MAMMILLARIA THORNBERI

Espinas y Flores

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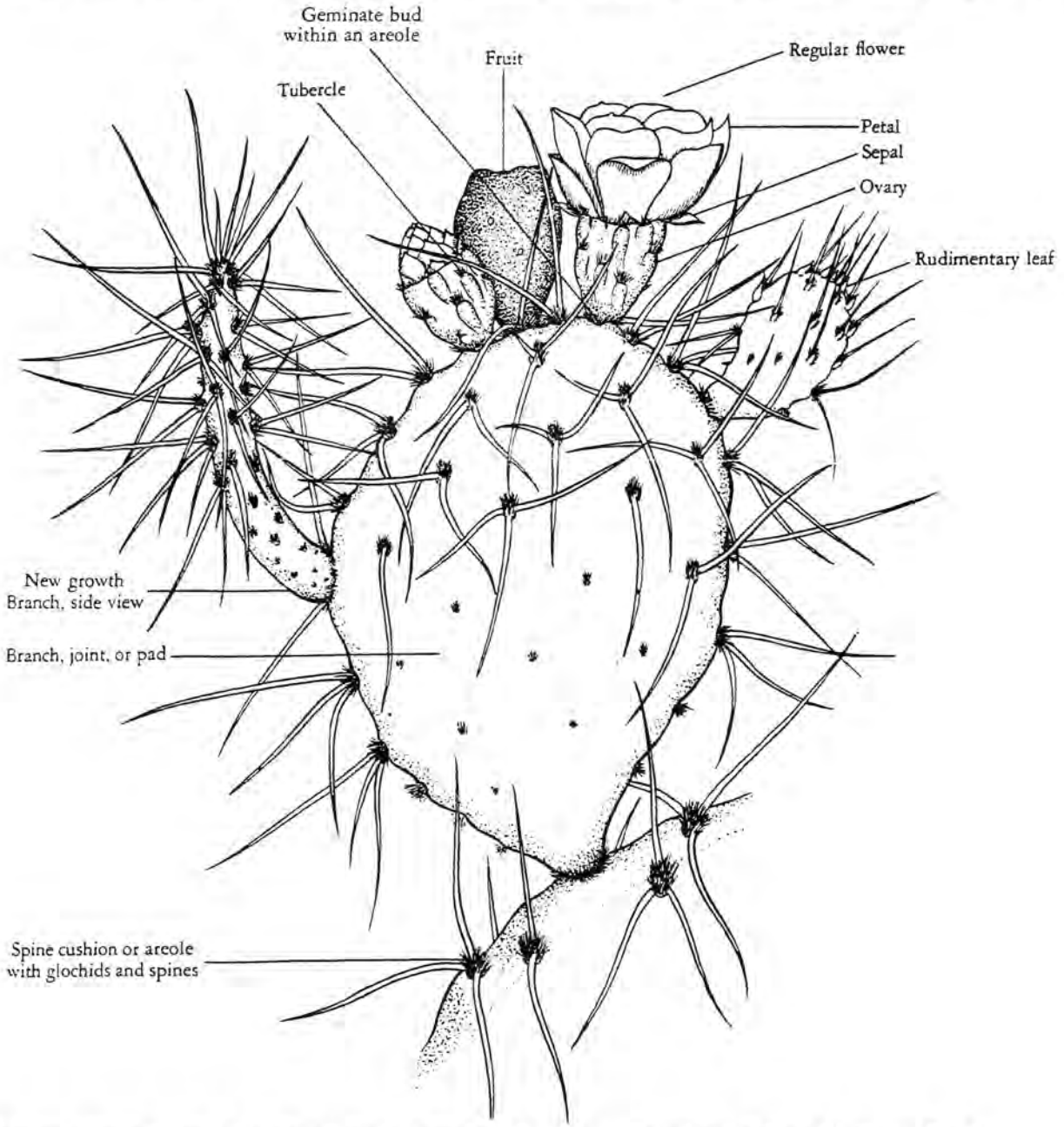


Typical Opuntia growth, showing all important features. Drawing by Thor Methven Bock
CACTACEAE , Abbey Garden Press 1941.

OCTOBER PROGRAM: OPUNTIAS BY CHARLES SPOTTS

ABOUT OUR SPEAKER
CHARLES "CHOLLA CHUCK" SPOTTS
BY CAROL WUJCIK

Little did Joann Spotts realize that when she brought home two weird-looking plants potted in tin cans from a garage sale about fourteen years ago, that her life and husband Charles' would be changed. She had been told that the two funny things in the pots were unkillable, and indeed, they lived. "It went from there," Joann said.

From then on, she and Charles would see cacti and succulents at yard sales and stores, and the collection grew.

In time, fate led them to the Topanga Plaza, where the Los Angeles Cactus & Succulent Society was then holding its show and sale. Charles and Joann were thrilled to see the variety of succulents in the show. And there were handouts and information to take home. . . . Their fate was sealed when the attended a meeting of the L.A. group. They were in the hobby for keeps.

Today Charles and Joann have plants in the ground, front and back, plants on the patio, plants on benches, under lath, and in a greenhouse. Plants are everywhere, especially the cacti, and more specifically, the Opuntias.

A native of Arizona, Charles is a retired Professor of Microbiology at Cal State Northridge, where he was also co-chairman of the Biology Department. Charles and Joann now reside on two acres in Paso Robles. *(This is where SDC&SS member Kitty Sabo now resides, too!)*

Charles and Joann are an integral part of the Inter-city show. They are also very active members of the San Gabriel Valley Cactus & Succulent Society – this club will be having their 2nd Annual Winter Show & Sale on Saturday, October 14 and Sunday, October 15 at the Huntington Botanical Gardens in San Marino. We are very glad that SGVC&SS can spare them for a few hours to put on this informative program in San Diego.

We are pleased to present the first in a series of short stories by Monte Woodworth relating different experiences in his seventeen years as operation manager for Baja Discovery Tours. We hope you enjoy these exclusive pages especially for you SDC&SS members. Thank you Monte for the great slide show in August and for these wonderful natural history stories.

Please send articles and notices for Espinas y Flores to:

Michael & Joyce Buckner, 4822 Santa Monica Avenue, S.D., CA 92107

Phone: (619) 222-3216

This is the ideal time to plant natives in San Diego County. Arrive early for our 1 PM meeting because the California Native Plant Society will be having its annual fall plant sale on Saturday, October 14, from 10 AM to 2 PM at Casa del Prado, Balboa Park. In addition to the thousands of plants, you can also find books on California flora, posters, notecards, bulbs and seeds. For additional information call (619) 685-7321.

This is a great month at Quail Botanical Gardens:

✿ There will be an Orchid Fair & Sale on October 14 & 15, from 9 AM to 5 PM — call Greg Luetticke @ (619) 234-3818.

✿ The following weekend October 21 & 22, from 9 AM to 3 PM will be the Quail Botanic Gardens huge annual sale featuring everything from succulent wreaths and rare & unusual plants to horticultural books and homemade goodies. There will be many demonstrations and educational displays. Admission is a suggested donation of $1per person.

✿ On Saturday, Oct 28th Quail will host a seminar on one of California's most rapidly vanishing habitats, the Coastal Sage Scrub (CSS). Featured speakers include SDC&SS member Jim Dice, Tom Oberbauer, R. Mitchel Beauchamp and Mike Evans; Senator Lucy Killea will provide opening remarks. To pre-register call (619) 436-3036 — the day-long seminar costs $65 and includes lunch.

