

MAMMILLARIA THORNERI

Espinas y Flores

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

TOMO SIETE

MARZO 1972

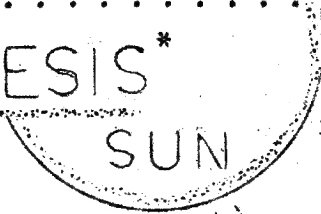
NUMERO TRES

PHOTOSYNTHESIS*

THE MOST EXTENSIVE CHEMICAL
PROCESS ON EARTH

The source of OXYGEN in
the atmosphere

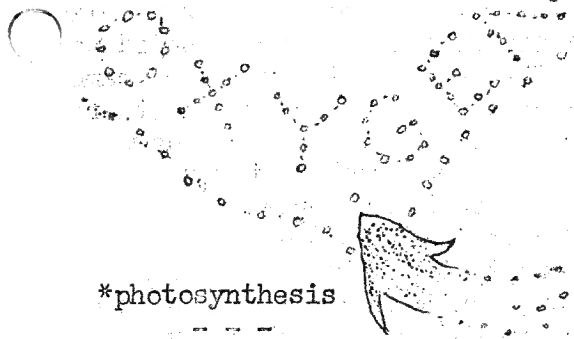
Necessary to animal life . . .



ENERGY

C-A-R-B-O-N D-I-O-X-I-D-E ($6 CO_2$)
from ANIMALS, COMBUSTION, DECAY, FIRE
in the LEAF of a GREEN PLANT . .
plus water ($6H_2O$) from the soil
and CHLOROPHYL

in the presence of sunlight
forms plantfood - SUGAR
($C_6 H_{12} O_6$)
and OXYGEN ($6 O_2$)

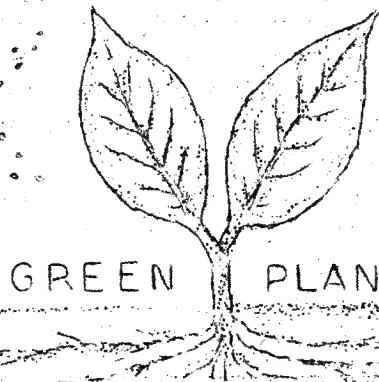


*photosynthesis

photo - Gr. "light"
synthesis - "The building
of complex substances
from simpler compounds.

PHOTOSYNTHESIS
is the process by which
green plants make their
own food. Once the plant
makes sugar it can form all other
substances needed for life.

Photosynthesis occurs only in
the plant kingdom. Chlorophyll
in plant leaves makes them green.



GREEN PLANT

SOIL

WATER

W.R. SCOTT

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ROCKS AND STONES

Doc. R. V. Vaughan

The Editor requested me to do a short piece on 'rocks and stones'. Having had experience in mining engineering as a geologist, I thot it would be an easy assignment. I was disillusioned when I peeked into the dictionary and found 33 definitions of 'rock'. We little realize how many times each day we use cliches - 'rocky road', 'Rock of Gibraltar', etc. So I'll try to omit scientific terminology and get down to the subject as it interests us cactophiles.

All we know of the earth by direct observation is confined to a depth of a few miles. Drilling for oil, mining, earth faulting, wind erosion, water carved channels such as the Grand Canyon have exposed the earth's crust to our observation for a possible depth of eight miles. The outer portion is made of rocks. A rock may be defined as a mass of material, loose or solid, which makes up an integral part of the earth - granite, limestone, sandstone, etc. The rocks, except the glassy ones, are aggregates of a few or many materials; either in their original form like quartz, feldspar and mica or granite, or in a secondary grouping, resulting from the units having been dislodged from their primary position and regrouped a second time, as a sandstone.

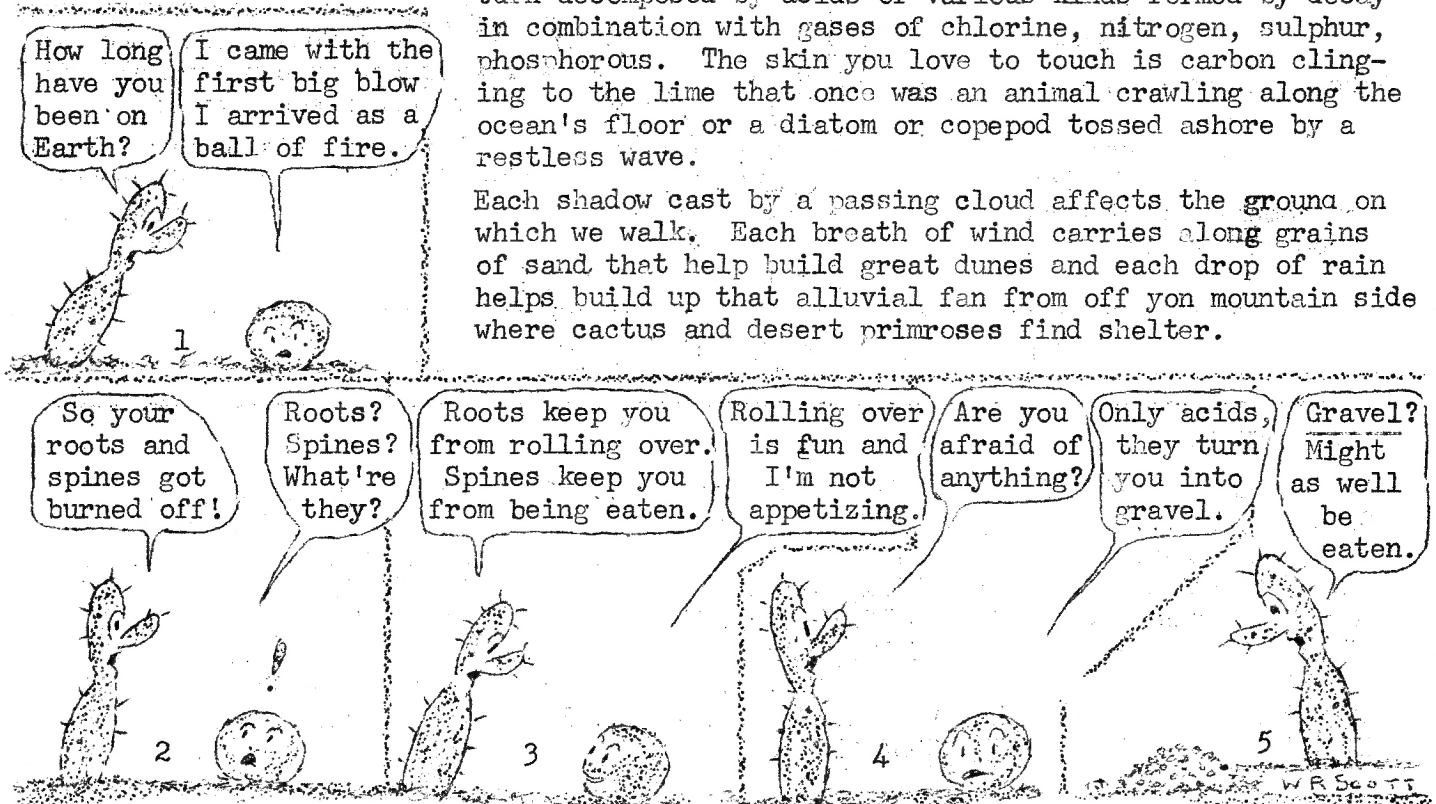
Geology is the geography of yesterday, of yesteryear; of all that has gone from the beginning of creation. Nature never for a moment ceases to labor at changing and re-arranging all that she has wrought. Rocks and bits and parts of other rock that are and were parts of eroded mountains, river washed sands, of lava flows, or orogenic movement where great mountains and continents have ground into each other trying to reach the sunlight and rid themselves of the restless sea.

The most wonderful story ever written is revealed in open cuts made by railroads and highways as overlays are removed and the cuts expose to view layers of sand, breccia, conglomerates, etc. If you have just a small understanding of geology you will be forced to respect the awesome forces of 'Nature' that have labored for millions of light years as we count time to bring all this story to your attention.

Little do we realize that each sip of water that slakes our thirst, soothes our fevered brow, was a part of a ROCK, or more truly an ore. When the water becomes a frozen solid it is a block of ice. Mercury, a liquid metal at normal temperatures, becomes solid as a rock at subzero temperatures and vaporizes at 622° F. The bones that form your frame whereon such beauty rests are dense hard, porous 'rocks' composed of calcium and other salts and organic materials. All the food we eat is derived in great part from decomposed rocks as well as decayed organic matter which once was solid rock that was in

turn decomposed by acids of various kinds formed by decay in combination with gases of chlorine, nitrogen, sulphur, phosphorous. The skin you love to touch is carbon clinging to the lime that once was an animal crawling along the ocean's floor or a diatom or copepod tossed ashore by a restless wave.

