

GAUGE  
OF  
VALUE

ESPINAS

Y

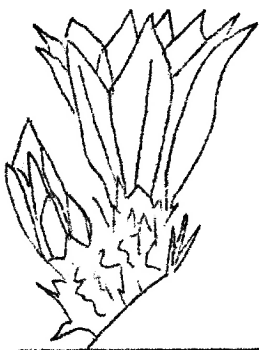
FLORES

OUR  
CIRCULATION  
SPANS 2/3  
THE GLOBE

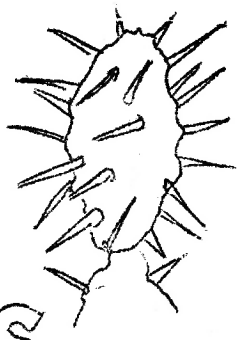
PUBLIC  
ACCEPTANCE



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# ESPINAS Y FLORES



Mar-1967

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## SOIL STRUCTURE

Soil, now there's a deep subject; or in the case of San Diego county, not too deep at all. At any rate the study of soils is vast and complex; and owing to the fact that most of our knowledge of soils has come to pass in the last 15 to 20 yrs., we will keep our dissertation basic and unfancy, otherwise it may become outdated before we get to the printers.

There are three basic types of soils: 1. Clay, 2. Sand, 3. Loam, -clay is heavily compacted fine particles of mineral material; rich with elements needed for plant growth, but difficult to make into a useable form. Sand is a material consisting of small grains of disintegrated rock or gravel; sometimes fine and powdery as found on seaside beaches, which is not desirable for horticultural use, or sharp and coarse as found in river bottoms. Loam is the happy marriage of the two above ingredients, and is the silt material we fervently seek called "top soil". Loam or silt has one additional part, that of organic matter, which we will consider more closely later.

Soils are more or less friable; a workable medium (ranging from sand to hardpan) in which plants by means of their root systems anchor themselves and grow. In order for any given plant to do its best, the soil must have the proper tilth or the desired tillability. The great majority of plant life share the same spectrum of soil conditions for suitable growth habits regardless of their native habitate, and only vary in their degree of tolerance toward conditions existing in their use as cultivated ornamentals.

Soil is made up of five important factors; the ideal soil is the correct balance or percentage of these factors, which you as nature's chief assistant have the opportunity and duty  
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### MARCH MEETING

Saturday, Mar 4th 2pm  
Floral Assoc Building  
Balboa Park

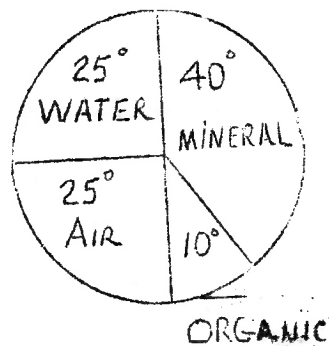
### TOPICS

Cactus Car-a-van-Part I  
(with slides)  
Narrator-Jim Stalsonburg

Plant Exchange Table  
&

Best Coffee & Cake You've Ever Had

**SOIL STRUCTURE** (con't)... to control. (1) **MINERAL**-the bulk factor of decomposing rock and mineral substance which is constantly changing due to variation in temperature, water, wind, oxidation, chemical reaction, and pressures from growing matter, and houses needed elements as well as serves as an anchor base. (2) **ORGANIC**-the balance factor of decomposed or decomposing animal or vegetable matter, which furnishes the areas of manufacturing and storage of plant food. (as a point of information-Southwestern soils have an average amount of 2%, the desert 1/2%, mid-west has 7%, and the North considerable more due to a larger rain fall) (3) **Living MICRO-ORGANISMS**-the action factor of bacteria, fungi, & algae organisms breaking down organic matter and releasing nutrients in a useable form to plant life. (4) **SOIL ATMOSPHERE**-the reaction factor of free water, vapors, and gases of water, air, and debris that have formed a partnership as a film on soil particles or as absorbed compounds in porous mineral and organic particles to be assimilated by the plants. (5) **MOISTURE**-the supply factor of water which is held by the soil in proportion with the air content, thereby creating the proper environment. An ideal structure would contain 40% mineral, 10% organic, 25% moisture, 25% air.

