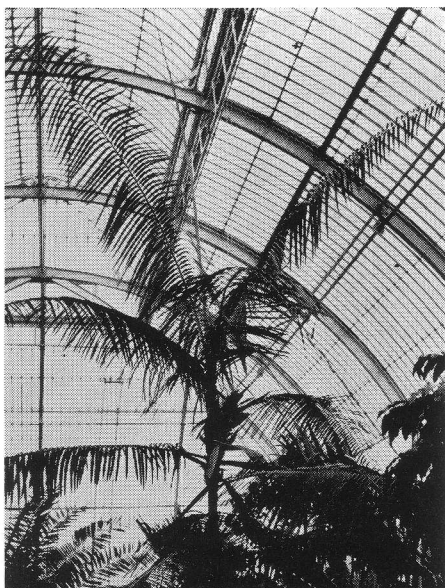


self has not remained unaffected by the passage of years. Some damage was suffered in wartime by bombs which, falling near though not on the structure itself, caused shattering of the glass. More disastrous than war-damage has been the corrosion of the iron-work fostered by a century of moist heat. This so weakened the framework that in 1952 the building was declared unsafe and was closed to the public. With dismay it was learned that the structure was considered beyond repair and would need to be replaced. Further tests indicated that repair might yet be possible and a major restoration was started in 1955. Section by section, the glass was removed, the girders strengthened by welding of steel plates, and all the iron-work cleaned from rust and treated. In replacement of the glass, longer curved panes, admitting more light, were inserted. When this was done, it was possible to see the grace and lightness of Burton's design revealed anew.

On May 29th, 1959, during the commemoration of the 200th anniversary of the Gardens at Kew, Her Majesty Queen Elizabeth visited the Palm House which her ancestor Queen Victoria had viewed with so great interest during its con-



39. Armed with hooks on its leaves, the rattan scrambles above its neighbors. Photograph by R. R. Zabeau.

struction 111 years before. In re-opening the doors to the public, the Queen at the same time opened a new chapter in the story of Burton's Palm House, and one which all concerned hope will be prosperous and make for progress in the knowledge and appreciation of the family of Palms.

## Daddy of the Palm Canyons

RANDALL HENDERSON\*

Within a radius of 150 miles of my home town of El Centro, California, I have tramped the length of many palm canyons—and now I have found the daddy of them all.

It is in Baja California, approximately forty miles south of the boundary established many years ago when United States and Mexico settled their dispute over the ownership of 1500

miles of rich coastal terrain along the Pacific. United States got Alta California, and Mexico retained the peninsula, designated by the Jesuit padres as Baja California.

The palm trees which grow wild in the southwestern sector of the Great American desert do not know anything about boundary lines. I have found many lovely oases on both sides of the international border.

The best known and largest forest of palms on the Alta California side of the

\*Reprinted with permission of *Desert* from *The Desert Magazine*, June, 1948. Photographs by the author.

line is the famous canyon at Palm Springs where between 3,000 and 4,000 *washingtonias* extend along a tiny stream for seven miles. Many thousands of visitors go to Palm Springs every year to marvel at the scenic beauty of this gorgeous canyon. (*Desert Magazine*, Jan. '41).

But Baja California also has its champion palm canyon, although few visitors, even among the Mexicans, have ever been within its rocky walls despite the fact it is only 50 miles from Mexicali's 40,000 population.

The daddy of the Mexican palm canyons, as far as my explorations have gone, is Tajo—*Cañon del Tajo*. The word means cut or opening in a mountain. It is a pretty name, but it does not do full justice to the great gorge which slashes through the western slope of the Sierra Juarez range and empties its periodic storm waters onto the normally dry floor of Laguna Salada, the great inland basin just south of California's Imperial Valley. Tajo really is the *Gran Cañon de la Sierra Juarez*.

My first glimpse of this spectacular canyon was 11 years ago when Malcolm Huey and I maneuvered our jalopies far up into the rocky fan which spreads out at the mouth of the gorge. We spent a day hiking along an old cattle trail which led up into the canyon. Four miles from our parking place we came to a little stream with an occasional palm tree on its banks. Two miles above where the first palm was seen we found an old Indian cave with pictographs in a sheltered crevice. It was growing late, and there we turned back. One day was not long enough to get acquainted with this canyon.