Each shadow cast by a passing cloud affects the ground on which we walk. Each breath of wind carries along grains of sand that help build great dunes and each drop of rain helps build up that alluvial fan from off yon mountain side where cactus and desert primroses find shelter.



"Dear Walter:

Fargo, No. Dakota

Enclosed are dues for 1972 Espinas y Flores which is the best of the Club newsletters. I like your new format, too. Congratulations on your new position in the club and your VIP position in the National Society.

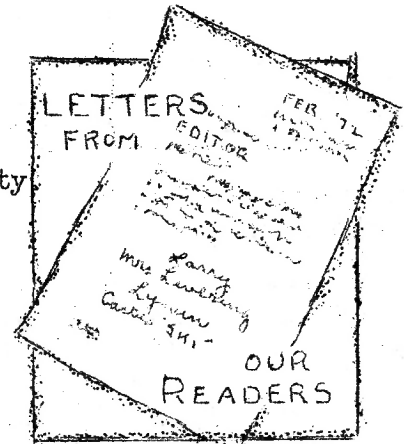
The word here is COLD. The present temperature is 16° below after a high today of 6 below. Aren't you glad you live in California?

A hardy cactus really has to be hardy to take this climate. However, the outdoor beds are covered by over a foot of snow that provides considerable protection.

Just finished an article for the Cactus & Succulent Journal. Am doing research on yet another one. Charlie asked me to do a series, but this really takes time.

Sincerely, *Larry*

(Larry: A friend in Alaska says that when he turns his thermometer up-side-down, the 'highs are lower' and the 'lows are higher'. That's what HE said.Ed)



"Dear Mr. Scott:

Brant Beach, New Jersey

In the July-August issue of the Cactus and Succulent Journal a footnote on page 177 says that the San Diego C. & S. Society has published a 12-page account of the 1971 convention. I am enclosing my dollar in the hopes there is still a copy available. I am still struggling over identification of some of my specimens gathered in the field trips, nor did I get to all the lectures.

Sincerely, *Mrs. William W. Tearing*

(Mrs. L. You now have the Convention issue, plus a modern day 1972 issue of Espinas y Flores, and a list of plants in the Oro Grande and Casa Blanca areas. Don't be dismayed - even the experts have problems with naming....Ed)

Claremont, Ca.

"Dear Walter:

Thank you for the copy of the bulletin of the S. D. C. & S. Society, 'Espinas y Flores'. Unfortunately I put it in a safe place while I was talking to various people after the meeting and then I remembered in the middle of the night that I had left it there. If another copy is available, I should appreciate having one.

Sincerely, *Lyman B.*

(Dr. Benson: It just so happened that your request was received as the February issue was being sent out....hope you find both interesting ...Ed)

Shangrila

"Dear Editor:

You will recall reading in 1968 about a Russian scientist's prediction of the finding of cacti on Mars. And you read in 1971 about Mars II giving signals for 20 seconds. Wouldn't you say they disproved their own theory.... 20 seconds was long enough time for Mars II to say 'ouch'. Do what you will with this missile.

Cactus Ski

(Dear 'Cactus-ski': Dont be perturbed, cacti have been able to take care of themselves here on Earth for eversolong and I would presume the same applies to Mars - if the Russian scientist was correct. . . . Ed)

PS: A second thought, maybe Mars II wasn't programmed for 'ouch'. Or how would you say it in Russian - 'ouch-ski'?Ed

LOVE OF NATURE
in Japan

On our recent trip to Japan we were impressed with the basic philosophy of the Shinto religion. Until the end of World War II it was the state religion, taught in the schools and supported by the government. The Emperor was regarded as of divine origin and descended from the Sun God.

Instead of abolishing Shintoism during the occupation period, General Douglas MacArthur simply had the Emperor renounce claims to divinity and Shintoism was abandoned as the state religion.

Shintoism is so old its origin is unknown. As opposed to Buddhism, a monotheistic religion, Shintoism has many gods. Each force in nature has its own particular god and the Sun God is supreme. Strangely enough many Japanese are both Shintoists and Buddhists, apparently without conflict in beliefs.

An important part of Shintoism is the worship of nature - trees, plants, the sun, streams, etc. because these are worldly manifestations of the powers of God (or Gods). From the home of the most humble farmer to the skyscraper, hotels and buildings in Tokyo you find beautifully manicured and artistic gardens. American promoters would try to figure how to squeeze another 100 rooms into a building whereas the Japanese use the space to plant a beautiful garden.

From the worship of nature they have evolved a philosophy of life which in effect goes like this: 'Don't be envious of the man who has more money, you can have in your garden to enjoy plants, trees, water and the sun. You can invite your friends to see your garden and all can enjoy it together.'

All the big department stores we visited had departments selling cacti and succulents. Being a frugal son of Scotland, I checked prices and found them roughly in line with ours. It gave me a warm feeling - like meeting an old friend in a far away land - to see some of the same cacti I have in my garden.

Even for Occidentals its a good philosophy of life.

..... Wm. J. Bishop

OPERATION BOUNTIFUL FOODBASKET
at the
CSSA SPECIAL ACTIVITY---Feb. 12

CSSA, PALOMAR and SAN DIEGO wish to take this means and opportunity to say 'Thank you' to the COMMITTEE of 'ATE' and thirty-three 'AIDERS AND ABETTERS'

who performed with faultless foresight, inordinate planning, machine-like precision and unusual skill in the preparation and serving of the noon-day luncheon for guests at the CSSA SPECIAL ACTIVITY on February 12th in Casa del Prado.

COMMITTEE OF 'ATE'

AIDERS AND ABETTERS

- | | | | |
|------------------|--------------------|----------------------|----------------------|
| 1 BIBBEY Elvira | 1 BIDDLE Mary | 12 KENNETT Nellie | 23 RICE Lena |
| 2 D'ATTILIO Rose | 2 BUCKNER Virginia | 13 KLINEFELTER Nibby | 24 REINBOLDT Melita |
| 3 LEWIS Perlso | 3 CHATHAM Evelyn | 14 LANGER Frances | 25 RICHARDSON Ruth |
| 4 LOYLAND Sophie | 4 COTTEN Verneta | 15 LICKERT Margaret | 26 ROUSH Honore |
| 5 MOONEY Pat | 5 CUZNER Ruth | 16 LOW Ellen | 27 STANTON Ruth |
| 6 PHELPS Marilyn | 6 FLETCHER Olivia | 17 MEREDITH Florence | 28 TAYLOR Suzanne |
| 7 RICE Julianne | 7 FULLER Ceil | 18 MOGIL Minnie | 29 UNDERWOOD Lucille |
| 8 SCOTT Hazel | 8 HAPEMAN Jean | 19 MOONEY Jill | 30 VAUGHAN, R. V. |
| | 9 HAPEMAN Leta | 20 MORSE Alice | 31 WERNER Edith |
| | 10 HEGYI Helen | 21 NELSON Ruth | 32 WIDEN Edith |
| | 11 HUBNER Ione | 22 PFEIFFER Augie | 33 GREGORY Mildred |

'BAJA BY BOAT'

Skipper--
R. Mitch Beauchamp

Floyd L. Gable, 1st VP and Program Chairman announces a boat trip down the coast of Baja (with landings) at our March 4th meeting in Casa del Prado at 1:30 p.m.

Our 'skipper' will be Mitch Beauchamp who assures all us land lubbers we will have no need for life jackets. When Mitch is in command things always go smoothly.

March 1972

NIBBY'S NOTEBOOK



THAT was a MEETING! Largest attendance ever, due to co-hosting with Palomar for the CSSA's quarterly... the huge room overflowed with "flower power"...easier to list who wasn't there than who was... Bill Lockwood as President made new members for CACTUS & SUCCULENT SOCIETY OF AMERICA — if you haven't joined, N*O*W is the time. Bill said that 48 came down on the chartered bus, representing Los Angeles, San Gabriel, Long Beach, (Sunset?), Riverside (Gates C&S) Societies... Ellen and Bill Low belong to all of them + ours...FIVE memberhips!!!! Ellen giggled and said that if I printed that, people would think they're nuts? Aren't we ALL? Belonging to just one qualifies. Can anyone out-belong the Lows for multiples in C&S?... Imperial Valley and El Centro were also represented, making 8 affiliates.

Bill introduced me to Bill and Lois Worth, and Dr. Jerome and Isabel Fisher of San Gabriel...sat next to Leu Sawey from Los Angeles. San Diego now has five new members from the meeting, they came, they saw, they liked. My pleasure to meet the Werlings, Erma and Joe, more mutuals.