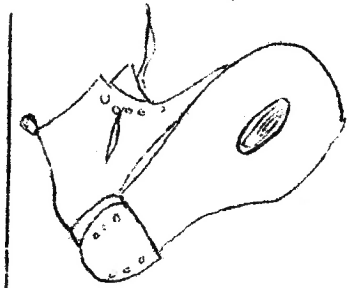


The structure of soil is a study of Hydroponics, that is, the relation of water and how it reacts to the single grain of sand acting as a unit or the compound of many particles of sand grouped with just enough clay to hold them together as a "crumb" acting as a unit. In this way we can determine the water holding capacity of any given soil. For instance, we have learned that an area of sand 10'x10'x1' will hold approximately 60 gals. of water, a like area of loam will hold 90gal. and a like area of clay will hold 160 gals. to the saturation

point or "field capacity" as it is called. More simply; an inch of rain or water will penetrate 4" deep in clay, 8" in loam, and 12" in sand. From this we can determine the degree of tith most desired for the plants we are growing, as well as, the amount of water to apply for optimum moisture content.

In San Diego County soils are classed as a Marine Terrace structure which is a conglomerate of clay and rock molded together in a cement-like condition. Realizing that we have the poorest of beginnings, we must start about the task of constructing good out of bad, or of building containers, filling them with good soil, and forget about the mess underneath. Let us concern ourselves with the rebuilding job here, and discuss containers and artificial soils at a later date. First and one of the most important things to remember, which will be completely foreign to what most of you have learned or were told; is that the study of hydroponics has determined that water is not transmissible from one soil structure to another completely different structure until the first has reached field capacity, and thereby eliminating the essential ingredient of air from the root zone of the plants. (con't next page)

**SOIL STRUCTURE (con't)...** Hence, we must use the materials at hand, even if they are soils containing ten rocks to the shovel full. If we don't, we will create a false structure that will perch the water in areas detrimental to the plants well being. The thing we must do, besides removing 5 or 6 of the rocks from the shovel load, is to amend the soil; and the same amendments can be used for sandy or heavy clay soils, but for slightly different values. Our knight in shining armor is organic matter; sawdust, manure, peat moss, tree bark, old shoes, your mother-in-law, anything that has come from a living source (in the case of your mother-in-law, this may be questionable). This substance should be in a thoroughly decomposed or composted state, if not it will rob the soil of valuable nitrogen to complete this transmutation (how 'bout that, Charlie Wireworm). Why organic matter? Because it becomes a source of nutrients needed by the plant—i.e., nitrogen needed for stem and leaf growth, chlorophyll, & dextrose-phosphorus for root growth, flowers, & seed—potassium for the catalyst to make the elements work—calcium, sulfur, magnesium, iron, zinc, boron, and many other trace elements in the soil or added; it works as a humus to hold these nutrients; it increases the water holding capacity; it breaks down compaction and aerates, thus improving soil structure; it is a source of food and energy for micro-organisms; and it releases carbon dioxide used by plants to manufacture food. With out sufficient quantities your soil is lifeless.



DECOMPOSED, NOT WORN OUT!

Fresh organic matter must be continually added or worked into the soil, depending on the type used, it will last from one to ten years. In our area we would suggest about 20 to 25% initial volume, regardless of what one is planting—trees, lawns, cacti, or snags. The piece de resistance is to create a transition zone between the amended soil and the native. It is easiest to see in the preparation of a lawn. Before you add the customary 4" of prepared soil on top of the native, work into the top 4" of the native an amount of the amended preparation; this promotes a gradual structure change and allows water to pass more freely.

It's simple when you take the time and do the necessary steps at the beginning, and keep in mind that you often have only the one opportunity to do it...at the beginning. Isn't it so true with life, that the things we do initially are reflected in the results and the ease of the journey along the way. NEXT MONTH—watering, salinity, pH, fertilization, artificial soils, and a whole slough of food for thought.

NATIVES in some parts of the world practice the strange custom of beating the ground with clubs and uttering wild blood-curdling yells.....

Anthropologist call this a form of primitive self-expression.....

