I know people whose idea of a national park is Yosemite Park in California. There, you comfortably drive your air-conditioned car to a gate, and for a small fee, a neatly uniformed ranger gives you a detailed map of the sites. All you need is to drive, on a freshly-paved road, in an endless convoy of other “nature seekers”, to the parking lots around the designated road, walk a few meters to the site, read the description and look around. You are seldom alone. The inevitable Visitor Center will give you more information, issues permits for hiking, and sell you soft drinks and souvenirs. If this is your idea of a park, then you are definitely in the wrong place if you visit the Central Desert Park in Baja California, Mexico.

To begin with, there is no gate, no ranger, no entrance fee, no visitor center, and not even decent roads to drive on. Nevertheless, the place is spectacular if you wish to make the effort to see a true wilderness. Perhaps one day it will attract crowds. These days however, it is almost as pristine as it was when the first Jesuit missionaries walked the Baja peninsula over 400 years ago. Actually, the missionaries mounted donkeys and the Indian guides walked, or so the old pictures depict. The park will reward you anytime of the year with a unique flora, out-of-this-world rock formations, and all the tranquility one can absorb.

Make no mistake, preparation is the key to surviving the visit. It is not a tourists’ heaven. There are no cars around, very few ranchers, no mules to rent, and absolutely no public transportation within the park. Above all, one needs a very rugged off-road vehicle. Bring extra gas; there is no gas for
Far Left (previous page) Typical landscape of the southern desert park where young (front) Agave shawii and "Datillo" trees Yucca valida share the desert with young giant cardon (center) and bushy Opuntia cholla.

Left Middle (previous page) The tall 5m+ flowering stalk of Agave shawii is produced once in the lifetime of a plant after 15-20 years of growing.

Left Landscape of ocotillo Fouquieria splendens (left) with boojum (right).

200 km around. Leave your shiny SUV at home as it will never look new again. Also bring all of the vehicle’s spare parts that you can think of. You will need some, guaranteed. Drive slowly and carefully is rule number one; one should look at every stone protruding from the road. Sharp stones, and they are plentiful, will tear your tires to shreds in seconds if you exceed walking speed in some rough stretches. Two extra tires are a must; you will surely need them for the one minute you have forgotten the previous advice. Do not believe the tire ads that promise that "all terrain" tires will carry you safely throughout. Not here in the Central Desert Park.

There are two additional fundamental requirements. You have to have strong will, and physical capacity (no loose ribs), to endure long hours of back-breaking, neck and kidney-paining driving along long dirt roads and tiny stone trails leading to nowhere. These roads have never been seen, and perhaps never will see, a maintenance crew. Not less essential, you should be accustomed to walking alone in a primordial landscape that few have put their mark on, or back to the highway if your car suddenly decides that you gave it enough hardship far from anywhere. The bright part, food, from simple...

Top A hillside covered with the Ferocactus sp. which produce red-tops in the growing season. Middle A young "bisnaga" (barrel) cactus growing in solid granite rock in the absence of soil, diameter 30cm. Above Flowering Ferocactus sp.
A typical large granite boulder in the central desert park. Note one of the authors for scale. Right A young cirio tree grows in front of a huge granite football-shaped boulder.

roadside tacos to a fancy restaurant, and lodging are available on the trans-peninsular highway that transverses the park, catering to the numerous truck drivers and RV retiree tourists roaming the highway day and night. These travelers almost never enter deeper into the desert.

As with any less-explored area, the Central Desert Park in Baja California peninsula is in the middle of nowhere, but is easy to reach. Southbound on the only trans-peninsular highway, it is about 250 km from the village of Rosario (and about 450 km south of Tijuana on the US-Mexico border) and northbound about 250 km from the salt-extraction industrial town of Guerrero Negro on the Pacific side of Baja. The park stretches for about 40 km on both sides of the highway. If you expect the road to be marked with signs to let you know that you are in the right place, then your expectations are far too high. Nonetheless, when you reach the large and colorful La Pinta hotel in Cataviña, a hamlet which was probably established to supply the hotel and to provide minor services for travelers on the highway, you are in its center. There are no other paved roads within the park. Even dirt roads are in short supply. Any dirt road exit you may take from the highway is an excellent choice. Most were “created” long ago by the trucks of now extinct local ranchers; they lead to nowhere other than the abandoned ranch. Dirt roads with tire marks will often lead to an active small cattle ranch or to a micro-village, sometimes over 50 km from the highway.