Later I told my friend Dr. Warren Fox about those pictographs, and being an amateur archeologist, he gave me no peace until we had arranged a trip to

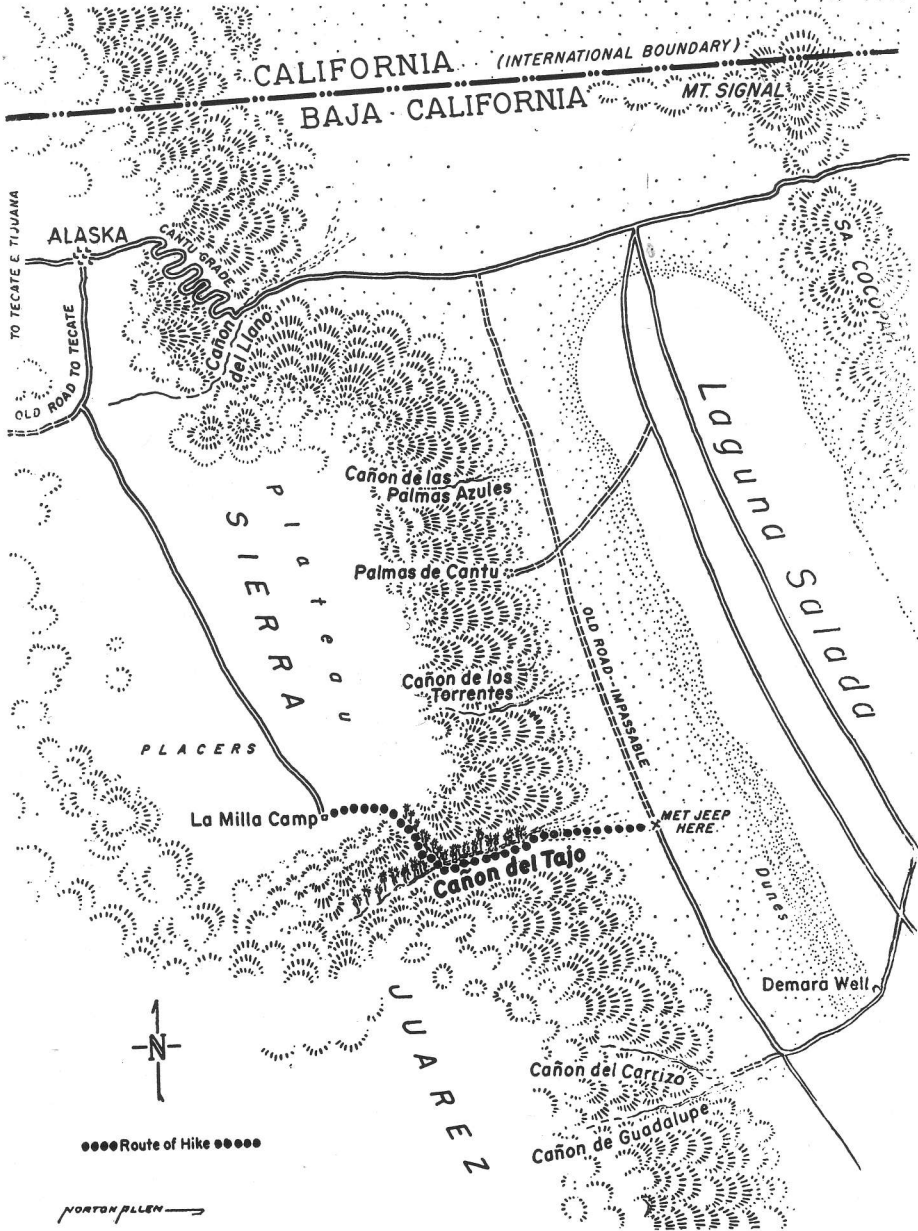
the cave. We backpacked our sleeping bags up the canyon and slept that night in the cavern. Then while he roamed over the rocky slopes looking for prehistoric campsites and artifacts, I hiked up the canyon to become better acquainted with the palm forest.