However, in America we have another name for it.....GOLF !!!

(could be an amateur cactus collector too.....)

*PLANT OF THE MONTH*——— Legend has it that many years ago in the then young kingdom of Ireland, King Patrick (O'toole) commissioned a Portuguese explorer named Tinbad to find a suitable conerstone for the castle Blarney then under construction in the county Cork. After many month of fruitless endeavor, having traveled the dusty trails of unknown lands and ventured over the waters of uncharted seas, Tinbad anchored in the harbor by the Cape of Good Hope to take on water and supplies.

Inquiries of the local inhabitants revealed that a great outcropping of green grey granite of unusal qualities lay inland a short distance. Qualities that fairly set his imagination on fire; the natives told of how these rocks would divide themselves and develope anew. What a monumental find he thought to himself, as his tiny little group made their way through the steaming jungle on that hot morning in mid-March; not only would he find a stone fitting as a corner piece for "Blarney", but one that may in time even add one or two additional wings to the castle, not alocated in the initial austere budgit. It was high twelve when they came to a clearing and there before them stood a massive outcropping of greyish-green granite, just as advertized; but quickly the jubulation passed as notice was made of a simultaneous appearance of a rather large group of men lead by a man named Scott that was on an expedition to locate the "stone of scone".

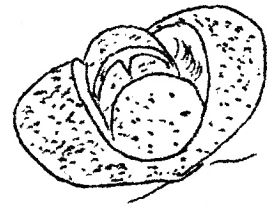
As the two parties advance towards inevitable confrontation, a gaunt figure of a man staggered out of the jungle. Dressed in a somewhat tattered white toga, sporting what seemed to be a used "Van Dyke" from his bronzed chin, and whose bare feet clearly showed the stains of freshly crushed grapes of wrath. "Vaughan is the name," he said, "my pleasure making your acquaintance." "I am a 7th son of a 7th son and possess great magic power; I can turn into a dog or cat in less than a half an hour." (Greatly impressed the two warring parties stopped to give ~~anience~~ ~~to~~ his pronouncements) To avert bloodshed a suggestion was made by this man, who was fulfilling his immediate destiny by being spiritual practitioner to the natives and selling their wares to the tourist in the local market place, to appeal to the gods to give a sign as to who rightfully should claim the rock.

In an hour the stone began to divide and by mid-afternoon a flower appeared... its color was orange yellow. It was a bad day for the Irish. In a gesture of good will Scott ordered a great feast, complete with fatted calf and three days ration of Rum. Vaughan or "Doc", as he was affectionately called by the tribesmen, arose before the assemblage and with a few well chosen words so named the rock. For a genus name he called Pleiospilos in honor of the Greek navigator who was in quarantine aboard ship with the German measles, and for the specific name he called it Nelii for the bonnie lass who did the baking aboard ship, and also filled in as a belly-dancer when the native girl sprained her ankle. And so it wouldn't be a total loss for the losers  
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PLANT OF THE MONTH (con't)---he stated that henceforth that day would be known as, "Patrick's Day". When Tinbad returned to Ireland and related the story to the King, he was promptly dubbed "Tinbad the Taler" and beheaded. Well, in as much as Easter comes a month early this year, we thought we might just as well have our April Fool early too.....

PLEIOSPILOS (play-ios-pee-los) our real Plant of the Month comes from the Greek words pleios meaning full and pilos meaning spots and refers to the conspicuous little spots on the leaves. They are member of the Aizoaceae (fig-marigold family) and are kissing cousins to Mesembryanthema. All varieties of Pleiospilos are found in and around Cape Province in South Africa among the debris of rock outcroppings. So well do they merge in shape and color to their surroundings that it is very difficult to see them even when standing on them. Hence, the nickname of "mimicry" plant is often used along with the more popular "Split Rock Plant" as a common name.

There are 30 species in this freely pollinizing genus most of which are natural hybridizations and the distinctions between each other are slight. We have chosen *P. nelli*, which is rare in cultivation, for the Plant of the Month; mainly because it is the earliest blooming of the genus. In our garden it comes into bloom in mid March with a biege or pinkish-yellow flower about 2 inches across. The flower is daisy-like and reminiscent of the *Mesembryanthemum* which opens in the afternoon, closes each night, and reopens each day for several days. Other species flower in a season extending to early fall.