The area around Cataviña is a convenient starting point for walking. All around, there are huge sculptured boulders appearing as if thrown randomly by giants in an unexplained game. Any direction you take in these huge rock fields is the right direction. Lower your expectations for trails. There aren’t any. Yet, the sparse low vegetation of jojoba Simmondsia chinensis, creosote bush Larrea tridentata, joint fir Ephedra californica, goldeneye Viguiera deltoidea, bursage Ambrosia dumosa, allows easy walking as long as you pay your respects to the rattlesnakes. They will warn you noisily before you step on them. Listen for the rattling and give them a chance to move on. Better to everybody. They are not aggressive, but are very lethal with no hospital around; luckily you are not on their menu.

The huge granite boulders were formed in a limitless variety of strange shapes, a product of the active erosion of a relative soft layer of granitic soil which once covered the landscape. Use your imagination to create your own names, the “football rock”, the “whale rock”, the “smiling whale rock”, the “Petrodromus”
or the "sky crashing hamburger rock" (different people have invented different names for the weird formations, take your pick). Although strangely shaped, all are natural, short of the contemporary graffiti on rocks close to the main highway. Walk into the landscape, and keep walking. Some small mountains, a few far from the highway and some visible from it (like the Pedregoso mountain 80 km south of Cataviña), have completely lost their soil cover and stand as bare rock mountains; on many, soil erosion is in progress. The canyons and dry washes crisscrossing the area have polished marble granite surfaces and many unexpected curves created by the infrequent floods. At these sites you can find the blue palm trees *Brahea edulis* that elsewhere on the peninsula are less common than the sky duster palm *Washingtonia robusta*. From both species the locals are producing the famous thatched roof houses, or "palapas", and shading shelters so common on the beaches of any resort in Baja. Perennials with flowers abound: white ratany *Krameria grayi*, rock pea *Lotus rigidus*, desert lavender *Hyptis albida*, incense *Encelia californica*, globe mallow *Sphaeralcea* sp., and many more.

Water, a lot of water, is always needed as the entire area is arid and rainless almost year around. Some desert rodents, we are told, can live on the moisture derived from the cacti they eat. Perhaps worth a try, but beware, cardon cactus *Pachycereus pringlei* sap, for example, is extremely toxic; it contains numerous alkaloids and corrosive oxalic acid that keeps most animals far away even if they are desperate for a drink. Do not consume this cactus even in extreme dehydration. Yet, the various species of the *Opuntia* cactus, (such as the choya: *Opuntia cholla*), produce countless flowers, and are edible for cattle. These cactus species serve as forage in time of necessity. Naturally edible annuals are in short supply in most areas of the desert in Baja and the Central Desert Park is no exception. It is very common to see cattle walking with some choya segments, that are easily detached from the mother plants even by the slightest touch, attached to their mouth, head and body. Apparently, it does not bother the animals and they can digest it despite the countless mini spikes covering the cactus. Humans beware. Although the cows do not care about these spikes, you should. Once, one of the authors accidentally had some choya segments attached to her knee. When she removed it out, it detached the skin, and this was not the bad part. Residual plant material remaining after removal of the spike caused irritating infections later that last.

The cactus itself greatly benefits from cattle grazing. In areas heavily foraged by cattle, it predominates, and vegetatively grown cactus segments are dispersed by the slow going desert cattle; they are never in a hurry, as every driver who encounters cattle walking on the highway will tell you.

Despite the arid desert, life is abundant here, especially the floral type. And what strange shapes it appears in. Nature went a long way and worked extra hours in this remarkable and remote place. The Central Desert Park shows that once you give life a chance, it can develop into unimagined shapes and forms. Take for example the cirio tree, as it is known to the locals, or boojum *Idria columnaris* as it is called in the north. It does not take a doctorate in botany to realize that it is an unusual tree, seemingly derived from a science fiction movie describing the "Yellow Planet". It is perhaps the most unusual plant of the Sonoran desert. It is not a regular tree, far from it. It can be considered a "living fossil" from millions of years ago. Nobody knows for sure, as fossils of the plant or its fossilized pollen have yet to be discovered. The species is older than the peninsula itself which split from mainland Mexico 4 - 5 millions of years ago. It has been slow to evolve and looks today perhaps as it did to our ancient ancestors. Some believe that the
Two elephant trees (center) growing in a rocky field with cirios and cardons.

cirio tree is at the end of a line of ancestral desert flora that inhabited the earth eons ago. The genus *Idria* contains only one species, the cirio tree. Although certainly not in danger of extinction, it is one of the last of its kind. Almost endemic to the park, it grows only here in large abundance, and also in a small stand in Sonora, mainland Mexico. Overall, its range is only a small fraction of the Sonoran desert. Some good souls claim that the park was created mainly to conserve this ancient tree.

