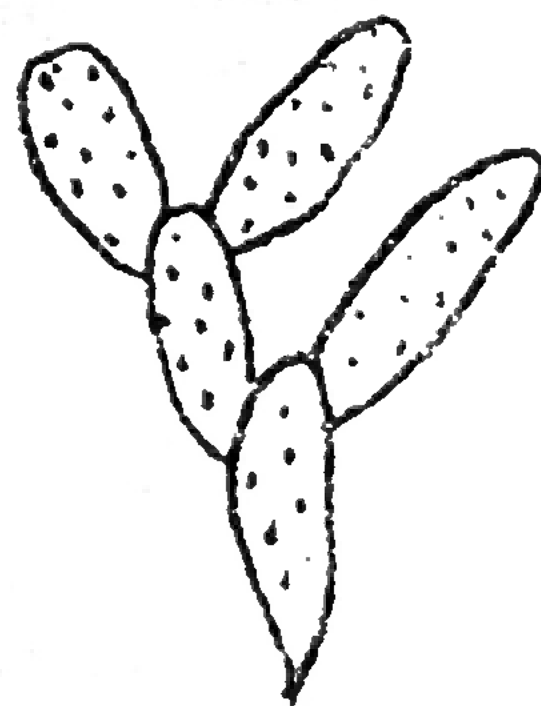


# CACTOS

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# SUCULENTAS



OFFICIAL PUBLICATION OF THE SAN DIEGO CACTUS & SUCCULENT SOCIETY

June, 1966

Vol. 2, No. 6

## SPECIAL MEETING JUNE 18

### JUNE MEETING

San Diego Floral Association Building at 2:00 p.m., Saturday, June 4. A second meeting will be held at the Del Mar Fairgrounds, Saturday, June 18, for members to bring their plants for display.

Two color motion pictures will be shown at the regular meeting: "Water--Fountain of Life" and "Weather--Breath of Life."

Members who find it difficult to take their display plants to the fairgrounds may bring their specimens to the June meeting. The display chairmen will take charge of them.

Tickets will be on sale for the Plant Sale Table.

Refreshments will be served at modest donation. Bring yourself and friends.

### LAST MEETING

Mrs. Joyce Tate gave a most informative talk on "Some Uses of Cacti and Other Succulents around the World."

### JULY MEETING

The regular meeting is planned for July 9 at the Taylor's Cactus Garden in El Cajon to be preceded by a potluck lunch at noon. Mr. Taylor has kindly offered to give a grafting demonstration.

Members have only three weeks to put final grooming touches on plants for fair display.

The San Diego County Fair opens at Del Mar June 24 through July 4, but displays are started two weeks prior to opening.

A special Society meeting will be held on 18 June, at the fair grounds for as many members as possible to participate in setting up exhibits. Members who received display plants last November are urged to bring them to the special meeting on 18 June.

Members who have other plants which might be displayable are urged to write down the names and bring them to the regular meeting of 4 June. There, fair committee members may be able to preselect those plants usable at the fair. Inasmuch as fair committee members cannot visit the homes of all members, it is hoped that members will bring their lists.

Bigger plants will be picked up by fair committee members at member homes, but it will be impossible to pick up plants at the homes of all members. If the members are unable to bring plants to the special meeting of 18 June, at the fair grounds, they are urged to drop them off at the homes of Mr. Arnold, Mrs. Lewis, Mr. Stalsonburg, or Mr. Ward.

After the fair ends on July 4, the plants will be carried to the Taylor's Cactus Garden in El Cajon, where members may pickup all plants at the regular meeting to be held there on 9 July.

# MINUTES

SAN DIEGO CACTUS & SUCCULENT SOCIETY

May 7, 1966

The meeting was called to order by the president and the minutes were read and approved. Several guests were welcomed.

Correspondence: The first issue of the journal from the National Cactus and Succulent Society was received together with our membership in their society.

