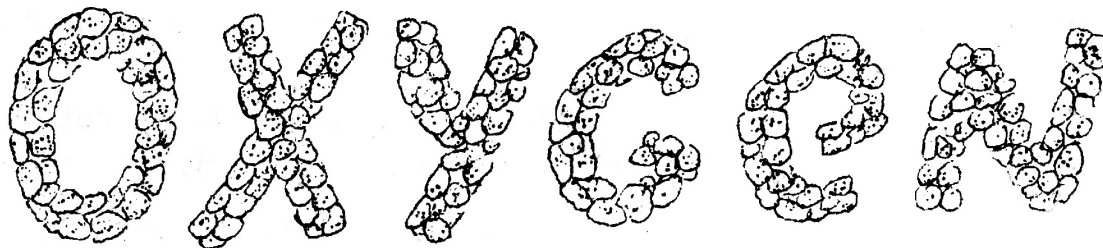


Espinas y Flores

BULLETIN OF THE SAN DIEGO CACTUS AND SUCCULENT SOCIETY
Affiliate of the Cactus and Succulent Society of America, Inc.

.....
TOMO OCHO, NUMERO ONCE

NOVIEMBRE 1973
.....



OXYGEN is in the air and in the water. It is everywhere. It is the most abundant element on the earth. It combines with numerous other elements in nature.

Oxygen is an element, one of a hundred plus which form the building blocks of nature. Its chemical formula is O_2 . It makes up one-fifth of the air we breathe and it is about eight parts in nine of the water we drink.

We couldn't start a fire without it. It causes candles to burn; it supports life; it is the fuel of life. Without oxygen living things would not continue to exist; life on the earth as we know it would perish. Land plants and animals obtain oxygen from the air. Most water plants and animals use oxygen which is dissolved in the water.

An animal may go for weeks without food and days without water. But take away its oxygen and life expectancy is minutes. The body burns oxygen and releases carbon dioxide via the breath into the air. Plants in turn use the carbon dioxide in their life processes and return oxygen to the air.

One thinks of oxygen as something which burns easily, and it does. Then one asks: "If water is eight-ninths oxygen, why doesn't it burn?" Water is an oxide, the result of burning hydrogen in an atmosphere of oxygen. Water serves as a fire extinguisher. It's like putting out a fire with ashes.

When oxygen combines with other elements, usually by burning as we think of it, sometimes visible, energy is released and new substances are formed. The process is called 'oxidation'. Oxidation goes on all the time in living creatures, in other words "they are on fire". Whether we think of our bodies as such, they are oxygen consuming furnaces. The oxygen we inhale is quickly absorbed into the blood stream and carried to all parts of the body to do its work.

How can we help to keep the air clean? By growing green plants! And when flowers appear in their beauty and splendor, the result is doubly climactic. Ye Ed

- - - C O M M U N I C A T I O N S - - - - -

Mrs. Leroy WACKER, Las Vegas: "I've read everything in "Espinasy Flores, the Convention issues, July and August; it's a very informative bulletin. I've been to four conventions and hope not to miss San Diego in 1975. May I subscribe to "E y F". ("Treasurer Mooney's new member list tells me you've decided. Your suggestions and contributions are most welcome. C U in S. D. in 1975. . . .Ye Ed)

Evon RAY, Sacramento: "With this issue (October '73 inclosed) the final curtain comes down on our Intercity C & S Show, "Spree for '73". Thought your readers would enjoy statistics: Exhibitors 43; Total plants 250 cactus, 273 succulents, 44 allied interest; spectators 1400---one of the best-attended shows of the year at I G Shepard Garden & Arts Center. (The Sacramento C&S Soc. is to be complimented and congratulated for "Spree for '73. As Virginia Martin said: "Definitely a large show, about one-third more entries than CSSA at Arcadia 1973." The question now is "More in '74. . . .Ye Ed)

Betty DUCHARME, Florissant, MO: "Please add my name to your mailing list; "E y F" has much useful info."

Charles F. HARBISON, National City, CA: "My many commitments do not permit me to be an active member, but herewith is my check for an outstanding bulletin".

Helen HEGYI, Escondido, CA: "An African plant project is underway at a North County Activity. Large euphorbias are needed."

Jean HAPEMAN, Leta HAPEMAN, Neta COTTEN- - -and Edith BILLMYER, Mary BIRCHELL, Winnie FOSTER, Ione HUBNER, Johanna HOFFMAN and Verna PASEK combined efforts and goodies at the October meeting to provide an outstanding regale-ment table for 100-plus persons crowded in Room 104. They really communicat-ed with all present via the table.

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17	OFFICERS, COMMITTEES and COMING EVENTS

MIGRATIONS OF BEASTIES

Doc. R. V. Vaughan

Great Falls, Montana, is located along the Missouri River where the great Rocky Mountain uplift narrows the river's path to the sea into a series of dalles (narrow chutes thru which the raging river churns over many fallen rocks) thus becoming well aerated and charged with oxygen.



Bison Americanus

There were many of these "rapids" above Ft. Benton where river traffic was terminated and a Trading Post was operated by my grandfather and Paris Gibson and Senator Clark the 'copper king' who was elected to the U. S. Senate and later unseated for unethical conduct---buying his seat. Later the Lieut. Governor appointed Clark to the Senate in the Governor's absence. The Governor was hunting in Idaho.

My grandfather and his friends moved away from Ft. Benton and settled at the waterfalls. They realized that water was 'power' and that immigrating hordes coming up the great river from St. Louis would need land and power.

I was a laddie when we arrived on the Great Northern train of wooded coaches, swinging coaloil lamps that furnished light at night, and a pot-bellied wood-burning stove that the conductor stoked at intervals when the temperature dropped well below freezing as the train bumped and wheezed onward to the land of buffalo herds we had heard so much about.

The last great migrating herd had just perished in the river at Great Falls. My uncle and other men were at the river's edge as the spring thaw released the ice and exposed thousands of carcasses of animals that had perished as the ice gave way under their thundering hooves. The men used long chains and teams of strong horses above the river's bank. The horses dug their hooves deep into the bunchgrass soil as they hauled the dead beasties up to the skinners. The meat was useless but the hides were needed. Hides were used in every home as floor covering, bed spreads, overcoats and lap robes for sleighs. Buffalo robes were thick and heavy.

Larry Neihart, the founder of Neihart, Montana, where our family lived, was a small silver mining town sixty miles above Great Falls in the Little Belt Mountains. The 'Little Belts' were treasure houses of many metals. As a wee chappie I listened to Mr. Niehart tell of the tremendous herds of buffalo which came up thru the narrow canon migrating northward toward the green pastures of Canada. The last great migration was three days in passing. The few miners remained in their log cabins. They were unable to get to the water in Belt Creek. That was the last recorded migration across Montana, either northward or southward.