HAPPY BIRTHDAY to LOS ANGELES CACTUS & SUCCULENT SOCIETY...they celebrated their 37th year... Marilyn Phelps must have known they were coming for she had baked a beautiful cake, so big it came in on wheels with lighted candles glowing...which started a rash of picture-taking with Marilyn between our Presidents Augie (sand-and-Soul) Pfeiffer and "National" Bill Lockwood. L. A. President Manny Singer was there, too, brisk and bearded. Charter members Harry and Joyce (CACTUS COOKBOOK) Tate, Ted Taylor, and editor Murray Skinner - L.A. CACTUS CHRONICLE...37 years...that's LOYAL!... Ruth Richardson got in the act snapping a few photographs for our History Book... if no one will give her photographs for the book, she'll take them herself! ...Ruth, do you think we should have an Official Photographer? Too bad our local press wasn't present.

Palomar's present President Harold Marino confided that he was starting a Nursery in Valley Center due to open this spring...the Bob Taylors, the Bishops, Scotts and Helen Hegyi belong to Palomar, too...also past presidents Mitch Beauchamp and Mildred Gregory were there... All the same we missed Ed & Betty Gay. Hope you're feeling much better, Ed, and back on your...uh feet again...

Missed Lillian Pickoff, Corresponding Secretary for GATES C&S of Riverside, and Editor of OPEN GATES... Yes, Lillian, I have been receiving OPEN GATES and thank you for noticing that I asked for all exchange papers to be sent to me at 2201 Fairfield, San Diego 92110. We have 15 or so exchanges going to all four of us who have been editors...now it appears that the Board has decided to take advantage of a box in the office of Casa del Prado... a change NOTICE: GATES C&S Society - Lillian Pickoff, Editor OPEN GATES - 3002 Sugarloaf Drive, Riverside, CA 92507 - okay, Warren? Scotty has cartoons in OPEN GATES...why is it the jokes are always funnier on the other?.. Speaking of exchange publications and reprinting material, is written permission really necessary? I thought in these busy times a credit line was sufficient...anyway, hoped... nevertheless, Clara Maurer of

HENRY SHAW CACTUS SOCIETY, you have our permission (and I'm sure the writer's gratitude) to reprint the article on Pesticides from last year's EyF...Here's another for you, Warren - instead of Charlotte Wittmeyer, Editor of CACTUS DIGEST, it's Mrs. Paul G. Maurer, Route 2, Box 180-A - High Ridge, Missouri 63049. We'll miss you, Charlotte.
Eleven years! an editor.

THE PROGRAM: Reid Moran, Curator of Botany at the Natural History Museum and frequent contributor to the CSSA JOURNAL, introduced himself with Puckish charm... Mr. Moran's wry offbeat humor is reminiscent of a stretched-out George Goebbel. Not only that, but he speaks so clearly you can hear every erudite word...where Walther left off with Echeverias, Moran begins. (It's the softer Mexican *ésh* or *ësh* rather than *ék*.) (By the way.)

"I do not believe in trying to educate anyone against his will," he said, but with stunning slides magnificently magnified, skillfully presented the distinctions between Echeverias and Dudleyas so painlessly that we learned eagerly rather than reluctantly...

Dudleyas were considered Echeverias until fairly recently; before that they were classified as Cotyledons... Little wonder that there are so many arguments about classification. Learn to note position of pistil, number of stamens, arrangements of flowers, whether the petals overlap or separate, and you, too, can key a Crassula into its proper genus. Some of the Echeverias have a frosty or furry look but all of the Duds are smooth although some are heavily powdered; both have a certain element of cliff-hanging in their makeup...both are beautiful and some of each are blooming now.

Echeverias are apparently evolving toward becoming hummingbird-pollinated plants with an open arrangement of flowers hanging -- witness E. pulvinata, Mr. Moran urged. Dudleyas flower in racemes.

Speaking of pollination, CALIFORNIA GARDEN not only does, but the most recent issue has an article entitled POLLINATION IN THE DARK ...we quote Marie Hoff Cox: "Two of our most interesting bat-pollinated flowers are produced by the Sahuaro (Carnegiea gigantea)...and the Cardon (Pachycereus pringlei)"...subscribe and read all about it ...or buy a single copy, I'll be pushing them every meeting -- Bill Lockwood and 15 others knew a good thing when they saw it... and thank you, Stevenson, for promising to become a regular.

Julianne Rice's handiwork was seen again in the "friendship bread" Sahuaro and Octillo table decoration, a conversational tidbit if ever there was one...your recipe, Lens Anne? ... Several members were heard to say they wish Doc Vaughan would give us a program sometime for they enjoy hearing him speak...so do we. ... Photographer Alice Taylor won another in the Naturalist's contest - Aphids feeding their young - seen that way, large screen, you might almost hate to kill them...try planting chives nearby to keep them away. Since ants cart them about and ants hate lemons, blend into a liquid and make magic rings of lemon ant+aphid repellent around likely plant victims. Really, Troy Shipman and Lauron Lovelace should be giving more hints as they are charter members of the Organic Garden Club. Kay Canady, the President of ORGANIC GARDENING, proved with a soil-core that I have hard pan - hard pan! have been shocked and horrified -- soil dry on top, damp in the middle and saturated just above the hard pan level; the soil-core bore came up dripping in places... Suggested solution, raised beds of compost. You can use a knife to test your soil.

From our

Detroit C&S SPINAL COLUMN - Thank you

"It used to be that whenever we touched a mealybug with a swab dipped in rubbing alcohol, the bug just burned up and disappeared. But some time ago we noticed that a bug, though it seemed dead and probably was, had to be removed from the plant.

We questioned our druggist about this and learned that the product now sold as ISOPROPYL is not the same as true rubbing alcohol. Notice the label says "rubbing compound". There is alcohol in it but it is diluted, and while it is probably good enough for what it was intended, we suggest that for battling bugs make sure you buy a 70% Ethyl Alcohol, such as LAVACOL."

also from the same source: "We would like to repeat an item from the Dec 1966 BULLETIN of the New York C&S Society: Lester Rothstein writes: "A California professional recommended to me the following spray which I've tried and it seems to work fine.

2 PARTS WATER, 1 PART RUBBING ALCOHOL and 1 PART HOUSEHOLD AMMONIA.

This mixture does not seem to adversely affect crassulaceous plants as Malathion may. It has no bad odor as the alcohol evaporates rapidly and ammonia is a common household smell anyway. Furthermore, ammonia acts as a fertilizer."

(It may take a while for a C&S tip to travel from California to New York to Detroit and back again to San Diego...but, a tip in 9!)

* * * * *

Another quote from Wava Frye of Detroit's SPINAL COLUMN: quoting a letter in the 1949 CSSA JOURNAL - "Somewhere I read an article about putting marble-sized pieces of very soft brick in cactus soil. To try it, I potted a Stenocactus with a lot of the 'marbles' in the soil and intended to let it grow until next spring before I looked, but the pot was smashed accidentally...the roots were wound tightly around the brick pebbles like string and some even seemed to grow right into the brick substance itself. Less frequent watering would be needed, the soft brick pieces retaining the moisture."

* * * * *

STAR to STAR - Corpus Christi, Texas - September 1971 - The Coastal Bend C&S Society - GET THE ALOE VERA! by Lillie Schraeder - (in part)

"Uses for this plant are almost unlimited. Burns, cuts, stings, scrapes or bites have a less-lasting effect after an application from a freshly cut leaf of Aloe vera.

There is one use that has escaped many gardeners that have a plant - that is - as a healing agent for plants! the cut end of flowers...cuttings made to dry and then potted for propagation... or to heal fresh cuts where rot or fungus has invaded. Be sure to use clean implements to cut away rotted, broken or diseased parts before apply a generous amount of the juice -- sometimes it heals better if a thin sliver of the Aloe pulp is placed over the cut.

This very old, tried and true plant will help heal or stop the bleeding of the popular poinsettia -- apply immediately to the cutting and the remaining stock -- the "flower" will last longer."

(Member) Larry W. Mitich, North Dakota State U, Fargo, ND- wrote THE GENUS EUPHORBIA (Jan '69 CACTUS POINTS, Delta, Alabama) Our thanks to them for reprinting privileges.

"The Euphorbias came to the attention of the herbalists some 2,500 years ago because of the latex or milky sap contained in their stems. Certain species were believed by the ancients to contain potent medicinal properties. It is a marvel of Nature that many different genera of plants, through slow evolution, developed the ability to store liquids as thick milky juices or latex. Water can easily be lost from a plant by evaporation and transpiration but latex endures in spite of heat and drought. The ability to manufacture latex is not confined to the Euphorbias - figs and stapeliads and many others, too. Amazingly, several plant families made the chemical discovery of latex independently. The composition of latex differs in unlike genera, being virulently poisonous in some and harmless in others.

