

# 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 NUEVE

SEPTIEMBRE 1972  
.....

## SPINES ON PALMS

You asked a simple question, referring to spines on the palm trunk but there's no easy answer! You might say that the palm spines prevent rats from climbing the trunk to eat the fruits, but birds usually are the animals that eat palm fruits; anyway, by eating the fruits of palms the seeds are widely scattered and it helps to spread the species. Of course the spines are helpful in keeping the rats from unripe fruits that might be eaten before they are developed enough to germinate.

Most palms do not have spines on their trunks, so I fail to see an advantage in having spines on a palm trunk.

The same thing applies to cacti. You can't say that cactus spines were developed as a protection for the plants, as many that don't have spines have survived quite well without them. Spines may actually help cacti in a number of ways, such as reducing air circulation so they don't dry out so easily, shading them from the sun, allowing moisture to condense easily so it runs to the base of the plant where the roots can absorb it, and so on.

But why spines developed, no one really knows. You have to be very careful in making a general statement that may not apply in all cases, or in making a statement about one theory when in reality there are a number of other theories that might be more true, or just as true.

.....  
Espinas y Flores gratefully thanks Myron Kinnach, Curator and Superintendent of Huntington Botanical Gardens, San Marino, for the above thought-evoking observations on spines.

And "thank you" to our Maria Reeder for this final observation and translation 'en español':

"Algunas palmas tienen muchas espinas en el tronco."  
.....

General observation: A cactus is a many spined thing.  
(Not intended to belittle any palm.)

LIFE FUNCTIONS

AND PROCESSES!

Doc R V Vaughan

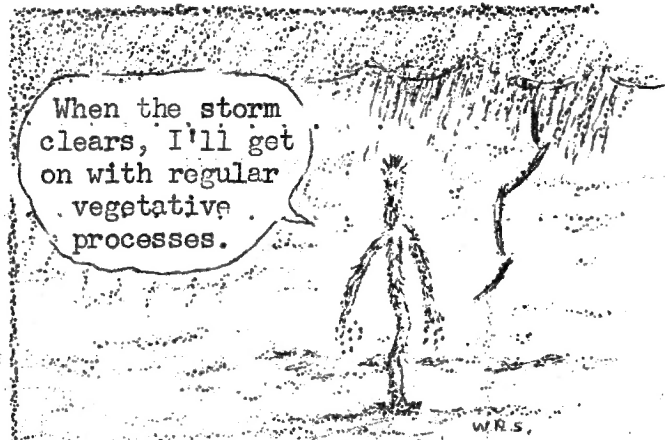
Speaking of plants and animals replacing parts by the vegetative process, we have rats that shed their tails if any enemy grabs them thereby-- the outer skin and muscle is slipped off and a new tail or new muscle thereon replaced.

As we all know a lobster will grow a new claw and that many annelid worms will restructure an entirely new body that reacts to tactile- or photoirritation. But this is not true as it is in plants which from a small cutting will regenerate an entirely new and complete plant.

No animal creature can grow a complete body from a claw.

In animals we have an inborn memory that functions as a part of the brain. In vegetable matter we have a built in pattern developed by the laws and processes of survival.

The moth survives if it can match the coloration of the plant whereon it hangs--the plant that can drop its leaves and has a waxy protection and a bitter taste or purgative action will repel animals bent on destroying it.



..... MAYBE SOONER .....

Pa and Ma are doing a regenerative dance.



Really weirdy!

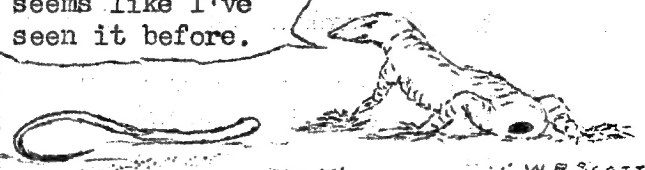
... WEIRDY NOW, BUT WAIT! ...

A parent plant like the creosote bush poisons the earth around the parent plant so that offspring cannot take what small amount of water is available for the parent's survival. Seeds therefore must be carried afar by wind, water, animals, etc. Only those seeds so carried survive. Only the seeds with thorns on the parent plant were protected until the great rains and winds came and the sand in the running water eroded the skin of the seeds and permitted quick germination.

The "smoke tree" Cotinus coggygria of our Sonoran desert is a vivid example of water, wind, sand all working on seeds.

The "bunch grass" of the prairie needed below zero temperatures to make it germinate. When the winters were mild and lots of other plants and weeds grew in abundance there was no need for the "bunch grass" to fight for survival and the seeds would lay in the ground for several years or until there was a killing winter with cold winds and little snow cover. Then forage was needed for the buffalo and the "bunch grass" met the welcome sun-- called by the Plains Indians "Chinook".

It looks familiar, seems like I've seen it before.



..... BEREFT BUT NOT BEREAVED! .....

Such are Nature's laws, life functions and processes!

PROGRAM FOR SEPTEMBER

"Spagnum culture"

By a successful Practitioner.

Speaker's name

Mr. and Ms. -- Ladies and Gentlemen of the San Diego Cactus and Succulent Society--we are indeed happy and proud to tell you in this September issue of "Espinass y Flores" that our Vice President and Program Chairman, Mr. Floyd L. Gable has obtained the best informed and the most experienced practitioner of the technique of spagnum culture to describe it as he practices it in his own garden. He has developed the method to near perfection over a period of years.

