

MAMMILLARIA THORNBERI

# Espinas y Flores

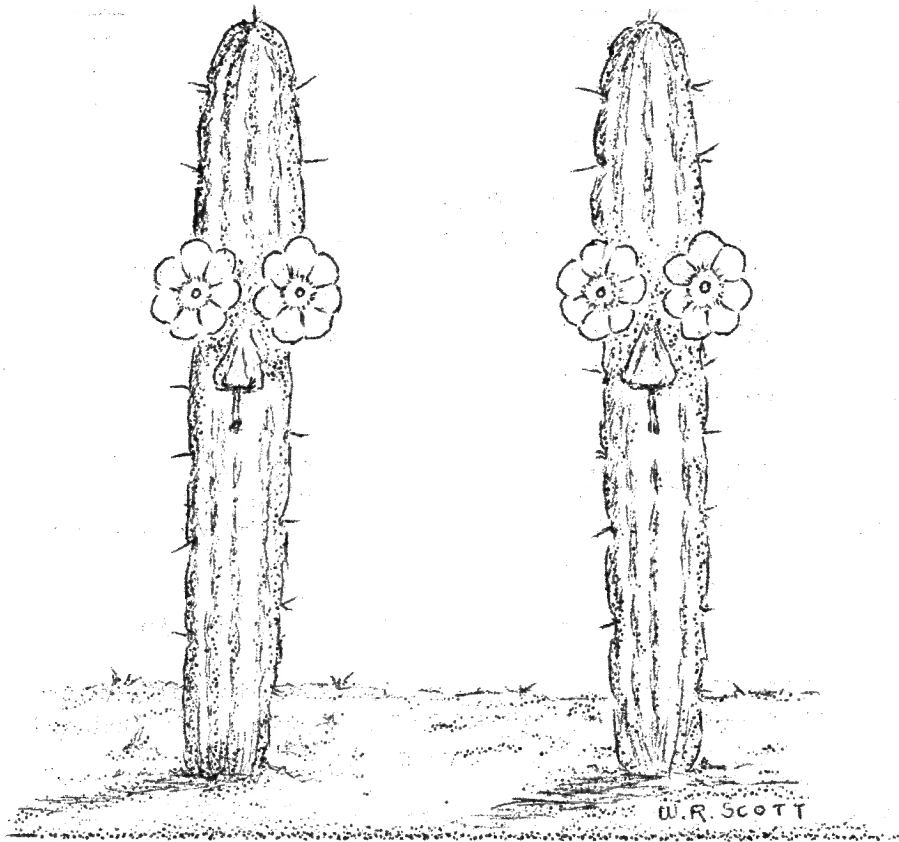
BULLETIN OF THE SAN DIEGO CACTUS AND SUCCULENT SOCIETY  
*Affiliate of the Cactus and Succulent Society of America, Inc.*

.....  
TOMO OCHO, NUMERO CUATRO  
.....

ABRIL 1973  
.....

People are strange  
looking creatures.  
Look at the mouth  
on that one.

And the eyes on  
the other one.  
Not a flower on  
any of them.



Cereus Observations

"SUCCULENTS OF MY HOMELAND--- .  
 A R G E N T I N A .  
 - - - Victor Turecek - - - .  
 . . . . .

Victor is President of the Los Angeles Cactus & Succulent Society. He is an attention-holding, much-travelled, inspiring, interesting and out-going personality. He will be talking about the succulent plants of his homeland--Argentina. You're going to like his program and

his presentation and you'll have a better appreciation and understanding of the succulents down under. It's late summer there now where Argentina extends over 3,000 miles from the antarctic to the tropics and from sea level to the high Andes.

We will be seeing you at Casa del Prado this coming Saturday, April 7th at 1:30 p.m....come early, parking is for those who come early and remember there's no "thru traffic" on Laurel any more. Still the cars come west on Villgge Place only to have to make a U-turn alongsidé Casa del Prado--by the hundreds. It says "Not a Thru Street" but that doesn't deter all drivers even tho they're supposed to be able to read.

Loyal J. Bibbey, Program Chairman

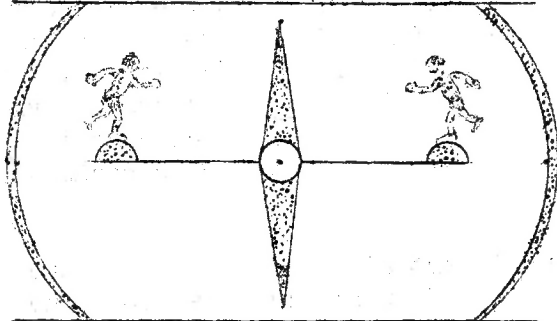
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 Perlso. LEWIS. says: "I am interested in succulent geraniums. Would like to exchange cacti or other succulents for them such as Haworthias, Kalanchoes, Euphorbias, Crassulas, Aeoniums. You name it. See me at the meeting or call 583 9085.  
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Page THIS IS YOUR PAGE--THIS ISSUE PAGE BY PAGE:

- 1 -- Cartoon by Ye Ed "Cereus Observations", all in the point of view.
- 2 -- THIS page, the April Program -- Contents -- Personages.
- 3 -- NATURE'S BALANCE, another of Doc Vaughan's thought provoking writings
- 4 -- continued on page 4. And Barbara JEPPE'S "TEMPORARY CUSTODIANS".
- 5/6 -- NIBBY'S PAGES attractively set up, comprehensive and most interesting.
- 7/8 -- The article on SAGUAROS has attracted wide attention and very favorable comments. Note also the line drawings over photos by Nibby's son BEN. Result more eye-appealing than original photos. Thank you Ben.
- 9/10 -- The CSSA, ITS OBJECTIVES AND ORGANIZATION very thoughtfully and thoroughly put into words by Dr. Lyman Benson of Claremont. Read it carefully.
- 11 -- EARLY MAN IN AMERICA, A "Science Editor" presentation, plus a couple of Refranes by Doc Vaughan and Maria M. Reeder. Lección en español.
- 12 -- PAUL E. LEONDIS receives letters in response to his splendid article on "Bromeliad Collecting in Mexico" in the January issue of "Espinas y Flores". Reader appreciation.
- 13 -- GARDEN VISITS for April. It may be your garden. Read carefully.
- 14 -- TRANSVAAL NATURE CONSERVATION submitted by the Singers of Reseda. Thank you Manny and Bert. Write again! Will see you in Las Vegas.
- 15 -- CACTOPHIL'S OBSERVATIONS: Plant purchases and a visit with the Reinelts.
- 16 -- Nibby comments on the Fair (Cal Expo). Board meeting coming up.
- 17 -- Martin L. MOONEY puts Schlumbergera into meaningful words. Very well done.
- 18 -- Julianne RICE writes about SUCCULENTS, particularly Sedum tortuosum in her own delightful, informative style.
- 18 -- OUR CLUB AND ITS OFFICERS. WELCOME TO NEW MEMBERS.....end of Bulletin.