Committee reports: Mr. Ward explained the possibility of combining the Cactus Garden with the Kate Sessions Aloe-Agave Garden. After reading a rough draft of a letter that will be sent to the Superintendent of Balboa Park asking permission to combine the two gardens, he asked for discussion and suggestions from the membership. Mrs. Lewis agreed that moving the garden was the best idea if it is at all possible. Mr. Hoffman said that this plan would solve the problem of theft and mutilation of the plants. Mr. Vaughan volunteered to go to the city government and park superintendent to do everything in his power to bring this about. Mrs. Day supplied the name of the Director of Parks, Miss Pauline Des Granges, City Administration Building, 9th floor.

Mr. Ward reported that the Society had been asked to put in a succulent basket display at the Mission Valley Flower Show.

The Fair Committee requested that an extra meeting be held in June at the Del Mar Fairgrounds in order that members might bring their smaller plants for display. Larger plants would be taken by truck directly from the homes to the fairgrounds.

The July meeting will be held on the 9th at the Taylor's, to be preceded by a potluck lunch.

Mr. Stevenson reported that he had found the solution to darkening the room for movies and slides. A large shade roller is available and he was authorized by the president to buy it as a gift to the Floral Association.

The meeting was turned over to Mrs. Joyce Tate who gave a most interesting talk on "Some Uses of Cacti and Other Succulents around the World."

Very special refreshments were served by Miss Kathy Kennett and Mrs. Kennett in honor of President Vaughan's eightieth birthday.

The meeting was adjourned after the plant sale.

Shirley Ward  
Temporary Secretary

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## A THANK YOU . . .

The Society wishes to express its gratitude to Mr. C. L. Benbow who has made a gift to the Society's library of several years of the Cactus and Succulent Journal. These include the years 1946 and 1950-1958. These back issues are most valuable now and will provide many hours of interesting and informative reading. Again, thank you, Mr. Benbow.

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## NEW MEMBERS TO BE ADDED TO THE MEMBERSHIP LIST:

Mrs. Amy E. Curtis, 3709 Seventh Ave., San Diego, Calif., 92103, 298-1042  
Mrs. Emily Park, 1012 Lincoln Ave., San Diego, Calif., 92103, 297-3452  
Mr. W. Grant Standley, 3841 Julie, San Diego, Calif., 92115, 463-2859  
Mr. Albert R. White, Rt. 1, P. O. Box 349, Alpine, Calif., 92001



# BAJA DIARY

by Jack W. Ward

Note: Old Baja collectors may skip this article. My apologies for mistakes in misidentification.

My family (wife Shirley; and children Tamara 8, Kern 7, Ross 5, Danika 3) and I planned for almost a year to take a leisurely exploratory excursion into Baja Calif. del Norte during Easter week. We had previously been as far south as San Quintin, but, this trip, we planned to drive south of El Rosario into the interior. We thought that by identifying species found along the way, we might make it easier for other amateurs making initial trips into Baja.

We had a vague goal of driving 100 to 150 miles below El Rosario, and could have done it in our allotted time from Monday, April 4, to Sunday, April 10, but decided to head home early because we wanted to allow adequate time for possible breakdowns and other unforeseen events. Our trip took us as far as San Agustin, 286 miles below the border.

Our preparations had included the accumulation of camping equipment such as cots, sleeping bags, fold-up table, stools, canned goods, gasoline cans, water cans, etc., including planning on how to fit everything into our Volkswagen Kombi, and still allow adequate seat-space for the children. As it turned out, we were able to store everything compactly in the luggage area over the engine and behind and under the seats, so that our children lost no seating space. We reversed our front rear seat so that the two back seats faced each other in a stagecoach arrangement. This gave us additional storage space and made it safer for the children.

One of our preparation oversights was failure to obtain Tourist Permits the week before. Old timers assured us that we did not need them, but we wanted to have everything legal and proper. The permits cost nothing other than the time spent in going for them to the Bank of America Building in San Diego. Actually, we spent three times as long buying our Mexican car insurance at the border as we did obtaining the Tourist Permits. Nevertheless, because we could not obtain permits during the weekend, we lost a half day on Monday obtaining permits and insurance. A birth certificate is the only identification required when applying for a permit. It was interesting to note that "high school teacher" was translated as "profesor" rather than "maestro" on the permit.