During the winter when temperature recordings fell well below zero, the "old timers" would gather in the Great Falls Hotel around a wood burner that was cradled in a large, low wooden, sand filled box. Streams of tobacco juice were carefully aimed as the buffalo robed settlers spit their tobacco juice with great precision into the sand. Arguments involved a local subject matter: "Where are the buffalo? Why are there no migrations?" My grandfather proclaimed loudly that the buffalo were in the "Nations" as Oklahoma was then called. Seven tribes of Indians were detained by the U. S. Army after Ocoola had staged an uprising. "Only a dead Indian was a good Indian" was the voiced sentiment. No thought of right or wrong was given to the fact that an Indian was a human being.

MIGRATIONS OF BEASTIES -- Continued:

Even as a boy this killing puzzled me as I played with Indian children and learned their sign language and I learned to track birds and beasties from them.

The last great migrating herd came plunging across the prairie to the river's edge. They could not stop. Like the lemmings of the Arctic, late comers forced the leaders of the herd to dive into the river and perish. The waters were jammed with the dead and late comers walked across to the Canadian grasses near Lethbridge and northward. And in the fall the vast herds would migrate southward.



On the Lone Prairie

When the newly completed trains were crossing the continent, they would stop and let the passengers alight to see who could shoot the greatest number of the passing herd. Only the tongues of some animals were taken.

In September 1902 mother, sister and myself arrived in Los Angeles. After my years of schooling and college, I married. I promised my wife that I would take her back and show her the wonderful waterfalls, the great eagles that nested upon the rocks above the rapids.

Indians sunning themselves on the depot platform watched the tourists and homesteaders alight. They were wrapped in their cheap Boston-made blankets, given them by the Indian Agency. Stoic, sullen and silent, they watched us detrain. Then they faded away into the desert. With them went my childhood dreams, memories long cherished.

I learned and readily understood the meaning of their saying: "Never look back as you leave."

--- WATER CULTURE --- A PROGRAM FOR 1974 ??

Please refer to Franz Borg's article on "Water Culture" in the October issue of Espinas y Flores, page 4. The method has all the ingredients and features for a project followed by a program in 1974.

There could be two or three dozen individuals in the Club who would be interested in working with it. Suppose members obtained containers, nutrients and suitable plants (epis or epiphytes) and started water culture with them as a project. Some individuals might even wish to go further and experiment with water sensitive cacti.

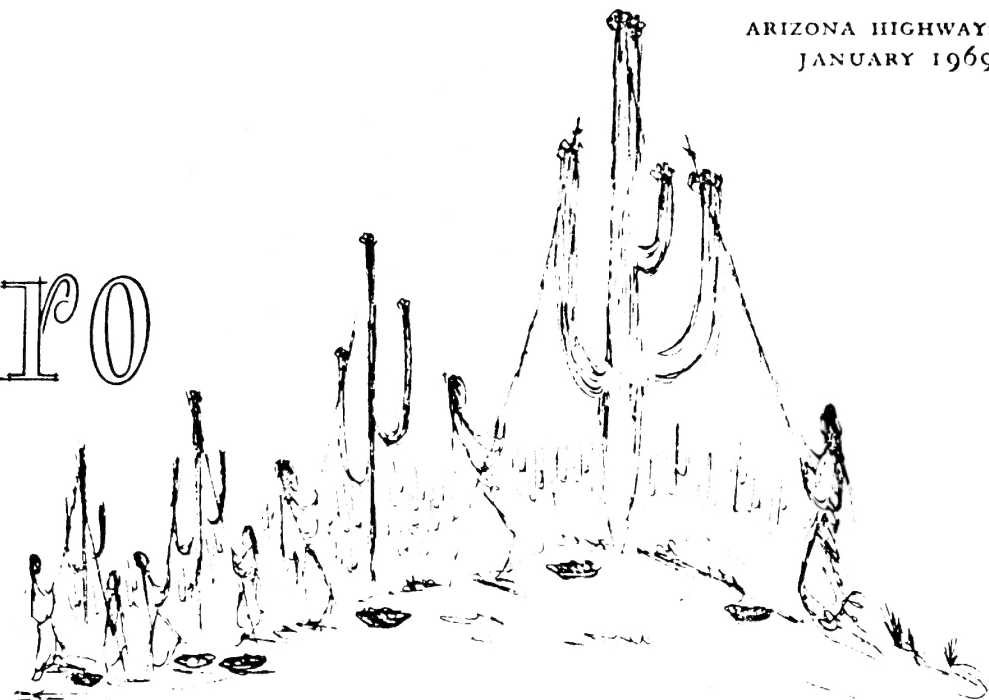
Results of the efforts could be brought to a Club meeting for a "show and tell" program some months later, for personal pride or chagrin (whichever) of those taking part.

A clip board for entries by interested individuals in a water culture project will be passed at the November meeting. Also remember the names of nominees for Vice President and Program Chairman will be announced at that meeting. Whoever the new VEEP and PROGRAM CHAIRMAN may be, he surely would be very happy to have a ready-made program at his command sometime in 1974.

Start thinking now !! Sign up on Saturday the 10th of November !!

Papago Saguaro Harvest

BY CHARLES W. HERBERT



In midsummer, when the Arizona desert is at its hottest and driest, when edible plants wither, when cattle and wildlife weary of long treks in search of food and water, along about July nature unfolds some of her miracles. The saguaro cactus utilizes the abundant water stored in its massive frame and sends out lovely coronets of waxy white flowers atop the main trunk and arms. Then the giant holds its head high and proud for all to see that it is the monarch of all desert plants.

From these blossoms come the rich, sugar-sweet, succulent fruit long held in reverence by the Papago Indians who live in the desert. They use the fruit as food and the foundation for wine used in their sacred rain ceremony.

Man's first concern, from the beginning, was finding subsistence and shelter. The earth contained animal and plant life, water, and raw materials which he used to fashion primitive tools and build crude shelters. Starting from scratch, instinctively he was able to kill or gather the food that was there for the taking. Taking, however, was the problem, and doubtless there were many hits and misses as animals, birds and fish also had an instinct to protect themselves.

Food from plant life was easier to get, but he did not live in a Garden-of-Eden land of plenty. He had to work for what he obtained. Though some of the desirable fruits were high overhead, or protected by thorns, man found a way to get them, and passed the knowledge on to following generations.

Papago Indians in the desert south and west of Tucson gather saguaro fruit just as their ancestors were doing when Father Kino came up from Mexico and founded the original San Xavier Mission on land that, today, is part of their reservation.