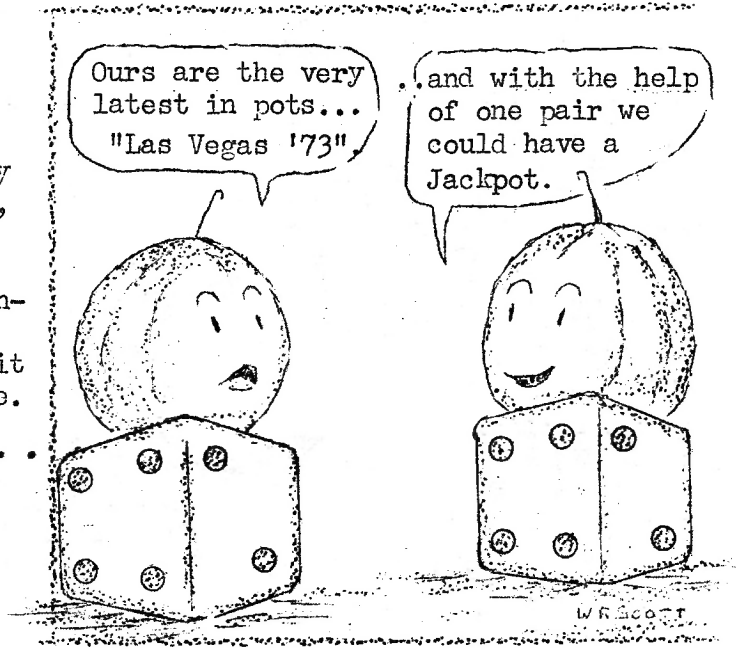
The speaker has enjoyed successes which to him seem routine, but to others, miraculous. It may be a long, long time before you have an opportunity like this again--don't miss it. He will take you through it step by step, using props and plants from his own garden. And if you want to see the props and plants to the best advantage, please sit on the front row. But remember--everyone in the Club can't sit on the front row!

We encourage you, or let us put it this way--we would insist that you bring a pencil and paper so you may take copious notes. Ask questions too, and make appropriate sketches.

The speaker's name will be announced on September 2, Saturday, at Casa del Prado at about 2 p.m. Write it on the line provided above at that time.

FLOWER POTS FOR TIGHTWADS

By 'Steve'



"The high cost of flower pots, even the plastic ones, has been a thorn in my flesh for some years. So I decided to do something about it.

More than a year ago I started using styrofoam drinking cups for planting small cacti. It has worked beautifully! The pots and plants are still strong and viable. This settles once and forever the problem about the use of clay -vs- plastic pots with regard to insulation and aeration.

Cups come in various sizes, some are even short and squat, similar to cottage cheese containers. The cups should be perforated in the bottoms, either with several nail holes or a drill. Then put a small handful of pea gravel to add weight and provide stability and to keep the holes from being plugged. Then proceed as in normal planting. When the planting mix is thoroughly compressed, add a layer of pea gravel, lava pebbles or other granular material. This has a two-fold purpose, it prevents the soil from washing out and evaporation is retarded.

An added advantage to styrofoam cup potting is that one may use a felt tipped pen to write such data as the name of the plant, potting date, your wife's birthday, etc. etc. (Try doing that on a plastic pot! /-?#0 ?/--)

....Rots or ruck...Steve, EX-tight wad.

CONTRIBUTORS TO AUGUST REGALEMENT--"Gracias y muchas" to: Marcelle Barfield, C. L. Bonbow, Rose D'Attilio, Ceil Fuller, Frances Langer, Verna Pasek, Marilyn Phelps.

August 1, 1972

"Mr. Scott: Over a period of about two years I've had the pleasure of reading three of your Society's bulletins. They are exceptional in many ways!

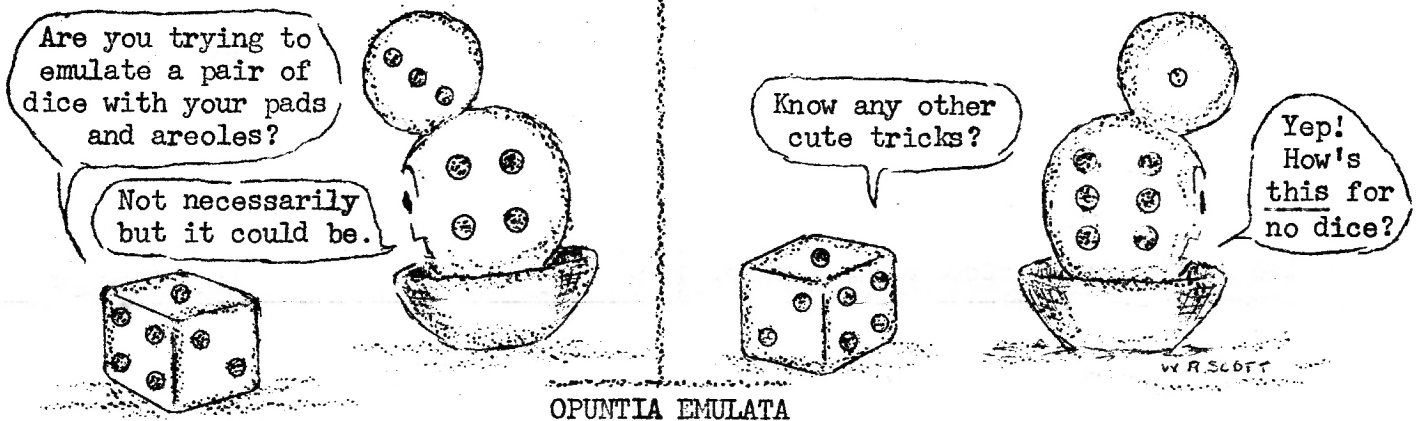
I'd like to become a member of your Society and am enclosing \$3.00 for a year's membership. I will anxiously await my first copy of "Espinasy Flores".

Please send to: Evon Ray, 5804 Garfeild Avenue Sacramento, Calif. 95841"

.....