## Tijuana to Ensenada

We left the border at 11:30 Monday morning, April 4, bounced over the deteriorating streets of Tijuana to the Ensenada highway, and then drove in bumper-to-bumper traffic all the way to Ensenada. Seven out of ten cars on the road were from California and around four out of five U. S. cars were surfers. Apparently, it is surfer paradise from Tijuana to Colnett.

There seemed to be no end to the forlorn shacks of Tijuana extending southward toward Ensenada. Within a decade, if the present trend continues, the shacks of Tijuana will stretch all the way to Ensenada. Out of Tijuana, one may spot a few straggly specimens of Opuntia prolifera and Opuntia listosensis, the two most common species in western San Diego County. Seventeen miles below

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BAJA DIARY (continued from previous page)

Tijuana, at Rosarito Beach, one sees the first stands of the golden spined Bergerocactus emoryii, a species which once extended northward to Orange County, but is now extinct in the U. S. except for the channel islands, Point Loma, and the International Boundary monument at San Ysidro. Two miles past Rosarito, one catches sight of Agave shawii, which increases in frequency as one moves southward along the coast. One would have to leave the highway and travel eastward several miles to see Ferocactus viridescens, Mammillaria dioica and Opuntia serpentina. The first two extend along the coast all the way to El Rosario, and M. dioica also extends to the interior desert all the way south as far as we traveled. Opuntia serpentina is now almost extinct in the U. S., and may be extinct within a decade in Mexico; it has an extremely small range.

Hundreds of thousands of B. emoryii and A. shawii were uprooted and destroyed during the clearing of the roadbed for the not-yet-opened freeway to Ensenada. It makes one groan to see the slopes of the freeway landscaped with that too-common South African plant, Carpobrotus edulis, when the landscaping could have been done with the beautiful, but now destroyed, native plants. Within a decade, one may have to drive all the way south of El Rosario (224 miles) to see any native cacti and succulents.

Opposite Popotla trailer park, 21 miles below the border, one may see massive growths of B. emoryii and A. shawii.

If one stops 25 miles below the border, and searches the ocean bluffs carefully, he may find a small, almost clavate type Opuntia growing in association with O. prolifera and B. emoryii. This is O. alcahes (?) which may be found growing up to 12 feet high inland from El Rosario, but stays dwarfed on the northern coast. One may also find Euphorbia misera and species of Dudleya including D. orcuttii, and D. farinosa (possibly D. virens).

This trip was our sixth to Ensenada but it was the first time we had seen water running in streams and so many wild flowers. There was an especially beautiful view past Cantamar, 30 miles below the border, with a combination of sand dunes, wild flowers and running water.

Near La Mission, 35 miles below the border, there is a nice view with cliffs above the ocean. Just past this point, the road cuts inland, to the east, extending parallel to dark sheer cliffs, probably an escarpment. At 42 miles from Tijuana, one may see the large, showy, gray-white rosettes of Dudleya Brittonii dotting the dark-colored, shaded, rock cliffs, which is a good indication that this plant does best in almost complete shade or filtered sun. The only native cacti visible in this area are Opuntia prolifera, O. littoralis, and O. occidentalis, but if one leaves the road and searches, he may find the ever-present Mammillaria dioica.

The road climbs up to inland foothills, and except for a few previously mentioned Opuntias, M. dioica, hard-to-see Ferocactus viridescens, and a few isolated specimens of B. emoryii, the landscape is rather dull for the cactus enthusiast. The road curves back to the sea 59 miles from Tijuana, and two miles later the car reaches the outskirts of Ensenada at San Miguel village. It took us an impatient 35 minutes to drive from San Miguel through Ense-

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BAJA DIARY (continued from previous page)

nada to the immigration inspection station, 77 miles from the border. It had taken us two hours and 10 minutes to drive the 77 miles in bumper-to-bumper traffic.

Previously, without a tourist permit, we had to pay a \$1.00 fee at the inspection station, but, this time, the officer briefly looked at our permits and waved us through without any waste of time.

Past the inspection station, the road improves; it climbs into the coastal hills where one sees few cacti because most of the land has been cleared for pasture or grain.