✿ The Grand Opening of the Canary Islands Garden, a new exhibit at Quail Botanical Gardens, is on Sunday, November 5, from 11 AM to 3 PM. Festivities will include food and music from that area, craft demonstrations, canaries (yes, they are from there) and a plant sale. A special activity is planned for children who will create a carpet out of fresh flowers as is the custom in the Canary Islands. There will be ongoing tours of the new garden. Admission to the event is free with garden entrance of $2.

❀ For more information on any of these events: (619)436-3036. ❀

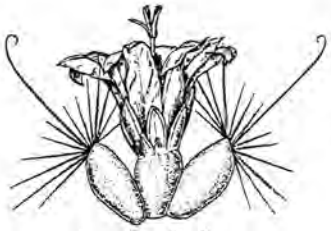
Abbey Garden has moved from Carpenteria and will now specialize in mail order. Their new address is **Abbey Garden**, P.O.Box 2249, LaHabra, CA 90632; (310)905-3520.

Our November program will be **"Cactus, Canyons & Coyotes"**, by Woody Minnich. This is his newest double projector program featuring a majority of the well known canyons of the Southwest United States, cacti biomes, endemic animal slides, Indian sites, and just sheer photographic beauty. An artistic and educational experience you will not want to miss. The November cactus of the month is *Parodia* by Joe Clements and the succulent of the month will be Tropical Aloes by Aloe-master Phil Favel. Joe Clements, by the way, will lead a study group **"Madagascar & its Plants"** on Wednesday, Oct 18th at the San Gabriel Adult Center, 324 South Mission Drive @ 7:30 pm. Charles & Joann Spotts will be able to give you more info - should you be interested.

Steve Sobel has decided to sell the very best of his collection while is still in great condition. **213 Specimen Show Quality Plants** will be made available on Saturday October 21 & Sunday the 22nd. This special plant auction begins @ 8:00 am at Cactus Data Plants, 9607 Avenue S-12, Littlerock, CA 93543. All Cactus Data Plant stock will also be 20% off. For more information call Woody & Kathy Minnich @ (805)944-2784. This is a once in a lifetime opportunity to obtain some very fine and rare cacti and succulents.

Any members who wish to donate a few plants to the V.A. Hospital for their annual sale in November, please bring them to the October meeting. The money earned at the sale goes directly toward buying craft kits, personal care & grooming products, and many other amenities for bedridden and wheelchair bound Veterans. Ruth Richardson will collect donations brought to the October meeting; Please don't forget to bring in a few small plant donations for the V.A. Hospital Annual Sale — Michael & Joyce Buckner will collect donations. Your contributions are greatly appreciated — plants are always sold!

Thank you, Ruth Richardson



Mammillaria thornberi

San Diego Cactus and Succulent Society

P.O. Box 33181, San Diego, California, 92163-3181

Presidents Message for October 1995

Our annual Picnic and Auction was a great success! Thanks to the good food, cool weather, great plants and those that attended and helped. I received many positive comments about the event, and have passed these on to the real stars of the Picnic: Tom and Laura DeMerritt, the picnic committee and Betty Athy, Paul Steward and Ed Nolan, the auction sales committee. Betty, Paul and Ed worked on acquiring the plants and auctioning them. Also, thanks should go to all the unsolicited plants brought by members; quality plants were available for all. Please pay for the plants that you purchased at our next meeting or mail us a check.

Below is an alphabetical listing of the individuals and their businesses (if they have one) that donated plants: Ken and Deena Altman (and Bob Reidmuller) of Altman Speciality Plants, Elizabeth Athy of Cacti and Succulents by Elizabeth, James and Shirley Berry, John Cooper of Cooper's Nursery, Edward and Debe DeLollis of 'The Chlorophyll Kid', Carl Dykema of Cactus Statements, Philip B. Favell, Floyd Gable, Kenneth and Gloria Graham of Graham's Greenery, Beverly Kirkegaard, The Latimer Family; Rick's Sisters: Cindy Anderson, Barbara DeCarli and Marcia Tunnell, Madelyn Lee of Grigsby Cactus Gardens, Rudy and Teresita Lime, Gene Lund, Jeff Moore of Solana Succulents, Ed, Karla and Shane Nolan, Don Patterson, Joe and Kay Quijada, Harold and Mildred Richter, Troy Taylor of Taylormade Cactus and Carol Jean Wolcott.

Please take the time to thank these people when you can. If you have the chance to patronize any of these businesses, please do so they have helped our society by their generous plant donations.

Efthalia Savatos has been a member of the SDCSS for 25 years! That turns out to be exactly half of her married life. We all know Efthalia by her married name, Ethel Standish. Christian and Ethel Standish have just celebrated their 50th wedding anniversary . . . congratulations Ethel and Christian. We are looking forward to seeing their smiling faces at our October meeting.

The 1997 CSSA convention is just around the corner and to help us start out right the new CSSA convention gavel will be passed on. Martin Mooney, SDCSS Host Society Chairman, will accept the gavel at our October meeting. The CSSA Convention Chair, Richard Bernard, CSSA Vice President, Dr. Larry Mitich and CSSA Treasurer, Mindy Fusaro will also attend our next meeting. Though July 1997 seems like a long way off, our society needs to start looking to that date to make this the best CSSA convention ever. After the great convention in Tucson this year, it will be a challenge.

Two of our long time members are feeling under the weather, please send cards or letters to help cheer them up. They are: Sarah Jervey, 3425 - 33rd Street, San Diego, CA 92104-4312 and Dorothy Larberg, 7617 El Paso Street, La Mesa, CA 91942-4304.

Lastly, thanks are due to all of those people that have donated money to the Richard G. Latimer Jr. Research Fund. As of this writing about 14 people have donated over $700 to this fund. The monies collected from auctioning Rick's plants will be lumped into this fund as well (at the request of the Latimer Family). This will bring up the total to about $1,200.

Joey Bettler

San Diego Cactus & Succulent Society Salutes Ethel Standish

For the past 25 years Ethel Standish has proven herself to be an invaluable member of the San Diego Cactus & Succulent Society. When she first joined the club, she assisted in setting up the refreshment table and helped serve coffee. Later she volunteered to work at the plant swap table, until the need arose for her to assist Perlso Lewis at the reception table. Here she faithfully performed her duties which consisted of greeting members and visitors alike, introducing visitors to the Society, leading the flag salute, turning lights on and off as needed during shows, and assisting the treasurer by collecting money for name tags and /or membership when necessary. During the SDC&SS annual June Show & Sale Ethel would spend both days — all day — manning the reception table, greeting visitors, answering inquiries and providing information about our Society, the plants, the meeting schedule and even where the restrooms were located!

Ethel likes to bake and would usually get up early on the Saturday of the meeting to bake goodies for the refreshment table — it never mattered whether she was on the list to provide food that day. Ethel would often bring extra baked goods for special friends. (*editor's note: We still have dreams about her incredible baklava!*) She loved to share her pastries.

Ethel is a likeable, friendly, industrious person who enjoys talking with people and making them feel at home in the club. She has always willingly assisted in anyway that would make people happy and help the society run smoothly.

Recently her health has not been that good and we have missed her smiling face welcoming us to meetings. We all hope that she will soon return to good health and be back with us to enjoy the Cactus and Succulent meetings again.