The plant is comprised of a pair or more apposed leaves like an Irish potatoe split into. The surfaces are smooth greyish green and covered with obscurely visible dark dots. All varieties prefer an open sandy soil and resent having their feet wet for long periods of time, and will burst open from over watering. This would make them more desirable for pot culture than in the open garden. Light occasional fertilization is required. A specimen of *P. nelli*, *P. bolusii*, and *P. simulans* would make an outstanding collection; one well worth any additional effort in the care needed.

ECHINOPSIS MULTIPLEX (Easterlily Cactus)--(ech-i-nop'-sis) It's easy to see why we picked this one. It is a hardy member of the Cactus family native to southern Brazil, Argentina, and Uruguay. The name is derived from the Greek word echinos meaning hedgehog or porcupine and the word ops meaning like, and refers to their spiny appearance. Multiplex is a combination of multi and plexus and means many or much entwined; again a reference to the spines and their formation. Echinopsis or hybrids thereof were described in 1830, but were popular and wide spread in the collections of Europe long before.

Oft times this plant is snubbed by socalled connoisseurs as being too common or a  
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PLANT OF THE MONTH (con't)--- beginner's plant. The chief reason for it being so classed is that they rarely any longer run true owing to the length of their cultivation and past popularity, when a house wasn't a home unless it had an African Violet or an Easterlily (Cactus somewhere in it, on it or around it; and after hybridizing and cross hybridizing, it is difficult to put a proper variety name on any one in particular. Even in hybrids of the same species there is a goodly amount of spine, color, and shape variation.

However, as mute evidence of their popularity and of the down right honest pleasure they give, be on the lookout for a long funnel shaped or lily-like white, pink or bright rose colored flower sticking up through a Geranium or Petunia patch, from some unnamed pot in a window garden or from an obscure corner of a lath-house. BROTHERS of the Cause, unite, do not banish Echinopsis to the backwaters of your gardens; bring it to a place of prominence again. You will be deeply rewarded for your trouble.



*E. multiplex* is from  $4\frac{1}{2}$  to 6 inches in diameter slightly globular with 11 to 12 distinct ribs, which have many pronounced areoles. An indefinite number of short equal length dark brown spines forming an interlocking design are borne from the greyish felt-like fuzz of the areoles. The body of the plant is medium to dark green. The flowers forming near the top of the plant from the areoles are pale rose about five inches across, and borne on a 4 to 8 inch hairy funnel shaped tube. They open in the evening and last till the afternoon, and are often violet scented.

Suitable most anywhere in any soil, however, they do seem to do best in a mixture of 50/50 sand and organic matter. Most all Echinopsis varieties pup freely, but will proliferate excessively if an overabundance of nitrogen is applied in the fertilization; we recommend a 6-10-4 blend or any standard Rose food. In pot culture: they should be repotted only when signs of starvation are shown, because they flower more freely when in small pots. Water generously from April to August, tapering off as winter approaches; and then just enough water to keep from shrivelling. Well known species are *E. bridgesii*, *E. calochlora*, *E. eyriesii*, *E. campylacantha*, & *E. tubiflora*. The flower and the truly Cactus shape of the plant make it a must for your garden.

HUEVOS CON NOPALES (eggs with cactus leaves)--- 8-ounce can nopalitos, (tender young cactus leaves from the *Napolea dejecta*... can be had fresh from your garden too) 3tbls. of butter, 2 tbls. of heavy cream, 6 eggs lightly beaten, salt and pepper to taste. Rinse cactus pieces well with cold water and drain. Heat butter in skillet & saute the cactus lightly. Add heavy cream to eggs and season with salt. Scramble eggs into cactus, and season the mixture with freshly ground pepper-serves 6. Thanks, Perlso, must try...