At 84 miles, we pulled off the highway for a brief lunch of cold fried chicken, chips and canned drinks. Cars passing by, going south, were all loaded with surfboards. After resuming our journey, we spotted Yucca whipplei and Yucca schidigera in bloom.

At 93 miles, the road descends into a broad valley to Santo Tomas, the site of an old mission and nice hotel. The countryside past Santo Tomas is much like that from Ensenada to Santo Tomas.

The road breaks into a nice view of the broad San Antonio River Valley at 116 miles, and of the village of San Vicente five miles away. Agricultural activities, including the planting of new olive orchards (128 miles), are changing the landscape.

Previously, we had collected Ferocactus viridescens, var. littoralis, around 130 miles below the border, but now there is only pasture and grain in place of the native plants. In fact, the landscape is so modified, we could not even determine the exact collection location. South of the San Antonio River Valley, the road climbs back into the hills.

At 136 miles, we saw Agave shawii (in bloom), Dudleya brittonii on the cliff faces and B. emorvii. At 138 miles, the flora changes very abruptly as one comes upon an untouched native cactus forest. Machaerocereus gummosus, Myrtillocactus cochal, Opuntia littoralis (white spine variety), Echinocereus maritimus, Mammillaria dioica, Agave shawii, Ferocactus viridescens, Bergerocactus emorvii and large specimens of Dudleya farinosa climb up the hills to the west of the road. There appear to be two distinct species of Echinocereus here, one with short straight spines and the other with long, gray, irregularly curved spines. For the next 64 miles one sees no new species of cactus.

We stopped at 139 miles, one mile before the paved road ends, to look and rest. Here, on the hillside, I became so enraptured in the tangle of cacti, dudleyas and agaves that I almost stepped on a six foot rattlesnake. Fortunately, the snake was crawling and did not turn to strike, but continued to travel. The snake was rattling before I was even aware of its presence; my foot had come within about two inches of stepping on it.

At 140 miles, the paved road ends, four miles short of Colnett village. At Colnett, we forded a wide stream, at least 80 feet across. Shirley was so scared that we would get stuck that she was all for turning around and going home. However, the car made it without difficulty.

On our previous trips, the area between Colnett and Camalu (19 miles) had been a forest of Machaerocereus gummosus and Myrtillocactus cochal, and Agave shawii. Sadly, we viewed the pasture

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## BAJA DIARY (continued from previous page)

lands and other cleared areas. One may see some of the uprooted and slowly dying agaves alongside the road.

We arrived at Rancho Ybarra, between Colnett and Camalu, at 4:43, 158 miles from the border, and at Camalu (163 miles) at 4:55. On an earlier trip, we had stayed at Leo's at Camalu-by-the-Sea, driving through fields of native cacti to get there. Now, all we could see were grain fields.

Shortly past Camalu, the turnoff to the Hamilton Ranch beckoned but we decided that we had wasted too much time already, and decided to drive to San Quintin by dark. The Hamilton Ranch is the type locality of the rare Opuntia hamiltonii, but since I had already purchased two specimens from nurseries, there was little point in collecting, except for comparative purposes.

Almost all the way from Colnett to below San Quintin, a distance of 40 miles, there is an almost uninterrupted broad coastal strip, as deep as 15 miles, which is now nearly stripped of native vegetation, mostly cleared in the last four years. One sees the monotonous grain fields and pasture. Presently, there are only small, impoverished-looking villages in this area, but when the paved road is pushed to San Quintin, circa 1970, one of these villages, probably Colonia Guerrero, will become a city, the market center for a farm area covering more than 300,000 acres.

Just before reaching Colonia Guerrero, there is a turn-off to the ruins of Mission Santo Domingo, another one of those interesting side trips we postponed to the future. At Colonia Guerrero (171 miles), we came to an even wider stream than we had forded at Colnett, at least 120 feet across. Shirley panicked into her usual state of frozen hysteria whenever we plow into a body of water or test a sandy strip of road, but we crossed without mishap.

Past Colonia Guerrero, at 175 miles, one may see one of the last few stands of Machaerocereus gummosus left on the coastal shelf.