.....  
 Said the psychiatrist to the puzzled parents: "Your son has the spark of genius but he also has ignition troubles."

Light- - -Life -- Death- - -Dark



Wet ---- Cold ---- Heat ---- Dry

### NATURE'S BALANCE

### NATURE'S BALANCE

- - - Doc. R V Vaughan - - -

While boiling my groats the other morning I was ruminating about the change taking place under my bubbling porridge. I was using gas brought from Texas and Oklahoma oil fields formed millions of years ago from forests of ferns and cycads brought forth by the very warm sun's rays that stimulated quick growth of plant life during the Permian Period following the carboniferous era.

Glaciation of that period had receded and the weight of the ice no longer burdening the land permitted it to rise slowly resulting in a vast savannah that extended from the western mountains to the eastern mountains. The result was a vast quagmire or swamp containing many plants building their structures from the carbon derived from rotting vegetation, volcanic fumes and the heat from the earth's interior magma which formed our coal, oil and gas supplies of today.

As I stirred I ruminated about the earth's fate that now is in human hands rather than a well-balanced system that we inherited when man arrived in the Neogene Period some twenty-five millions years ago and about a half million years ago became a menace to this earth's safety for all creatures that are part of our ecology. Life is a tenuous thread that all men share with all other creatures from the lowliest blowfly to the winds that sweep the Gobi or Sahara.

In my few years I have seen the vast forests felled and great fires set to cleanse the land for settlers to erect homes and raise a few stalks of corn. I have seen diseases introduced that felled the mighty elms and others that destroyed vast forests of other trees. The once vast flocks of Carrier Pigeons were roasted at night by the thousands so men could feast in drunken orgy. Trains carrying passengers would stop as great herds of bisons crossed the tracks and men would senselessly slaughter thousands just to say to others in their home bailiwicks: "I am a great nimrod, I slew many head." Then men fenced the plains so millions of animals could not get to water or food.

During the last fifty years man has learned more about his home on this globe than he learned in all previous ages. While in college I was taught there were four ice ages. Now we know from research on sea sediments that periods of glaciation are cyclical. Cores of earth material taken from the sea bottom reveal other startling evidence that our oceans are not primordial but are recent when compared to the earth's age.

Assuming that the ocean basins were formed at the earth's birth and assuming that the rivers and winds deposited just one-tenth of a millimeter of sediment every one thousand years, the bottom deposit would be several miles in depth. Exactly the opposite is true.

Holes drilled by researchers have brought up facts that confuse and awaken me to facts that cause alarm. There was a time in the ocean's history when it was a sargasso sea without movement and deposits drilled up from the deep rocky bed show black ooze or carboniferous slate. Drills have shown that the sea floor has more than once been high and dry and at other times under water as it was during the Cretaceous or chalk-forming Period. ( Continued on back )



# This spring the Cactus flower is at its blooming best!

NIBBY'S  
NOTEBOOK

April  
1973

There's a time for everything and now it's time to travel wherever flowers grow.

The weather was sunny and the Coronadas were clear and sharp the weekend I went to visit friends who live on a hill above the end of the tollway near Ensenada.

The recent rains had flooded the Tiajuana River basin where so many Mexicans live crowded in huts jammed together. Children were wading. Bright washes hung out to dry, brave banners blowing clean above the mud...The haves drive by the have-nots and become almost inured to the absolute unfairness...(Except for Bob & Suzanne Taylor ; they Do Something.)

In the Baja countryside yellow mustard colored the hills yellow, yellow, mistily yellow. Past Rosarita Beach jade dudleyas were decorated with red stems holding creamy yellow heads high. Near Halfway House where Aloe striata had been planted in the diving strip of the toll road, the glowing coral-orange tassels were excitingly vivid. Here and there stands of Agave shawii's asparagus stalks were just beginning to show bright yellow bloom.

Around La Mision the cliffs were studded with silvery Dudleya antonii, brightly at home in every crack and crevice. Rocks were frosted with lichens. Yucca stalks of spent blooms were as thick on the hills as TV antennas in a subdivision. Recently disturbed soil along the road was softly rust-red with native iceplant. The blue and white of sky and cloud were echoed in blue Pacific and white surf. It's a beautiful drive ANYtime but particularly splendid when the sun shines on rocky shores...It rained all day Sunday ...and again we drove above sodden poverty in the mud of the river bottom...

**There's** a time for planting our cactus garden in the park...but that time is not now. "Funds are dry until 1974. Be assured, however, that there is still space for large plants if you know anyone who would like to donate -- just call the Park Nursery." A more-or-less direct quote from our representative in the Park. (Space, perhaps, but care?) Does that answer your question, Ed Miller? To quote further: "Preliminary plans have been approved and we can look forward to contoured mounds and a dry wash along the palms."

**It's** nice to know the Notebook is read...it's nice to get another anonymous contribution to THE DESERT PROTECTIVE COUNCIL in the name of our Society for \$70...Bill Lockwood's address is 2481 Las Lunas Street in Pasadena 91107 - he requested a membership roster. We were honored to have the President of CSSA present last meeting, and also Kitty Sabo who invited us to the Pool, Garden & Patio Show in Los Angeles the 28th through April first. She's doing a succulent garden there with a wet look -- succulents around a pool.

