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CENTRAL ARIZONA CACTUS AND SUCCULENT SOCIETY NEWSLETTER

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CSSA ANNUAL SHOW

The 11th Annual Show of the Cactus and Succulent Society of America will be held next weekend at the Los Angeles County Aboretum in Arcadia, California. Hours are 9 to 5 on Friday, Saturday and Sunday, July 2, 3 & 4. Monday is not a show day. Both amateur collectors and professional growers compete and many rare and beautiful plants are entered. The show is always an outstanding event--well worth the trip.

ORGAN PIPE GROWING PROJECT

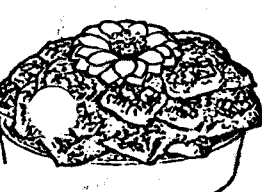
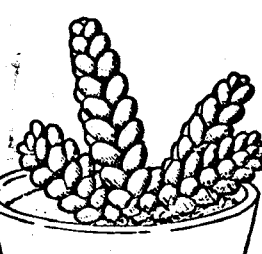
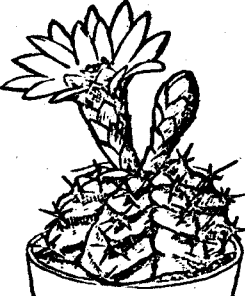
Our chapter project to grow enough Lemaireocereus thurberi to use as favors at the Tucson convention in May of 1977 is coming along fine. Most of the seedlings have been distributed and planted. Members who are growing plants include the Bremers, 102 plants, M. Caldwell, 50, W. Dodd, 140, the Hennisseys, 98, G. Oppen, 74, M. Passworth, 71, L. Steichman, 140, the Tollesons, 35, and H. Triesler, 130. The remaining seedlings will be distributed at today's meeting to other members who have expressed interest in participating in this plant growing project. Remember: providing protection from the winter cold is a must.

STOCKS FOR GRAFTING CACTI IN THE DESERT by BOB MOULIS.

In July 1967, Ted Hutchison stated in the Cactus & Succulent Journal that very little information was available in print as to cacti suitable as grafting stock for hot, dry, desert areas. This situation hasn't changed. Commonly used genera such as Hylocereus, Pereskia, and Selenicereus don't hold up under desert conditions unless grown in a glasshouse. Trichocereus spachianus is the most commonly used stock in this area. It does well in the heat, speeds up the growth of most cactus scions and many species of cacti seem to thrive when grafted on this stock.

If T. spachianus has so many virtues as a stock, you might ask, why I have spent the last ten years trying every other possible stock that I can get my hands on? Spachianus has two faults: The main one, in this area is that a year or two after grafting the stock becomes brown and scaly. Fungicides slow this down for me but never eliminate it. Perhaps if I used the fungicide more regularly the problem could be solved. A crest grafted on it will become a beautiful show plant in two or three years but by then the stock isn't fit to be seen in the company of healthy plants. The other fault is that sometimes it pushes too fast. Miniature gems, that are favorites of mine, become bloated monsters--more like pickles than cactus. Commercially this isn't a problem as growers are able to remove the scions and root them as cuttings when they are of suitable size. Propagation is thus speeded up and I use it for this reason myself, but I no longer graft show plants on it.

Other Trichocereus that I have used are pachanoi, knuthianus, macrogonus, and several hybrids. Pachanoi is difficult to keep turgid outdoors in the summer.



Knuthianus offsets too profusely. I have made but a few grafts on macrogonus but they worked out well and this seems to have possibilities. A problem I have had with this and some other Trichocereus is that if the temperature is hot, they develop "black rot" very easily if roughly handled. I've had good results with some of the hybrid Trichocereus. One in particular has a bright green epidermis, and huge pink flowers. I've been told that it is a Diehl hybrid. It works very well with the scion grafted low so that the stock is eventually hidden and it doesn't seem to offset much when used in this manner.

A Trichocereus appearing plant of dubious origin is called "Imperialis". There seems to be some question as to whether it is a Trichocereus, Echinopsis, or a natural hybrid between the two. From what I understand, it was grown from seed imported many years ago from Argentina but no one has found the plant growing in the wild. Whatever its pedigree, it makes a magnificent stock in this area. It tolerates both summer heat and winter cold as well as a wide range of sun and shade conditions. Scions are pushed at a good rate without being blown out of proportion. Its worst fault is that it's a slow propagator compared to most other stocks. I hoard every piece to use for grafting show plants. If you have a chance, try to get some of this stock--but not from me.

Most Echinopsis and their hybrids are acceptable and are fine to practice on when learning to graft. Some tend to drive you crazy because they produce so many "pups" but these push off easily enough when small.