Evon: In all fairness to you as a new '72 member, a complete set of the '72 issues have been mailed to you. Welcome to our Club, we're very happy for you to be a member of our gang. Your entries at the CSSA Annual show at the Arboretum were outstanding--tops as the Judges decided. Congratulations, it was a real achievement when one considers the competition--tough!

....Ye Ed



"The pleasures of the senses pass quickly; those of the heart become sorrows; Those of the mind are with us even to the end of our journey-- Like, would you believe, collecting cacti and succulents.

...el Chico

"Dear Ye Ed:

August 7, '72

We will not be able to attend the September or October meetings of the Club as we will be on a six-week safari to England, Holland, Germany, Austria, Italy and Greece. Hope to be able to squeeze in some visits to European cactophile's gardens and will either report to you direct from there or when we get back to the "Sweetest Place This Side of Heaven"--San Diego County. Hasta la vista!

The Bishops--  
Rancho Bernardo

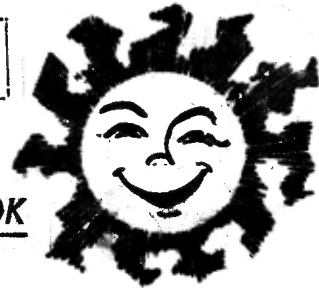
Floyd: Would you make a note of the Bishops' stops and contacts, they're the basis of a most interesting program later in '72.

....Ye Ed

NEVER A WINNER: Through natural selection insects can eventually evolve strains resistant to each of the chemical compounds man devises to eradicate them. Sometimes in the space of a few years.

It now takes about seven years and 5- to 10-million dollars to put a new pesticide on the market. The result: Few new products are finding their way into the insect ridden fields.

"Be to my virtues very kind -  
To my faults, a little blind."



NIBBY'S  
NOTEBOOK

FLOYD GABLE is a man to be appreciated. One of the nicest reasons why occurred at our last meeting. Floyd made arrangements for us to buy wholesale directly from the distributor his favorite all-around fertilizer called "WATCH IT GROW", a completely balanced 8-8-8 liquid preparation.

31 Signed to buy: a quart at \$1.80 - half-gallon \$3 - or a gallon for \$4.80. He is also arranging a reprint of instructions for foliar feeding. WATCH IT GROW is not only a favorite with Floyd for c&s, but for all plants, including roses and orchids... Elaine Hyskgull commented that her mother uses it for African violets with great success... If this product should crystallize at the bottom, it may be "thawed" by putting the bottle in a pail of warm water ... Maria Fisher has a favorite fertilizer, too, and promised us her recipe.

The other product that Floyd uses is a 10-30-10 which doesn't seem to be available retail as far as we know. He uses it only in early spring for setting bud and would be reluctant to try it the year around. (Remember the slide show he gave us of his most photogenic garden several months ago? He had used 10-30-10 in lieu of magic - O beautiful and bountiful bloom!)  
or moon dust

Another nice thing Floyd did was bringing Howard Jones, a retired college professor and lifetime photographer who "hasn't time to get old and doesn't know why it's necessary, anyway." Mr. Jones showed many slides of the trip he and Mrs. Jones had made to South America... Did you know that 1/4 of the Earth's fresh water is in the Amazon -- that it's 27 miles wide at one point -- and quite red in color? The Jones covered South America from the Panama Canal ("Looks like an irrigation ditch in Imperial Valley") to Rio with magnificent views of the Andes in between ... He also did photographic justice to many tribes of Indians and their colorful clothing...as well as their beads and boobs... Hey, Wilson -- can you line up some S. A. tours wholesale? Some of the fellows wanted to know...

Another sidelight: the natives eat the cashew fruit but throw away the nuts --and Brazil nuts are peeled of their outer covering by hand!

At this meeting some of us saw the Botanical "Library" for the first time as we met in the large empty room by that name...there WERE books there but they are our books... Augie let the membership decide whether to meet on the first or second Saturday in November, since once again we would use the Library on the first Saturday as the Tropical Fish people will be doing their thing then. Our Regale-ment Committee said - very selflessly - that it didn't make any difference to them --even though it is actually much more difficult: the kitchen was not available until two o'clock and water had to be hauled from there. ... Pat Mooney, Rose d'Atillio and Elvira Bibbey sent around the old clipboard for members to have another crack bringing cookies or cake ... we had 81 present by actual head count in August. The Regalers need 6 providers per month rather than 5. Okay?

Warren Buckner asked if we had been to Mike's shop yet. It's located near the Farmers' Market in Old Town's BAZAAR del MUNDO. Mike handles pots and plants from EVERYWHERE...the most uncommon and choicest ones, of course.

Ruth Nelson made her first public appearance since surgery - twice in 24 days time - and was surrounded by wellwishers. Meantime, Helen Hegyi and Edith Werner have been holding down the Bookmobile...Bill Nelson has a dozen 14x20" sheets of glass which can be yours for the hauling - if I don't get there first!

(NOTEBOOK continued)

The Nelsons are having a night blooming party tonight (August 10th) to share the 32+ blooms of Hylocereus undatus which are making their debut - Ruth said the lights would be on until eleven and since notice is too late this year, try to make it next year...they come round fast enough...the years, that is...

Mitch Beauchamp is working on his thesis: DISTRIBUTION OF NATIVE PLANTS IN SAN DIEGO COUNTY. He brought a few choice plants collected in Baja to sell and I finally succumbed to the creepy spell of the 'Creeping Devil'... rooted and potted and greening ... Mitch's Opuntia from Isla Magdalena (or was it Isla Santa Margarita?) was in splendid spine and won first in Cactus of-the-Month judging. Loyal "Joe" Bibbey now has the care and feeding of that winner.