— Elizabeth Glover

Ethel and her husband Chris Standish had a neighborhood beauty shop on Euclid Avenue in East San Diego back in the 1960's and early 1970's. Visiting her shop was always a special treat. If you've ever seen the movie Steel Magnolias — these are the warm and friendly feelings that created many lasting relationships and old friends and clients.

The beauty shop was warm and affable. It was the kind of a place that a young girl could go to and become a princess. I can still remember Ethel teasing and curling my long straight hair into a work of art; something that Eva Gabour could relate to. Ethel always made you feel like you were the most important person in her shop. Ethel and her spouse of fifty years, Chris, treated customers with a flair of importance. Just like we know Ethel today: she is always taking time to say hello and catch up on the happenings of friends since the last meeting.

— Lorna Odegaard

Cactus of the Month:
STOP AND SMELL THE CACTI

By Amna Cornett

Scent is probably our most evocative and least understood sense. For most animals, smell is the most important of the senses. Turtles and salmon use it to return to their natal spawning spots. Predators use it to locate prey, while the prey use it to be aware of the hunter, even producing alarm scents to warn others of danger. Dogs are able to read in urinary messages the social and sexual status of canine passers-by.

Although our olfactory sense can sometimes surprise us by overwhelming our emotions when we catch a whiff of a half-forgotten smell, humans have pretty much lost the ability to consciously analyze scents. Aside from the sensations of sweet, sour, bitter and salty, the taste of food is dependent on the sense of smell. This would account for so many scents being described in terms of food - honey, mint, chocolate, plum, curry, spice, almond, coconut, vanilla, lemon, pineapple, etc.

People smell things differently. Some can catch the faintest of scents, others only appreciate the strongest. Brunettes are said to smell things more acutely than fair-haired people because the olfactory mucous membranes are lightly pigmented. The ability to identify different colored freesias by smell has been shown to be genetic, so if one is not born with the ability no amount of sniffing will enable one to distinguish some scents.

Several parts of plants may be scented. Roots -some Iris roots smell like violets, while **Sedum rhodiola**'s smell like roses, but I have not heard of any fragrant Cactus roots. Leaves - While the leaves of some succulents such as **Dudleya viscida** and Bursera species have marked aromas, this would not be likely for Cacti for the obvious reason. Fruits - the fruits of Cacti may smell quite delicious. **Opuntia leucotricha** (duranzillo) has fragrant, edible fruit. But it is in the flowers where most Cactus scents are found.

Fragrances are extremely complex. They consist of a number of compounds such as aliphatic terpene alcohols and aldehydes which fluctuate according to weather and time of day. The particular scent of a flower derives from various combinations of these compounds into essential oils known as "attars" which are stored in epidermal of the petals. Double petaled forms therefore are usually stronger-smelling than single petaled forms.

Nature seldom does anything without a reason, and the reason for fragrance is a common one - SEX. Since plants can not move around to seek an object for their affection, they have to attract intermediaries such as the birds and the bees. Scent plays a fairly minor role among day-blooming flowers, which generally depend upon color and form to attract pollinators. Some plants do tip the odds by having sweet smells to attract bees and butterflies. The **Pereskia** has a definite smell of mildew. Perhaps it seeks to attract fungus gnats.

Stop and Smell the Cacti

It is among the night-blooming flowers where the strongest scents are found. Not all of these are pleasant. Bat pollinated flowers are said to be without exception downright repulsive, with flowers that smell of cabbage, garlic, fish, or rotten meat. Examples are found in **Carnegiea, Pachycereus, and Stenocereus.** Since these are all large arborescent cacti one would have to try hard to sample the scent and would be unlikely to be accidently offended. **Pterocereus foetidus** sounds like a plant to be especially avoided.

Moth-pollinated flowers are the most highly adapted and the most powerfully scented. The often huge, white blooms of the night-blooming cerei have earned them the title "Queen of the Night". Brought inside a single bloom will perfume the whole house, though close up the smell may be too overwhelming. Too much of a good thing ---.

I have tried to compile a list of plants which I personally know, have read, or have heard, are fragrant. It is very incomplete since books and catalog do not consistently mention fragrance in their descriptions.

EPIPHYTIC CACTI: **Rhipsalis houlletiana, R.pilocarpa, Selenicereus coniflorus, Cryptocereus anthonyanus, Disocactus macranthus, Epiphyllum crenatum, Hylocereus ocamponis,** and **Nyctocereus serpentinus.**

OTHER Cacti: **Echinopsis multiplex, Echinopsis hamatacantha, Echinocereusd davisii, E.scopulorum, Echinocactus texensis, Ferocactus latispinus, Leuchtenbergia principis, Mammillaria baumii, M.camptotricha, M.heidiae, M. melaleuca, M.weingartiana, Neoporteria krainziana, N. odieri, Notocactus bueneckeri, and Parodia rubristaminea.**

There are undoubtedly many more fragrant cacti out there. By being more aware of scents and sniffing them out wherever we find them, trying to identify and describe their qualities, we might be able to train our smell palates the way a wine-taster does his taste. So get out there and smell your cactuses! (Carefully, of course).

References used :

Allardice, Pamela. The Scented Garden. Angus and Robertson. 1992.

Haustein, Erik. The Cactus Handbook. Chartwell Books Ltd., 1988.

Lacey, Stephen. Scent in Your Garden. Little, Brown,& Co., 1991.

Rowley, Gordon. The illustrated Encyclopedia of Succulents. Salamander Books, Ltd. 1978.

Stabler, Arthur. "Some Perfumed Cacti", Cactus & Succulent Journal (U.S.) Vol. 58, No.1, 1986.

SUCCULENT OF THE MONTH: THE AGAVES OF BAJA

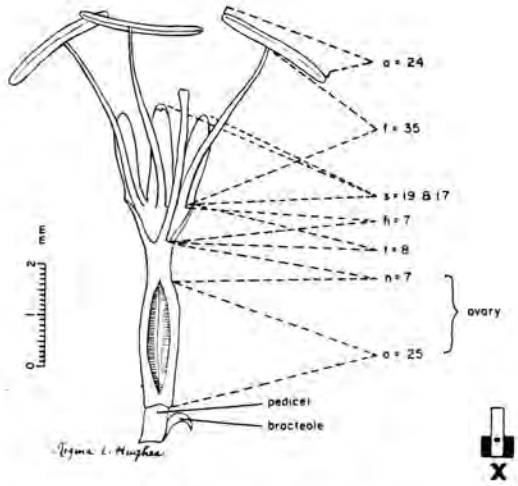
BY EDWARD NOLAN PHD

While looking for reference sources on the agaves it very quickly became apparent that the only monographs that exist are the wonderful publications by Howard Scott Gentry: The Agaves of Continental North America,, which is currently out of print, and his other more specific publication, The Agaves of Baja California printed in 1978 by the California Academy of Sciences. Probably the earliest account of the agaves in Baja was written by William Trelease back in 1912; surprisingly very little else of note has been generated since then, besides the works of Gentry. It is somewhat of a tragedy that a plant family as ubiquitous in the deserts of North America as the *Agavaceae* is so under-represented in the literature. Until the time Gentry's classic monograph on North American agaves makes it back into print, anyone who possesses and is willing to sell this treasure can contact me and name their price! The Baja agaves occupy four groups that, besides morphological characteristics, can be separated by geographical ranges. These groups include the *Deserticolae* which contain the most species and is generally the northernmost, the *Companiflorae*, which are in the south, and the *Umbelliflorae*, which are more central and coastal. The last group has two types, species *datylio* and variety *vexans* that Trelease put into the *Datyliones* group in his 1912 publication. Gentry in his more recent 1978 publication states that these plants belong in the group *Rigidae* . . . Trelease's original account included descriptions of 23 species, but Gentry restructured this into 16 species, eight subspecies, and one variety of agave type in Baja. Just wait 'til the reductionists get hold of this!