Try to hand-pick the luscious, red, prickly-pear fruit growing along the edge of the wide, flat, green joints. You will find an unbelievable number of sharp spines and stickers scattered all over the plant and held so loosely they seem to jump out when your fingers get even cautiously close. The fruit itself is studded with patches of very small fine spines that leave little room for fingers to get hold of it.

But watch an Indian woman pick the fruit. She dusts off the loose spines with a stiff creosote-bush brush. It's easy then and, in a short time, she can take home a large basket loaded to the brim. The juicy meat is scooped out from the shell after the pears are cut in half.

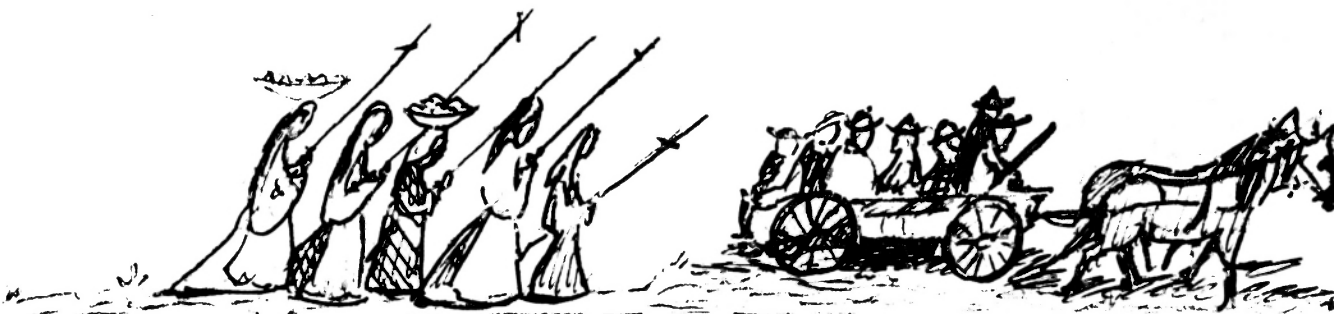
The oval-shaped fruit of the saguaro develops into a hard-shelled green pod. When just about ripe, it turns red, then opens up like a flower as it splits into four petal-like sections to expose its bright-red lining and crimson pulp with innumerable tiny coal-black seeds. This makes it easy for flocks of birds that sense it is time to fly in for a colorful feast. But as the birds arrive so do the Papago women. Sometimes it is a race to see which gets there first and gets the most. One bird doesn't eat much, but there are lots of birds.

In addition to providing a good excuse for a family camp-out, gathering saguaro fruit has a threefold objective: jam, seeds for meal or chicken feed, and wine for the Rain Making Ceremony. The best and largest quantity of fruit is out where the saguaro forest is thickest and away from the numerous settlements on the reservation.

Saguaro fruit harvest time is forecast by the elders according to how the season went, how much rain in the spring and how much hot sun. Wise families go out periodically, however, to check up and see how things are coming along.

Before the automobile arrived on the reservation, the Indian families hitched up their horse and wagon and made the long, hot trip to favorite campgrounds. Before that they walked. Today most go out in their cars or pickup trucks.

Experienced pickers take along the essentials needed for their sojourn in the hot, dry desert, including plenty of water carried in fifty-gallon drums, and make camp at their allotted spot a day or so before the fruit is ripe, to gather wood for the fires, set the large earthen ollas in place ready for cooking, and to rebuild their ramadas for protection from the midday sun and the rain — if it comes. One reason for gathering the fruit is to make wine for use in the ceremony to pray for rain.



Many of the saguaros are thirty feet or more in height. To reach fruit on the top, they must make up the tall picking poles, *kuibits*, if they don't have any left from the last year's harvest. Nature equipped the giant cactus with a sturdy built-in frame of ribs. When the saguaro dies the pulp rots and disintegrates, but the frame usually stands, hardened and bleached by sun and rain, waiting for the Indians to put it to use. It may end up as a *kuibit*, crude furniture, a ramada covering, reinforcement for mud walls of homes, ceiling covering, a religious cross, toy or firewood.

The Papagos must search for these standing, ghost-like skeletons of dead saguaros, cut them and strip out the hard woody ribs that stretch from the base to the top of the main trunk. If one rib is not long enough, two are spliced together to be sure that fruit from the tallest saguaro can be picked.

After smoothing off the rough edges of the *kuibit* with a knife, a *matsuguen* is made from a fifteen-inch section of tough creosote or catclaw acacia sharpened on both ends and fastened near the top of the *kuibit* at a forty-five degree angle. The tie is made with rawhide, rope, native grass or wire, whichever

is handy, and the *matsuguen* hook is in place. A second *matsuguen* is secured to the midsection of the *kuibit* to pluck fruit from shorter arms. This gives the *kuibit* both a pull and a push chance to loosen fruit from tops of the saguaro arms as well as the main trunk. It takes a steady hand and sharp eye to pick only the ripe fruit from each saguaro each day without disturbing the green fruit.

With camp in order and equipment ready, it's time to wait and visit with neighboring families in their camps. Saguaro harvest time is also a social gathering time when politics and weather are discussed along with local gossip.

When Grandmother, the matriarch, gives the word, the family is up and on its way at daylight. The young women and small children, with their *kuibits* and colorful baskets, start picking, while the men look for game and more wood while Grandmother stays at the camp to start the fires and cook.

To be privileged to go along on a saguaro fruit harvest and to sit in on their "jam session" is to have a pretty good idea of how primitive man took advantage of what nature provided.

Arizona's well-known artist, Ted DeGrazia, and I made our first trip together. We had obtained permission from the Papago Tribal Office in Sells and spent the night there, so we missed the early morning takeoff of the pickers. By the time we reached the camp, thirty miles away, the women were just returning with baskets filled with fruit.

Ted was there to get a first-hand look at the harvest and take back to his studio indelible impressions of every detail of the setting, the Papago dress, equipment and the color and action which trademarks his work.

In a small grove of mesquite trees, the colorful camp was all set to go into the jam making. Horses were tied up in the background where the men were chopping wood. The main attraction was around the fires, where water was already steaming in large-mouthed ollas. A number of small ollas stood nearby ready to hold the syrup and jam. Other equipment included stirring sticks, loosely woven baskets for strainers and tight, finely woven baskets for processing, mixing and as containers for the liquid waiting to be boiled down. Large pieces of canvas were stretched out on the ground with the corners weighted down by rocks. The women emptied their baskets onto the canvas and spread the fruit out to dry in the already hot sun. Then they sat down to rest and eat.