Florabunda's Agave filifera compacta took first in Succulents... Who is Florabunda? Hazel Scott and she truly deserves her nickname. ... Lee mentioned that he has gathered some 50 species of agaves under 21" in size when mature. Some of the little beauties he brought to demonstrate this point were, in fact, small enough to find a place on your windowsill. ... Lee praised the Plant Drawing Table - the Draw-a-Plant or Win-a-Plant Table?? - triumphantly displaying a tall earth-colored container he had won recently. (Evelyn Chatham had given it.) As a bonsai pot with an ordinary juniper draped gracefully across, it became a stunning combination... Pairing plants and pot is an Art in itself and our Educational Chairman excels in this art... as he does in being one of our more colorful characters. Beard poised to emphasize knowledgeable comments while headband disciplines Lincolnesque locks, attired in "muscle" shirt and brass-studded shorts, Lee does catch the ladies' attention...and quite favorably, of course... we had fun snickering over my costume, too...

If anyone has wondered why Dr. Corliss has more than the policy-limited number of plants on his salestable, it's because he petitioned the Board with excellent reasons for being an Exception... He really IS exceptional, hybridizing and growing from seed to offer us rare plants. ... Augie urges any members who disagree with policy or procedure to present his case to the Board - either in person or in writing.

Vera Pasek bought a bryophyllum from Sophie's table. The comparatively small leaves have a fresh-herb odor, rather lemony...does anyone know the name of this fragrant bryophyllum?

Ed Miller says that you should turn in your Fair milage -- or else let's FORGET it. Every year that has been a dreary hangover. ... Tony d'Atillio held up tongs and graft (which was sans soil when he found it) for owner to claim...graft has been potted (has owner)(?). They are thought to belong to Nellie Kennett...Ed Miller is going to bring my Baja driftwood and almost-white echeveria which he says has

## Moon Dust Clues Sought In Plants

HOUSTON (AP) — Scientists hope that a pinch of moon dust, a nuclear reactor and a few lettuce leaves will teach man how to improve fertilization of plants and grow better food.

The experiment, to be conducted at Texas A&M at College Station, Tex., will explore an unexpected reaction from the Apollo moon missions.

Following the first moon landing by Apollo 11 in 1969, scientists placed moon soil around the roots of laboratory plants.

On some of the plants there was no reaction at all. On others, the soil seemed to cause unexpected growth.

This was particularly puzzling to scientists because current studies show plants take their food from the soil in a form of solution and none of the elements in moon dust are soluble in water.

"We synthesized the soil for the plants, using the best formulae now available," says Dr. Paul Baur Jr., a North Texas State University botanist working at the space center. "The soil should have had everything the plants needed before we mixed in the moon soil."

The formula soil "didn't seem to be enough for some of the plants," he said. "The lunar soil still contributed. Something from the lunar soil is helping some of the plants."

Just what that "something" is may be answered with the help of the A&M nuclear reactor and some lettuce plants.

Baur said five grams of lunar soil have been exposed to radiation in the reactor. Elements in the soil, he said, will catch and hold this radiation for some time, and can be detected on X-ray plates. He said the process also will determine which elements from the moon dust were taken.

(NOTEBOOK continued)

been blooming nicely...and I'll bring Perlso's container from last year. Perhaps everything will get back to rightful owners...did you EVER find your Euphorbia horrida, Walt Greenwood? The Loyland's Crassula falcata has been replaced in full bloom -- last year's was stolen as soon as it flowered.

A lot of the fun of the Plant Drawing Table is the conversation it leads to as well as some of the antics...once Augie brought a crested Stapeliad variegata which one person kept hiding and another would ferret it out again... funny thing, the ferretter's number won that plant! So many times when one expresses interest in a plant they didn't get, someone else will say, "Oh, I'll bring you one of those next month." We all have warm remembrances of past gifts...for instance, Bill Waite remarked that the succulent Elaine Niehaus had given him two years ago was faring splendidly... Marcelle Barfield and Alberta Widen discussed care and feeding of exchanges ... But we (for one) have ALWAYS found SOMETHING to cherish from the Table - and around it. ... Thanks to the bringer of the Watsonia bulbs, too. ... And who was it that said she mixes her potting soil in the kitchen because she likes her soil friable? ... Ricky Latimer, 2nd Vice-president in our Society, has just accepted the 2nd Vice-presidency of the Epiphyllum Society! Floyd Gable is also doing double duty for us and the Epi group as 1st Vice-President... which brings us full circle to sing another verse in praise of Floyd's generosity -- he shares his time and talent with us -- and is most giving of his plants. Ione Hubner and I really "took in" -- and almost "took out" Floyd's garden...what a thrill to see for the first time! Worth waiting for, for certain.

Since we couldn't get to the Nelsons to see the night-bloomers, they brought them to the Board Meeting Friday evening. Pat and Martin's pool table never had it so good! Did you ever see a pool table in bloom? It was loaded with white flowers of Hylocereus undatus...very ethereal. And the Board has never had it better than we did with the Mooney's hospitality -- thanks, kids! In fact, as we waddled in to discuss the club's business, one member was heard to ask, "Are we going to have a meeting, TOO?"

Garden-visiting oriented, arrangements were made to take advantage of Lee Phelp's invitation... Sophie & Oliver took Frances Langer, Minnie Mogil and me to view Lee's vista. And again we were generously treated. Lee said, "If you see anything you want, just ask. I'll either say yes or no!" Each of us left with a bagful of treasures -- and never once did I hear him say no! He even shared his agaves -- thank you for a delightful morning in a lovely garden, Lee.

-o0o-

Hardpressed for a pot to plant in, Harriet Sopp is designing her own in a pottery class. One thing leading to another, Harriet has gone from turtles for succulents to wall containers for grasses and hanging planters...and is "all fired up" with enthusiasm...we are looking forward to seeing the results.