The information that I am presenting on the Baja Agaves is taken almost exclusively from Gentry's book on the Baja agaves. I am attempting to render this fine publication into a few pages of usable, interesting discussion intended to broaden one's botanical repertoire on the agaves that inhabit this incredible desert peninsula and to illustrate the location of each species habitat. I would also like to offer some of my own opinions on how and why this species evolved, and of what interest agaves present aesthetically and as garden subjects. My personal interest in the Baja biome is quite immense as I eagerly read the book from Gentry, I was astonished to learn that there were so many species that I had not noticed! For example, I remember very clearly how exciting it was years ago to read in the CSSA journal about the species *Agave cerulata subcerulata* growing in an area about 10 miles south of San Ignacio and then going there and finding it in all its toothy exuberance. Later learning that I had passed by two other subspecies of *cerulata* just back up the road! You see, the problem was that I had not read Gentry's book! . . . . Lets get to the plants.

As we all know, Baja split off from the mainland anywhere from five to fifteen million years ago, (depending on who you believe) and is continuing to creep northwest. For all purposes this turned the land mass of Baja into an island in plant evolutionary terms. The faulting that split off the peninsula also generated significant northwest-southeast oriented mountain ranges that have partially facillitated in the divergence of habitats and species on the peninsula. The northeastern part of Baja is the hottest and driest, and as one moves south and west across the land the climate becomes cooler and wetter — or at least foggier. This oversimplification is intended to exemplify the factors that have participated in the current geography of the distribution of the different species. Agaves are generally abundant in the Baja and in certain areas form the dominant element in the vegetation. The species *shawii, deserti,* and *cerulata*, for example, occur by the thousands over vast tracts of land, but other species such as *gigantensis* are not common and the island species require a boat to be reached. The flowers are almost always yellow and, depending on the species, bloom from early spring to late summer. The flowers are in clusters on the ends of very exuberant branched stalks that often last for many seasons and serve as a major icon of the desert. **News flash**: According to Gentry, agaves from the *shawii* group are perennial since they can flower repeatedly! This group flowers from the leaf axils and thus the terminal meristem is not committed to inflorescence development. And you thought all agaves died after flowering, didn't ya?! **Now back to your regularly scheduled program.**

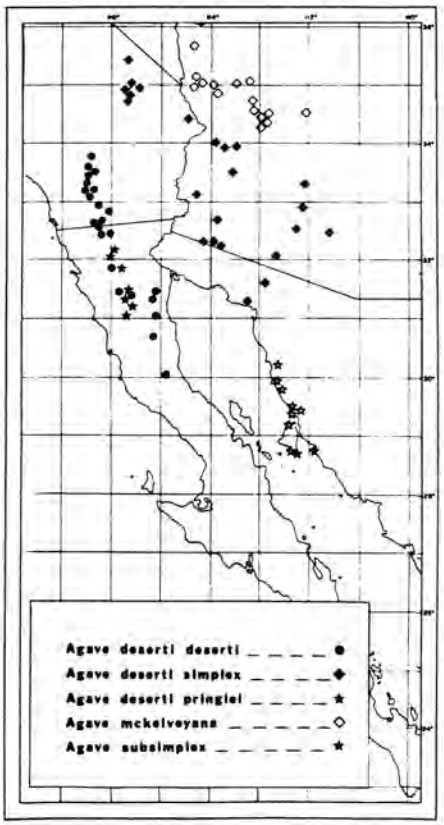
The physical characteristics that Gentry utilizes in the determination of species among the agaves is based on the usual devises of flower structure, stem length and width, and geographical distribution, etc. Agaves are unique in that their chemical contents, particularly the level and type of sapogenins, (which are used commercially in the synthesis of steroids) are also very indicative of species. Gentry further mentions that often the flower structure is not very useful, especially among the *deserticolae* group, at separating species and the traits of the plant body itself are more distinctive. The typical agave flower structure and its physical measurements are presented in figure 1.



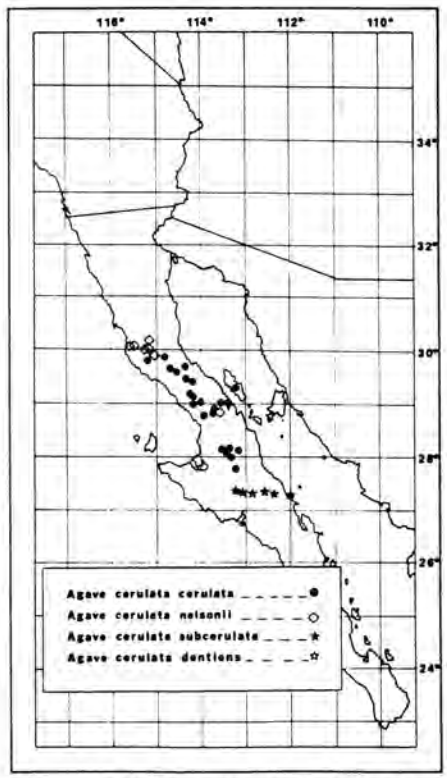
o - ovary body length, n - neck of ovary length, t - tube length, fi - filament insertion (measured to bottom of t - tube), s - tepal lengths, f - filament length, a - anther length, tl - total length

THE BAJA AGAVE GROUPS: Instead of physically describing each of the three groups of the Baja *Agavaceae*, which is slow torture, I intend to offer tasty morsels of Agave snack facts designed to provide easy to digest memorabilia. Such as if you were starving to death in the deserts of north central Baja . . . which species would provide the most . . . Oh never mind.

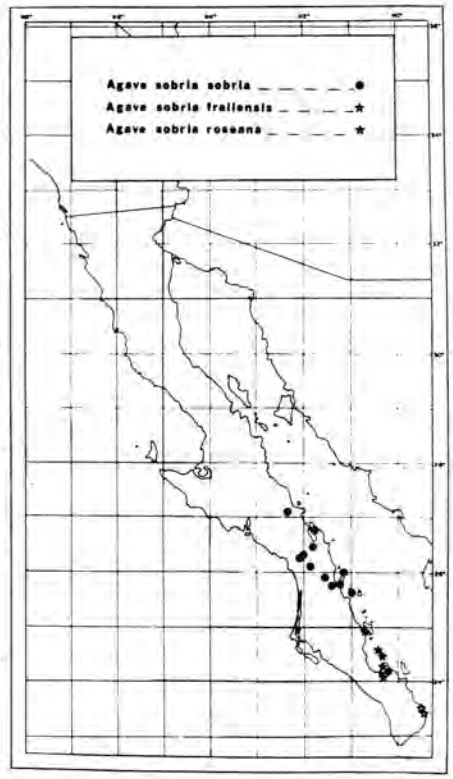
Deserticolae: With ten separate species, this is the most northerly group with a range that includes the Sonoran desert regions of California, Arizona, Baja, and Sonora. The *Deserticolae* do not display close morphological relation to any other agave group. I believe they may represent a more modern radiation of a type that is very drought resistant, physically rugged and has adapted to the gradual drying of the western climate. Closest relatives are probably the *utahensis* group which inhabit a similar region. Typically leaf margins are fiercely armed with pronounced teeth; the leaf surface is generally light colored, glaucous gray or yellowish and usually inflexible and thick at the base. The various species include: *desertii* (ssp. *desertii, simplex*, and *pringlei*), *mckelveyana*, *subsimplex*, *cerulata* (ssp. *cerulata, nelsonii, subcerulata*, and *dentiens*), *sobria* (ssp. *sobria, frailensis*, and *roseana*), *margaritae*, *vizcainoensis*, *moranii*, *avellanidens*, and *gigantensis*.