Arriving at San Quintin (185 miles) at 6:15, we turned off toward San Quintin Bay, a distance of 3 or 4 miles, according to the map. Somehow, we took the wrong road, driving 10 miles onto the upper peninsula area, between bay and ocean before we finally settled for the night. One mile from the main road, our passage was blocked by a truck, stranded from an empty gas tank. We donated two and a half gallons of gas from our 20 gallon portable reserve, but it took a lot of hand pushing to get the truck started. Shirley gave out suckers to the children on the truck, and we continued on our way to the beach in darkness. Shirley was in her usual state of frozen terror, as we bounced over strange roads and struggled through sand traps, not really knowing where we were going. Finally, we stopped on a ridge, to keep from plunging into an impossible locking sand trap, and camped in the middle of the road for the night. Unaccustomed to sleeping in the open, both of us were cold that night in our sleeping bags. We have double-deck, bunk-type folding cots, and Shirley takes the upper level because she is afraid of all those crawly things in the night, but she also gets more soaked from the dew. It was hard getting to sleep because of the loud noise of the pounding

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surf, and because of our agitated internal organs, mixed up from bouncy roads.

The next morning, Tuesday, we built a fire pit to warm ourselves, the children delighted and thrilled with the adventure of gathering driftwood and toasting their cool cheeks and hands over an open fire. We took out the Coleman stove and cooked our first meal of the trip. After breakfast, we became so engrossed in exploring the nearby ocean cliffs (volcanic origin) and the area around us that we quite forgot about the time. We found the usual M. dioica, F. viridescens, Mesembryanthemum crystallinum, Euphorbia misera, Bergerocactus emoryi, Echinocereus maritimus, and Dudleyas. But, we were surprised to find Lophocereus schottii, poor specimens though they were, and an annual Compositae, which had a quite succulent base of irregular form. It was rather disconcerting to see a typical sunflower stalk with bloom protruding from a succulent base. We tried to bring back a few specimens, but they wilted dry by the time we returned to the border. Unfortunately, we could find no ripe seed. Kern found a small Mammillaria he wanted to take. We assumed it to be a typical M. dioica but when we arrived home and took a closer look at it we were plagued with that nagging feeling that it might be a different species. It has no hair in the axils as does M. dioica; its flower color is lavender pink, with down-curving petals and bright red stamens. We have never observed a M. dioica with these particular characteristics.

Near the site where we camped, there were sheer cliffs of dark volcanic rock and an endless carpet of wild flowers, predominantly yellow, with a peppering of pinks, whites, blues, reds and violets. Just identifying the hundreds of species of wildflowers, mostly Compositae family, would be an exciting and exhausting project in itself.

At 9:15, we finally started on our way again, arriving at the main road by 9:52. Four miles down the road from San Quintin, we saw a sign "4 miles to Bahia San Quintin." We would have saved time and fret had we known this the night before. On the other hand, we might have missed one of the most enjoyable interludes of our journey. Seven miles south of San Quintin, 193 miles from the border, the road was washed away completely, a stream bed having sliced a deep channel through it. One mile farther, we were stopped by a herd of cows.

Wherever the land is not cultivated one sees an almost solid carpet of Mesembryanthemum crystallinum interspersed with Dudleyas. This species is so common and so widespread, I can hardly believe that it is an imported escape from South Africa.

At 10:35, we arrived at El Rio Bravo (?) (195 miles), the last village before El Rosario, 31 miles away. Five miles below El Rio Bravo (201 miles), the hills come down to the coastal shelf and one may see the first isolated specimens of Echinocereus pringlei. We stopped at this point and discovered that all the previously mentioned species of cacti were growing in association on the hills to the left. We collected one new species of Dudleya at this point and a cristate form of Machaerocereus gummosus on the way home.

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After resuming our trip, the road turned to natural cobblestone and became progressively worse south of this area. In fact, the road was the worst strip of the whole trip, even in worse condition than south of El Rosario (except for one or two mountain grades).

At 212 miles, we were following a Mexican car through one of those 200-yard-wide-100-foot-deep dips, where the road is gone, when it stalled half way up the incline, and rolled backward. Car doors flew open and three young men tumbled out onto the road as the rear of the car twisted to the right and came to rest with its rear tires hanging over a drop-off. One man could speak English. He told us that his car did not have any brakes, and did not have enough horsepower to climb out of the steep trough. (Talk about optimists!) We had no way of helping them so the three sat down to wait for a large truck to come by and pull them onto the road and up the hill.