-o0o-

Ed Miller is a man with a talent for knowing when and where to collect rocks... On his very recent trip to Hawaii he met the President of the Honolulu C&S Society as a direct result of picking up a few pieces of volcanic rock -- and was thus able to see more of the island than most visitors...



# now is the time

## CACTUS & SUCCULENT SOCIETY

Nibby Klinefelter

### Now is the time

to make a wreath for Christmas and year-round pleasure, of succulents.

to gather together a wire wreath, sphagnum moss, (or heavy duty foil or screening), a spool of wire or ball of twine, and well drained, sandy soil mix.

to make cuttings of succulents that will root quickly but grow slowly: Small Sedums, Crassulas, Echeverias, and other types of "Hen-and-Chicks" rosettes, Aeoniums, Haworthias et cetera.

to line the wreath with sphagnum moss (or foil or screening), fill with soil mix, and poke in cuttings until desired effect is obtained.

to unobtrusively catch underleaves with either wire or twine in crisscross fashion from top to bottom of wreath to hold it all together until plants are well rooted. Keep it in a sunny position with soil damp rather than soggy, and it will root in a few weeks. Mine lasted two years and was hung on the door as well as used as a centerpiece.

Courtesy of CALIFORNIA GARDEN

-000-

The Editors of CALIFORNIA GARDEN were in my office recently at the Naval Hospital. Bill Gunther (iris) and Jim LeMasters. Bill was a patient but has returned home. They enjoyed our EyF so much that they want to use some of the material! Past editors have also reprinted from EyF. Copies of this locally published magazine can be had at our meeting. So take advantage!

(Apologies to the Editor for a poorly planned page...thrown-together rather than planned... but it's so HOT and time has once again run out.)

-000-

SPRAY: 2 parts water  
1 part rubbing alcohol  
1 part household ammonia

It is said that this spray does not adversely affect crassulaceous plants as does Malathion.

-000-

## SPRAY from ORGANIC GARDENING SOCIETY

Tops from 3 bunches green onions  
1 clove garlic  
1 tablespoon cayenne pepper  
handful fresh jalapenos

Blend with water in blender. Add to 3-5 gallons water with a bar of Fels Naptha soap chipped and dissolved. Let "work" 7 days, stirring occasionally (WOW). Strain with several thicknesses of old pantyhose or cheese cloth before using in sprayer to prevent clogging.

The theory here is that insects smell with every pore and that these odors repel them.

They also recommend planting marigolds to control nematodes, and advise that chives repel aphids, two of our most irritating pests.

-000-

## FERTILIZER for leaf succulents

1/4 ounce sodium phosphate  
1/4 " potassium nitrate  
1 gallon water

(Source unknown at this point, but it sounds reasonable.)

-000-

-page 8-

# Have a happy summer!



The recent monograph of the Fouquieriaceae by Dr. James Henrickson at California State University, Los Angeles contains several significant revisions of interest to succulent plant fanciers. Condensed below is the taxonomic section of the lengthy opus which appears in the botanical journal, Aliso, Vol. 7, No. 4, pp. 439-537, July 20, 1972, Rancho Santa Ana Botanic Garden, Claremont, Cal. 91711.

---

Fouquieriaceae A.P. de Candolle  
Fouquieria Humboldt

subgenus Fouquieria

section Fouquieria

F. leonilae F. Miranda.  $2n=24$

Known only from Canon del Zopilote south of the Rio Balsas (Rio Mexcala) in the state of Guerrero where it is common from 500 to 1100m on rocky hillsides on outcroppings of a whitish, possibly gypseous or calcareous soil. Flowers during the dry season from December through March.

F. ochoterena F. Miranda.  $2n=24$

Known only from southwestern Puebla and adjacent Oaxaca where it occurs in the deciduous arid tropical scrub vegetation from 1250 to 1500m elevation. Flowers in the dry season from November to April.

F. macdougallii Nash.  $2n=24$

Ranges from sea level to about 600 (800)m elevation from the Sonoran Desert of Central Sonora southward to the tropical deciduous forest along the Sierra Madre Occidental of southeast Sonora and adjacent Chihuahua and to the thorn forest of south-central Sinaloa. Flowering follows rains but may occur at any time throughout the year.

F. diguetii (van Tiegh.) I.M. Johnston.  $2n=48$

Very common in the Sonoran Desert of Baja California from an area about 40km N of Punta Prieta ( $29^{\circ} 10'N$  Lat.) south through the tropical deciduous forest below La Paz to Cabo San Lucas. Disjunct populations also occur in Sonora near Guaymas and on many islands in the Gulf of California. Occurs mainly on broad alluvial plains and hills below 600m elevation but is found as high as 1200m on Cerro de Gigantea. Flowering predominates in the winter from February through May but some flowers may be produced throughout the year.

F. burragei Rose.  $2n=72$

Known only from widely scattered populations near the gulf coast of Baja California from Bahia Concepcion south to the vicinity of La Paz and on adjacent islands in the Gulf of California. Occurs on rocky slopes with shallow sandy to volcanic clay soils, from just above sea level to 200m elevation. Precipitation...falls in sporadic showers mainly from July through January. Flowering occurs after rains.

section Fouquieria (continued)

F. formosa H.B.K. 2n= not reported

Occurs on rocky alluvial slopes and valleys on lateritic to calcareous soils from Lago de Chapala region of Jalisco to southeastern Oaxaca. Exists in tropical deciduous forest and arid tropical scrub vegetations at elevations from 2400 to 700m (to 100m near Tehuantepec, Oaxaca). Flowers from October through February; however, some flowering may occur throughout the year.

section Ocotilla Henrickson.