Distribution of *Agave deserti, A. mckelveyana*, and *A. subsimplex*, based on herbarium specimens listed in the Exsiccatae (Appendix).



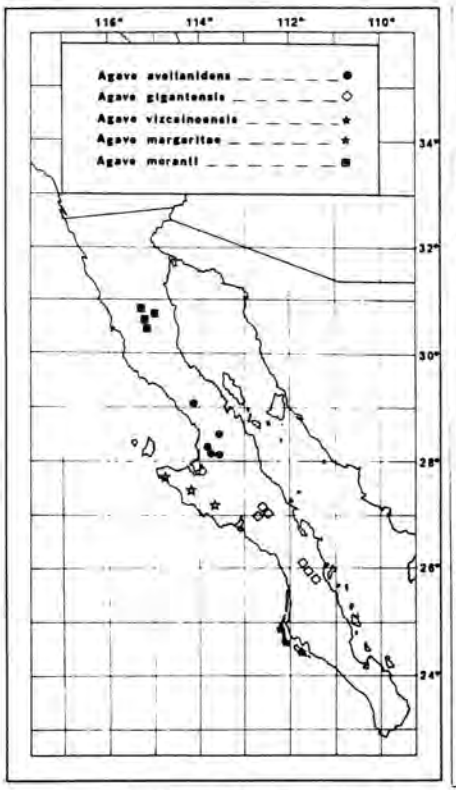
Distribution of *Agave cerulata* and its subspecies based on herbarium specimens, see Appendix—Exsiccatae.



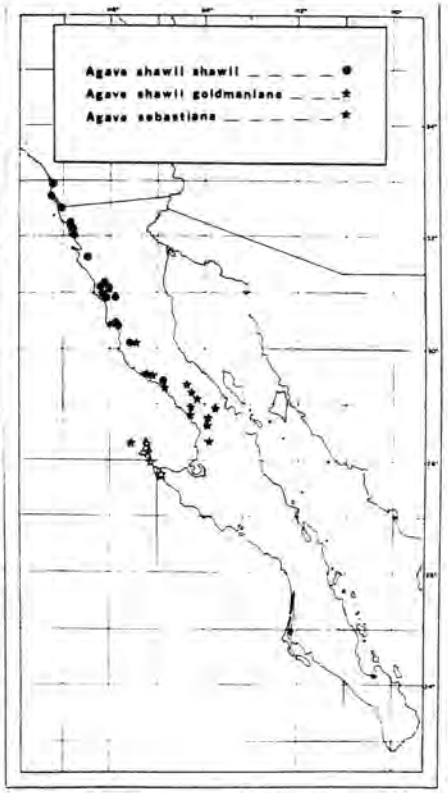
Distribution of *Agave sobria* and subspecies, based on herbarium specimens (see Appendix—Exsiccatae).

The species *desertii* can be found in vast stands in the southern section of Anza-Borrego state park. It is certainly one of the toughest plants you will meet anywhere. *Agave desertii* was used extensively for food and fiber by the aboriginal peoples of the Sonoran desert including southern California deserts. Because of their smallish size, beautiful glaucous blue undulating leaves, and heavy teeth, the species and subspecies of *cerulata, margaritae,* and *sobria* would be very attractive in cultivation. The species *gigantensis* (so named due to its habitat in the Sierra de al Giganta), *avellanidens*, and *moranii* grow too large for most landscape applications. The remaining species are just not sufficiently attractive to purposely plant in one's garden!

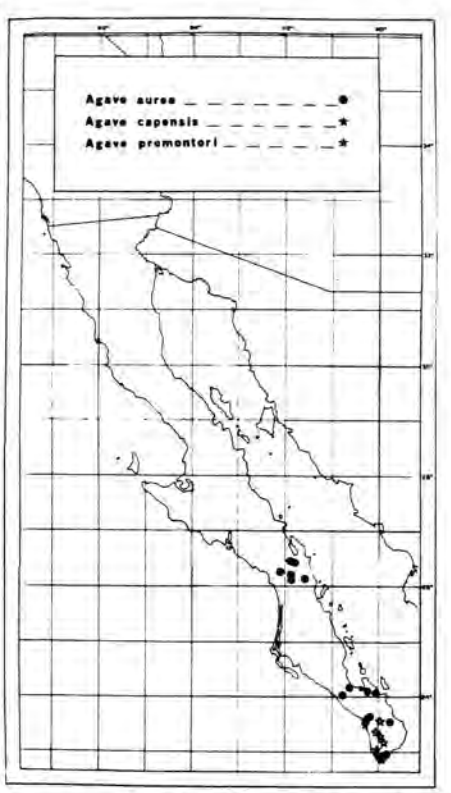
Campaniflorae: The *Campaniflorae* range is restricted to the southern half of the peninsula and is one of the most isolated groups of continental agaves. This isolation is reflected in the flowers from this group which all have a distinct campanulate (bell shaped) conformation with broad tubes and thin tepals. Rainfall in this region occurs mostly in the late summer and fall and can be quite heavy due to its tropical nature. The greater abundance of moisture in this region compared to the very arid northeastern part of the Baja may partially account for the large size of the *Campaniflorae* species, such as *promontori.* Members of the *Campaniflorae* include the following species: *aurea, capensis,* and *promontori.* The species *capensis,* has the habit of axillary branching and is often found as large clusters, while the remainder of this group is refractory to offsetting. Both *aurea* and *capensis* would make attractive and interesting landscape subjects (if you can find them), but as mentioned above, are a bit large and would require a spacious setting to accent their flowing undulating leaves. *Promontori* is probably too large for most settings, however, Gentry's book shows a photo of two huge flowering plants in Balboa Park! I wonder if any still exist there?



Distribution of *Agave avellanidens, A. gigantensis, A. margaritae, A. vizcainoensis*, and *A. moranii*, based on herbarium specimens listed in Appendix—Exsiccatae.



Distribution of the Umbelliflorae, based on herbarium specimens listed in Exiccatae (Appendix).