The doctor found abundant evidence of Indian occupation, but no artifacts worth bringing home. I had not gone far before I realized that most of the palms in Tajo canyon were of a different species than the *Washingtonia filifera* which grows so plentifully on the California desert to the north. The Tajo palms were of the fan type, but of shorter stature, and their fronds had a blue-white cast I had never seen on the Alta California trees. Then I came to one with a great cluster of fruit as big as marbles and about the same color as a green olive. Since the fruit of the *Washingtonia* is the size of peas, and almost black in color, I knew I had found a botanical stranger.

I brought out some of the fruit and frond stems and sent them to Don Admiral, botanist at Palm Springs. He relayed them through friends to Dr. L. H. Bailey of Cornell University, leading authority on the palm family, and in fact on all botanical subjects.

Several months later, on one of his periodic trips to the West coast, Dr. Bailey asked me to guide him to the canyon for positive identification of the trees. We made the trip on a hot May day, yet despite his 79 years the scientist hiked the eight-mile round trip into the canyon with amazing agility, and along the route entertained us with stories of botanical discoveries all over the world.

Dr. Bailey confirmed what he already had suspected—that these were the blue palm *Erythea armata*, a native of the Lower California and Sonora deserts.



40. The author's route in Tajo Canyon.

This palm has spread from its southern habitat almost to the California border—but has never jumped the line. Since then I have found them within 15 miles

of Alta California, but never have discovered a single tree in the many palm canyons I have visited north of the border.

Although I have made three trips into this canyon, my journeys had never extended beyond the lower portions of it, and I looked forward to the opportunity of exploring its full length.

Later, comparing notes with Arles Adams, I learned that he also was eager to make the trip. Arles had looked down into the canyon from the top of the Sierra Juarez range, and had seen miles of palms extending along the winding floor of the gorge. "I believe there are thousands of them," he said.

We agreed that a round trip up the canyon and back to our starting point could not be made in a day. And neither of us relished the prospect of carrying bedding and food for a two or three day backpack up along that rocky floor to the mile-high headwaters near the top of Sierra Juarez.

We solved the problem by arranging with Walter Gatlin to ferry us to the top of the range, which was accessible by a passable jeep road, and then meet us at the bottom the next day. We would make a one-day trip of it—downhill all the way.

It was April 12 last year when we crossed the international line at Calexico, port of entry for the adventure. In addition to Walter and Arles our party included Bill Sherrill and Luther Fisher of the U.S. Border Patrol.

From Mexicali we followed the old Cantu road toward Tecate and Tijuana. The first 38 miles was a fair dirt road through the cotton and grain fields of the Colorado River delta and across the floor of the desert to the base of Sierra Juarez.

When former Governor Cantu gave his engineers instructions to build this road in the early days of the present century, he evidently told them to get to the top of the mountains by the shortest pos-