The latex found throughout the plant is produced in a series of latex tubes which are derived from single cells. Latex contains starch grains, varying amounts of a deadly resinous substance called Euphorbon, as well as many other materials.

When removed from the plant and exposed to air, latex hardens to form a gummy substance called Euphorbium. Derived from a few E. species only, Euphorbium was once an important product of commerce. The greater the amount of Euphorbon in the latex of a given species, the more poisonous it will be. Species containing little are said to have some value as animal fodder."

* * * * *

"All the Way from America" and back again via CACTOCHAT, published by Christchurch (New Zealand) C&S Society. "Use nylon hoisery instead of rubber hands when grafting. Cut crosswise in bands 2 or 3" wide, using tapered ankle for small pots and top for larger grafts --allows daintiest of spines to penetrate and avoids dents and bruises caused by rubber bands."

Mrs. L. H. McCausland has been "The Editress" for some years. She wrote once, "Personally I have found that it does not pay to 'potter' in the greenhouse while the jug heats...I wonder how many jugs have boiled dry in members homes at such times?"

Re ESPOSTOA HUANUCENSIS: "Seed is almost impossible to supply because the heads with the cephalia are being cut off in order to get wool for mattresses. The plants to be found are nearly all mutilated and cannot bear fruit."

(Notebook continued from page 6.) Another chapter in where-do-members-come-from saga. Lucille Underwood and Edith Billmyer have been friends for 10 years. Edith belonged first to a Gem & Mineral Club but dropped the rocks when she became interested in succulents after Lucille showed off her collection. Then Edith saw a notice in the paper that the public was welcome to attend meetings, came and joined, and later brought Lucille...I believe Sophie told me that Emily Parks encouraged her and Oliver to join.

The following is a message in part from Myron Kinnach, past president of the CSSA:

"I BELIEVE THE SOCIETY should be composed of chapters, all of whose members subscribe to the JOURNAL. This is customary among practically all national societies.

There could still be local groups not belonging to the Society who, presumably, would not be very seriously interested in this field. On the other hand, those groups that are more than superficially concerned with succulents would belong to the national society and support its JOURNAL.

'Affiliated' clubs would have to choose which they wish to be. It is most unfortunate that the present, loosely affiliated organization of the Society was ever begun, because it is now difficult to make members realize that this situation is untypical of national societies.

THE JOURNAL is an excellent publication, the principal accomplishment of lasting and world-wide value supported by the Society.

It is incredible to me that one can be a member of an affiliate but not a member of the Society."

Mr. Kinnach started by saying, "To my surprise I have found these 'messages' have brought out a tendency in my character that I had not suspected lurked there at all: a strong urge to preach. This is my last opportunity to satisfy this urge...

If our membership were sufficiently increased, enough income could be accumulated to finance expeditions, research, scientific drawings, and the foundation of support of public plant collections. (The American Camellia and Orchid Societies, for example, have substantial research funds which further valuable work on these plants.)

The AFFILIATE REPORT...too often it is thrown on a shelf, unseen and unread... What incentive does the President have to write his 'Message'? HOW CAN THE TOO-LOOSELY ORGANIZED AFFILIATES BE BROUGHT TOGETHER BY A PUBLICATION OF SUCH LIMITED CIRCULATION? In my opinion, an enclosure of such material should be sent with each issue of the JOURNAL. It would REACH EVERY MEMBER."

* * *

??How many of our San Diego Society have seen the AFFILIATE REPORTER?



From OPENGATES - DESERT SYMPOSIUM ANNOUNCED: Throughout 1971 the Desert Sub-committee of the Sierra Club has been conducting a series of 25 desert study trips into the California desert in cooperation with the Riverside District of the Bureau of Land Management. The information gathered on these trips will be summarized at a Desert Symposium. The following is from a letter dated 9 February 1972:

"Dear Mrs. Pickoff:

The Sierra Club will sponsor a Desert Symposium on
SATURDAY
March 11th

at the University of California in Riverside. Registration will begin at 8:30 outside Watkins Hall. J. Russell Penny, State Director of the Bureau of Land Management, and Larry Moss, Sierra Club, will start the program at 9:00 a.m.

At 10:30 twenty slide and discussion programs will begin and run concurrently and continuously until 3:00. A thirty-minute movie on the California Desert will be shown at 10:30 and again at 2:30. At three a final question-and-answer session. (A box lunch will be available at noon.)

ADMISSION IS FREE. * Donations will be gratefully accepted. Everyone is welcome.

Parking in the visitor's parking lot is 25¢ - be sure to have the quarter for machine-dispensed permit.

--oOo--

Dr. JAEGER TO SPEAK on Monday, March 6th, 7:45 at the Riverside Museum on his recent trip to Madagascar and Rhodesia, with slides.

--oOo--

The Wilderness Society

Sierra Club

JOINT ANNOUNCEMENT OF WILDERNESS HEARING
FOR
JOSHUA TREE NATIONAL MONUMENT

*March 16th
DEADLINE!*

(The hearing record will remain open for letters for 30 days after the hearings. Please express your support for the Sierra Club-Wilderness Society wilderness proposal by letter if you cannot attend the hearings in person. Mail your comments to: Superintendent, Joshua Tree National Monument, P.O. Box 875, Twentynine Palms, California 92277.)

URGENT - It is indeed important that you make your views on this matter known because the Secretary of the Interior's recommendations to the President and Congress will be based on the hearing record and CITIZEN RESPONSE. Please write in support of the Park Service wilderness proposal with the additions delineated in this mailer. (too much to print)
URGE - "Close the Covington Flat road and add the entire area to wilderness. Bring wilderness boundary down to shoulder of road and to campground limits. Add this section to the wilderness, acquire the inholdings, and close the road that leads to the mining claim below Salton View. Add this section to the wilderness and close approximately 3 miles of road across this section -- also acquire the inholdings. As a general comment, ask the Park Service to bring the wilderness boundaries down to the road shoulders and Monument boundaries rather than leaving 1/8-mile management zones. (IT IS NECESSARY TO EXPRESS SUBSTANTIAL OPPOSITION to the concept of a motor nature trail and ask that it be deleted from the Master Plan.) The Park Service proposal is good but needs to be improved in several instances, as listed.

DO WRITE NOW

ECHEVERIAS AND DUDLEYAS IN THE SCHEME OF THINGS

The first quarter meeting of the Cactus and Succulent Society of America, held at Casa del Prado, was an educating experience. The speaker, Dr. Reid Moran, introduced himself in a most unanticipated way. A subtle vein of humor runs through all of Dr. Moran's lectures or talks but never distracts from his highly professional presentation.

The lecture dealt with variations of the Echeverioideae (That's what's left of the New World Crassulaceae when you subtract the Sedoideae!). Beginning at the beginning, the six genera recognized by Linnaeus in his 1753 opus, Species Plantarum, were discussed. It seems that the father of modern botany based his classification along diagnostic lines rather than on phylogeny. Most of his species were of Old World extraction also. The Swiss botanist, Augustin deCandolle, amplified the Crassulaceae by recognizing eighteen genera in his Prodromus, 3, 1828. Within this work was Echeveria, a genus established in 1793 by deCandolle, based on E. coccinea (Cav.)DC. The march of time finds the versatile Drs. Britton & Rose monographing the North American Crassulaceae in 1905. This work, although having undergone significant changes since, is still a standard reference for North American Stonecroppers.

With all these works on Crassulaceae it is small wonder that the nomenclature was still rather unsettled in the first part of the 1900's. Today we still have works of that era, i.e., Jepson's, Manual of the Flowering Plants of California, which lists Dudleya as Cotyledon or Kearney & Peebles', Flowering Plants and Ferns of Arizona, which lists Dudleya as Echeveria. But as the venerable lecturer pointed out, it's all a matter of opinion.

Next on the syllabus were flower and inflorescence structure. Dudleya, it seems, is wholly convolute in its petal arrangement while Echeveria varies from mainly imbricate to valvate and induplicate valvate. Again in the inflorescence, Dudleya has adhered to the cincinnus design while Echeveria spans the spike, raceme, or cincinnus patterns.

The next section of the lecture discussed the Echeveria-related species of Mexico and adjacent areas. Thompsonella, Lenophyllum, and Valladia were shown and their relationships mentioned. Pachyphytum was covered in some depth. Of particular interest was the intermediate position of P. fittkai between sections Pachyphytum and Ixiocaulon. Two guests from the Bay area in the audience were also interested in P. fittkai as they were married in Mexico by Father Hans Fittkau. The unusual behavior of the Graptopetalum flower was then covered and related to outcrossing or non-self pollination.