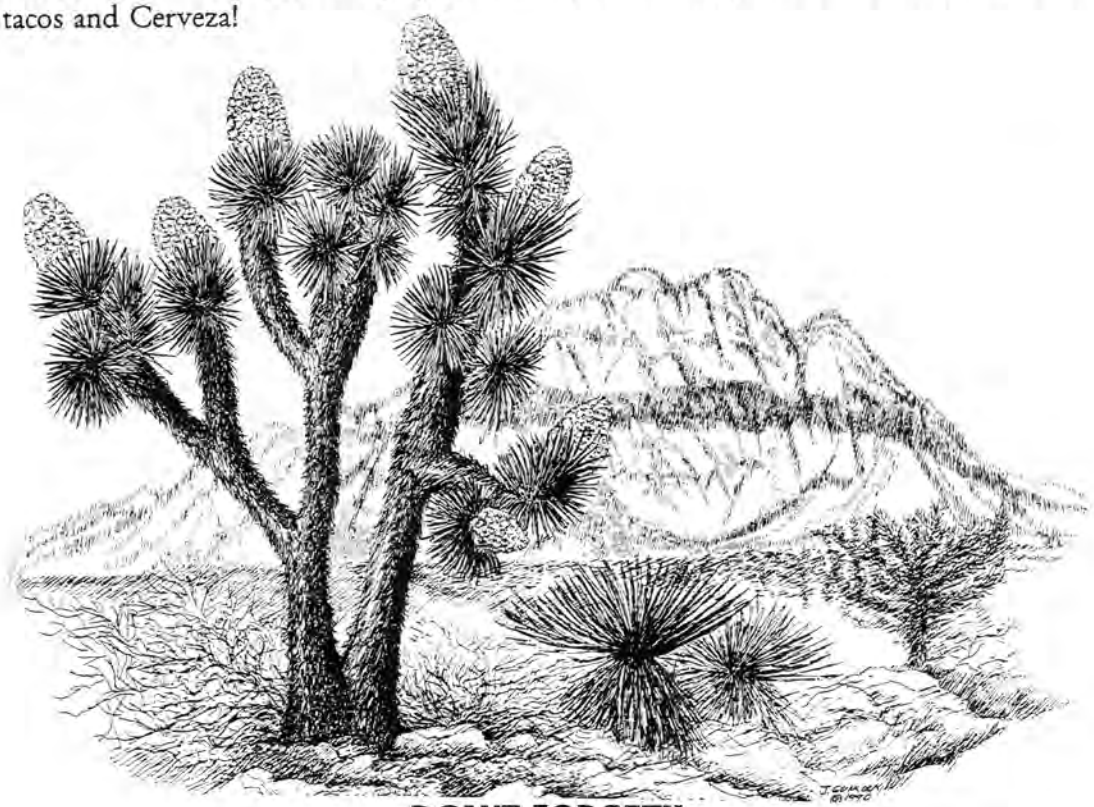


Distribution of the group Campaniflorae based on herbarium specimens listed in Appendix—Exsiccatae.

Umbelliflorae: The *Umbelliflorae* are unique among all agave groups in being confined to the Mediterranean climate of the Northwestern shore of the Baja peninsula. A Mediterranean climate is characterized by dry hot summers and cool wet winters and springs. Members of this group are generally large long stemmed plants commonly branching from leaf axils and eventually forming fragmented supine clones. As mentioned in the "**News Flash**" they can flower repeatedly due to the development of axillary branches. The following species are included in the *Umbelliflorae* group: *shawii* (ssp. *shawii, goldmaniana*) and *sebastiana.* The two varieties *shawii* and *sebastiana* look very similar in habit. *Agave sebastiana* is more glaucous and thus more attractive. These two species constitute the maritime ecotypes, while *shawii* subspecies *goldmaniana* is the desertic ecotype. Anyone who has traveled Mexico's Highway 1 along the Pacific north shore knows of the proud stands of these large deep green toothy plants with the bulbous flower buds. Unfortunately, as the endogenous plant communities along the coast continue to be destroyed by both condos and agriculture the possibility of this plant becoming endangered exists.

Datyliones **or is it** *Rigidae*?**:** Members of this group in the Baja include one species: *datylio*, and one variety: *vexans*. These small to medium sized plants with long thin dagger-shaped leaves occur in the cape region of the peninsula (no map). *Agave datylio* has no close relatives on the peninsula; Gentry believes it belongs with the group Rigidae established in 1915 by Berger. The variety *vexans* is smaller and more xerophytic and occurs on both sides of the Sierra de la Giganta.

After reading Gentry's publication and learning of all the locations previously missed, I have been given just cause to begin planning my next trip down south. I simply must observe firsthand the wonderful areas he describes. These especially include the regions west of Loreto on the road to San Javier and the Sierra de las Palmas — what botanical playgrounds! Just thinking about such a trip makes me hungry for fish tacos and Cerveza!



DON'T FORGET!!
— WE ANTICIPATE MANY GUESTS —
AND NEED AMPLE REFRESHMENTS —
PLEASE BRING SOMETHING APROPOS!

Apple slices, Almond cookies, Apricot jam, Assorted candies, Animal crackers, Angelfood cake, American cheese, Ambrosia salad, Avocados and Artichoke hearts!

Dear SDC&SS Members,

The September issue of Espinas y Flores was dedicated to a very special person, Rick Latimer. This issue had quite an impact on many of us and was much appreciated — perhaps especially by those who could not attend his memorial service. Many SDC&SS members were unable to attend due of a prior commitment to the Inter-City Show *(Rick was supposed to judge!)* that weekend.

In light of this, the October issue seems more appropriate for a submission which shares the significance of the Tenth Anniversary Inter-City Show. On the following page is a summarization of contributions by SDC&SS members. I feel it is important to recognize the dedicated efforts of SDC&SS members who have volunteered support and/or entered plants in the Inter-City Show. This year's show was a particularly significant since it marked ten years of putting on the world's greatest cactus & succulent show and sale. Many of the people involved are members of our club in San Diego — I'm sure I've missed acknowledging some SDC&SS members — for this I apologize in advance.

This year I made the effort to take fun and candid pictures of show participants. In the past Carol Wujcik has always taken many rolls of photos and then in October she would mail prints to each of us. Although, in previous years Carol was much more thorough in making sure all "candid" people aspects were preserved in photo content. This has been one of her many talents which was dearly missed at the show since she could not attend due to her recent hospitalizations. I know that we all missed her presence and plant entries and she has appreciated hearing from you.

Continued support of the Photography Committee has allowed all of us to enjoy years of historical preservation. This was evidenced by how much FUN we had viewing the 10 Years of the Inter-City Show slide program presented at the awards dinner. Over the years the committee has archived many photographs of specimen and trophy plant entries. There may be more significant benefits of this yet unseen!

The Awards Dinner was held at the "Capistrano's Restaurant" at the Embassy Suites in Monrovia which consisted of a carefully planned (by Charles & Joanne Spotts) and deliciously prepared buffet meal under the chandelier lights of a spacious private room. Woody Minnich once again carried off as Master of Ceremonies in his usual animated, energetic, and positive fashion. Much of his discussion was based on recognition of various efforts of different people for the past ten years and of course the auction of the table centerpieces which are plants donated for this purpose.

Following dinner, the traditional poolside party at the Santa Anita Inn included patio conversation alongside pool and jacuzzi action. However, the Scotts were missed this year and their expertly manufactured margaritas!

The "Looking at Ten Years of the Show " presentation was created by Ed Nolan, Woody Minnich, Mike McCammon, and Carol Wujcik. The Program was presented in two parts consisting of a slideshow and a video tape of the show plants. A TV/VCR unit ran the show plant video that was painstakingly created by Mike McCammon throughout the weekend. The video panned across the 10th Anniversary Show displaying everything all around to preserve what it was like to be there live! Most everyone agrees that it is quite a thrill to see that many specimen quality plants presented and displayed all together in one room brought in by friends and people from all over.