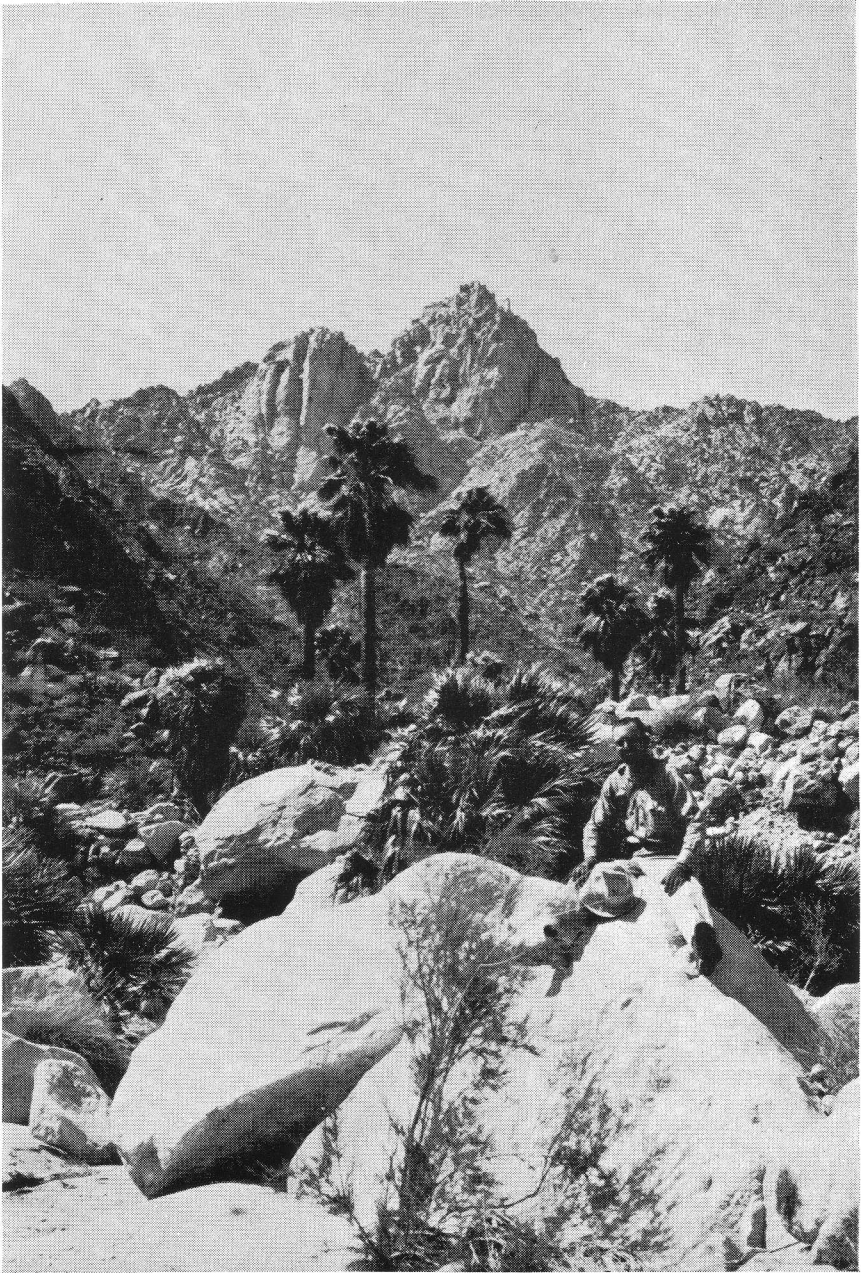
sible route. They did just that. They zig-zagged right up the face of the steepest slope they could find, and between the zigs and zags they put in hairpin turns which are easy enough for a burro, but somewhat awkward in places for a modern automobile. However, Mexican truckers and stage drivers go over the road daily, with surprisingly few casualties. It was easy for the jeep, but I would not recommend this road for tourists.

At the top of the grade is Alaska, so named by former Governor Abelardo Rodriguez who built a summer palace for his territorial government at the 4,500-foot elevation. Alaska has long since been abandoned as a summer residence for territorial officials, but there remains a little settlement of Mexicans and two tiny stores to serve passing motorists.

South of Alaska the Sierra Juarez extends for 50 miles as a great pinyon-covered plateau. In the 1880's placer gold was discovered in the decomposed granite which covers this plateau, and power equipment was later brought in to recover the gold on a big scale. The field has long since been worked out, and only an occasional prospector goes there to pan among the great piles of waste material deposited by power shovels. Driving along the road through the pinyons one passes scores of abandoned campsites and quantities of rusting equipment.

The placer area covers many square miles, and its main camp is today referred to as La Milla, the mile, or El Topo, the top. The elevation there is just a mile.

From Alaska two roads take off across the plateau, one going west to Tecate, and the other south to La Milla, a distance of 25 miles. We arrived there



41. Granite peaks tower above the palm forest in Tajo canyon.

late in the afternoon and camped that night in the shelter of a huge block of rock that stood near a little pond fed

by a spring—the headwaters of Tajo canyon. The landscape here was cluttered with the debris of a long-aban-



done mining camp—timbering, pipe, the wrecks of automobiles of the Model T era, and before. Everything of value had been taken away, but a huge scrap-heap remained to mark the site.

That evening Arles broiled our steaks on an old stone fireplace which probably had served Mexican miners 50 years ago. And before them, the Indians had camped by this spring for in a large flat boulder which served as a windbreak for my sleeping bag were the grinding holes used by aboriginal women to prepare their meal.

Before dark we climbed a 600-foot dome near the camp to plot our route across the plateau for tomorrow's trip to the head of the canyon. There was a cairn on top the granite dome, and we left a record of our expedition in the usual tobacco can.

Walter Gatlin camped with us that night, then departed at daybreak for his return trip down Cantu grade and across the floor of Laguna Salada for the rendezvous we were to keep at the end of our canyon journey 12 hours later.