# We think

there's a time to buy plants, a time to flip through our library's great selection of books, but those times are NOT while the program is on or the business meeting in progress. It isn't fair to Rickey or to the librarians, to the speaker or to the President... Sophie and Oliver want to thank members for three goodly donations of plants & pots for the Sales Table... Sophie had a GREAT idea that Alice & Wilson Wells will welcome -- seeing if Bob Lamp will have another space for us at the Fair for the JUNIOR SD C&S Society!...Edith Werner was also in the desert during the full moon --but where is Cane's Brake?... Bea & Kim Arnold have a place in Borrego and took time out to enjoy it recently...if they can manage they'll help with the lighting for our exhibits at the Fair but it's a big IF at the moment...Loyal Joe Bibbey's rebutia in full bloom was chosen without a moment's hesitation by Kitty Sabo when Lee asked her to chose the winner of the Open class... Our new Program Chairman chose the panel well, mixing in some of our new members...Walt Greenwood claimed he was not an expert on notocactus -- "In fact, I've had four digs since I came to the meeting today..." Phil Burton spoke interestingly on the science of taxonomy...he joined in January of 1972 and said that noone knew him until he took part on the Panel --will YOU help at the Fair, Phil? Young and blond, he's majoring in Biology...Frances Langer made much use of a few words telling how she bloomed miniature Mams by supplying bottom heat -- she put the pots on top of the TV...Doc Vaughan asked a tantalizing question: Was it the heat or the ultra high-frequency radio-active waves that stimulated growth??? Which led Ruth Stanton (back with us again after months of unhappy accidents & illnesses) to comment on the power of prayer on plants...which leads me to ask for any articles members have available on emotional reactions of plants to situational stimuli... Joe Donohue, whose subject was Cephalocereus senilis, said: "In nature 'the Old Man' grows to 45', doesn't like humus in the soil and a minimum of water. I got this out of a book; what do you know?" A most refreshing approach. John Korver grows Mams because they don't take up much space; "...my background in science leads me to put labels on things. The further you go into it, the stickier it gets." John is a lumper rather than a splitter and already has about 130 species; is considering growing them from seed. ...Helen Hegyi brought John to the Society from Escondido and he joined this January. Moved here from New Jersey, belongs to CSSA and is a physicist/geologist, and is willing to help wherever he would be useful "WITHIN REASON"... Tony's tillandsias were beautifully mounted and he also disclaimed being an expert - "Specialist, not an expert." -- Julianne was sick at home in Holtville and could not make it. We all wish her well. And Ruth Nelson, too; can't reach Bill for the latest news... Who's Maggie MacDonald? Can Ruth Cuzner tell me? Expect we'll be hearing from Corwin DeVotie who was held in reserve for the Panel...Helen Claydon was studying for her finals but Alice McNichols was there to fill her in...Floyd Gable said he would supply the phenomonal 6-6-6+6 fertilizer but no longer manhandle it--5 fruitless haulings did it!...Our old presidents don't slowly fade away--they just work Saturdays; but Augie keeps in touch attending Board Meetings. Augie & Chris plan to help where & when they can at the Fair.

(Continued on page 16)

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OUR warmest CONGRATULATIONS to Doctor Bill JOY (who certainly always is) on his recent marriage. (Practicing in Los Angeles now; formerly my boss in SOQ Medicine at the Naval Hospital.)

# SAGUARO

BY CARLE HODGE

There are said to be fifteen to twenty saguaros on each acre within the main forest in the Monument, and each bears about four flowers a day for thirty days. About half of these flowers set, the scarlet fruit ripening in about thirty-seven days after the first blossoms appear.

*Operating in lab and desert, men and means of science seek and record new knowledge*

Therefore, if each plant engenders sixty fruits, each containing roughly two thousand viable seeds, every acre must fall heir to something like two million seeds. Drs. Hastings and Turner calculated that during a century of maturity a saguaro produces twelve million seeds.

A new plant should succeed each that dies. To keep the population in balance, then, only one seed in twelve million must somehow survive the barriers to maturity. The trouble in some areas, including much of the Monument, is that out of twelve million seeds not even one overcomes these rigors.

If it is to sprout at all, in July when the summer rains start, the tiny black seed requires an awesome combination of conditions. Scientists with the United States-Mexican boundary survey in the mid-1850's were the first to notice that smaller saguaros could be seen only under other plants, usually such trees as the palo verde, acacia, or mesquite.

Almost a century was to pass, however, a time during which an average saguaro would grow a little less than twenty-five feet, before anyone could explain this phenomenon. Since few things in nature are essentially simple, there turned out to be several explanations, but the most important have to do with camouflage, light and an umbrella effect.

Unlike the seeds of most plants, which germinate in darkness, these might have light, as scientists describe such things, light from a somewhat narrow part of the spectrum. But the saguaro cannot take root in direct sunlight. There must be shade. And here, most likely, is one answer to the enigma of the declining saguaro stands: climatic change.

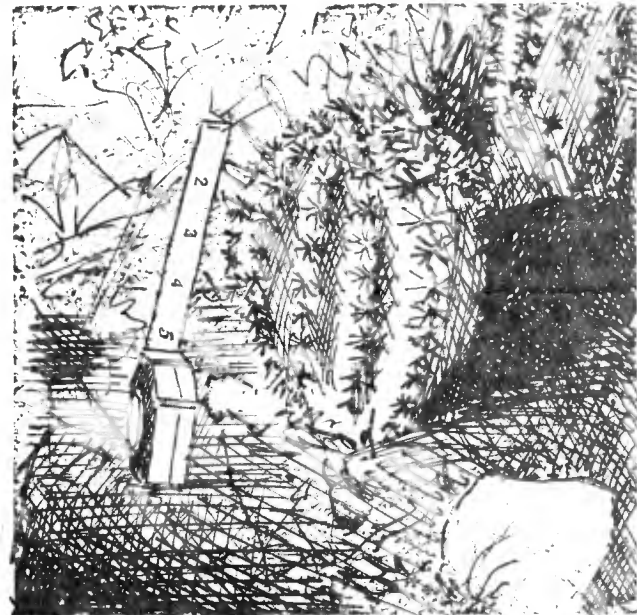
Precipitation has decreased over most of the world during the past several hundred years by about one inch every thirty years. While this difference may or may not be critical to the

BOB BRODER

APRIL 1973



OSCAR SOULE



RAY MANLEY



Retouched photos by Ben Kline Felter

## □ SAGUARO from page 7 □

saguaro, it almost certainly has been to palo verdes and acacia. Records indicate that there are, in places, fewer of these trees than there once were, and without a shade or "nurse" plant to bring it along, no saguaro takes root.

To the necessity for shade, though, must be added a similarly stringent regimen of temperature and moisture. Alcorn and Kurtz found that saguaro seeds are most apt to burst into life if the temperature is about 77° Fahrenheit. None develop if the temperature drops as low as 59°, and very few if it climbs to 95°. Because the desert cools off at night an adequate balance must be reached.

The matter of moisture is more delicate still. From his work at the National Monument, Steenbergh concluded that seedlings emerge only when rain falls at least twice within five days, and improbable as the chances for germination appear, virtually no seeds (his estimate is less than one percent) endure on the surface long enough to germinate.