At 2:00, we came to the El Rosario landing field (224 miles) where the road splits left and right. Since there were no signs, we took the wrong turn to the right, but made a lucky choice of wrong turns. Since we had not eaten lunch, we drove about one half mile down the road and stopped for lunch. As usual, we became engrossed in exploring and forgot all about time. We had been worried that we would not find the supposedly rare Mammillaria lewisiana (M. brandegei var. lewisiana). We were under the impression that it was found only at Secorro Playa (wherever that is). At this spot, we found them all around us. They are hard to spot because they grow almost completely buried in the soil. However, they are quite distinct from the common M. dioica because they have completely straight spines, milky sap, and greenish-yellow flowers. My older daughter Tamara became very proficient at spotting them, and found them innumerable times in the next few days.

In addition, we collected Ferocactus fortii at the same location. (This species may be seen in scattered locations beginning about 15 miles north of El Rosario.) F. fortii appears to be doomed to extinction because it is the favorite target of a moth whose huge larva ( $\frac{1}{2}$  x 2 inches) bores into the soft flesh from ground side. We found many dead specimens, and three fourths of the live ones we examined were being killed by the larva. Its purplish bloom is very showy and contrasts distinctly with the yellowish-green glooms of F. viridescens, found in the same location. This species has a distinct concave underside from which the main root extends, another feature which distinguishes it from F. viridescens.

Before leaving this spot, we collected another broad leafed Dudleya species (very succulent). At this location, many of the Dudleya specimens are very old, with trunk-like stems up to two feet long, resting procurrent on the ground.

After driving back to the airport, we turned right for a steep southward descent to El Rosario. The canyon walls and floor are densely covered with M. dioica, E. maritimus, Dudleyas, and Agave shawii. On our return trip, we observed several dozen members of a Mexican family, burning and clearing the canyon floor of Agaves; another sad sight.

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BAJA DIARY (continued from previous page)

It was 5:30 before we reached El Rosario (224 miles), a very dead looking village, where we turned eastward away from the ocean. Numerous Indian hogans dotted both sides of the road for the next few miles. Dozens of Indian children stood by the road begging for "money," but we gave them suckers instead.

At 231 miles, we spotted the first specimens of Lophocereus schottii since San Quintin Bay, and a mile farther, started across the valley (Arroyo del Rosario), where the ever-present irrigated grain crops have replaced the native vegetation.

At 6:15 (234 miles) we camped for the night on the south side of the Arroyo del Rosario. Opuntias dominate the scenery at this point, but one may see M. dioica, F. fordii, L. schottii, Machaerocereus gummosus, and E. misera. We had unexpected guests in the form of large black spiders with yellow markings, which came from all directions. They actually appeared to have been attracted by the noise or some other factor. Shirley was quite happy to be sleeping in the upper bunk with her head buried inside the sleeping bag. It was windy-cold that night, with strong ocean breezes lasting until dawn. We were uncomfortable the whole night, receiving very little sleep.

The next morning (Wed.), after breakfast and exploring, we were finally on our way at 9:00. Almost immediately after starting, the road forked to the right, up a lateral canyon to the Arroyo del Rosario. There is a quite sudden change in the scenery. On the distant hills, one sees stands of Idria columnaris, and beside the road a different species of cactus, Ferocactus gracilis, as well as several new species of Opuntia. Opuntias are my specialty but I must confess that I found identification quite confusing. I am certain, after examining seed, that several species of Opuntia have not yet been identified.

As we proceeded up the canyon, the Idrias came closer to the road and the F. gracilis became more dense. On the east-facing sides of the canyon we saw the large white rosettes of Dudleya pulverulenta, and often saw it close to the road growing on the level ground. We thought of the extremely rare Pachycereus acrotii somewhere in the untracked hills south of El Rosario, but looking for it would have required pack animals and guides. This is one of the rarest of all cacti.