From the top of the dome we had been able to trace the shallow arroyo in which our camp spring was located to the point where it entered a cleft and then dropped down the side of the mountain to the floor of the desert beyond. This was Tajo canyon.

After Walter departed we shouldered our light backpacks containing lunch and camera equipment and set out along the watercourse. Occasionally we saw where recent prospectors had dug down through the sand to bedrock, evidently on the theory that since this arroyo drained a field once rich in placer gold, there should be some color in the drainage channel. It was a plausible theory, but the test holes evidently had

not yielded a satisfactory showing of gold for they had been abandoned.

For a while we followed a gentle grade through a luxuriant growth of mountain vegetation. Then as the streambed dropped away more rapidly granite walls rose on both sides, and soon we were in the bottom of a V formed by cliffs many hundreds of feet in height.

Then suddenly the canyon floor dropped over an almost vertical fall of 50 feet. Standing at the top of this fall we could see a series of them below, as if some prehistoric giant had hewed great steps on which to climb the side of Sierra Juarez at this point. A tiny stream of water trickled over the precipice. Around this waterfall and the others below we were able to detour without undue hazard. Working around one of these falls I saw a ledge of quartz thickly embedded with black tourmaline crystals, some of them  $\frac{3}{4}$  inch in diameter. There is much of this black tourmaline in the Sierra Juarez, but it is not of gem quality, and this occurrence was at a point where we were too busy clinging to the face of the cliff to be interested in gem collecting.

We had worked our way around three of these falls—and then I saw the first palm tree. It was a healthy blue palm 30 feet high growing in a lovely setting. At its base were ferns, and on the mountainside nearby were mountain lilac in blossom, wild apricot in fruit, ribbon-wood or red shank, scrub oak, pinyon, *Rhus ovata*, agave and buckthorn cactus. My altimeter showed 4,600 feet—and this is the highest point at which I have ever found a native palm growing in the Southwest.

Then we passed a four-foot palm of the *Washingtonia* species, and below that a tree so unusual as to leave a permanent imprint in my mind. It was a blue



42. The blue palm, *Erythea armata*, produces a heavy crop of fruit, each "date" about the size of an olive. When the fruit dries the seed becomes as hard as chalcedony.

palm, a giant of the species such as I have never seen before. Slender and naked as a flagpole it stood there along with a tiny topknot of fronds at its

crown. Members of our party guessed its height to be all the way from 45 to 60 feet, and my estimate of its age would be 200 years. Because it was twice the

height of any blue palm I have ever known, it will take its place in my mental picture gallery with a few others of conspicuous charm—the Queen palm in the narrows of Andreas canyon, the Hunchback palm of the Borrego badlands (Desert Magazine cover, Dec. '37), the gnarled Old Man palm growing on the vertical sidewall at the entrance to Magnesia canyon back of Rancho Mirage, and the Sentry palm in Palomar canyon. In my notes I recorded this majestic palm as "The Chief."

Below this there were increasing numbers of palms, but it was not until we had dropped below the 4,200-foot level that they appeared in forests. Here also was more mountain lilac wearing its lavender plumes, and wild currants with the fruit turning pink.

At 9:40 we had descended to 3475 feet, and I took a picture of three Indian grinding holes on the top surface of a great granite boulder. We passed a mesquite in bud—at just the right stage for a mesquite roast. It resembles nothing so much as a greatly enlarged asparagus head, from  $1\frac{1}{2}$  to two inches in diameter, projecting a foot or more above a cluster of dagger-like blades. It is a delicate procedure, going in among those daggers to gouge the bud out of the heart of the plant. The Indians used a sharpened stick three feet long or more, and then roasted it in a pit lined with hot rocks. Bill Sherrill harvested this one with his hunting knife, but when he announced he was going to take it home and roast it in the family oven I lost interest in his culinary adventure. I am sure Marshal South will share my disapproval of this unorthodox method of roasting mesquite.

At 12 o'clock my counter showed 1,554 palms, and we came to a junction where a tributary from the south brought in a large stream of water. Ac-

tually, I do not know which is the main canyon above this point. The stream coming in from the south carried a larger volume of water than the one we had been following. Perhaps we had been descending a tributary. I do not know. But looking up the other canyon I could see that its channel was lined with palms as far as the eye could follow it.