After breakfast we followed the pickers back into the desert. They went out a good distance, then turned back towards camp and started picking in a pattern that would bring them close to camp when the baskets were full and heavy. It was easy to spot fruit atop the tall saguaro arm as the bright-red pods, some already open and others about ready to, stood out boldly against the blue sky.

Two women worked as an efficient team. One pushed or pulled down the fruit pods with the *kuibit* while the other gathered them up, removed the fruit meat and put it in the basket. She was careful to dust off any dirt or spines that got on the exposed fruit, as full, ripe pods usually burst open as they hit the ground. For the ones that didn't, she twisted off the stem end of the pod, and used its sharp, circular calyx as a knife to open it and take out the fruit. The empty pods were laid on the ground with the bright inner side uppermost to speed the summer rains.

The picker was careful not to disturb the green pods as she went from saguaro to saguaro until each basket was filled with from fifteen to twenty pounds of ripe fruit. With baskets on heads and *kuibit* in hand, they made the now short walk back to camp. We offered them a ride but they politely refused. Later we learned that every detail of the saguaro harvest is governed by long-standing tradition, almost like a ritual, and tradition required them to bear their burdens.

One more trip was made out into the cactus forest before the intense heat forced them to remain in camp and rest under the shelter until it was cooler.

Back in camp the midday meal was ready. Grandmother served a good-tasting rabbit stew from a big iron pot over a fire near the ollas. As each person was served he sought out a shady spot under the ramada and sat on whatever was handy. We accepted some of the stew. They declined some of our sandwiches. But then we brought out a watermelon and some soft drinks they were pleased to join us. Our hosts didn't volunteer much talk, but Ted was able to carry on quite a conversation with them in Spanish. (To be cont'd in December)



The tragedy of life
is not so much what men suffer,
but rather what they miss.

THOMAS CARLYLE

We were maudlin over missing Madelyn's meeting ...maybe Madelynn'll let us know when she gives another program in the vicinity...reports were enthusiastic. But a trip to Guaymas with a stop-over at Kino Bay doesn't come one's way often enough to turn down...we flew low enough to see the footprints on shore... rocky scallops along the coast with unpeopled crescent beaches... will never forget a rocky cliff illuminated by golden barrells... or Tiburon Island silouetted black against a blazing red sky, the water in the straits flat silver - mental posters for meditations. This pleasure was mine as a gift from Ilse Sommerfeld who won the 4-day trip at a convention and was unable to go - how about THAT for being A GOOD NEIGHBOR?

The Coronado contingent of Suzanne Gillie, Ann Boyd and Mrs. J. R. Conrad might like to contact Elinor Canedy of 200 Palm Avenue... who has a garden of succulents and expressed an interest in attending our next meeting the SECOND Saturday in November...we hope to meet you, Elinor Canedy.

HAPPY HARVEST TIME...whatever you harvest or wherever...hope you all agree that PAPAGO SAGUARO HARVEST is timely...it feels timely, now that midsummer is here in November in San Diego...



We have another new member from Dallas, Texas, via his parents, Virginia & Mike Firth. Son Michael R. Firth and his wife have recently become enamoured of the endless varieties of succulents. Mike writes plays and runs a newspaper forum for the Little Theater movement ...avant-garde in character... which proves again to an unaware public that we're not all squares in The San Diego Cactus & Succulent Society!...Mike met his wife in college in Iowa...she's a doctor now, an anesthesiologist. Welcome--and happy birthday!

Scotty heard from Warner Dodd of Phoenix...Warner is willing to take on indexing EyF -- GREAT! And from Paul Bingham of Irvine whose cartoon we're anticipating.

Ruth Nelson is better but still must Take Things Easy.

SEVERAL SPURS

New Road Links Will Open Baja

By VI MURPHY
Mexico Special Writer
The San Diego Union

PLAZA SANTA MARIA—The new Trans-Peninsular Highway through Baja California will connect with five other major highways to open a new era of continuous travel through the peninsula and mainland Mexico.

Mario Casco, director of the federal Commission for the Development of Baja California (CODIBAC), said "the Trans-Peninsular Highway will be one of the most vital links in the history of Mexican transportation after it opens in December."

Attends Ecology Parley

Casco was at this resort 39 miles south of Tijuana attending a three-day environmental meeting ending today.

He said that through port connections with four ferry boat routes from the peninsula to the mainland, the Trans-Peninsular Highway will form the first direct link from Baja with Mexico's west coast, the southwestern Pacific area and the northwestern desert country.

"There are also three major airports on the Trans-Peninsular route and a fourth is under construction," said Casco.

The Mexican federal government is developing major tourist circuits complete with facilities such as hotels, restaurants and resort complexes, ferry boat and airport linkage as a result of the Trans-Peninsular Highway.

The routes linked by the Trans-Peninsular Highway, some of which are completed, are:

1. An existing paved highway from the rich cotton farming area of Algodones, east of Mexicali, to Tijuana to form a direct route for southern Arizona traffic to the Pacific coast of Baja California and linkage with the Trans-Peninsular.

2. An existing paved highway from Mexicali to the Gulf of California port of San Felipe is being extended south and west into the center of the peninsula to form the northeastern leg of the Trans-Peninsular Highway and open the coast below San Felipe to convenient travel for the first time.

Thelma O'Reilly and Mary Birchill have "accepted the challenge" to do the display for our Society for Floral Association's Old-Fashioned Christmas weekend in the park, December 1st and 2nd.

OUR DECEMBER MEETING IS THE THIRD SATURDAY, DECEMBER 15th.

Thelma and Mary recently created the most beautiful begonia show ever. They actively collect bromeliads and are even now on a collecting trip near Vera Cruz. Mary writes the now-is-the-time cultural column for the Bromeliad Society in CALIFORNIA GARDEN. One of them is intensely interested in variegated plants...they both specialize in dramatically highlighting their plants and we are DELIGHTED to have them active in our group.

Overheard in the hospital where I work: One doctor said to another in passing - "He's a most interesting fellow -- he's got a high phosphatase and a low chloride!"

Mark your calendars NOW for the FLORAL OLD-FASHIONED CHRISTMAS December 1st & 2nd... CALIFORNIA NATIVE PLANT SOCIETY will have plants for sale, among other "botique items" and our table should not be missed. Thelma said that she would like to feature a few snowballs but did not have enough cacti of a snowball nature...so who will volunteer to loan a few? Mary and Thelma will do your cactus proud!

Circular Peninsula Route

3. An existing circular route from Tijuana to Tecate across the peninsula to Ensenada to link into the Trans-Peninsular and the border crossing at San Ysidro.

4. Construction and paving will be completed in 1974 on the Cross-Peninsular Highway from Ensenada to San Felipe through the picturesque Valle de Trinidad, one of the most popular trips for off-road vehicles.