The slideshow was compiled by Ed Nolan and Woody Minnich which meticulously combined slides of the past ten years from the Photography Committee (mainly Ed's, Woody's, and Carol Wujcik's). It consisted of 5 reels (really!) that were dually synchronized on 2 large screens displaying the early years through the present right up to that day. Ed finished the final touches adding this show to the presentation about 1/2 hour before the dinner! Everyone seemed to be really enjoying the program which included years people, activities, chores, dinners, awards, and those specimen plants. Ed created humorous caption slides, however, no narration was needed as the audience spoke for itself. This was especially due to Carol's customary and much loved "candid shots". The final shots projected were of a certain person's behind leaning over a trophy plant and then 'The End'. This person fortunately has a very good sense of humor (Okay and a nice behind too).

The slideshow concluded with a tribute in memory and celebration of the life of Richard Latimer.

Respectfully submitted,

Karla L. Nolan
Member of the Photography Committee
and the San Diego and San Gabriel Cactus & Succulent Societies

P.S. Special thanks to Tom & Laura DeMerritt for planning the great picnic, to Joey Betzler for securing the spot early in the morning, and to all the people who donated plants for the auction. Many members were extremely touched at having opportunity to purchase plants from Rick's garden — knowing these funds would go to the Richard G. Latimer, Jr Research Fund was a comfort as well. The food and auction were terrific and we had alot of fun too!!

Inter-City CACTUS & SUCCULENT SHOW

SAN DIEGO CACTUS & SUCCULENT SOCIETY PARTICIPATION IN INTER-CITY 10TH ANNUAL SHOW

SDC&SS Member SHOW CHAIRPERSONS:	Larry Grammer
(Ten Years of dedication)	Woody Minnich
SDC&SS Member JUDGES:	
Novice Cactus	Ed Nolan
Advanced Cactus	Madeline Lee
Advanced Succulents	Rudy Lime
SDC&SS Member TROPHY WINNERS:	
Best Agave: (*A. utahensis*)	Duke & Kaz Benedom
Best Ariocarpus: (*A. retusus*)	Woody Minnich
Best Argentine Cactus: (*Gymnocalycium pungens*)	Woody Minnich
Best Astrophytum: (*A. asterium nuda*)	Woody Minnich
Best Cactus/advanced: (*Melocactus warasii*)	Ed & Karla Nolan
Best Cactus/open: (*Epithelantha micromeris*)	Woody Minnich
Best Caudiciform: (*Bursera fagaroides*)	Larry Grammer
Best Chilean Cactus: (*Pyrrocactus bulbocalyx*)	Joe Clements
Best Collection: (Succulent Bonsai)	Larry Grammer
Best Crested Cactus: (*A. retusus*)	Woody Minnich
Best Crested Succulent: (*Euphorbia* "zig-zag")	Larry Grammer
Best Echeveria: (*E. domingo*)	Marylyn Henderson
Best Echinocereus: (*E. rigidissimus rubispinus*)	Duke & Kaz Benedom
Best Educational Display:	Alan Weiss
Best Fouquieria: (*F. fasciculata*)	Rudy Lime
Best Gasteria: (*G. brachyphylla*)	Marylyn Henderson
Best Madagascar Plant (not *Euphorbia*): (*Operculicaria decaryi*)	Larry Grammer
Best Mammillaria: (*M. herrerae*)	Woody Minnich
People's Choice: (*Operculicaria decaryi*)	Rudy Lime
Rarest Plant: (*Bursera semarubra*)	Michael & Joyce Buckner
Best Staged Plant: (*Cussonia spicata*)	Michael & Joyce Buckner
Best Succulent/open: (*Fouquieria fasciculatus*)	Steve & Rowena Southwell

SDC&SS Member Ten Years of Service & Dedication PLAQUE AWARDS:
Larry Grammer, Jim & Roberta Hanna, Woody Minnich, and Joe Wujcik

SPECIAL RECOGNITION OF VETERAN SHOW CHAIRPERSONS:
(SDC&SS Members) Larry Grammer, Woody & Kathy Minnich

*Flower bouquets arranged by Karla Nolan from the Inter-City clubs were presented upon show end.

KITCHEN DUTY /REFRESHMENTS: (4 days +) Kathy Minnich, Gloria Massey, and Camille Rutkowski

*Kathy has headed this effort for the past 2 years in support and appreciation for the group. She is very humble about this huge job and manages to somehow make it look easy. Kathy also arranged accommodations for many of us. Thank you! Kathy — You are terrific!

COMPUTERIZED SHOW ENTRIES / RESULTS TABULATIONS: (SDC&SS Member) Steven Southwell

PHOTOGRAPHY COMMITTEE: Ed & Karla Nolan and Woody Minnich

SALE PLANTS & POTS, CASHIERS, HOSTS, AND THE EVER IMPORTANT "BEAN-COUNTERS": Jim & Roberta Hanna, Ellen Low, Dick Hulett, Steven & Rowena Southwell, Brigitte Williams, Phillip Favel, Annette Needleman, Monte Woodworth, Michael & Joyce Buckner, Woody & Kathy Minnich, Joe & Carol Wujcik, Joe & Susan Clements, and many more we may have temporarily forgotten!

Sleeping Heron

by Monte Woodworth

During new moon and full moon the tide rises sufficiently, and we are able to take the pangas *(Spanish for small boat)* into the mangrove channels. There we can observe a variety of shore bird species — from the diminutive sandpipers and plovers to the magnificent egrets and herons, that make the mangroves their home.

Once while approaching the nesting area of the black crowned and the yellow crowned night herons, I spotted a yellow crown standing on one leg in a grotto of red mangrove plants. On closer inspection I noticed the bird's eyes were closed. I motioned to the pangero to cut the motor and whispered to everyone in the panga to be very quiet. At first, people were using their binoculars and telephoto lenses to view and photograph the beautiful bird. This was a mature heron with full adult plumage — a black head except for the yellowish band across the top from forehead to back of head ending with long thin head plumes and white cheek spots extending back from the stoutish mostly dark bill. The body is medium-dark gray with slightly darker flight feathers and fairly bright yellow legs.

We rowed closer until we were about five feet away from the bird. Binoculars and telephotos were now useless; the camera folks changed lenses and kept on shooting — click, whirr, click — the sounds of motordrives and shutters did not seem to alarm the heron. After about five minutes of watching and shooting, the bird decided to wake up . . very slowly though. He opened only one eye at first and kind of gazed at us slightly turning his head. The other eye opened and he stretched his neck up and out a bit, still not noticing us, or not caring. He proceded to go through an elaborate stretching of wing and leg — up to this point he was still standing on the one leg. Still unconcerned about us, he extended the folded leg with the wing out and back, then changed feet and repeated the stretch on the other side. The heron then leaned forward, tilted down, lifted its tail feathers and shot a stream of white digested fish about three feet out — narrowly missing our panga. No one was sure or not, if that was some kind of social statement directed at us. He turned on the branch, ruffed up his feathers and settled back.

For the first time he noticed us in the boat. I have never before seen an animal do a double take, but this heron's bird brain for the first time registered our presence and he whipped his head around as if to say, "Holy shit! How long have you guys been watching me?"

With a most startled look in his eyes, he let out the loudest `haaarooock' and took flight. At this point we all laughed hysterically, partly because it startled us and partly as a release from being so quiet for so long, but mostly because it was very very funny.

MIRAMAR LANDFILL
COAST BARREL CACTUS TRANSPLANT

* The Coast Barrel Cactus, *Ferocactus viridescens*, exists only on the coast of Southern California, from Del Mar to Northern Baja — an area of rapid urban development.

* The destruction of suitable native habitat for the Coast Barrel Cactus has forced the U.S. Fish & Wildlife Service to consider this species a candidate for endangered status.