Down to this point we had seen only an occasional *Washingtonia* among the blue palms. But *W. filifera* now became more plentiful, although *E. armata* continued to predominate.

A half mile below the junction of the two canyons a great block of granite stood squarely in the middle of the gorge. There was a cave beneath it, and on a level platform of stone outside the cave were 24 grinding holes—the most I have ever seen in one boulder. We ate lunch here, and would have liked nothing better than to spend the afternoon exploring this old campsite for relics of its prehistoric dwellers. But there were miles yet to be covered before we would be out of the canyon.

At the 1,280-foot elevation we passed another conspicuous campsite—a sandy bench where the ground was covered with broken pottery. The sidewalls of the canyon at the lower elevations were sprinkled with elephant trees. I have often wondered whether the Indians ate the rather bitter fruit which grows on this tree.

Also, I am curious to know whether or not the Indians found the fruit of the blue palm palatable. If they did, then this canyon would provide a grand feast for the aborigines during March, April and May. For this palm yields a generous crop of "dates." They grow in great clusters, some trees bearing as much as 125 pounds of them. We came through the canyon at the peak of the fruit season and saw literally thousands





43. *Washingtonia filifera* extends below the border into Tajo canyon.

of tons of fruit hanging in clusters, often so close to the ground it easily could be picked.

The fruit consists of a seed as big as a marble, covered with a thin green skin. When it matures the skin turns brown.

I brought some dried seeds home and tried them in the nut-cracker. It would not even put a dent in them. Then I tried the hammer, and it required a heavy blow to crack one open. The meat is about the color of chalcedony, and about as hard. If the Indians ate them I am sure it was only during their green stage. There is little flavor to the green nut, but the Indians who roamed this desert country ate food for nourishment, not because it pleased their palates. And their tasting apparatus had not been traduced by many generations of pie and ice cream and chocolate pudding. Perhaps these blue palm seeds were good eating—to an Indian. And I hope they were, for it would seem a pity that such a prolific crop of fruit should forever have been wasted.

At 4:30 in the afternoon we came to the place where the last trickle of water seeped into the sand, and here also we saw the last of the palms. Cattle which graze on the bajada along Laguna Salada had beaten a path up to the water—and we followed this trail another four miles before we reached Walter and the jeep. We met him just at dusk.

We estimated the hike from La Milla at 15 miles—and it had taken 12 hours to make the trip. We had counted palms along nine miles of the 15. Arles and I both carried mechanical counters, but we had seldom compared notes during the day and it was gratifying and rather surprising to both of us when we compared figures at the end of the trail. His counter showed 4,444, mine 4,518. And if you don't think that is amazingly close, you do not realize the difficulties involved in tabulating palm trees while scrambling over boulders and down waterfalls along nine miles of a canyon which loses a mile of altitude in 15.

Along the way we got glimpses of many palms in tributary canyons—but

there was no time to explore them on this trip. In the entire Tajo canyon system there are perhaps twice as many as we encountered along our route. We were in close agreement on another estimate—that fully 80 per cent of the trees in the canyon we traversed were *E. armata*—the blue palm.

If the commissioners who established the boundary between Baja and Alta California had moved the line a few miles further south, and left Tajo canyon on the northern side of the border, I am sure this canyon would long ago have been set aside as a national monument. Flanked in its upper reaches by colorful domes and battlements which rise 1,500 feet above the floor of the canyon, exhibiting a gorgeous botanical variation that ranges from Lower Sonoran to the Canadian zone, broken with waterfalls which make sheer drops of 10 to 50 feet, and set with lovely pools which carry the reflection of both palm and fern, this canyon with a trail to make it accessible would be a mecca for botanists and photographers and hikers.

But there are too many lovely places on this earth for all of us to see all of them, and perhaps it is just as well for the present that Tajo should enjoy the protection provided by its inaccessibility. The beauty will be there — even though human eyes seldom look upon it, and half the fun of living is in dreaming of the places we would like to go—and sensing the fact that Nature is preserving the charm of these hidden beauty spots for the day when perhaps we may have the opportunity to see them.

---

## NEWS OF THE SOCIETY

### Seed Bank

Thanks to the generosity of a new member of the Society, Mr. Donald Anderson, Superintendent of the H. L.