F. splendens Engelm. in Wisliz.

subspecies splendens 2n=24

Ranges from the Sonoran Desert of southern California, Arizona and southernmost Nevada south to Baja California and Sonora and in the Chihuahua Desert and adjacent Mesquite Grassland from New Mexico, and Texas south to Zacatecas and northern San Luis Potosi. In the Sonoran Desert it occurs from sea level to about 700m elevation and up to 1800m on a few south-facing mountain slopes in Arizona. In the Chihuahuan Desert and adjacent mesquite grassland it ranges from 1000 to 2100m elevation. The western Sonoran Desert receives winter rains while Arizona and Sonora receive both winter and late summer rains. In contrast, the Chihuahuan Desert is characterized by summer rains. Through this range, F. splendens flowers in the late winter to spring from March through May. Flowering therefore occurs in the wet season in the Sonoran Desert but during the dry season in the Chihuahuan Desert where flowers are produced each spring even if predipitation the previous summer was scant.

subspecies campanulata (Nash) Henrickson.

variety campanulata 2n= not reported

Forms extensive and dense populations along the eastern edge of the Sierra Madre Occidental west of the Chihuahuan Desert from the vicinity of Santiago Papasquiaro north to Inde and east to the Rio Nazas Basin near Rodeo. It occurs in well-drained rocky (basalt to limestone) slopes in the gramma grasslands from the border of the microphyllous scrub at 1200m to the juniper-pine woodlands at about 2000m. Flowering occurs in the spring from March to May while the plants are leafless.

variety albiflora Henrickson. 2n=24

Occurs in the Rio Nazas Basin from Rodeo to an area about 45km S of Atotonilco along Mex. Hwy. 45 in scrubby grassland with Acacia, Jatropha, Opuntia, Cnidosculus, and Larrea. Flowering occurs in the spring from March to May while the plants are leafless.

subspecies breviflora Henrickson 2n=24

Known from scattered disjunct populations in low arid basins from San Luis Potosi and Tamaulipas south to Hidalgo and Queretaro. It occurs on arid rocky usually south-facing slopes and hillsides from 750 to 1200m elevation in the north and to 2100m in the southern part of its range. Average annual rainfall ranges from 280 to 450mm and is again concentrated from June through October while flowering occurs in the winter.

Distribution of the Fouquieriaceae (adapted from Henrickson 1972)



Legend

- F. leonilae     Δ
- F. shrevei     -o-o-o-o-o-o-o
- F. ochoterena     o
- F. fasciculata     ■
- F. macdougalii     - - - - -
- F. purpusii     □
- F. diguetii     -o-o-
- F. columnaris     \* \* \* \* \*
- F. burragei     ~~~~~
  
- F. formosa     - F F F -
  
- F. splendens ssp. splendens     ———
- F. splendens ssp. campanulata  
var. campanulata     o o o o o o o
- F. splendens ssp. campanulata  
var. albiflora     \* \* \* \* \*
  
- F. splendens ssp. breviflora     + + + + +

section Ocotilla (continued)

F. shrevei I.M. Johnston.  $2n=24$

Known only from a few scattered gypsum outcroppings in the Bolson de Mapimi region of the Chihuahuan Desert in western Coahuila. The Bolson region consists of low, warm basins from 1000m to 1200m elevation. Flowers in the spring from March to May when the plants are usually without leaves.

subgenus Bromia (H.B.K.) Henrickson.

F. fasciculata (Willd. ex Roem. et Schult.) Nash.  $2n=24$

Known only from southern Hidalgo in the Barrancas west of the Sierra Madre Oriental north of Actopan and Atotonilco el Grande. Several collections are recorded from Barranca Tolantongo and vicinity near Chalmita and Lago de Metztilan where it occurs on rocky slopes with shallow calcareous and apparently gypseous soils. It occurs from 1200 to 1600m elevation in pockets of arid tropical scrub. Flowering occurs in the dry season from December through March.

F. purpusii T.S. Brandege.  $2n=24$

Known only from a few localities in southern Puebla and northern Oaxaca where it exists in an arid tropical scrub vegetation on exposed rocky limestone outcroppings and open basaltic slopes from 1000 up to 2300m elevation. Flowering occurs during the dry season from February to April.

subgenus Idria (Kellogg) Henrickson.

F. columnaris (Kellogg) Kellogg ex Curran.  $n=36$

Restricted to the arid Sonoran Desert between El Rosario and Santa Rosalia in Baja California, on Isla Angel de la Guardia in the Gulf of California and in a small area south of Puerto Libertad on coastal mainland Sonora. Occurs from sea level to 1450m elevation on deep to shallow, volcanic loams or clays to decomposed granite soils. The species flowers in August and September regardless of rainfall.

---

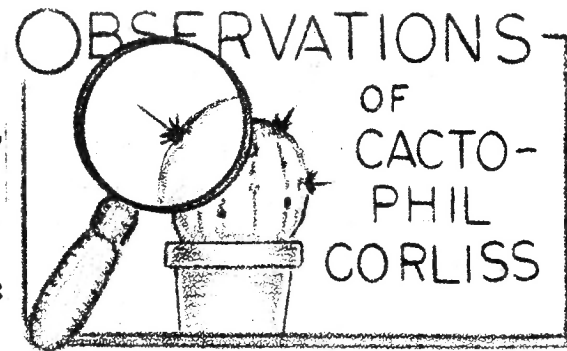
---

SYNOPSIS - The most profound result of the taxonomic revision is the return of the family to a single genus, Fouquieria. The Boojum Tree genus, Idria, is lowered to subgeneric status. Section Ocotilla is proposed for the first time while other sectional and subspecific combinations are proposed or given different status.

No new species are proposed.

R. Mitchel Beauchamp, M.S.  
Department of Biology  
Herbert H. Lehman College  
The City University of  
New York, Bronx, N.Y. 10468

Progress (?) in My Cactus Hybridizing Program. Current Status Report.