5. A major spur of the southern end of the Trans-Peninsular Highway in the Territory of Baja del Sur from Cabo San Lucas up the west coast to Todos Santos and circling back to La Paz will be completed by January.

6. Extension of Trans-Peninsular Highway travel from Santa Rosalia across the gulf by a ferry boat line, now in operation, to Guaymas, on the Mexican mainland, and a paved highway there.

7. A ferry boat link off the Trans-Peninsular Highway at Puerto Escondido, south of Loreto, with Topolobampo, on the mainland through a new line to go into service shortly.

We all missed another outstanding meeting July 17th at the regular meeting of Floral Ass'n held at the Harvards of 4190 Palmetto -- Kate Sessions spoke on c&s ...members were invited to bring specimens...July 17th, 1973... (From CALIFORNIA GARDEN) About that time Howard Johnson was writing about water gardens and just starting with succulents...

HAPPY THANKSGIVING.

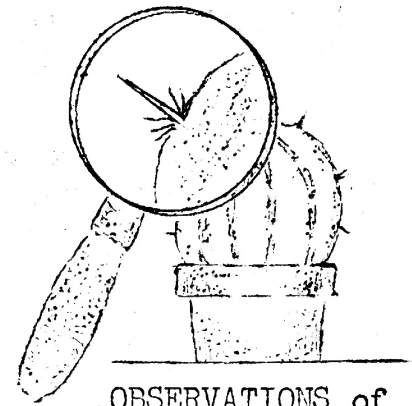
NK

DOES FERTILIZING ABORT

MAMMILLARIA FLOWERS?

Dr. Philip G. Corliss

The Mammillaria Society of England has warned that mammillarias will not bloom if they are fertilized, that in fact buds will be aborted and absorbed.

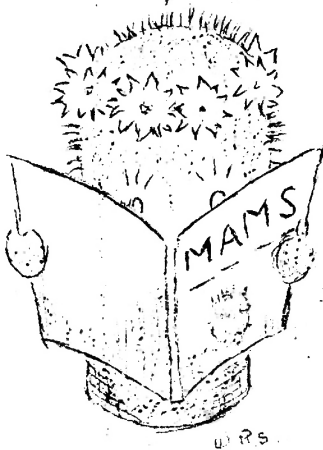


OBSERVATIONS of
Cacto-Phil Corliss

I found this to be devastatingly true some years ago with M. columbiana. I then decided not

to fertilize my mams until after their principal bloom season. I rather arbitrarily selected July 15th as the date for the first application of fertilizer, although there are always some mams in bloom. After that date it is often the second bloom period with the exception of some very late bloomers like M. plumosa.

The more I read
the more confused
I become.



W.R.S.

Contrary Opinions

I noted, however, that after I began fertilizer application with every watering (at intervals of one to two weeks in warm weather, there were some mams which came into bloom and some whose buds were not aborted.

For the past two years I have kept a record of the mams which bloomed in spite of being fertilized. I grow more than 400 varieties of mams but the list is relatively short since most of them had already bloomed out before July 15th.

We know that with mammillarias, as with many other genera, the blooms appear at the top of the plant in the growth made in the past year. Since I like a lot of bloom,

which implies a lot of growth, I fertilize quite heavily. This year I have been using a liquid fertilizer with the formula 10-8-7 which has an acid pH, and I also use an home-made fertilizer containing nitric acid about which I will have more to say in a future column.

Following is a listing of mammillaria varieties which were induced to bloom within four weeks following the application of fertilizer. No buds were aborted and many varieties seemed to be induced to bloom within the four week period. A few of the species were grafted and this may be, in some cases, a cause for the lack of inhibition of bloom. I mention this because an ungrafted group of three M. nana plants failed to produce new flowers while a single grafted plant, although smaller than the three, continued to bloom for six weeks.

I hope the following list of flowering mams will be helpful to other readers. Also I would appreciate hearing from readers as to any mams that did not have bloom aborted or inhibited by fertilizer.

When people have flowers
then their opinions will
have more meaning.



W.R.S.

Continued on following page.

DOES FERTILIZING ABORT
MAMMILLARIA FLOWERS - - - Continued:

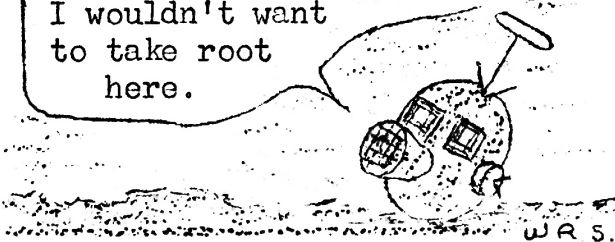
Even more valuable would be a list of those mams whose flowers were definitely inhibited by fertilizer, as such plants should not be fertilized until after their flowering periods.

Until we know the behavior of each species, the only wise thing will be not to fertilize until after the flowering period.

The following mammillarias bloomed after receiving heavy and repeated watering with liquid fertilizer:

M. albicoma	M. icamolensis	M. rettigiana
armillata	ingens	rhodantha
aureoviridis		roseana
auricoma	M. jaliscona	
		M. sanluisensis
M. boedekeriana	M. kelleriana	scheidweileriana
bocasana	karwinskiana	seideliana
brunispina v. mayor	klissingiana	sinistrohamata
	knebeliana	
M. calleana		M. tetracantha
camptotricha	M. lindsayi	
carnea	longicoma	M. viereckii
carretii		viperina
celsiana	M. microthele	voburnensis
crinita	monancistracantha	vocultii
	multiceps	
M. diacentra	multiformia	M. werdermannii
dolichocentra	multisetata	wiesingeri
durispina	multisetata v. puebla	wildii
	mystax	
M. ebenecantha		M. zeilmanniana
	M. nana	zeilmanniana v. alba
M. flavovirens	neophaecantha	zuccariniana
fuliginosa	neumanniana	
	neopotosina	
M. galeottii	M. obconella	
glochidiata	obscura	
	M. pentacantha	
M. hahniana	pfeifferi	
hemisphaerica	plumosa	
hirsuta	polyedra	
hoffmanniana	pringlei	
humboldtii	pygmaea	
	pyrrhocephala	

The Earth with its people, politics and pollution is no place for a Martian Mam. I wouldn't want to take root here.



Root Resistance

PROGRAM FOR NOVEMBER !!

Victor Turecek, President of the Los Angeles C & S Society, came to San Diego last April to show and tell us about the Cacti of Argentina, his homeland. It's a long jaunt down under, but who wouldn't go just to see the tall and bearded cacti of the Andes?