Birds strip them from the fruit while the fruit remains on the branches. Once the pod falls to the ground, ground squirrels, coyotes and packrats, not to mention the ants, move in hungrily on whatever is left. These seeds are by no means all lost forever. The animals also disseminate them; those that have passed through the digestive tract of the kangaroo rat, in particular, remain highly viable. The net loss, nonetheless, must be tremendous.

Less than one percent of the seeds that ultimately become seedlings, that poke tentatively up through the baked earth,

scarcely can be said to be well on their way to giant. Mortality among the infant plants may, in fact, exceed that of the seeds. For the first few years of its struggle, a young saguaro lives rooted in less than an inch of soil, with its stem rising the same distance into the atmosphere. In a microhabitat so circumscribed, the slightest disturbance can be of overriding consequence, and disturbances are commonplace.

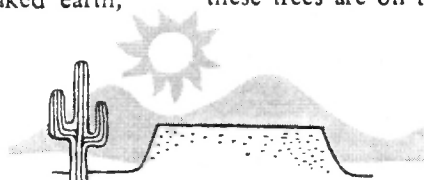
Thousands of half-inch high seedlings, which had been nurtured in a lath house, were transplanted in one experiment. Turner, Alcorn, Olin and John A. Booth set them out under varying conditions, e.g., some had shade and others did not. Some were watered when rainfall was scant (that did no good) and some were covered with insect-proof screening (that did).

Those placed in the darker, less reflective and, hence, hotter soils found beneath ironwood and mesquite failed in far greater numbers than those planted in the lighter dirt from around palo verdes. Regardless of soil, water or whatever, every unshaded baby died. The most unassailable point all such studies have underlined, in fact, has been that very few of the rangible seedlings survive, no matter what is done.

The first few years are the most difficult. Predators ravage the tiny plants. Insects, especially the larvae of weevils, cause many to be all but stillborn, or rodents eat them. There are scientists who flatly accuse pack rats and their kin of the principal villany in the tragedy of depopulation. There are others who reply that acacia seeds are a favorite rodent food; these trees are on the increase.

continued →

(Continued in EyF in Ma)



## THE AUTHOR

The saguaros whose mysteries he explores for us in this issue are a subject with which Carle Hodge is more than casually acquainted. He nurtures tiny, slow-growing saguaro seedlings in pots and laboratory dishes on his sun porch, an undertaking that, he says, "begs a certain amount of patience, since America may land men on Mars before my green shoots stand half an inch high."

Three of the giant cacti loom up within fifteen feet of his front door in the Tucson Mountains, and he has sipped saguaro-fruit wine with the Papago Indians. He also admits to an obsession, "at times when a diligent free-lancer should be oblivious to everything except his typewriter," with the comings and goings of the birds that make their homes in the tall plants.

He wants it made clear, however, that the observation he reports in these pages are those of professionals, and not his own as "a Sunday scientist." The veteran newspaperman and magazine writer, who was on the staffs of *Newsweek* and *Time* before he returned to his native Southwest, has specialized for most of the past fifteen years in scientific articles. For five of those years he was the science writer for the *Arizona Daily Star* in Tucson and ranged on assignments as far afield as Long Island, Puget Sound, Hawaii and Antarctica. In subject matter he wrote about all kinds of research from astronomy to zoology. But his deepest interest was, and still is, in desert ecology — the interrelationship of all life in the desert.

He edited *Aridity and Man*, a technical book published in 1963 by the American Association for the Advancement of Science. At present, besides editing the Association's quarterly *Arid Lands Research Newsletter*, he is writing a popularized book on how living things adapt to and are affected by the desert. He points out that "for this latter project, which is breaking my back and searing my spirit, I am indebted in part to ARIZONA HIGHWAYS."

This "indebtedness" has to do with his first appearance in our magazine, in 1960, with an essay that involved neither science nor the desert. His topic then was one of his side interests, the bucking horses of rodeo. A long-time friend of ARIZONA HIGHWAYS, Angus Cameron, a book editor in New York, read that story and, although he knew nothing about its author, thought he might have found an authority to turn out a volume on rodeo for his company, Alfred A. Knopf, Inc.

Considerable correspondence followed, and a number of meetings in New York and Arizona. Mr. Cameron was surprised to learn that the writer who had discussed broncs with such savvy was, in fact, a specialist in science. Apparently he was not unpleasantly surprised, for finally it was agreed that the book on rodeo would be at least shelved and that Carle Hodge, after he completed some other commitments, would write instead a book on the desert. And this, Carle explains, is why he happens to be studying saguaros rather than computers, which were his main concern a couple of years ago. We think our readers will be pleased he still is concentrating on the desert. . . . R.C.



## THE OBJECTIVES AND ORGANIZATION OF THE CACTUS AND SUCCULENT SOCIETY OF AMERICA

LYMAN BENSON

### OBJECTIVES

The object of the Cactus and Succulent Society of America is to serve its members and to provide an opportunity for the good fellowship and exchange of ideas which stimulate interest and activity in connection with cacti and other succulent plants.

The Society began in 1929 as an association of amateurs and nurserymen with a fundamental interest in the problems which arose in connection with their hobbies or work. The "amateur" or beginner is still the backbone of the Society. However, beginners do not remain beginners and many of them become interested in the problems arising in connection with growing or collecting plants.

These problems may be the superficially simple ones connected with making plants grow or with naming the plants in a collection. But, however simple the problems may seem at first, the complexities become evidently greater as solutions are attempted. Just making a cactus grow involves a selection of principles from the vast field of plant physiology and ecology. Naming the cacti in a small greenhouse or backyard leads into not only the complex field of plant taxonomy (classification) but also into the related fields of genetics (heredity), morphology (structure and development), ecology (relationship of living organisms to the environment and to each other), paleobotany (the evolutionary history of plants and of their species through geologic time), and cytology (the internal features of the cell, including its chromosomes).

In time a plant in a pot comes to be recognized as an individual representing a complex natural population highly variable within the area in which the plant was collected originally and even more variable from place to place throughout a large geographic range. The single plant under consideration is not necessarily any more representative of such a cactus species as *Echinocereus engelmannii* than a single person chosen at random from any part of the world is completely representative of the human species, *Homo sapiens*. Many of the "species" described in some books are mere phases of the same natural population. A comparable classification of humans would require a brown-eyed man to be of another species than his blue-eyed mother. This complicates interpretation and naming of plants in books and journals, and the complexity of the problem is

reflected in the difficulties with the literature.

Thus members of the Cactus and Succulent Society of America may be beginners or they may have advanced to any degree in their interest in and their knowledge of the problems involved in a cactus or succulent collection. It is of first importance that the Society include members with every type of interest and that it serve all of them.