DOES THE THUMB MAKE THE GARDEN—not if its in a can... "With rushing winds and gloomy skies, The dark and stubborn Winter dies; Far off unseen, Spring faintly cries, bidding her earliest child arise: MARCH!"—Bayard Taylor— This is an active month in outdoor gardening, everywhere there is a flurry to keep pace with nature flush with Spring... March is also beat WALTER GREENWOOD month... in the last three months Walt has walked away with top honors of the "Bragging Table" twice... Last meeting the "table" was so loaded it looked as though someone had unearthed the Huntington Botanical Gardens... We have never seen so many beautiful plants in one little area in all our born days... It was simply impossible for us to get all the names of those who brought plants and the plants they brought... so next time would you please put a little card or slip of

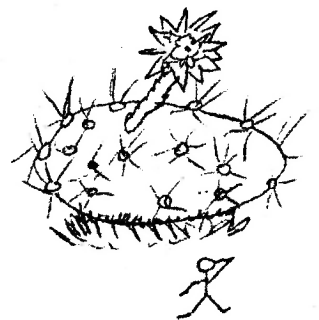


WHAT DO YOU FEED it?

paper with your name on it with each plant that you bring... the winners were WALTER GREENWOOD with a Kalanchoe in the Plant of the Month class, and DOROTHY MICHEL with an Aeonium in the open class... beautiful, beautiful... thanks, to all... next time we'll try to do a better job of reporting on this important part of the meeting... Speaking of things being overlooked; one thing that surely wasn't... a six foot staff in full bloom of Bryophyllum tubiflorum... looking somewhat like a leftover prop from a science fiction thriller, standing there in its thimble size pot; and as WALTER SCOTT explained the exotic medium he used to get it into this desired form, we could have sworn it smiled at us. As reported in "Organic World", an Australian farmer is "serenading" his banana trees to grow bigger & better fruit. The music—actually just a loud, constant bass note—apparently pleases bananas... one plot on the New South Wales farm that "listened" for 15 months yielded the best crop on the plantation. Harvests of peas and tomatoes have also jumped 200% compared with check plots with out musical encouragement... In our gang MILDRED GREGORY is going to try Tchaikovsky's "Waltz of the Flowers" on her Annuals first; HELEN HOWE thinks something from the Tijuana Brass would be nice for her South of the Border plants; RUTH CUZNER is sticking with Strauss' "Thunder & Lightning Polka" and maybe we'll get some rain too... and HANNAH SCHAUB will listen to the neighbor's loud HiFi without a word of complaint.

More than likely a renewed battle of the sexes will result... but men out do the ladies when it comes to gardening, according to the "Wall Street Journal" report... of 40 million gardeners in the U.S., the average male spends 7 to 8 times as much on his hobby as his female counterpart... according to LIBBY PENN, the women spend so much time cleaning up after their male counterparts, that when they get a chance to go and buy something, the nurseries are either out of stock or they are closed. Welcome to the "Club" LEA WARNER, VIRGINIA ADAMS, & Mr. & Mrs. O.K.

-con't next page-



WHAT KIND OF RABBIT WAS, THAT?



DOES THE THUMB MAKE THE GARDEN--(con't) LOYLAND-sorry, but we don't have your wife's first name, Oliver...also to HAZEL ADCOCK, MYRTLE BAILEY, & HELEN TODD with the editor's compliments for getting him started with his first "spine and flower"...A write up on how fast we're "running out of air" notes that while each person breathes approximately 400 cubic feet of air per day, every gallon of gasoline burned in automobiles consumes some 1,200 cubic feet...you know EMILY PARK doesn't have such a bad idea in riding her bike to the meetings..and keeping fit too...!What ever happened to the one that was built for "two"...REMEMBER, by nature self contained, you yourself create the larger cup now necessary to hold the surging elixir of your talents..... A. Phidd

CACTUS? WITH MUCH ECLAT!-by Bennie Tillman

See that plant, I love it!  
I already have a hundred of it!  
It's kind of pretty isn't it?  
But what in the (blank) is it?

If you find a Cactus spine,  
don't complain to me,  
I have plenty & some times,  
and give them away for free.

When a Cactus that you see,  
interests you tremendously,  
pay the small price or fee,  
enjoyment comes not cheaply.