Victor arrived. Being the engineer, fireman, conductor and brakeman for the day, he threw the switch. We went instead to the "Land of the Rising Sun". We saw very neat and orderly and well-kept gardens. Everyone was delighted! This month Victor returns. He really is going to tell us about the Cacti of Argentina. Everyone is delighted!!

COMMUNICATIONS

From our readers

"FREUNDE MIT KAKTEEN"

Anita Heywood, Glendale, Mo.

In Walther Haage's book "FREUNDE MIT KAKTEEN"* he not only lists all the present plants under their oldest, but also under their newest generic names. This means in some instances that a plant has two or three different generic names.

What really impresses me about this wonderful book is the part where he lists a few personal details about the people who either discovered the plants, or were honored by having their last names used as the specific names of some of the plants.

My library includes nearly all the best books written about cacti, but only a few times do I find this interesting information printed in the Cactus and Succulent Journal. I am intrigued to know about those persons who live on while there are still cactus collectors. I mean serious ones, those who bother about names. I cannot think of a higher honor to go on living with ones name given to a beloved plant. For instance, when Kathryn Sabo told the fascinating story about how her son discovered M. saboae (see photo front cover C & S Journal, July-August 1967). What a great story. So now I look at my little plant and I think of this vivacious and creative woman, and a whole new world of "cactus fascination" starts right there. Is there anyone who does particular research along these lines? I am sure there would be many people interested in such information.

When I give programs, I go to a lot of trouble, either translating the Latin or Greek specific names, or if I can, I tell a little about the person whose name was used. It makes the presentation more interesting, and it helps to remember names.

For my programs I have four different slide carousels: One of North American blooming plants; one for South American blooming plants; one showing my own seed growing methods with one-year-old seedlings in bloom; and one carousel with Latin names, word endings, etc. My slide collection includes color photos of plants taken from above, from the side and finally of the flower which is often much bigger than the little plant itself. The photos in color are taken by my husband, Fred.

Next year I hope to add photos of more South American midgets which appear to be ready to bloom. I am always amazed at people who do not see and appreciate the miracles of nature as seen in the flowers, spine formations, tiny bodies and huge flowers, etc.

I am already contemplating my new seed list for 1974 of really rare cactus plants. It usually takes me over six months. I already have a nice collection so it gets harder each year to make up a good seed list for new and beautiful plants. I study the latest seed lists from here and abroad. The latest European cactus books and a wonderful book "Dictionary of Word Roots and Combining Forms" by Donald J. Borror are very helpful. Unfortunately, the newer plants are not yet pictured, and of course some plants are not named for the way they look, but rather in honor of their discoverer or the place of discovery.

I find myself handicapped by 'room shortage'. I always want to grow the most striking species of each genus.

*Freunde Mit Kakteen available from Abbey Garden, Box 167, Reseda, CA 91335, price \$8.00.

Madelyn Lee of Grigsby Cactus Gardens in Vista came to our October meeting fully prepared to enlighten everyone present -- 100 plus -- on EUPHORBIAS. Euphorbias are one of her "special interests". She brought 36 very attractive, interesting, well-groomed, potted plants of the smaller varieties to illustrate her talk. She thoughtfully didn't bring a mature E. splendens. She knew it would fill the center aisle for the length of the room and displace a lot of club members in the already cramped library quarters, Room 104.

Madelyn not only enlightened her listeners, she entertained and inspired them. She delighted them. She took them back in time several hundred years to the days of sailing ships and early collectors and their problems with sailing schedules, port facilities, collecting, loading, storing, and so on. We could easily relate in present day life by recalling postal problems of some months ago.

It would appear now that it is entirely possible an "offset" group, or a similar interest group could develop at Casa del Prado. It could be called the C&S&E Society, or if a number of individuals were totally carried away, it would be the "E Society"

When one looks closely at the Euphorbia family, he sees an analogy in nature, the possible simultaneous development of two plant families in different areas of the world, Africa and the Americas. Although they evolved separately they have so much in common: Evaporation resistance, a milky sap in the Euphorbias; spiny defense systems; many similarities in appearance, etc. In fact the two are actually confused because they look so much alike. It isn't that nature was blind, it is that people don't see or understand what they are looking at.

Before the meeting some individuals were heard to say: "Euphorbias?" During the meeting there was a lot of close scrutiny, concentration, thinking and studying. It is safe to say at the meeting's end those who said "Euphorbias?" at the outset, changed their words to: "Euphorbia, Si; They are for me! Madelyn really scored with her euphorbias. . . .Ye Ed

An afterthought: Madelyn: It would be very enlightening if at some time in the future you would describe for our group how you keep records of plants. A considerable number of our members could use a good system. . .Ye Ed

MY FAVORITE CACTUS

"I wish the Editor would ask for something easier to answer like "How high is up?" or "How long is a short circuit?" instead of "My favorite cactus?". BUT, if I had an area of only two or three square feet for a cactus garden, my choice would be Neobesseya similis*.

My reason for picking it are: 1) It is hardy in this area; 2) it produces many flowers which last several days; 3) It has a succession of bloom; 4) Not all buds open at the same time, and 5) Flowers have a variety of color from light brown to chartreuse and many shades in between.

N. similis is larger than N. missouriensis and its flowers are larger, about 1½" across. It produces many offsets, which if left on the plant, form a clump. They may be removed and rooted to increase the size of a collection.

It is easy to grow N. similis from seed. Germination is good and the plants start blooming when four years old. P.S. I like all my plants. I hope I never have to make a decision.

*Neobesseya is named for Dr. Charles Edwin Bessey, 1845-1915. Professor at the University of Nebraska for many years and an eminent botanical teacher. Thanks for this "choice" to The Spinal Column, Detroit Cactus & Succulent Society, and in particular to Bernard C. Scherer.

WHO WILL SAVE THE CACTI ?????

SAYS G. L. Lucas -- Kew Gardens: "There's no doubt that all cactus species in the wild are endangered. Species disappear before we even know about them."

SAYS Elizabeth Lane --- Audubon Magazine: "Mercilessly uprooted by collectors, their habitat destroyed by proliferating subdivisions and by range clearing, many North American cacti have become severely depleted, and others are thought to be extinct. Conservationists have been slow in recognizing the threat. . .plants are not included in federal endangered species legislation--- and only now is the government taking a first step by compiling lists of threatened plants, including cacti. Only Arizona attempts full protection of its cacti.

"Shockingly remiss in facing up to the crisis is the 3,000 member Cactus & Succulent Society of America, recently chastised by the new Chairman of its Conservation Committee for having swept the conservation issue under the rug for the past forty years. The prevailing attitude has been that conservation is a good thing for everyone but the serious cactus collector."