### ATTAINMENT OF OBJECTIVES

**THE JOURNAL.** Publication of *The Cactus and Succulent Journal* is the principal means taken by the Society to serve the needs of its members. The Journal reaches everyone, and it is imperative that it carry a wide range of papers, from those intended for the beginner to those primarily for the members of the Society interested in technical matters but interested, too, in helping others to understand these problems and their possible solutions.

The contribution of the Journal to the members is of primary importance, but another function is the development of science. The pages of the Journal have included numerous noteworthy scientific contributions. Some of these have been by professional botanists, but most have come from those whose interest developed largely within the Society. The contributions of the Society and of the Journal to the development of an understanding of cacti and other succulent plants include much which could not have been accomplished if the study of this group had been left to professional botanists.

**MEETINGS.** General meetings of the Society are available to only those members who live near the geographical center, but others may attend meetings of affiliated societies and may come to the national conventions every other year.

The annual meeting of the Society held each summer or early fall, special lecture meetings, cactus and succulent plant shows, and field trips are held from time to time in the southern California area. However, to a large extent in recent years these functions have been taken over for most members by the affiliated societies which have been established through a wide geographical range.

**CONVENTIONS.** The Cactus and Succulent Society of America, Inc., has established a series of conventions held in alternate years. These have been in various parts of the United States

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and in Mexico. One convention was held jointly with the Sociedad Mexicana de Cactologia, A.C.

#### ORGANIZATION

The Cactus and Succulent Society of America is a corporation, as the formal name indicates. The Society is incorporated under the laws of the State of California in the County of Los Angeles. The official meetings of the Executive Board of the Society must be held in that county.

The Board has made various attempts to extend the geographical character of its membership, but these have not been successful because of the obvious inability of members at a distance to attend meetings frequently enough to become familiar with the background of each of the problems to be discussed. The Society has had regional vice presidents. This again turned out to be of little more value than a special means of honoring individuals who are unable to be active in fundamental activities of the Executive Board.

The problem of the Cactus and Succulent Society of America is similar to that of other loose-knit, sprawling societies which extend over an enormous geographical range. It is not possible to have a full membership meeting at any time, and running the business of the Society falls upon a few members as a special duty which requires a considerable amount of time and effort and not infrequently individual expense.

Although the terms of incorporation impose a geographical restriction, this has one paramount advantage. Members of the Executive Board must be near enough together to be able to enter into discussion, and discussion results in solution of problems which could be nearly impossible for one individual to solve satisfactorily or for many individuals to solve by correspondence.

The first year on the Executive Board brings many puzzles to a new member, and full comprehension of the major problems of the Society usually cannot be attained with even the first full term of membership. In serving on the Board, one learns after a while that the problems being discussed today are not new, that many of them have had to be solved over and over by Executive Board members in the past, and that most frequently in the end the solution adopted today is the same as that adopted a number of years before and for the same reasons. For this reason stability of membership is important to the Board, just as is also some change. In the course of the last 15

or 20 years there have been numerous changes in membership, but there has been a thread of continuity through retention on the board of a few of the same members. During this period there has been no continuous domination of the activities of the Society through any considerable period of time by any one individual or cohesive small group.

**AFFILIATED SOCIETIES.** The Cactus and Succulent Society of America is not composed of affiliated societies. They are affiliated with it, not the reverse. The major society is composed of its 2,000 direct members and the elected officers.

The Cactus and Succulent Society of America expects virtually nothing from the affiliated societies for its objective is to help them in becoming established and in carrying out their own work. Each local society has its own objectives, functions, and organization. Its affiliation with the central society amounts at the minimum to little more than maintaining a single membership in the Society. The affiliate may receive certain services from the central society including, sometimes, supplying of speakers, use of books, or use of a considerable collection of colored slides. Many members of the affiliated societies contribute in various ways to the activities of the national organization. However, this is as individual members of the Cactus and Succulent Society of America.

**CONVENTIONS.** The conventions of the Cactus and Succulent Society of America are held, ordinarily, on odd-numbered years. They provide an opportunity for meeting, usually in some place where there is an abundance of plants, either in the field or in gardens, or both, and for discussion of problems of interest to the members of the Society and its affiliates. A varied program of lectures, field trips, picture shows, and sight-seeing is arranged by the central society, often with the help of a local host society.

At each convention the Cactus and Succulent Society of America has organized a meeting of delegates from the affiliated societies. This is not for legislation because the convention is not a legislative organization, this being the function of the Executive Board. However, the President of the Society and the Secretary communicate to the Executive Board the suggestions made at the delegates' meeting, and the suggestions which arise there are given careful consideration by the Executive Board which is charged by the laws which govern the incorporation of the Society with the conduct of all its business.

EARLY MAN IN AMERICA\*

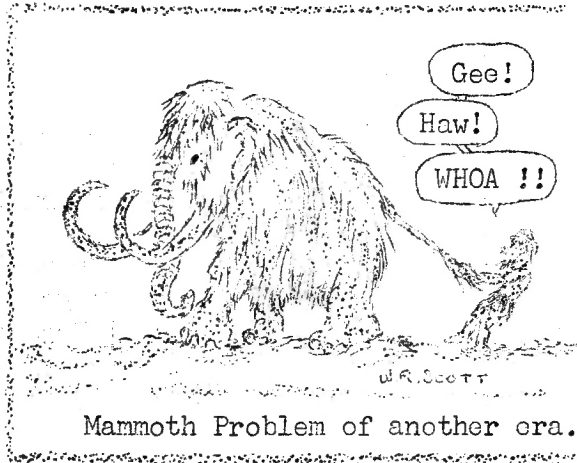
Science Looks Backward

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It isn't often progress can be made by taking a step backward, but such is certainly the case in the field of anthropology where scientists keep pushing back the arrival date of early man in America. There is definite proof that man flourished in this part of the world at lease 10,000 years ago.

In 1926 some man-made stone projectiles were found near Folsom, New Mexico, right alongside skeletons of buffalo that were 10,000 years old. Since that milestone event, more than 100 different sites have provided evidence that early Americans lived and hunted among prehistoric mammoths, camels, extinct species of horses and bison as far back as 15,000 years.

In recent years there has been mounting evidence that could push the history of man in America back 30,000 years and possibly even further. Perhaps the oldest and most controversial date advanced so far resulted from the Calico Mountain site in California, which was excavated by Ruth Simpson and the late Louis Leakey. The Calico Mountain digs have been dated at between 50,000 and 100,000 years.