Finally, the subject matter struck home when Dudleyas began flashing onto the screen. The three sections of the genus, Hasseanthus, Stylophyllum and Dudleya, were well covered regarding flower structure. The unique aspect of the inflorescence of D. pulverulenta was proposed as an example of evolution toward hummingbird pollination as is the case with some Pachyphyti. Throughout the lecture, brief references were made to hybrids, hybrid fertility and chromosome numbers. Speculation on hybrid origins of D. nesiotica and D. traskiae via allotetraploidy was inferred. However, hybrids throughout the Echeverioideae, be they artificial or natural, are apparently common or of little import regarding phylogenetic relationships. Apparently, geographic isolation is of more consequence regarding speciation and evolution of the subfamily. Many of the species are quite local and restricted, as a quick survey of the literature will reveal. Perhaps geographic range maps would be more revealing than the slides of the seventeen blurred chromosomes of the meiotic cell.

Anyone wishing to follow-up Dr. Moran's presentation is faced with many scattered references. Jacobsen's, A Handbook of Succulent Plants, is helpful, as is Das Sukkulanten Lexikon (auf Deutsch!). Regional floras include portions of the North American Crassulaceae, i.e., Munz & Keck, A Flora of California, and Correll & Johnston, Manual of the Vascular Plants of Texas. It would, in deed, be nice to have a single, up-to-date monograph on the subject! ...R. Mitchel Beauchamp

LEAVES

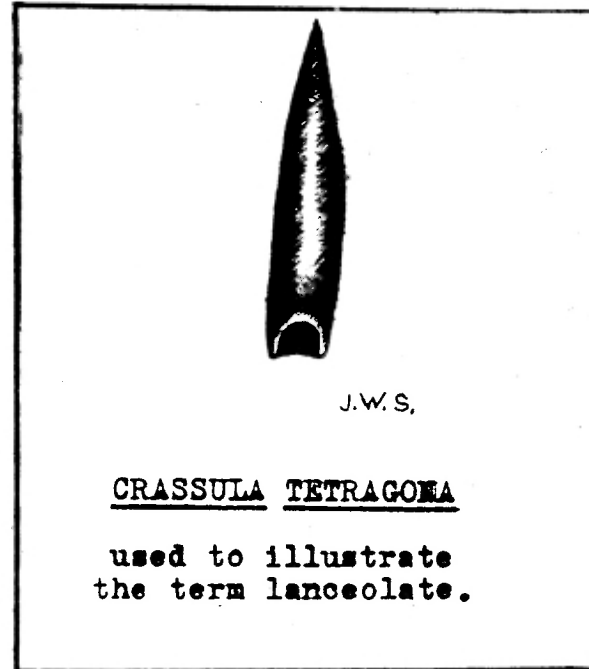
LANCEOLATE

Jack W. Schlotte

--oOo--

Each month this article will illustrate a botanical term used to describe the shape of leaves. Such terms as lanceolate, obovate, mucronate, and others may be clarified. I will try to illustrate each term with a plant known to most collectors to facilitate recognition of the shape.

Lanceolate (lăn'sē-ō-lāt) is described as lance shaped; several times longer than broad and tapering from near the base to the pointed apex. *Crassula tetragona* with its almost cylindrical leaves arranged in four rows fits the description. Its one inch long, pointed leaves are arranged two to a node, opposing, such that each pair forms a cross with its neighbors, thus the name tetragona, meaning four-angled. A common name is Midget Pine Tree.



If *Crassula tetragona* is hit by frost it will usually die back to a node and later it will branch from the leaf axils. Its stiff, slender, upright stems may fall if to dry. It is a tall growing shrub and is good in borders. I have seen it over three feet tall with a trunk over an inch across. When it is smaller it is useful in bowl gardens. It roots very easily even from small cuttings. The flowers are small, about an eighth of an inch across, with five white petals and five stamens. The flowers are born in terminal clusters which may be two to three inches across.

The genus *Crassula* contains well over 200 species, a few of which are annuals. It may be divided into two groups. The first consists of plants with visible branching stems that form shrubs like *Crassula argentea* and *C. tetragona*. The second group is the small, low growing plants with the stems hidden by the closely packed leaves like *C. lycopodioides* and *C. barbata*.



EDUCATION PROGRAM
Dr. Leroy N. Phelps

(Ref: Page 17 and
January page 8)

Cactus-of-the-month: CEREUS SPECIES
Succulent-of-the-month: ALOE SPECIES, preferably miniatures.

If you have a plant-of-the-month, species not known, bring it to the meeting, someone may be able to identify it.

Suggestions: Aloes: A. jacunda, A. beguinii or other small or miniature.
Cereus: Pachycereus pringlei, machaerocereus gummosus, C. peruvianus

February Flowers

Leroy N. Phelps, Ph.D., Education Chairman

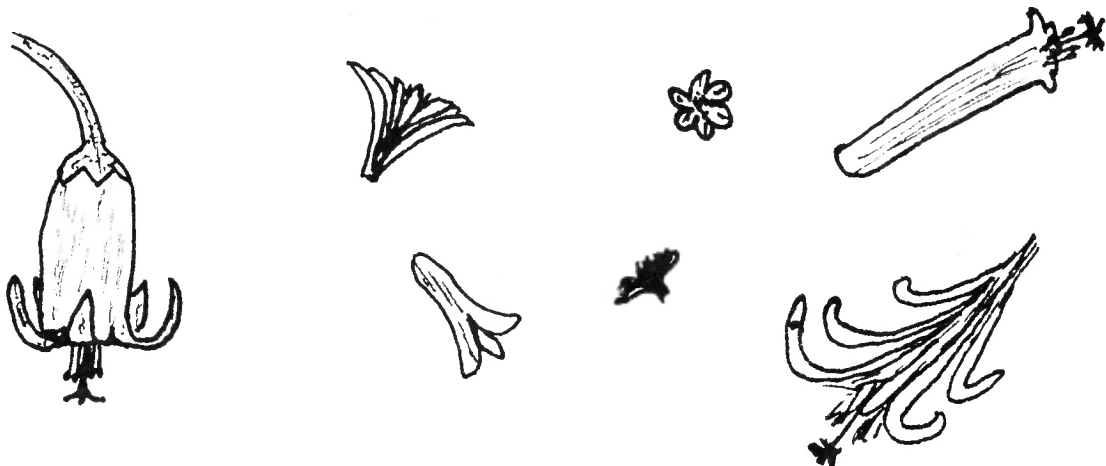
Although we are conditioned by cold weather to think of this season as being flowerless, there are many cacti and other succulents which find this the ideal time of year to produce their reproductive organs. The flowers are the only means by which plants can reproduce sexually, and the plants which rely on insect pollination frequently have very gaudy flowers. And we do see this in our plants. It would be natural at this point for me to go into flower structure and function, but I've just decided to skip that and recommend that you go to one of the many books available if you're interested.

Here I'll mention a few plants you might find in flower, and which can be seen in various gardens in the San Diego area. This is not intended to be an exhaustive list, and if I've omitted your favorite plant, I apologize.

There are several species of Mammillaria that typically flower during our winter months, such as Mm. confusa, Mm. hahniana (the old woman) and Mm. elegans. I have seen at least two species of Rhipsalis and several Epiphyllum hybrids in flower--these are probably atypical, but nice nevertheless. The Zygocactus truncatus varieties (Christmas and Thanksgiving cacti) are flowering quite late this year, so they're coming into their own this month. Some of the cleistocacti are in continuous flower, so you'll see them around, also.

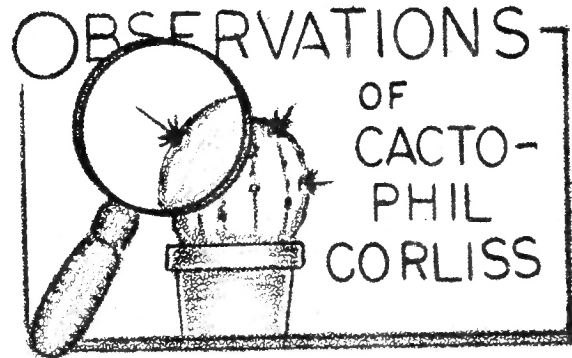
Among the succulents you'll find a great number in flower, especially those from South Africa. You can't miss the aloes--those large hot pokers of flowers can really knock your eye out. The haworthias with their quietly beautiful flowers may require some stooping, but don't miss them. There are various species within the genera of mesembs in flower, some very shy, others so spectacular they couldn't possibly be missed. We can also find some of our native succulents in flower. The species of Echeveria and Dudleya, among others, are in flower now. The flowers may not be brightly colored, but they are certainly worth examination.