SAYS Kenneth Friedman, University Park, Pa.: "I wish to call your attention to the July issue of Audubon Magazine. . .an article "Who Will Save the Cacti". He quotes Lane's statement (above) and adds "Many articles in the Journal, perhaps unintentionally, emphasize cactus collecting from wild sources... The Editors of the Journal whose job in part is to edit objectionable material and maintain a standard of quality, should make an active and positive effort to discourage the illusion that there is an unlimited supply of wild plants for either amateurs or nurserymen to collect.

"I recommend that the Society move toward preservation policies like those of the Audubon Society. Perhaps there are enough true cactus lovers to enable development of a program for preservation of endangered species. Perhaps a reservation could be established to which species endangered by housing developments, highways, range clearing, overgrazing and so on, could be moved for resettlement.

"Lastly, I think it is the duty of the Journal to obtain permission to reprint the article I have referenced. While it is true that the article criticizes the Society, there is no reason that the Society cannot take a look at itself and try to reform if such allegations are true."

SAYS the Editor of the Journal, Reseda, CA: "--Mr. Friedman states "there is no reason that the Society cannot take a look at itself. . ."; what he overlooked is that the "criticisms" leveled against us were taken from an article in our Journal written by our Conservation Chairman, Gary Lyons, who was appointed by the board of directors of our Society to look into this very matter! We see no need to reprint an article from another magazine which merely reviews material first published in our very own magazine!

"The one thing that those most involved with "conservation" consistently overlook is that in this area there is more than one point of view, and that the breakdown is not necessarily simply into "the good guys" versus "the bad guys". As editors of the Journal, we do not feel it is our duty to take sides officially on such issues, but rather to present all sides: to offer a platform to those who feel that because of urban sprawl, increased farming and grazing, etc., that conscientious collecting is a good thing; to those who feel that the conservationists are being too alarmist and overstating their case (such as the first sentence in the Audubon article which reads: " 'There's no doubt that all cactus species in the wild are endangered' G. L. Lucas of Kew Gardens. . .commented recently".);...continued on back.

WHO WILL SAVE THE CACTI ?????

Continued. . .

SAYS Editor of the Journal:

to those who fear that restrictions to stop unscrupulous collectors will hurt even the good botanical workers, professional and amateur who have made a great and underrated contribution to the science and hobby; as well as to those who believe that all collecting should be stopped. We feel that as editors rather than dictators it is our duty to accept articles expressing any and all of these points of view.

"A reservation for endangered species does not seem to be a valid concept, for while most species can survive and be propagated in cultivation, they can rarely survive when transplanted to another site in the wild, even to an area very near or very similar to the natural environment. Furthermore, one would be inviting chance hybridization of those which did survive, with other species which would naturally be separated by geographical restrictions. Plants should be preserved, cultivated, segregated and propagated in cultivation, and in the wild, serious, accurate, scientific observations should be made (rather than unfounded accusations) to determine the actual growth and propagation rates of wild plants, from which information in turn could be determined the factual danger to these species.

"One final point, as of this date the 3,000 member Cactus and Succulent Society to which the Audubon Society referred is now a 4,000 member society!

SAYS Doug Buckner, Santee, CA: "Members (of our S. D. C&S Society) might be interested in this (inclosed) admonition from the Audubon Society Interesting."

VERY !! The scene, word pictures above, resemble a 'pentagon', a geometrical figure with five angles and five sides being viewed by five individuals, each looking into one side of the pentagon which is a mirror. Result: Reflections of interests, personalities, views, thoughts, etc. Resolution of the reflections not clear, yet! Ye Ed

NEW MEMBERS --- Good growing to you !! You've picked an interesting hobby !

Francis J. BORG
248 Zabbar Road
Paola, Malta, EUROPE

Ann KEMPF
1652 Pennsylvania Ave.
San Diego, CA 92103

Milton & Betty DUCHARME
3565 Hambletonian Drive
Florissant, MO 63033

Van & Helen VAN NORMAN
Rte. 1, Box 23
Jamul, CA 92035

Charles F. HARBISON
1915 F Avenue
National City, CA 92050

Mrs. Leroy WACKER
4312 Dover Place
Las Vegas, NEVADA 89107

Anita M. HEYWOOD
745 West Oak Drive
Glendale, MO 63122

Mary WHITMORE
5492 Pire Street
San Diego, CA 92122

God in his wisdom made the flea. Dogs on the earth scratch endlessly.

Slightly inebriated conservationist: "Wh-h-o 's gonna sh-h-ave the cacti?"

CACTUS OF THE MONTH

- - TREE CEREUS - -

Martin L Mooney

TREE CEREUS (see'-ree-us) Miller 1754

The tribe Cereus, with some hundred and thirteen genera and thousands of species and varieties, is the third, last and maybe the most important tribe in the cactus family. The stems are always very succulent and, except in the seedling, never has leaves. They bear spines but never glochids. The flowers are usually funnel-shaped with a long tube. Members of this tribe are found from the seashore to altitudes of over 12,000 feet. They range in size from one inch, to many branched, treelike plants weighing tons and some sixty feet in height. So varied in form and size are they, the tribe has been divided into eight subtribes, and generally areoles that bear spines. The last two subtribes are tree dwelling epiphytic plants.

The name Cereus is from Greek and Latin signifying a torch with reference to the candelabrum-like branching of the first known species. The name was first used by Tabernaemontanus in his "KREUTERBUCH" published in 1625, for a tall, columnar, branching plant he illustrated and called Cereus Peruvianus. This, perhaps is the same plant we know by that name today.

It almost goes without saying, when we think of a giant tree-like cactus, the Saguaro (Carnegie gigantea) of Arizona comes to mind. No doubt, there is no more a thrilling and awe-inspiring moment than to see the huge sentinel-like Saguaro standing alone in all its glory with its great arms radiating toward heaven. And to know that in 1625, when Tabernaemontanus first used the name Cereus, this plant may very well have been a seedling. It has been standing there all these years, watching the world go by. Just think of what it has seen and gone through!

The Saguaro is mostly found in Arizona and Baja California. Their growth is very slow. One specimen took thirty-nine years to grow thirty-one inches. They may be fifty or more feet tall with branching arms well above the ground level. The branches are up to two feet in diameter. After a rain, the plants often increase their girth by an inch or more. With its additional stored-up water, a large Saguaro will have a weight of ten to fifteen tons. This tremendous weight is supported by very strong cylindrical cores of several dozen rods up to two inches in diameter. There are always dozens of cavities in the trunks, made and used by birds, rats and snakes as nests and sleeping quarters.

If you are fortunate to visit Saguaro National Monument at Tucson, Arizona, you will see magnificent specimens of these giants, that can be nowhere else.