Some 50 of my hemerocallis, 30 spuria iris, and 20 Louisiana iris hybrids have been introduced to commerce but I am discouraged by the results to date of my work with cactus. The logical starting-place seemed to be with the lobivia-echinopsis groups for several reasons: There are many diverse species and hybrids available, they set seed easily and pose few problems in raising to flowering size. The object was to achieve variation of color and pattern in long-lasting diurnal flowers. My slow progress makes me respect highly the work of Harry Johnson in this field. His large-flowered hybrids run the color gamut from white-yellow-orange-pink-red-purple with selfs, bicolors, and tricolors. It has been difficult to improve on his varieties. The few color and pattern break-throughs I have achieved are thus far disappointing in that the flowers do not open well or they stay open too briefly.

One of the most interesting Johnson hybrids is the small-flowered "Pink and White" which has a wide white edge on a flower varving from pink to brick-red. Seedlings of this plant have not shown the two-color pattern yet. Most distressingly, they open for only two or three hours in the morning. Among the offspring of "Pink and White" I have got a diversity of color, however, from pure white to royal purple!

Another Johnson hybrid I thot might prove to be a good parent is "Blush". It has a pink-red flower one inch in diameter, like the above. Its flower tube is disproportionately long and the plant bodies tend to be leggy. Its seedlings seem to accentuate both of the characteristics.

The most beautiful flowers so far have been on seedlings of lobivia chrysochaete (yellow). They are yellow or pink or salmon with white, yellow, or orange edges and mid-stripes. The growth habits of the seedlings are excellent - they have vigor, nice form of body, beautiful spiration, good branching. But the flowers remain open but a few hours! Johnson's "Little Red Riding Hood" has slightly larger flowers than any of the above, glowing deep rose with whitish outer petals. It is extremely floriferous and a prodigious seed-setter. I am using it with high hopes.

I am also looking forward to seedlings from the following:

(1) An European chmaecereus hybrid called "Purpur" which has good color (purple) but is loath to set seed.

(2) (3) Lobivias arachnacantha and densispina - both deep yellow.

(4) Echinocereus calochrysea. This has a large deep yellow flower. I raised my plants from seed and have not seen it listed anywhere in the trade. It has attractive spiration - short and dense spines, quite different from other echinopses.

About October 1st I will offer a free packet of hand-crossed mixed seeds of lobivia, echinopsis, or lobiviaechinopsis to all members who would like to try raising cactus from seed. There may also be some choice crosses available on my sales table. Members of our Society who live out of the areamay receive a free packet by sending a self-addressed stamped envelope to my new address, which is:

Philip G. Corliss, M.D., P.O. Box 80502, San Diego, Calif. 92138.

Do try to hear the talk at the September meeting by Floyd Gable. His method of raising seed in plastic bags is now most favored by me. It is the best way to raise the seedlings through their first critical months. The technique is easy, but must be carefully followed.

Next Month's Subject: "If Winter Comes....."

Lección en español

. . . . . SINGULAR Y PLURAL . . . . .

María Reeder

!Ola, señor Scott!

Hoy, los números: uno, dos, tres, cuatro, cinco, seis, siete, ocho, nueve, diez. Uno y uno son dos. Dos y uno son tres. ¿Verdad?\* Si, es verdad. Don y uno son tres.

Un cacto y un cacto son dos cactos. Cacto es singular; cactos es plural. En español es fácil formar el plural. Los sustantivos que terminan en vocal (a, e, i, o, u) forman el plural con s. Por ejemplo: el libro, los libros, la espina, las espinas, el restaurante, los restaurantes, el teléfono, los teléfonos. Los sustantivos que terminan en consonante forman el plural con es. Por ejemplo: el automóvil, los automóviles, el profesor, los profesores, la flor, las flores. El plural de el es los y el plural de la es las. Es fácil, ¿verdad?

Un gato y un gato son dos gatos. ¿Si? Una gata y una gata son dos gatas. ¿Si? Pero, un gato y una gata no son dos gatos--son muchos gatitos! ¿Verdad?

Vocabulario:

¡ola! -- hello, hi there!	la flor -- flower
hoy -- today	la espina -- thorn, spine
y -- and	vocal -- vowel
es -- is	por ejemplo -- for example
son -- are	gato -- cat, male
fácil -- easy, fácil	gata -- cat, female
los sustantivos -- nouns	gatitos -- kittens
terminan -- end, terminate	*¿verdad? -- true? Isn't it true, Isn't it so?

Note: Titles (señor, señora, señorita) are not capitalized unless they are the first word of a sentence. Por ejemplo: "Señor Scott, ola!" but "Ola, señor Scott!"

....muchas gracias, Maria.....Ed

.....

NEW MEMBERS- - Greetings! And welcome to our Club!!

Mr. L. X. Finegold  
8844 Robinhood Lane  
La Jolla, CA 92037

Winnie Foster  
1834 Ridge View Drive  
San Diego, CA 92103

Mabel Irene Mattson  
1610 Emerald Street  
San Diego, CA 92109

Evon Ray  
5804 Garfield Avenue  
Sacramento, CA 95841

John C, Dorothy Ronske  
2841 Scenic View Drive  
Alpine, CA 92001

R. Mitchell Beauchamp (NEW ADDRESS)  
Dept. of Biology  
Herbert H. Lehman College  
City University of New York  
Bronx, New York 10468

Note: Mitch Beauchamp has departed for New York to continue his studies looking forward in due time to a doctorate. 'Espinas y Flores' readers would appreciate an occasional note on progress or brief articles. (See pages 9-12)

Evon Ray won the DIV I - Cacti specimens contest in July at the Arboretum in Arcadia with an Echinomastus unguispinus. Also the Scott E. Haselton Trophy for high point in the cactus division in non-commercial entries. Congratulations, Evon. And what does 'unguispinus' mean? Simple -- 'claw-like spines'. (New members who have not received all '72 issues should contact Ye Ed.)

