the cultivation of plant life on earth is much more than a pleasant, leisure time activity.

TO GROW PLANTS IS TO AID NATURE IN THE IMPROVEMENT OF THE ENVIRONMENT.

WAX COATING ALLOWS PLANTS TO SURVIVE.

If leaves did not have a waterproof surface, evaporation would kill many plants. The common waterproofing on plant leaves is wax made within the leaf and spread on the surface to make a protective wrapper. The wrapping, however, does not cover tiny pores through which leaves interchange gases and water vapor with the air.

Scientists say that man knows no way to package a living, growing thing so selectively. The wax coating on leaves appears to serve different purposes in different plants in addition to waterproofing.