A more conservative and more generally accepted date has come from a site on the Old Crow River in the Yukon. From 1966 thru 1970 the Old Crow site yielded an anthropological goldmine of 390 fossil vertebrate specimens.

These include bone implements and a number of bone artifacts which were broken or otherwise modified by man to suggest tools. W. N. Irving of the University of Toronto and C. R. Harrington of the National Museum of Canada report that radio carbon dating of these artifacts indicate they are between 25,000 and 32,000 years old.

By far the most impressive piece in the collection is the tibia bone of a caribou that was fashioned into a fleshing tool for cleaning of animal skins. The whittling marks are clearly visible and show that the tool was shaped by an instrument with a nearly straight cutting edge, similar to the man-made stone tools found at 10,000 year-old sites. Next to the Crow River site the Calico Mountain area provides the oldest man-made implements found in North America.

Previous explanations of early man's appearance in North America have more or less hinged on the last time a land bridge existed across the Bering Strait. That was only 12,000 years ago. Experts suggest that prior to that 12,000 year old land bridge, the Bering Strait had opened and closed several times as glacial activity lowered the sea level.

It is possible that Siberian nomad hunters followed the food source into North America across one of the earlier land-bridge periods. Progress is being made on pinpointing man's arrival on North American soil.

\*University of California Los Angeles and Columbia Broadcasting System's "Science Editor".

REFERENCES

Courtesy:

Doc R V Vaughan

Maria M. Reeder

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"Lo mas fácil no es siempre lo mejor."

(The easiest is not always the best.)

"En la vida sin amigos; en la muerte sin testigos."

(In life without friends; in death without witnesses.)

LETTERS

"Paul E. Leondis  
5968 Windsor Drive  
San Diego, CA 92109

January 11, 1973

Dear Paul:

I have enjoyed immensely your fine article in "Espinaz y Flores" on Bromeliad Collecting. After noting the nice and easy writing style you have developed and very sound suggestions plus just enough humor, I was amazed to learn that this was a product of an eighth grade student.

I hope you will continue to contribute articles as a member of our fine San Diego Cactus & Succulent Society. We have had very few young members showing an interest in horticulture and have tried many ways to recruit members from high schools and colleges. I am confident that you would have some constructive suggestions in this program of recruitment which we would appreciate.

I hope to have the pleasure of making your acquaintance at one of the San Diego Society meetings and that you can attend some of our CSSA Special Programs for inter-club attendance in this area.

Yours sincerely,

William C. Lockwood, President  
Cactus & Succulent Society of America  
2481 Las Lunas Street  
Pasadena, California 91107

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Mr. Paul E. Leondis  
5968 Windsor Drive  
San Diego, CA 92109

February 13, 1973

Dear Paul:

After reading your excellent article on "Bromeliad Collecting in Mexico" in the January issue of Espinaz y Flores, I was somewhat surprised and very pleased to see the footnote, "Paul is a student, age 13, 8th grade, at Muirlands Junior High School". So very few articles about succulent plants are written by junior high school students that you are part of a rare breed. Please continue your imaginative articles. Not only will you help entertain and educate others, but you will be developing a fine talent for writing and a fine sense of accomplishment.

I became interested in cacti and succulents at about your age but didn't have my first article published until 23 years later! I hope we as readers will be able to capitalize on at least 23 articles by Paul E. Leondis by the time he is 36!

Keep up the good work! Sincerely,

Larry W. Mitich,  
Professor of Agronomy  
North Dakota State University  
Fargo, North Dakota 58102

G A R D E N   V I S I T S

Wilson Wells  
WAGONMASTER

There has been planned a set of visits to various gardens of the members of the Club. The idea is to try to visit four or five gardens during a morning and midday.

Great show!



One of the main ideas incorporated in these visits is to have only a few members and guests at one garden at one time. Therefore there will be NO CARAVAN. The request of the members and the owners of the gardens being visited has been that only a few members visit each garden at one time. This will require some thinking on the part of the visitors and some help from both the visitors and garden owners. Please vary your sequence of visits to eliminate congestion at any one garden. No one garden should be visited over three quarters of an hour. If this idea is followed out there should be only a small amount of congestion at any one garden. Carry a map so you will know where to go.

Dates for visiting will be April 14th (Saturday) and April 28th and May 12th and May 26th. All Saturdays. Starting time each day will be 10 o'clock a.m.

- April 28th: 1) William NELSON, 4250 Maryland Street
- 2) Walter SCOTT, at the south end of Georgia St.  
            at the street turnaround in front of 3427.
- 3) Augie Pfeiffer, 5163 East Bedford.
- 4) Leroy Phelps, 4348 Aragon Way.
- 5) Anthony D'Attilio, 4124 47th Street
- April 14th: 1) Warren Buckner, 1744 Englewood Drive, Lemon Grove
- 2) Wilber Wier, 8717 Jefferson St., La Mesa
- 3) Floyd Gable, 8820 Indian Wells Court, Santee
- 4) Wilson Wells, 8350 Ridge Route Road, San Diego
- 5) Wilbur R. Robertson, 6715 Lofty View Point, San Diego

Be sure to bring a map of San Diego and vicinity to the April meeting for receiving directions to the gardens to be visited.

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Cactophil Corliss offers the following points in Garden Visit Etiquette:

He says that with the upcoming garden tours imminent it is a good time to remember the common sense rules which should be observed by people who make garden visits. In general, the visitor should behave as he would wish others to do in his garden.

- 1 - When possible, make an appointment for your visit to suit the garden owner's convenience and keep the appointment.
- 2 - Ascertain if your host's free time is limited and prolong your stay accordingly.
- 3 - Do not bring small children nor pets on a garden visit.
- 4 - Do not carry large purses, umbrellas, etc. nor wear garments that can cause damage.
- 5 - Stay on garden paths. Do not step into beds without permission.
- 6 - Do not touch the plants nor take flowers, seeds, or cuttings.
- 7 - Do not ask for cuttings, plants, seeds, etc. If you express admiration, your host may offer them if he likes.
- 8 - Do not compare plants in the garden with your own or others you have seen except in a complimentary way. You are there to see the garden of your host and not to brag about your own.

More fun!



Wilson is a showman!



.     TRANSVAAL NATURE CONSERVATION     .  
 .  
 .     Extracts from 1970-71 Report:     .  
 .     Courtesy of the Singers, Reseda     .  
 . . . . .

a) Flora conservation

Plant collection outings by the public led to the removal of a record 220,000 plants from areas where they were threatened by agricultural developments and construction such as dams and roads. There were ten such organized outings during the year and permits were issued to 3,090 persons to move protected plants to places of safety. During September 1970 548 permits were issued for the removal of 45,567 plants from a single site at Doornpoort. Twenty-one permits were issued for the commercial gathering of arum lilies and 80,905 blooms were picked in the Draaikraal and Tonteldoos areas.