At 238 miles we stopped for exploring and collecting, picking up specimens of Idria columnaris and Myrtillocactus cochal. Tamara found M. lewisiana (M. brandegeei?) on the east side of the canyon but we did not collect because we already had specimens.

The road forks out of the canyon at 246 miles, where there is a house, and climbs steeply into the hills. At 249 miles, we spotted Echinocereus engelmannii and Agave sebastiana. E. engelmannii was in bloom with showy purplish flowers. The Idrias and F. gracilis dominate the scenery for mile after mile with interspersions of Pachycereus pringlei, Myrtillocactus cochal, Machaerocereus gummosus, Lophocereus schottii, Agave sebastiana, and Echinocereus engelmannii.

At 251 miles we stopped from 12:00 to 1:40 for lunch and exploring at the top of a mountain grade. Tamara again found M. lewisiana and another Mammillaria which must be a new species or one that we can't find described. Externally, it appears similar to M. lew-

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BAJA DIARY (continued from previous page)

isiana in color and spination, but it does not have milky sap and it has slightly hooked central spines. It has long hairs in the axils and the radiating spines are angled upward instead of lying flat as in M. dioica. We have not observed it in flower.

Five miles down the road, at 256 miles, we collected specimens of Ferocactus gracilis with especially long spines (up to  $3\frac{1}{2}$  inches). All the way from the 235 mile point to San Agustin (286 miles) one may spot large specimens of F. gracilis, from three to ten feet high, and in some spots on the higher mountains, the spines are very twisted.

On the high mountains, the wind creates a strumming sound as it blows through the umberless Idrias. This is the forest primeval, the wilderness unspoiled. Most of man's litter is confined to a few yards on either side of the road. Collectors (probably dealers) have stripped the Lophocereus schottii of their blooming heads within several hundred feet of the roadway, but not as thoroughly as in the San Felipe area on the east coast.

Rancho Arena, a cafe with residence, at 259 miles, advertised "water" and "gas" as do all the residences through this part of the country. At 260 miles, we began to see Yucca valida, a species which grows up to 30 feet, large growing Opuntia echinocarpa, Fouquieria splendens, Larrea tridentata (creosote), Opuntia tesajo, and Olneya tesota (ironwood), indicators of the rapid transition to east coast desert. We collected O. tesajo at 269 miles at 4:00 in the afternoon.

The next residence is at Rancho El Progreso, where the Lophocereus schottii becomes more dominant in the landscape. Just past this point (271 miles) we collected a cylindropuntia with long, stiff yellow spines. At 276 miles there is another residence, where the vegetation becomes predominantly creosote. Yuccas grow on the northern hill slopes and Idrias on the southern hills.

After passing El Aguila (279 miles) Pachycereus pringlei becomes more dominant on the hills to the left. The country becomes more open, with vegetation increasingly more sparse. We arrived at San Agustin (286 miles) 5:35 p.m. Wed., and decided to end our southward journey here. We drove back two miles to the base of a hill and drove off the road to make our camp.

If we had continued onto the south, in the next 150 miles we would have entered the range of numerous other collector's items. Among these were Lemaireocereus thurberi, Pachycormus discolor var. cubescens, Bursera microphylla, Opuntia cineracea, Opuntia molesta, Opuntia cholla, O. acanthocarpa, O. bravoana, Echinocereus brandegei, E. ferreirianus, Ferocactus peninsulae, F. rectispinus, F. thurberi var. tortulospinus, F. gracilis var. coloratus, F. gatesii, Cochemia roselgeri, Cochemia setispina, Cochemia maritima, M. lawsonii, M. angelensis, M. verhaertiana, M. insularis, M. micrantha, and M. brandegei.

On the way home, we made several stops to explore and rest, but the journey was uneventful. It took us three days to go down because of our many stops and explorings, but it took us only two days for the return trip home. It took only one day to drive from Alamosa to the border.

I would not advise making the trip in a passenger car because of the deep-crustal roads, big holes in the roadbed, projecting rocks, etc. If you do decide to make the trip, I hope that our identifications will be of help to you. Now that we have explored this part of the course, our next trip will be an attempt to cover this 256 miles as rapidly as possible (two days) so that we can leisurely explore the area south of San Agustin.