See that Cactus which I hit,  
it's also the one on which I sit,  
believe me it's not a perfect fit;  
That's why I got up and quit...  
Yucc(a), Yucc(a)

The Cactus with the name Flap-jack,  
is the one on which I sat;  
Could they be a humorous as that?  
Ask the expert which I contact,  
He'll tell you, Yucc(a), Yucc(a)

"IF MUSIC BE  
THE FOOD  
OF LOVE,  
PLAY ON!"

- SHAKESPEARE -



SUN FLURRIES

--~~when~~ what a weather forecast--are we glad February is over; but it will long remain in our thoughts and the thoughts of many of our members, as one of the real fine months we have shared as Cactiphiles. At the meeting we had an outstanding lecture and tour guide of Mexico by Gilbert Voss on his trip of last Summer, and were privileged to have auctioned some of the wares he collected in his travels. The question came up as to how he took such fine photos and did all the collecting too-which is a difficult job for the ardent pro-as truth will have it, his father, the Bignonia King of Encinitas, was assigned to do the picture taking..it was easy to see his love for flowers. The following week we had a Board meeting...the new Aloe book was approved for purchase, "Doc" discussed the proposed Cactus Garden for Balboa Park, Frank Mousseau elaborated on the theme of San Diego as the Garden Cross-

(con't next page)

SUN FLURRIES (con't)---...roads of the World, and membership in the U.S. Society was approved. Next came the Cactus-Car-a-van...and if you missed it, We're sorry; or rather you should be. Wagonmasters Walt & Hazel Scott, doing their best to keep what was a tight schedule, were in constant hot water with Mousseau's two poddles seeking clandestine facilities in the neighborhood yards, just at departure time; Ione Hubner having to take another look at the Australian Bottle Tree at Seaborn's; Perl Lewis wanting to buy just one more little plant at Avery's; Janet Fleer desiring to explore the extremities of Indian Rock, and Stalsonburg's attentive eye on the landscape instead of the road. We made it though...all the way through, and would you believe on time? Well, maybe ten minutes late.

The stop at Bill Seaborn's Del Dios Nursery was great-specializing in rarity and unusuality...lots of Yuccas, Ferns, Bromeliads, Cycads, and some things you will have to see (especially the big grand pappy of the sweet potatoe). Bill and wife will be gone this month on a collection trip to Mexico; if you want to be the first to see what he brings back, call on him the last week of March.

The next stop was at Avery's Cactus & Pottery where Russell and Beatrice are just getting started in the Cacti and Succulent trade after 20 yrs. of general nursery endeavors. They have a wonderful spot, easy to get to, and filled with well displayed varieties of all kinds.

At lunch time we arrived at Indian Rock Nursery, like our Puritain forefathers at the first Thanksgiving. With our sandwiches in our hands, we swarmed through the vast complex of lath houses and growing beds of Cacti and Succulents of every shape and size. Smiling "Cactus" Jack Merget, lord of the manor, greeted us and attended to our needs. Indian Rock supplies about 75% of the retail nurseries in the County.

The charming Katy Mc Reynolds had the meeting of the Palomar Club well in hand when all 21 of us arrived and warmly recieved...this is a bit shocking when you consider that we are going to take all the Blue Ribbons in our friendly inter-Club competition at the S.D. County Fair. The speaker was Kitty Sabo, who talked and showed slides of her fling by plane around Baja and off-shore islands. A quick excursion through the Cactus Garden at Palomar College preceded our long awaited repast at St. Georges' Smorgasbord. After shoveling a 35lb. plate of George's best offerings into his 105lb frame, Bernie Tillman and the rest turned sail for the Sunset. COMING SOON - Cactus Car-a-van Part two - South County. Time for a couple of quickies before we go...Helen Hegyi, about butchering the name of your plant in last issue...should be *Crassula mesembrianthemopsis*, (Foam Flower) sorry about that, but the suds were in our eyes...To L.E. Newton-Kumasi, Ghana...Dec was our 1st issue...publish monthly...subscription \$1.00 (U.S.)...mail will be slow...and it is, Dear Sir/Madam (?)...and now to all, be on the lookout and beware of the Citrus White Fly; not ----- Nema Toed