The demand from various provincial institutions for the shrubs and trees supplied by the Division's nursery at Pretoria North remained high and 19,419 plants were distributed during the year. A further 29,131 plants were propagated from seed. The various buildings erected in the nursery grounds included housing for five staff members and a complex of office, laboratory and store-room. Among the many plant species established in the nursery gardens are some 50 species of aloe and 11 cycad species known to occur in the Transvaal. A course on the identification of the various species of cycad was held at the nursery for the Division's Nature Conservation officers.

Public interest in cycads remained high and the Division continued work in various directions to ensure the survival of this rare and interesting group of plants. The cycad Encephalartus inopinus, which was previously known only from the Lydenburg district, was found to occur in the Letaba district as well. The only known female plant of this species was moved during 1970 to the Division's nursery in Pretoria where it was planted with a number of male plants nearby. (tsk! tsk! tsk! - sex rears its ugly head)\*\* E. cupidus, first discovered in the Pilgrim's Rest district during 1969, was described for the first time in volume 10.2 of the journal Bothalia during 1971. The rare aloe, Aloe modesta, formerly known only from the Breyton area, was found to occur near Wakkerstroom as well. A new aloe species from the Pietersburg area is yet to be named and described. \*\*typist's remarks.

b) Nature reserved controlled by the Division include: (area and purpose)

Reserve Ida Doyera	32 hectares	Cycad protection
" Vertroosting	27 "	Red-hot poker protection
" Thorncroft	16 "	Aloe protection
" Tienie Louw	10 "	Aloe protection
" Cythna Letty	8 "	Aloe protection

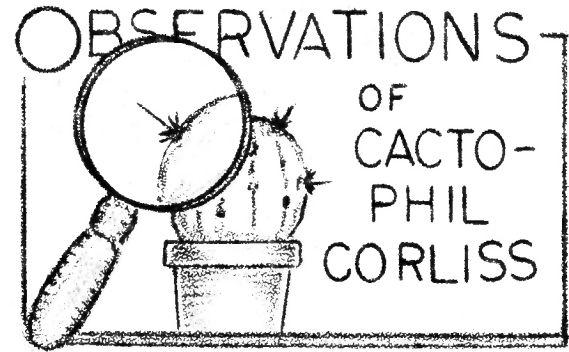
c) Introduction

In recent years there has been an impressive awakening of public interest in nature conservation. This interest is reflected in the increasing numbers of visitors to nature reserves and in the rising demand for information about wild-life and conservation activities. There is also a growing need for more undisturbed natural areas where young persons can hike and camp out. Even among gardeners there is an insatiable interest in our indigenous flora and a cycad in one's garden has become one of the most sought-after of status symbols.

d) Prosecutions for flora offenses: 1969/70, 87; 1970/71, 60.

## CAVEAT EMPTOR

### A Visit with Frank Reinelt



There are many good reasons why you should purchase your cactus plants from domestic dealers. Not only will you escape the many disadvantages of buying from foreign sources, but you will be supporting and encouraging the domestic dealer who, in his turn, will be constantly trying to stimulate interest in cactus in this country. From him you may obtain plants propagated from seeds, offsets, or cuttings which might give you much difficulty and many years of effort to come by with your own labor. That the plants may be mislabelled, diseased, or of an hybrid rather than specific strain is a risk shared with acquisitions from abroad.

Should your needs as a collector encompass rare species, however, it may be necessary to seek foreign sources as most of the domestic suppliers offer only relatively popular species with dependable sales demand. Rare species and collected native plants may also be less costly from foreign sources. There is also a greater availability of grafted plants, a condition of debated merit but sometimes necessary for your cultural facilities.

But purchases from foreign sources offer many pitfalls and the buyer must be aware of the risks! Transportation is not only more expensive but it is subject to the vagaries of weather, handling, and inspection treatment. Excepting the English-speaking foreign dealers, there may be horrendous language problems. Your inquiries and delivery suggestions may well be ignored. I can no longer recommend any Japanese sources; my check for plants from a Japanese firm in 1972 was promptly cashed but despite four letters of inquiry I have received no plants nor any reply. The plight of the U.S. dollar has made foreign dealers loath to accept orders from America... Plant Permits for Import are needed and plants must pass through Quarantine and probable treatment. The delay caused by this MAY not be long and the plants MAY not be harmed by the treatment, but on occasion there is delay and damage.

Next month (May) I will give you my specific recommendations of seed and plant sources for the current year and will again tell you how to obtain your Plant Import Permits.

Over the Washington's Birthday holiday weekend I enjoyed a visit in Santa Barbara with my good friend Frank Reinelt, whom I consider to be America's most eminent plant breeder of all time. His work with begonias, primulas, iris, delphinium, daffodils, callas, and so many other flowers have made horticultural history. For nearly ten years his almost sole interest has been with cactus.. One exception is with echeverrias and I admired his handsome new "Eric Walther" and his latest - a large echeverria with green leaves with bright red edges - truly Christmas colors - to be named for his charming wife - "Elaine Reinelt". ( I have been promised a plant for my next birthday! )

Frank is still interested chiefly in producing cactus hybrids with handsome spines. He says that most cactus are in flower but a short period of the year and the plant itself should be a thing of beauty at all seasons. He has reduced his breeding to about an half dozen each of North and South American genera I was most impressed by his work with lobivias, rebutias, copiapoas, neoporteria group, parodias, notocactus group, stenocactus, and echinocereus. The Reinelts will move to Arizona in the very near future and he will work closely with Dr. Earle at the Desert Botanical Garden near Phoenix.

# Talk about The fair

It's time to talk about our part in the Fair which is scheduled this year from Friday, June 22nd, through Wednesday, the 4th of July. BOB LAMP who puts these EXPOSITIONS together will be at the meeting this month to charge us with enthusiasm for a new scene. (Did you know that, Joe Bibbey?) Our exhibits will be in the main area but different-- which Bob will explain.

SCOTTY & HAZEL are pleased that "their" GRAFTS EXHIBIT -- after four consecutive years of bringing in the blues -- will be in good hands, those of LEE PHELPS and LOYAL JOE BIBBEY.