SORRY ABOUT THAT

Pick up your Agosto issue of "Espinaz y Flores", turn to page 15--Cacto Phil's page--fourth paragraph from bottom of page, 3rd line, note words: "blooming nasturtiums".

Separate the two words and insert:

"watermelon vines. I recently saw another beach garden ablaze with nasturtiums, so I bought a packet of seeds for him. Next day I read that"

Now doesn't that make sense? Ye Ed is Scotch, but not that Scotch, when the Club furnishes ample paper--to save two lines. And taking the blooms off the watermelon vine and putting them on the nasturtium....who would care about eating nasturtiums and spitting out the seeds.

"E y F" complaint office is open when someone answers the phone. Nematode handles all 'underground' matters and Mr APh'D looks at those above ground. Isn't that 100% coverage?

. . . Ye Ed

NEW, GREAT DESERT BOOK

"Great AMERICAN DESERTS" -- a National Geographic Society publication, Washington, DC 20036, (1972) \$4.75 postpaid. 208 pages.

FOREWORD by Edmund D. Jaeger (Riverside) who writes about the deserts only as he can - -

PHOTOGRAPHS range far and wide, down to Cabo San Lucas -- range of subject matter is broad -- magnificent colors, mostly on photogenic circumstances -- very few black and white. Good portrayal of the "Great AMERICAN DESERTS" on a two-page color spread (pages 14-15). Don't look for the "edge" of the desert--it ain't there--let the plants tell you where it is.

CONTENTS in nine sections mostly headed by a desert plant in blossom, and surprise! botanical names supplied in small type in footnotes.

TEXT about a quarter of the book, or less, not as interesting as the photos -- personalized, frequently in quotes. More like listening than 'being there'.

SAN ANDREAS fault north of Los Angeles, looking south. You'll be confused for a moment if you're from the south....or you could stand on your head.

BIRD WATCHERS will appreciate the Osprey on the cover--will it ever land?

"Thoroughly enjoyable" . . Ye Ed

SPEAKING OF CONTRIBUTORS AND CLUB TALENT - - -How did you like the cleverly illustrated article "Bumping in Baja" last month with "Monstrosus enjoying total comfort and privacy?"

You seldom come across that caliber team-talent--if ever. With that as a start, it wouldn't be too difficult to visualize a cleverly illustrated booklet with wide appeal at a future time.

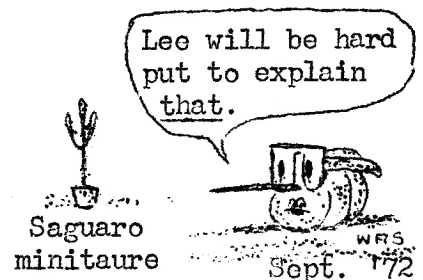
Thank you Doug and Donna. Write again! And again!! . . . . Ye Ed

PLANTS-OF-THE-MONTH --- SEPTEMBER

Cacti and Succulents in Miniature !

"Adult plants live happily in a tiny pot" Dr. Lee N. Phelps

Last month's program really brought forth plants--very interesting and informative. Come again in September! With miniatures.



SAN DIEGO CACTUS & SUCCULENT SOCIETY

Affiliate of the  
Cactus & Succulent Society of America  
'Espinasy Flores' monthly bulletin

PRESIDENT - August Pfeiffer, 5163 E. Bedford Dr., San Diego, Ca. 92116	280 4444
1ST V. P. - Floyd L. GABLE, 8820 Indian Wells.Ct., Santee, Ca. 92071	448 8041
2ND V. P. - Richard G. Latimer, 5990 Lake Murray Blvd., La Mesa 92041	463 1655
TREASURER - Martin L. Mooney, 97 K Street, Chula Vista, Ca. 92011	427 6796
SECRETARY - Frances Langer, 4459 Texas Street, San Diego, Ca. 92116	298 6323
YE EDITOR - Walter R. Scott, 3430 Wilshire Ter., San Diego, Ca. 92104	296 6022

MEMBERSHIP, yearly single \$3.00 includes monthly bulletin 'Espinasy Flores'.

SUNSET SUCCULENT SOCIETY

of Santa Monica  
cordially invites you to attend its  
NINTH ANNUAL  
CACTUS & SUCCULENT EXHIBITION  
to be held

SUNDAY, SEPTEMBER 3, 1972 FROM 2:00 to 6:00 P.M.  
MONDAY, SEPTEMBER 4, 1972 FROM 11:00 to 5:00 P.M.  
at

Marine Park Center  
1406 Marine Street, Santa Monica

The San Diego Natural History Museum  
presents  
"AN EXHIBITION OF COLOR PHOTOGRAPHY"  
by

LEON GORDON MILLER  
"DESIGN IN NATURE"

The exhibition will be on view September 5, through  
October 8, 1972. Museum hours are from 10 AM to  
4:30 PM daily including Saturday and Sunday.

David L. Mattern  
Kent, Ohio

Ref: Last page August '72 Espinasy Flores" back  
issues of same.

Ye Editor's little helpers Mr. A PhD and Nematode have rounded up a  
complete set of the 1971 issues and it has been mailed to you. Incidentally  
you now possess the last complete set of the '71 issue. One page is 'out  
of print' as publishers say in their wordy manner of saying "unavailable".  
Our Treasurer (see above) no doubt would consider \$3 as acceptable.

You have Ye Ed's curiosity aroused. He notes you use a symbol  
and it doesn't appear to be a symbol for a chemical in conjunction  
with your signature. If your 'tomorrow file' wouldn't be overly  
belabored, how's for an explanation or interpretation. Let us know  
when we should add 'PhD' to your name. You couldn't have selected  
a more interesting field. Best of luck to you!



YE ED