* Communities of the Coast Barrel Cactus are indigenous to the City of San Diego's 1,430 acre Miramar Landfill.

* A goal of City Wast Management Director Richard Hays is to return each closed landfill area to its natural integrity as the active landfill areas reach capacity.

* An important component of this restoration program has been the transplanting of the Coast Barrel Cactus from active landfill areas, where it may endangered, to closed landfill sections.

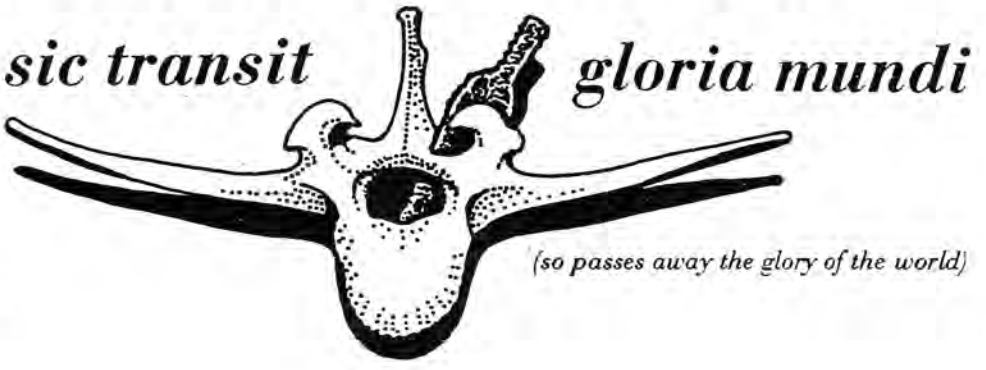
* Beginning in June, 1991, the Waste Management Department Refuse Disposal Division's environmental staff — with the help of County laborers — began transplanting approximately 200 Coast Barrel Cactus.

* Using a transplanting protocol that was developed by Caltrans for similar relocation projects, the cacti were uprooted then stored on wooden pallets upside down in the shade.

* A consideration during the replanting was that the sides of the cacti that were facing the south were planted facing south again, otherwise the cacti would not grow properly.

* Over 90% of the transplanted cacti have survived the transplant, meeting all environmental staff's expectations.

* The healthy cacti can now be found in clusters scattered among the coastal sage scrub and chaparral, particularly on dry, southern facing slopes.



WISE AND OTHERWISE

by Michael Buckner

"There is nothing either good or bad but thinking makes it so."

SHAKESPEARE

But to make rights and duties reciprocal supposes that only moral agents count in the ethical calculus. Duties exist as well to those persons who cannot argue back——to the mute and powerless——and perhaps this principle extends to other forms of life. Morality is needed wherever the vulnerable must be protected from the powerful.

The next easiest conclusion to reach, either from rights-based or utilitarian theories, is that humans have duties wherever there are psychological interests involving the capacity for experience. That moves a minimal criterion for duty past rational moral agency to sentience. The question is not whether animals can reciprocate the contract but whether they can suffer. Singer thinks that the only reason to be concerned about endangered species is the interests of humans and other sentient animals at stake in their loss. Only they can enjoy benefits or suffer harm, so only they can be treated justly or unjustly.

But species, not sentience, generate some duties. On San Clemente Island, the U.S. Fish and Wildlife Service and the California Department of Fish and Game asked the Navy to shoot 2,000 feral goats to save three endangered plant species, *Malacothamnus clementinus, Castilleja grisea,* and *Delphinium kinkiense*. That would kill several goats for each known surviving plant. (Happily, the Fund for Animals rescued most of the goats; unhappily they could not trap them all and the issue is unresolved.) The National Park Service did kill hundreds of rabbits on Santa Barbara Island to protect a few plants of *Dudleya traskiae*, once thought extinct and curiously called the Santa Barbara live-forever. Hundreds of elk starve in Yellowstone National Park each year, and the Park Service is not alarmed, but the starving of an equal number of grizzly bears, which would involve about the same suffering in psychological experience, would be of great concern.

A rather difficult claim to make under contemporary ethical theory is that duty can arise toward any living organism. Such duties, if they exit, could be easy to override, but by this account humans would have at least a minimal duty not to disrupt living beings without justification.

from *Duties to Endangered Species* **PHILOSOPHY GONE WILD – ESSAYS IN ENVIRONMENTAL ETHICS** by Holmes Rolston III, c. 1986, Promethus Books, NY

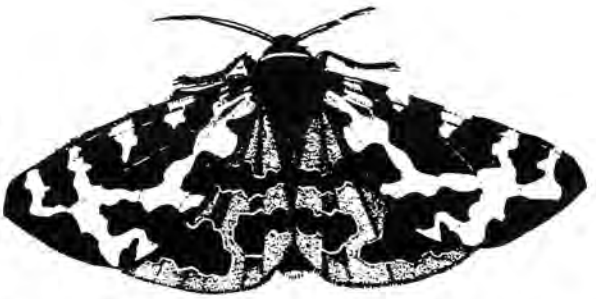
"Who would believe an ant in theory? A giraffe in blueprint? Ten thousand doctors of what's possible could reason half the jungle out of being."

JOHN CIARDI

"All good science is art. And all good art is science."

JOHN FOWLES

WISE AND OTHERWISE



A little more than a decade ago, ninety species of plants became extinct in a virtual instant, when the forested ridge on which they grew was cleared for agricultural land. The ridge, in the western Andean foothills of Ecuador, is called Centinela, and among ecologists the name has become synonymous with catastrophic extinction at human hand. By chance, two ecologists, Alwyn Gentry and Calaway Dodson, visited the ridge in 1978 and carried out the first botanical survey in its cloud forest. Among the riot of biodiversity that is nurtured by this habitat, Gentry and Dodson discovered, were ninety previously unknown species, including herbaceous plants, orchids, and epiphytes, that lived nowhere else. Centinela was an ecological island, which, being isolated, had developed a unique flora. Within eight years the ridge had been transformed into farmland, and its endemic species were no more.

Centinela had a unique flora, but it wasn't unique in being an ecological island. Countless such ridges exist along the whole length of the Andes, most of which, too, must have developed species not found elsewhere. What made the Centinela habitat notorious was that a botanical survey had been carried out prior to its destruction. Each time an ecological island is cleared, species will vanish in a virtual instant, an event ecologists now term a ***centinelan extinction***. There are two points to be emphasized here. The first is that whenever ecologists are able to survey a habitat before and after disturbance, species loss is almost always seen, often a catastrophic one. However, in the vast majority of instances, habitat destruction occurs in areas that have not been surveyed for their flora and fauna, so it is more than likely that countless species become extinct before ecologists even know of their existence. How is one to document this, except by extrapolation? The second is that, like the plants on Centinela, many species have very limited ranges, particularly in the tropics, so destruction of habitat often results in the instant destruction of species. As I indicated earlier, this implies that the 50 percent figure predicted for eventual species loss is more likely to be an underestimate than an overestimate.

THE SIXTH EXTINCTION - PATTERNS OF LIFE AND THE FUTURE OF HUMANKIND by Richard Leakey & Roger Lewin, c. 1995 Doubleday, NY

"You think that what you are accomplishing is a drop in the ocean. But if this drop were not in the ocean, it would be missed."

MOTHER TERESA

ADDRESS CORRECTION REQUESTED

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Espinas y Flores

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