You'll find flowers on a species of practically every genus of succulents this month if you really look, some gaudy, others with their quiet beauty. So rather than reading more, now, take a couple of minutes to go out and admire a flower this winter season!



Crests, etc.

I guess it's my turn to contribute two cents' worth about crests. It won't shake you up too much, I hope, for me to tell you that I HAVE produced crests in my collection. Perhaps I had better say that crests have "appeared" among my seedlings. To date, the crests have come in several seedlings of each of two crosses: the first had *lobivia tiegeliana* as one parent; the other had Johnson's hybrid *lobiviopsis* "Orange Glory" as one parent. These seedlings were grown in wick-few pans with electric cables for bottom heat and fluorescent lights overhead. They were heavily and constantly fertilized. It would therefore seem that the crests were due to extremely beneficial growing conditions. I did not try to produce crests; they just appeared. To the best of my knowledge there was no injury nor disease as a causal factor.



Every collection should include some crests, I think, if only because they are intriguing to visitors ("That looks just like a snake!"). Most of them are not, to me at least, as beautiful as normal plants. A majority of them must be grown as grafts. This may, according to your taste, be a vice or a virtue... Some crested plants are desirable because they have the following characteristics: (1) They grow in tortuous spirals. (2) They have a plethora of long hairs. (3) They are profuse bloomers.

Some crests resemble in structure the normal plant and can be recognized easily - *mammillaria vaupellii* and *mammillaria bocasana* here come to mind. Other crests are virtually impossible to identify, even if the normal plant is distinctive. Among these are included many crested plants of the *mammillaria* *rebutia*, *lobivia*, *echinopsis*, and *echinocereus* genres.

Some crests tend to revert to normal growth persistently and must be frequently cut back. In such cases, once you have attained a plant of an attractive size, I suggest you treat the plant like a bonsai - limit root space and nurture.

My visitors seem to like best the hairy *espostoa* crests; my personal favorites are the heavy-blooming *mammillaria louiseae*, *mammillaria saboae*, and *gymnocalycium mihanovitchii*.

Interest is also added to a collection by the presence of some variegated and monstrose plants. Those variegatas that contain NO chlorophyl (such as the "Ruby Ball" and the yellow variegated "Peanuts") must of course be grafted.. I like the rainbow effect of such as *opuntia monowantha variegata* ("Joseph's Coat") which have red, yellow, and green areas. Many variegated *gymnocalyciums* have this pattern. As is the case throughout the floral kingdom, variegated plants are more difficult to maintain than normal ones because they do not contain as much chlorophyl.

Of all known monstrose cactus plants, only *cereus peruvianus monstrosus* is said to come true from seed. Flowering monstrose plants are rare, in my experience, and those that do flower rarely produce seeds, even nonviable ones.

Unlike the crest, where the growing points are in a line, the monstrose plant produces new growth much like the cancer of humans. In general, I find them more attractive than crests. As with crests, the abnormal growth is sometimes similar but more often unlike that of the normal plant growth.

My one "induced" monstrose plant is a *stenocactus* which I discovered, soon after its purchase, to be badly infested with root mealy bug. Strenuous treatment with Cygon-2E followed by heavy fertilizing resulted in the appearance of ten monstrose growths on the plant sides. My own observations incline me to the belief that crests and monstrosae result from cultural factors and not from plant damage.

THE EDIBLE FRUITED CACTI

. . by Helen Hegyi . .

Reprinted from the 'California
Rare Fruit Growers' 1971 Year-
book, Vol. 3

The birthplace of the Cactaceae Family is probably tropical America and all species are native to the New World. Species are found from Patagonia to Canada, with the greatest concentrations in Mexico and Andean South America.

The native peoples of the arid regions of the New World, out of necessity, discovered a multitude of uses for these plants which often formed the dominant vegetation of their areas. Such a product as 'nopalitos' from the Opuntia stems is well known but there is a greater body of knowledge hardly known to the general public and new uses and recipes are continually being developed.

THE GENUS OPUNTIA

OPUNTIAS IN MEXICO

The Mexican names for Opuntia fruits are nopal or tuna. The tunas are mentioned by all the early writers. Bernal Dias del Castillo mentions them as one of the fruits depended upon for food during the siege of Mexico in 1521.

Major Emory, in his report of the military expedition which ended in the battle of San Pasqual and assured us the southwest....

"...today I ate for the first time the fruit of the prickly pear, the 'yerba de la vivera' of the Mexicans. As I was thirsty, it tasted truly delicious, having the flavor of lemon with crushed sugar".

Not all species produce edible fruits, but in certain ones the fruits are large and of excellent quality, containing about 14% sugar and 2% fat. I understand the best fruit is obtained from the species Opuntia Ficus-indica, O. tuna, O. megacantha, O. robusta and O. streptacantha.

The objectionable features are the rather large seeds and the tiny, but vicious spicules on the surface of the fruits. These tiny spicules or glochids are barbed and are very annoying when inadvertently caught in your skin, but can best be removed by rubbing your skin with #3/0 sandpaper.

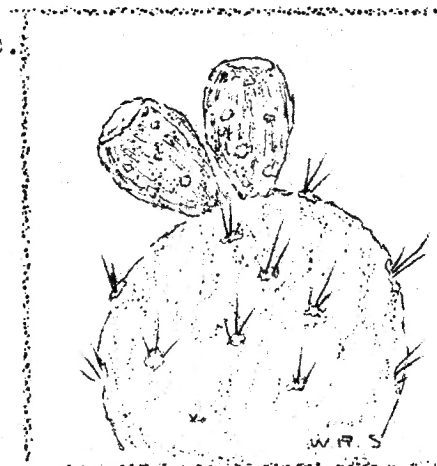
O. robusta produces a large, spiny, juicy fruit with purplish flesh which tastes much like cherry, but much sweeter.

O. occidentalis produces a spiny fruit with reddish-violet color, tasting somewhat like plum.

O. Ficus indica varieties produce fruit with no spines and few glochids, in colors ranging through purple, red, orange and yellow. It has a distinct flavor, but is rather seedy and is not as richly sweet as O. robusta.

O. megacantha produces yellowish-white fruit, usually without spines or glochids, and it also has a distinctive flavor of its own.

Many Opuntia fruits are sold commonly in the markets of Mexico. The fruit is not only eaten out of hand or used as a salad fruit, but is also cooked in various ways, and preserves, wines and sweetmeats are made from them. (See over)



OPUNTIA PAD AND FRUITS
Commonly called Indian fig,
prickly pear or tuna.

THE EDIBLE FRUITED CACTI---continued:

Some of the products made from opuntia fruits are:

- Miel de tuna - a syrup;
- Melcocha - a thick paste made by boiling down the juice;
- Queso de tuna (tuna cheese) - melocha boiled down still more until it is a very stiff concentrate which can be sliced;
- Colonche - the boiled and fermented juice;
- Nochote or nochole - the fermented beverage prepared from fruit juice;

Operating on the principle that I will eat anything that does not eat me first, I ventured into a produce market in Tijuana, Baja California, Mexico and asked for Queso de tuna. I spoke no Spanish. The merchant spoke no English. He conferred with a passerby. I was sold some little dark brown firm round patties about 3 inches across and a half inch thick that he called "pitahaya". They are truly delicious served sliced and will keep indefinitely.

OPUNTIAS IN CALIFORNIA

When the Franciscan Fathers first came to California they brought with them the fruit of the Opuntias as well as many ^{other} fruits. Two species were brought in of which O. Ficus-indica is the one most commonly encountered today. The second was O. megacantha and the two have been known for years as "Mission cactus".

Here in southern California we are all familiar with the tall-growing clumps of flat-pad species of Opuntia. They grow wild and produce red, purple or yellow fruits, round or ovoid, variously called prickly pears, cactus apples or tunas. Locally, the fruit is not too highly regarded although the vitamin content is considerable. Yet, in Mediterranean countries where they were introduced, they are considered a delicacy and are much sought after.

Among the many species of Opuntia there are some with very few spines. Luther Burbank in Santa Rosa, California hybridized these species and produced spineless opuntias which also have large edible fruits. Several of these hybrids can be seen composing part of the plantings around his home in Santa Rosa. (Tourists note: the grounds are open to the public).