Pachycereus pringlei of Mexico is another giant of the cactus world. They are not quite as tall as the Saguaro but their trunks are thicker and bigger. The branching starts two to three feet above the ground and goes almost straight up. The branches are often very thick and tall. This, with the thick trunk, gives a terrific impression of size and appears to dwarf an ordinary mortal, more so than the Saguaro. These two trees are the "Jolly Green Giants" in the world of cactus.

There are a great many Cereus of tree size. It would be impossible to name and say something about them all so we will list but a few: Cereus jamacaru, Brazil---up to thirty feet tall, very branched and erect. The woody trunk is suitable for making boards. Cereus pepinianus---up to thirty feet---much branched at the top, very common in Curacao, often grows in thickets. It is known as Kidoe-sji and Breebee tree. Lemaireocereus thurberi---Pipe Organ Cactus. They have yellow-green stems branching from the base, forming clusters of arms, to a height of fifteen feet or more.

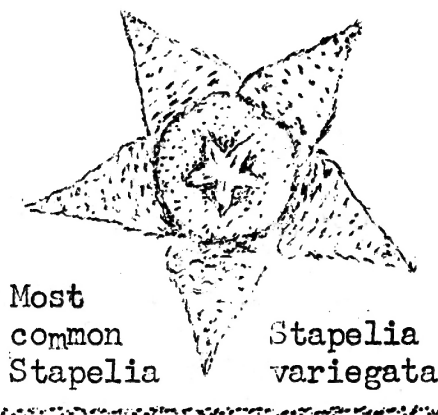
REF: THE CACTACEAE, Britton & Rose; CACTI, Oliver Leese; CACTI OF THE SOUTHWEST, W. Hubert Earle; CACTI & OTHER SUCCULENTS, Chidamian.

STAPELIADS

Family: Asclepiadaceae

-- Julianne Rice --

The genus Stapelia was named for J. B. Von Stapel of Holland, a physician and botanist of the 17th century. Stapeliads possibly are grown for their marked oddity of form as well as their showy star-shaped flowers which occur in such grand variety of size, combinations of colors, or lobe forms.



AH! What a magnificent armchair journey have I trekked---all the way from Afghanistan; across India with its carallumas; a hop over to Socotra and Edithcolea sordida; then to Arabia to read about Duvalia sulcata and the only Huernia there, H. macracarpa var. arabica; thru Palestine on to Sudan; perused the Sahara and more carallumas; into Somaliland to enjoy Edithcolea grandis, Edhidnopsis and Huernia species, as well as the numerous species of carallumas; to Tanganyika which produces Stapelia dummeri in the Pare Hills; Nyasaland and Huernia schneideriana; Angola where Hoodias and Tavaresias grow; and finally to Southwest Africa where all members of an especially interesting family had gathered for an old-fashioned reunion. . . .

Caralluma, Duvalia, Echidnopsis, Hoodia, Huernia, Stapelia, Tavaresia, Trichocaulon, take your very own choice or grow them all to a very satisfying state of being. Your reward can, and will be just as large or as small as you wish it to be.

The generally five-lobed flowers--sometimes 4 or 6--range from tiny velvet jewels scarcely an inch across to larger than one foot in diameter. Some grow very close to the body of the plant while others send out long stems with exceptionally beautiful flowers at their ends.

For more scientific data, try White and Sloane's "The Stapeliaceae". Their illustrations are wonderfully complete. Also included are color plates which I have found quite esthetically entertaining.

For another eye-filling treat, turn to page 239 of the Sept.-Oct. Cactus and Succulent Journal, 1973. There you will find Decabelone barkleyi Dyer found by the late Governor of the Cape: Sir Henry Barkly, about 1870.

Gracias, mil gracias, dear Charles and Bob for excellent choice and such abundance of very readable articles by highly knowledgeable people who seem, also, to love their subjectmatter.

Why don't we concentrate on Tavaresias this month for no other reason than the interesting, and at the moment not so amusing, incident our illustrious Treasurer, an animal and I experienced; and from which we learned that there is absolutely nothing to rehabilitating a li'l ol' Tavaresia which cost two small fortunes at our favorite Plant Sale on Picnic Day at the Bob Taylors.

Perhaps our program chairman can persuade the lovely gal who did the "Stapeliad" thing so well at the quarterly meeting of CSSA to come down to San Diego so our members might enjoy it.

Note: The natives of Mauretania transplant Caralluma dalzielii to ward off the hostile hoodoos from their little plantations of yams.

Commonly known as "carrion flowers" due to the fact that many of the flowers have a very disagreeable odor. However, this more or less putrid odor has a very definite purpose, as flies, which are necessary for the pollination of the specialized flowers, are attracted by it so that pollination can be accomplished.

SAN DIEGO CACTUS & SUCCULENT SOCIETY

Affiliate of the
Cactus & Succulent Society of America

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MEETINGS: Society meetings are held the second Saturday of the month (unless otherwise scheduled) in Casa del Prado, Room 101, Balboa Park, San Diego, CA at 1:30 p.m. The change of meeting date was voted by the membership at the October meeting--from the first to the second Saturday of the month.

MEMBERSHIP AND DUES: Membership is open to all individuals interested in succulent plants. Dues are \$5.00 per year, on an annual basis beginning in January. Dues were increased to \$5.00 at the October meeting by a vote of the membership. Any one joining now and paying for 1974 will have the benefits of membership for the remaining months of this year and until January 1975, at the \$5.00 membership price. Membership includes the Club's monthly bulletin, "Espinas y Flores".

COMING EVENTS:

CSSA SPECIAL ACTIVITY, January 12, 1974, Casa del Prado. The San Diego Club and other Clubs in Southern California will be hosts to CSSA members throughout Southern California. A special program titled "PLANT-O-RAMA" is being developed under the leadership of Julianne Rice and assistants for the occasion. A lunch will be served at noon time for both local Club members and out-of-town guests. Special items of interest for early arrivers will be described in the December issue of "E y F". There are a number of very interesting activities in Balboa Park in the vicinity of Casa del Prado for those who wish to come early in the day. Also parking for private cars is under much less pressure during the morning hours.

The CSSA BIENNIAL CONVENTION is coming to San Diego in 1975. It will be at the BAHIA HOTEL in Mission Bay for the period of May 11 through May 16, 1975. The CONVENTION Chairpeople, Ed and Betty Gay will meet with our local Board of Directors on Friday, November 16th at Casa del Prado, and together with members of the local Board, will formulate plans for the 1975 Convention. CSSA Conventions in the past have been the greatest. Improvement is planned for 1975.

November 1973

Walter R. Scott
3430 Wilshire Ter.
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