Bolivicereus or Borzicatus samaipatanus is a great stock for small scions. Most of them grow well on it, offset rather than get blown up, and bloom much better than on Trichocereus. This stock can be used unrooted as well as rooted. During the summer, roots are put out about two weeks after the cutting is made, even when it is out of the ground. A tendency to offset is its worst fault, and large scions may cause its collapse. When this stock is needed, I collect some from a patch growing under a Palo Verde tree, cut it into five-inch sections, and usually graft unrooted. This is probably the most useful stock that I have tried for this area. Sometimes it blooms while carrying a scion; this is quite a sight.

Lemaireocereus pruinus is good for large scions. Some of the so called "Mexican Living Rock Cactus" that don't take easily to other stocks, do well on this one. Their chemistry seems to be compatible. This is a good stock for hot areas although very frost tender.

Lemaireocereus marginatus makes a beautiful stock and grafts take well on it, but it bruises easily if roughly handled, and then rot sets in.

Most of my early grafting experiments were done on Eriocereus martinii, Echinopsis hybrids, or long spineless Opuntia pads. During April 1965, the first year I was grafting, both top and bottom of a Lobivia pentlandii were put on Eriocereus martinii. They were planted about a foot apart in the yard and are still growing there. It now appears to be a single clump about two feet in diameter with no sign of the stock. A Trichocereus crest grafted about this time is still growing. After I had obtained sufficient stocks of Trichocereus, I quit using the Eriocereus except for cactus such as Wilcoxia, because the Trichocereus was easier to use. Eriocereus grows beautifully in the heavy soil of the yard, but in a pot it barely survives. The huge tuberous root needs lots of room to develop. It grafts easily during cool spring weather, but I've had poor results during the hot summer. If these idiosyncrasies are taken into consideration, it makes a fine long lasting stock for grafts planted out in the ground.

The long Burbank Spineless type Opuntia pads have given me good results with Echinocereus, other Cereus types, and other Opuntias. This stock is my favorite for Opuntia clavarioides. A Wilcoxia papillosa grafted about two weeks ago has started to grow and looks very good. I haven't had much luck with Mammillarias on these pads but they put tremendous growth on cactus that are compatible.

Cereus of the peruvianus and hildmannianus types do well either as seedlings for small grafts or when planted out for growing larger cacti. They take the heat and cold quite well but need lots of water. If you provide enough to keep them turgid all summer, large plants make great pushers.

A plant much more suited to our valley climate and soils is the Senita or Lophocereus schottii. I have just used it for a year or two and have had some problems with it rejecting certain scions. I'm experimenting with it this year since Whit Evans uses it a lot, and I've seen beautiful grafts on it in his lath house. Some clones of this plant may be much better as grafting stock than others, which is true of other species as well.

I've also tried other stocks. Myrtillocactus is good although a little frost tender and Nyctocereus and Cleistocactus make good stock but are horribly spiny and literally a pain to use. This is true also of other stocks that were mentioned, as I have never learned to keep my hands out of the spines while grafting. Actually, any cactus that "grows like a weed" for you is well worth trying as a grafting stock. Most cacti will graft to others, but there is little point to it unless you have an improvement in growth. Grafting onto a shrivelled piece of stock is a waste of time and no stock is any good unless it can be kept turgid without too much trouble.

My plants are all grown outside--either in the yard, in a lath-house or on the patio. If you are the lucky owner of a heated and cooled glasshouse, you can use just about any stock.

Everytime I look at a barely living piece of Ceropegia woodii in a pot on my patio, I'm reminded to use a stock more suited to my conditions. Rauh and Dinklage have a great article on grafting succulents in the July 1972 issue of the Cactus and Succulent Journal. They report Ceropegia tubers grow by themselves under the tables at the Botanical Garden in Heidelberg. When they wish to grow one of the difficult stapeliads, they simply pick up a tuber, pot it on its side, and graft onto it a few weeks later. Reading this sounded great, so I obtained some Ceropegia woodii in California. Unfortunately, a great difference must exist between the climate under the benches at Heidelberg and on my patio in Phoenix. I may have better luck grafting one of the Ceropegia tubers on to a stapelid stock rather than visa-versa. All of them grow easier for me than does the Ceropegia. Stapelia hirsuta seeds itself in the treewells out in the yard. I'll have to try that as a stock.

To summarize--the most useful cactus stocks for me to use outdoors in Phoenix are Trichocereus spachianus, Echinopsis? "Imperialis", Bolivocereus samaipatanus, and Lemaireocereus pruinosus. I haven't found the ideal all around stock as yet, and I probably never will. For me, experimenting is what this hobby is all about.

A VISIT WITH THE LAUS OF MEXICO By BARCIA BREMER.