In 1921 Bernado Maniscalco in partnership with Hugo Thumb, set out 40 acres of Opuntia with the idea of using the flat pads as cattle feed. The project at what is now the site of El Caritan High School in Lakeside, California, failed after a few years. In 1929 Maniscalco moved the operation to 10270 Riverford Road in Lakeside and confined it to raising fruit for human consumption. This 14-acre planting of horticulturally improved varieties of O. Ficus-indica thrived under his care with boxcar lots of fruit being shipped to East Coast markets where it was greatly appreciated by Italians and Puerto Ricans.

In this commercial planting the harvest season lasted about six weeks. Pickers wore heavy horsehide aprons and gloves to protect themselves from spines. The fruit was picked when a blush of red appeared on the green skin. Fully colored fruit is overripe and past its prime for eating. Fruit was run through a peach defuzzer. Horse-hair rollers removed glochids and polished the surface. The fruit was graded into 5 sizes from small to jumbo and packed in boxes for shipment to Los Angeles and points east. Part of the crop was made into prickly pear jelly and candy by a San Diego firm.

The Opuntias were planted in rows 30 feet apart and 8 feet between plants. They produced well for 15 years or longer, but had to be irrigated to obtain good crops. They attained a 20-foot height and were cut back occasionally to facilitate picking and irrigating.

This planting was managed from 1960 until recently by his son Leon Maniscalco who was forced to close it due to increasing labor costs and high taxes. At the present time the only planting I know of for fruit production in the state is that of D'Arrigo Bros. Co. of Salinas, California. The fruit is marketed under the name of "Andy Boy Cactus Pears" and each fruit is enclosed in an attractive wrapper with several recipes for their use printed on it. (Cont'd in April)

2841 Highlands Blvd.
 Spring Valley, CA 92077
 January 27, 1972

Dear Mr. Scott:

"If it's worth doing at all, it's worth doing right." If we're going to give lessons in Spanish, let's do it right, por favor!

May I suggest that since we are learning "their" language, we do it "their" way? "...end lesson one" is correctly said "their" way "end of lesson one" es decir, fin de lección"

May I also point out that words may be synonyms but that does not make them interchangeable. Perhaps you recall the anecdote of the young man anxious to impress the beautiful young lady with his English, who greeted her by saying, "You are a sight!" Sight and vision are synonymous but not interchangeable.

Your new masthead is impressive. Let's improve the Spanish inset. It should be: TOMO SIETE, NÚMERO 2. (note accent) If you were to ask a librarian (bibliotecario) for "volumen" she would be most puzzled. "Vdumen" is the Spanish word for volume, as the volume of a cube. It is never used as a synonym for large book or tome. Hence you should ask the "bibliotecaria" or the "libero" (bookseller) for "un tomo."

As for the lesson in Spanish itself, days of the week and months of the year are not capitalized. It is preferable to say, "lección número uno, lección número dos, etc." "mañana" requires the tilde n. Mes is masculine in gender--el proximo mes. Also note accent.

One of the pleasures of Spanish is that the rules for accent are definite and follow a regular pattern. Spanish also happens to be a more precise language than English, which, according to Chesterton (I believe) "was invented to confuse thought."

If you've read this far, I thank you for your attention. "Muchas gracias"--note accent!

Vaya con Dios,

Maria Reader

Maria: Thank you so very much for your letter of Jan. 22nd with reference to 'lessons in Spanish' in the February issue of Espinas y Flores. Contributors such as you, and contributions such as yours add immeasurably to the substance and value of a club bulletin. Your points are well presented and taken and sincerely appreciated. Our readers, many, if not most of which are not familiar with Spanish, will profit by the points in your letter and your generosity and thoughtfulness in sharing your experience and knowledge.

May we hear from you again - por favor!

Ed

fin de lección tres

"Detroit, Jan. 26, '72

Dear Nibby:

In reply to your card, Mr. Keller is our Librarian and your bulletins have been mailed to him. Occasionally I get a copy to read and want to congratulate you for such a fine bulletin.

I called Mr. Keller and it is agreed that 'E y F' be mailed directly to me and then turned over to the Library, beginning with the next issue.

Sincerely *Wave K. Frye*
Miss Wave K. Frye, 9361 Virgil Ave.
Detroit, Mich. 48239"

(Wave: Thank you. 'Spinal Column' is an excellent bulletin too - we're happy to exchange. Address change is now in effect. . . . Ed)

HENRY SHAW CACTUS SOCIETY

"Jan. 15, 1972

Editor Espinas y Flores

As the new Editor of the Cactus Digest of our St. Louis Society, I am writing to become acquainted with exchange members. Would you be so kind as to send future issues of 'E y F' to me at my home address?

Also would you grant permission to reprint articles or to quote from 'E y F'? Back issues contain items I would like to use, one in particular regarding pesticides. I want to keep the quality of our paper high and help others give would be greatly appreciated.

Sincerely, *Clara Maurer*
Clara Maurer, Sec'y - Editor"

(CM: Agreeable - all signals are 'GO', direction 'UP' You're doing the same things we try to do. . . . Ed)

"Phoenix, Feb. 10, 1972

Dear Mr. Scott:

We think your new format for 'E y F' is excellent.

Do you need a supply of M. fasciculata (thornberi)? I have a few seed pods I could send and I know of a commercial source. Mrs. Mott suggested I offer my help. What plant was previously used? Echinocereus?

Are back issues of 'E y F' available - and how much?

Will anyone be coming to our February Cactus Show?

Sincerely, *Warner Dodd*
Warner Dodd"

(WD: Thank you. Letter follows. Your guess re previous masthead plant seems reasonable, but you know identification without the plant is tough. Sorry I can't be specific. Doubtful about attending the Phoenix Show - but hopeful. We had a CSSA 'Special' in Feb. Result exhaustion. . . Ed)

Said the bored wife to her cactophile husband: "Pretend I'm a cactus - talk to me."

PYROLYSIS

- IS IN YOUR FUTURE -

Occidental Petroleum
Unit Testing Process
For Waste Conversion

* * *

Garrett Says Its Method Can
Change Municipal Refuse to
Salable Fuels, Glass, Metal

By a WALL STREET JOURNAL Staff Reporter
LA VERNE, Calif.—Garrett Research & Development Co., a wholly owned subsidiary of Occidental Petroleum Corp., said it is pilot testing a new process for profitably converting municipal solid waste into salable industrial heating fuels, glass and magnetic metals.

At the heart of the process is a pyrolysis reactor, the equipment that breaks down organic refuse in an oxygen-free, high-temperature environment under atmospheric pressure; the end products include char, or pure carbon, gas and low-sulphur fuel oil.

Before it enters the reactor, the solid waste is shredded, dried and passed through an air classifier that separates most of the metals, glass, and other inorganic materials. The remaining refuse is shredded again and then pyrolyzed, or subject to chemical change under heat.

Garrett claims the process is practically pollution-free, less costly and more efficient than other waste-conversion schemes. In a demonstration of a pilot plant for federal and county officials, Garrett representatives estimated it would cost about \$5 a ton to produce converted refuse worth \$6 a ton. A 2,000-ton-per-day processing plant, meeting the solid-waste disposal needs of a city of half a million people, would cost about \$12 million, the company figures. Garrett says more than 90% of the raw materials in municipal refuse can be recovered using its process.

San Diego County officials are considering building a demonstration plant using the Garrett process, the company said.

A PARK AVENUE matron was being complimented on the magnificent display of cactus she has in her apartment window.

"They do well because we take care of them according to nature's plan," she explained. "The important thing is to water them at exactly the right intervals. These plants are from western Texas, and when my husband brought them home we subscribed to a Texas newspaper. We always read it carefully and when the paper says it has just rained in west Texas"—she smiled happily—"that's when we water the cactus."

CEREUS AND ALOES

Leroy N. Phelps, Ph.D., Education Chairman

The genus Cereus and the other closely related genera are usually cacti of great size. Genera which can be considered here include, beside Cereus, Pachycereus, Carnegiea, Cephalocereus, Bergerocactus, Macherocereus, Myrtillocactus, Oreocereus, Peniocereus and Trichocereus to name a few. However, some of the cereus allies are small, such as Pygmaecereus and Wilcoxia.

Many of the cereus allies, being large plants, can be expected to bloom when mature, so plants that can be carried in a pot are much too young to have flowers. Surprises do happen, though. Cuttings of a mature plant frequently will bloom as soon as they are rooted, or even before. The cuttings will even grow as they did before cutting. One which quickly comes to mind is Trichocereus pasacana, a very strong, fast growing and quickly flowering plant. Other easy-to-grow cuttings are Cereus peruvianus, both normal and monstrose, Trichocereus spachianus, Oreocereus celsianus, Macherocereus gummosus and the Cleistocactus spp.