It's my pleasure to announce that BOB MYERS & JIM STALSONBURG will work together doing the CACTUS EXHIBIT. Who could ask for a better pair -- both landscape designers at the Park. Jim is eager to rejoin C&S activities but understandably has been too busy moving his tremendous garden to his new home. We'll miss Eve and Harry Warn's impact at The Fair this year but they are planning to give Florida a whirl, as soon as Jim redesigns their grounds.

There's a time to close the Notebook for another month I've got 100 more items! We'll discuss SUCCULENTS later.



NK



BOARD MEETING: Our Prexy says a Board meeting is scheduled for April 20th at 7:30 p.m. at Casa del Prado.

Board please note: The Society must name and submit the names of delegates and alternates to the Affiliate Director, Ted Taylor, very soon or one Society (you know which one) will be voteless at the CSSA business meeting in May.

Necessary info and forms should have been received by the Society and the Affiliate Director by now or there's something "out-of-mesh". The Society is entitled to four delegates and four alternates, but the important thing is ACTION MUST BE TAKEN ON THE HOME FRONT. Let's "mesh".

.....

The San Diego Botanical Garden Foundation's newsletter of March says: "Because of the difficulty in obtaining a platform setup when requested in Room 101, we conferred with Miss Pauline des Granges, Park and Recreation Director. She said she would see if it might be possible to place risers permanently in room 101, or risers would be supplied when affiliate groups request a room setup with a platform."

Yes, we do have a problem seeing and hearing speakers and seeing what they are talking about at meetings. And what about a sound system? Solutions anyone??

.....

Thank you Phil BURTON for the copy of Reg Manning's "WHAT KINDA CACTUS IZZAT" for the Library.



: CACTUS-OF-THE-MONTH :  
: SCHLUMBERGERA :  
: Martin L Mooney :  
: . . . . . :

SCHLUMBERGERA (shlum-ber'-ger-ah) Lemaire 1858. The genus was named for Frederick Schlumberger, an amateur collector of cacti, begonias and bromelias. The genus includes two species and four varieties, Schlumbergera russelliana with two varieties and S. gaertneri with two varieties. They are members of tree dwelling cacti of the subtribe Epiphyllanae.

The word cactus is usually associated with vicious spines, desert heat and no water. However our plants schlumbergera are exactly the opposite. Their adaptive specialization has led them away from the 'no moisture' desert heat type environment.

They are all epiphytes, their habitat is in or near tropical forests, in trees or in crevices of rocks beneath the trees, where they anchor themselves to the rough bark, rooting in the decomposed matter found there. Although they grow in dripping rain forests of the tropical jungles, they are of epiphytic habit, and their condition is one of perfect drainage where the moisture never becomes stagnant. This epiphytic habit of growth does not in any way imply that these plants are parasites. They are not parasites! They never draw their nourishment from the living tissues of other plants. They merely use the other plants as living 'pots' to hold the decomposed matter which is what they grow in and not on the living tissues of their hosts.

Schlumbergera very much resembles zygocactus. They have the same growth habit, distribution and they look very much alike. They were at one time classed with zygocactus as well as epiphyllum, however schlumbergera flowers are quite different, being regular with spreading, slender, pointed petals, with a very short flower tube. The fruit is strongly 4 or 5-angled and naked. These are the facts that resulted in their being placed in a separate genus. The flower about Easter and so they are commonly called "Easter cactus".

S. russelliana comes from the Organ Mountains in the State of Rio de Janeiro, Brazil. S. russelliana was named for the Duke of Bedford (Russell family) of England. It has reddish-purple flowers at the end of the flat leaf-like branches. Flowers are about 1 to 1½ inches long and about as broad with 20 or so violet pink petals. The stamens are in two groups, the outer, about 20, are inserted on the tube. The others, about 10 on the ovary. They grow either hanging or erect, very much branched with short joints about as broad as they are long, with one or two notches along the sides and with a bristle or two in each.

S. gaertneri comes from the State of Santa Catharina, Brazil. The joints are usually flat and leaf-like, but sometimes they are 3 to 6-angled, 3 inches long and one inch broad. They are dull green in color with purplish margins, having 3 to 5 notches with areoles along the sides. Each areole has one or two yellowish bristles and short white wool. The flowers are starlike and a deep scarlet red on a short tube. Stamens are also red. Styles are longer and white. The stigma has 5 or 6 lobes. The fruit is also scarlet and acutely 5-angled. These are very beautiful and free-flowering plants.

The writer doesn't have one but thinks he deserves one. Anyone with a cutting that needs a home, and TLC?

REF: THE CACTACEAE, Britton & Rose; CACTI, J Borg, EPIPHYLLUM HANDBOOK, Haselton; MORPHOLOGY OF CACTI, Buxbaum; CACTI & SUCCULENTS, Chidamian; CACTI AND SUCCULENTS, Haage; and WEBSTER'S DICTIONARY.

SUCCULENT-OF-THE-MONTH .

Sedum tortuosum . . . . .

-- Julianne Rice -- .

. . . . .

Sedum (see '-dum) is a member of the large Crassulaceae family with representative members found in many parts of the globe. This genus of

plants has been given a name derived from the Latin word meaning "to sit". In their natural habitat, they do just that by affixing themselves to rocks, containers, walls, trees -- just anything handy for use as a "cling-ee".

These pretty little plants are quite easy to grow; actually they seem to thrive on a bit of neglect. Children find them an easy starter and some have extraordinary luck when given pieces of larger plants with which to experiment.

S. tortuosum comes to us from our neighbors to the South, Mexico, and it is a fine specimen for hanging baskets placed in enough sun to color pleasantly. Once upon a trip to that marvelous land of Cacti and Succulents, I saw a large container made of palm husks about 2 feet in diameter filled to a glorious overflowing with such color as I have never been able to achieve in partial shade. It was so placed as to receive full morning sun but it was protected against the damaging (at least in very arid areas) late afternoon sun.

The twisting stems sprawled over the side in a very attractive design, very agreeably blending their yellows, reds and browns with the native container. In shade, this one, as many other plants do naturally, will be a pleasant green with yellow overtones.

The delicately scented flowers are whitish, insignificant, but pretty. In case some have had different results, do remember that I am a desert dweller and we certainly do have much different results here. And too, I wonder how long ago we had an amusing session with see'-dum or seh'-dum? So many facets of pure enjoyment for those hardy enough to join and participate in gardening of any variety.

Space permits an EXOTICA description: "S. tortuosum, from Mexico, is a small branching succulent with leafy twisting rooting stems. The dense fleshy obovate spathulate sessile leaves are flattened on the surface and obliquely keeled beneath. They are yellowish pea green with bronzy cast, glossy with some waxy powder and about 1 1/2 inches long."