A highlight of our October trip to Mexico was a visit with Mr. and Mrs. Alfred Lau in Fortin de las Fores. The Laus have a large home and grounds, situated between two motels in Fortin. They are missionaries, affiliated with a church denomination in Germany. At the present time they have 21 Indian children with them. The youngsters are brought to them by Indian village chiefs, who think they have promise. The children have either been orphaned or are being mistreated by their families. The first task is to teach them Spanish in the Lau home so that they can attend the local schools. When not in school the children help around the house and in the beautiful gardens. The Laus have been at this work for about sixteen years; the first of their Indian "children" have reached university age, two being in the University at Puebla, and three in Mexico City. It is hoped that after the Indian children have been educated, they will return to their villages. The mission is supported by donations from the church group in Germany, and by the collecting and propagation of plants, which are sold. Mr. Lau has a legal permit for collecting. The Laus also have seven children of their own.

Immediately outside the Lau's home is a beautiful cactus garden. Since Fortin receives about 100 inches of rain a year, the garden is roofed, although the sides are open. In this garden there are no more than two of any one plant, and rarely two of a kind. Lew naturally found several Coryphantha that interested him, while I just looked and looked. There was a beautiful chalk-white Echeveria, a newly discovered species. I was told that if one even lightly touches a leaf of the rosette it becomes discolored, and the plants have to be watered from the ground level because a drop of water will cause spotting. Mr. Lau told me the plants had been discovered growing vertically on a steep cliff, and that the rainwater touched the undersides of the rosette leaves, running off the tips, and thus not touching or discoloring the face of the plant.

There were two greenhouses of cacti, half of one planted as a cactus garden. The one containing Mexican cacti provided propagation area. Mr. Lau collects seed extensively and has many lovely seedlings. He obtains extraordinary germination of seeds by using glass jars, rather than the plastic cup method we have been using. The capped jar appears to retain moisture extremely well and we saw no signs of fungus or damping-off, even on the largest seedlings.

The second greenhouse contained mostly South American cacti. Mr. Lau told us he had collected in South America for four years and had a special fondness for Parodia, Rebutia, Copiapoa, Neochilenia and Gymocalycium. His potting and grafting area is in this greenhouse. He told us of one plant that he had collected a number of years ago, thinking it was a Neochilenia because of its size. The plant had done nothing for several years, so he decided to graft it. After grafting, it began to grow, flowered and turned out to be a Copiapoa. He finds this type of work exhilarating and challenging. Another greenhouse contains bromeliads, tillandsias, and orchids. Outside there are plants everywhere- gardenias, camellias, azaleas. I had not realized the variety and beauty of many of these plants.

Mr. Lau's special collection is kept on the roof of the house. This I did not see because the roof is reached by climbing a set of rods driven into the side of the house, and on through a hole in the roof to the top. Of course, Lew made it to the top, and now I wish I had not been such a chicken! According to Lew, Mr. Lau has a way to cover the plants against the heavy rains.

Mr. Lau gave Lew two Coryphantha, one of which is almost certainly an undescribed new species. The plant was collected in a very remote area of Chihuahua, following dirt trails in a vehicle as far as possible and then a four or five mile hike into the habitat.

Mr. Lau was more than generous, giving me a number of Echeverias, most of which are new and undescribed. My pride, though, is a Tacitus bellus, a new genus and species of Crassulaceae. This plant was discovered by Mr. Lau in 1972 while exploring Chihuahua near the Sonoran border. It is a small echeveria-looking plant, very dark green, (almost black), in color.

FOLLOW UP:FRANK REINELT AND HIS HYBRIDS By KENT C. NEWLAND.

At our visit to Tanque Verde Greenhouses, one of the stops on our spring field trip to Tucson, many of us purchased some unusual hybrids developed by a California nurseryman by the name of Frank Reinelt. He hybridized cacti primarily to produce plants with spectacular spines since cacti flowers last such a short time. You must agree that he succeeded in this mission when you see his outstanding cross of Notocactus magnificus with Notocactus leninghausii, both beautiful parents, but nothing to compare to the cross with a magnificus body and the deep golden spines of the leninghausii.

Reinelt was involved with the hybridization of other Notocactus, Copiapoa, Parodia, Lobivia, Neoporteria, and Echinocereus and an interesting intra-generic cross of Notocactus tabularis with Gymnocalycium baldianum. He used grafting to get a rapid evaluation of his work. His diverse stocks included Trichocereus werdimannianus for Neoporteria, Lobiviopishybrids for Mammillaria and Parodia and Chamaecereus hybrids for other genera.

George Scannell, Tanque Verde owner, has acquired most of the Reinelt collection and has put some of the plants up for sale.

Reinelt has now turned his attention to begonia hybridization and I am sure his results with this genus will be as worthwhile as they were with cacti.

The Newsletter is published by the Central Arizona Cactus and Succulent Society, a 100% affiliate of the Cactus and Succulent Society of America, Inc. The local chapter meets at 2 P.M. on the last Sunday of every month, usually at the Desert Botanical Garden in Papago Park. Current officers are as follows:

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 Rodney G. Engard, vice-president
 Genevieve Oppen, secretary
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