The flowers of the Cereus allies are usually open at night, but there are many exceptions. Most of them open at night, but will stay open until strong sunlight hits them the next day. Many of the flowers are quite large, and if you want to see a truly spectacular sight, watch a full grown plant of T. pasacana during its flowering season--usually late fall.

The genus Aloe of the succulents is widely distributed among collectors in Southern California, and they also range in size from miniature to giant. Miniature aloes are a sight to behold, an example being Aloe jucunda. An example of a giant would be Aloe bainsii, a tree of beautiful proportions with a mass of flowers. Most of the aloes flower readily, and they really stand out since they flower during our winter months. They take well in our climate, and many uninformed people believe them to be native to our area.

These plants usually sucker readily so that even the rare ones are available to some degree. They are not native to our area, but come primarily from Africa in the southern hemisphere. There are several hundred species of Aloe, the most familiar being A. vera. This plant has many healing properties ascribed to it, but how true all of the claims are I couldn't say. My favorite is A. plicatilis, a small tree form with dichotomously branching stems and opposite, single-ranked leaves. Of course I admire many of the others, both miniature and giant.

Both the Cereus allies and the aloes grow well in sandy loam with about 50% organic content. They both root well from cuttings or suckers and grow reasonably fast. Some Aloe spp. will even root from leaves that have been properly dried, then lightly buried in soil. Both groups have the small and the large. What more could a collector ask?

You will find that there is a great variety of colors and forms in these two groups. They have something for everybody. Bring one to the table show, and if the identity is in doubt, all the better, since someone certainly would like to display his knowledge by identifying unknown plants!

This month our Club hosted the CSSA Special Activity. Guest speaker was Dr. Reid Moran, Curator of Botany of the San Diego Natural History Museum. His illustrated talk was most interesting and informative. Dr. Moran's slides and sense of humor were absolutely delightful.

Before the formal program began a luncheon was served to the out of town guests as well as the members. Plans for this buffet began last month when the call went out for volunteers. Under the competent guidance of Rose D'Attilio, Pat Mooney and Hazel Scott, et al. a menu was decided upon and the work began in the individual kitchens of the volunteers.

A little before 10 a.m. on the appointed day, Feb. 12th, the culinary masterpieces began to arrive at Casa del Prado and very soon the kitchen resembled a cross between a bee hive and a loading dock. Underneath the bustle, however, there was an organized system of labor.

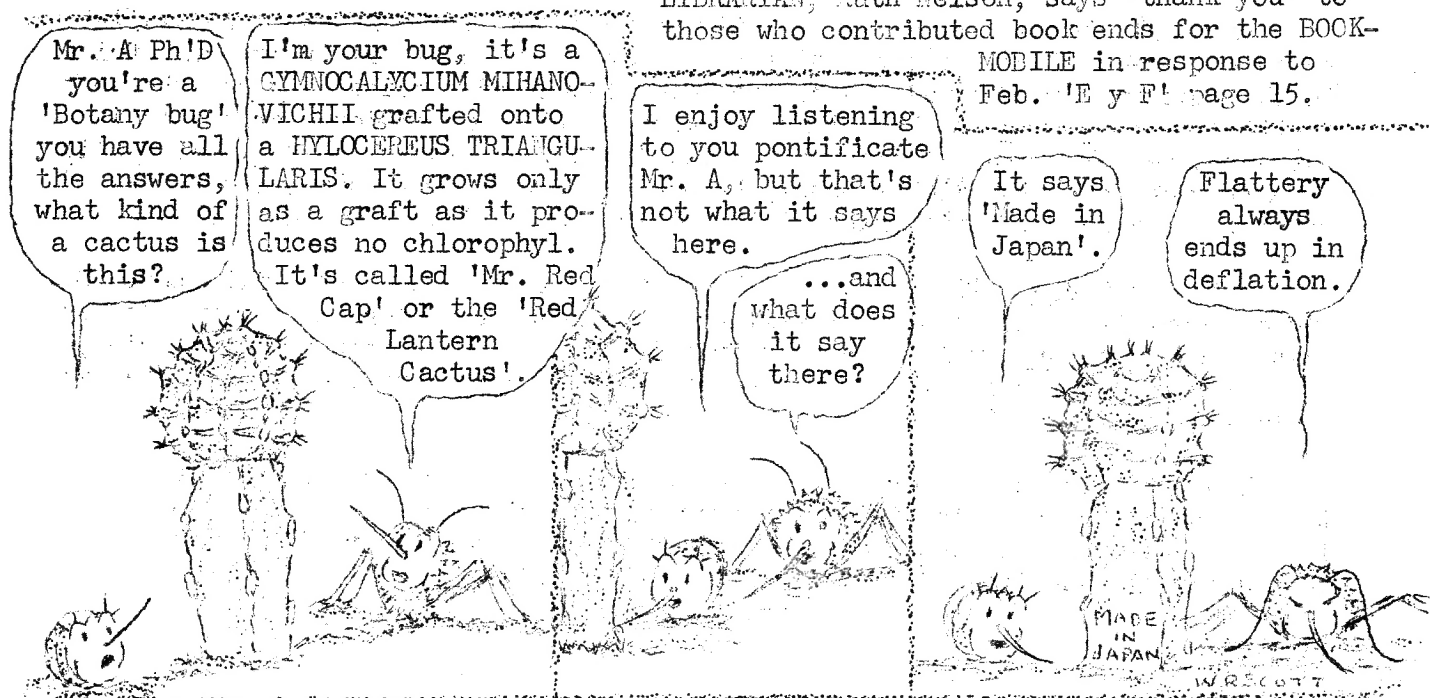
Two hours later, around noon, the serving commenced. When one bowl or plate of something was emptied another container soon took its place on the table. Along with the terrific hunger there appeared to have been a powerful thirst. More than three pounds of coffee was consumed. The coffee was so good that someone even swiped the coffee pot!

After the formal program, our customary refreshment break took place. The dessert table was piled high with a delicious assortment of sweets. These goodies practically disappeared as fast as the buffet had.

There was some concern that there would not be enough food to go around. However, this fear faded as the luncheon progressed. There was so much food that there was enough left over for another small feast.

It was surprising yet gratifying to all those who participated in the preparing and serving the buffet that it disappeared with such gusto. (Please note 'Operation Bountiful Foodbasket' page 4)

LIBRARIAN, Ruth Nelson, says 'thank you' to those who contributed book ends for the BOOK-MOBILE in response to Feb. 'E y F' page 15.



SAN DIEGO CACTUS & SUCCULENT SOCIETY

Monthly Bulletin 'Espinass y Flores'

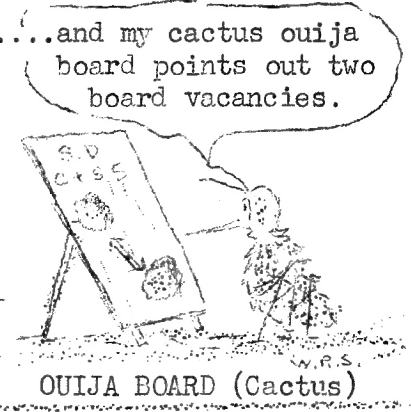
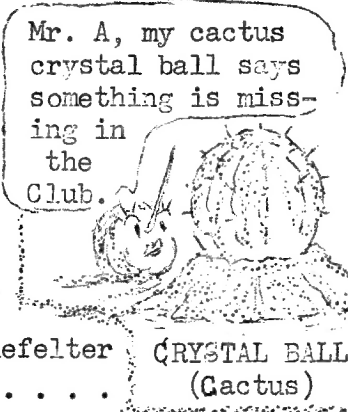
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C E R O P E G I A S

-- W A N T E D --
..SPECIAL PROJECT..

Thank you in advance!

- Any member who grows CEROPEGIAS and who has extra plants,
- duplicated of established plants, available cuttings,
- unusual species, etc e-t-c, please get in touch with the
- Editor. . . 296 6022. A special ceropegia project is
- cooking and it will not be either a ceropegia salad or soup.

CALIFORNIA NATIVE PLANTS

- done in water color . . . Forty-two sheets of California native plants done in water color from one of the finest collections of plant paintings (including many cacti) are on display on the main floor of the Natural History Museum. They are the work of Albert R. Valentien (1862-1925) done in San Diego over a period of years beginning in 1903. Valentien was commissioned by the late Ellen Scripps to do the paintings. Plants were submitted to the Uni. of California at Berkeley to ensure correct identification. The total work consists of 22 volumes of 50 sheets each for a total of 1200 plants. The work is truly remarkable. Reproduction in detail and color is such that one feels he is looking at actual plants.

DO YOURSELF A FAVOR AND TAKE THE TIME TO SEE THE EXHIBIT