The cirio tree usually has one trunk (sort of) and very short, primitive-like small branches (a single stem splits and continues to grow as two branches of equal age). The side branches look as if an afterthought of evolution aimed to accommodate only enough leaves needed for living and nothing else. Yet, one must admit, these mini branches are an ingenious solution to a major problem the plant faces—the strong desert winds and occasional hurricanes. They provide little resistance to the wind that otherwise might break the trunk. The jewel of the tree and the feature that captures the passing eye, is its bizarre crown. Although some trees are candle shaped, the tree top can take any variety of forms one can imagine on the theme of a stick: one stick, double stick, straight chandelier, tilted chandelier, snakes, candle holder. Joseph Wood Krutch, in his 1961 essay, provided a colorful description of the tree: "What, then, is this astonishing tree like? The right answer is "like nothing else on Earth", though the commonest description is like an upsidedown carrot .... But a fully grown specimen can reach a height of forty or fifty feet, tapering to a point from a base only a foot in diameter— which is far too slender for a respectable carrot. Moreover, they often branch in an absent-minded manner toward the upper end, and sometimes, as though embarrassed by their inordinate length, curve downward until the tip touches the Earth and thus becomes what is perhaps the only tree which makes a twenty-foot-high arch like a gateway into the Wizard's garden”.

The inspiration for the strange names attached to this "like-nothing-else-on-Earth" tree is obvious. Robert Humphrey described thirty years ago how the various common names for this tree were derived. To the Jesuit padres of Baja’s early modern history, it was reminiscent of a cirio, the large slender altar wax candles used in the Church’s religious ceremonies, historically made from animal fat. The Spanish speaking people of Baja still refer to *Idria columnaris* as the cirio tree. Influenced by Lewis Carroll’s book *The Hunting of the Snark*, the English-born botanist Godfrey Sykes, in the beginning of this century, was reminded of a "boojum", a mythical creature found in the desolate
A young cirio tree facing the drought. The cirio is first in the desert to indicate the hint of approaching drought when it turns golden. Then it sheds its leaves as fast as it can.

Far-off regions of Carroll's wild imagination. This name, also appropriate, stuck with the English-speaking Baja Californians.

The tree has many exceptional features. First described in 1789 by the historian Clavijero who noted its strangeness (see also Humphrey 2001). Like many other desert plants, such as the giant cardon cactus, it is a very slow grower, perhaps 3-4 cm in good rainy years. It may take between 50 to 100 years from germination of the seed until the tree produces its first flower. Similar to the leafless cacti, under harsh arid conditions the presence of leaves provides little advantage, thus the plant has a habit of shedding its leaves at the first hint of drought, passing quickly through a phase of golden-yellow, the cirio color, under the radiant desert sun.

Although it is not a succulent by definition, this tree can store large quantities of water in its trunk for drought days which are more frequent than rare in this part of the world.

No need to look hard for other strange looking plants as they are in abundance in the Central Desert Park. The elephant tree *Pachycormus discolor*, is only slightly less weird than the cirio. Although
The "cirio" tree or "boojum" *Idria columnaris* is really a living fossil. It's perhaps, the most unusual plant of the Sonoran desert. Some believe that the cirio tree is at the end of the line of ancestral desert flora that inhabited the earth eons ago. It is one of the last of its kind as the genus *Idria* contains only one species, the cirio tree. Above are just some of the weird and interesting forms and contortions that develop. Many have forks or complete arcs. Some especially tall cirios (about 20-25m) reach up to the Heavens.

It has branches like any other tree, the general appearance is of a strange tree. The trunk might be a meter in diameter, and looks as if permanently swollen. When the stems branch, they do so in a chaotic manner and the branches shrink very rapidly. This adds to their heavy, plump look. All together, this creates a grotesque shape resembling a crown 10m tall. Furthermore, if you look close, the bark tends to peel off in yellow-white sheets. The tree is leafless most of the year due to a lack of rain. Even when leaves are present, they never entirely camouflage the elephantine appearance. In the Central Desert Park, the cirio and the elephant tree contribute to the attractive photogenic niches provided by the big granite boulders. Furthermore, the clusters of large attractive waxy white flowers that appear always on the top.

Not everything growing in the park is on the strange side. Some plants, also common elsewhere on the peninsula, are exaggerated in size here. Take the giant cardon cactus. As elsewhere in the peninsula, they are plentiful. Yet, for reasons left for future researchers to discover, in the southern part of the park, they grow to tremendous size. It is the same species, as far as contemporary science can determine, that you find in other places in this southern Sonoran desert, yet, they are big here. Very big, dwarving any human standing by. Unlike other large specimens that are under threat by agricultural encroachment in the southern tip of Baja, these giants are well protected by a simple demographic fact: there are no human inhabitants, and likely...
won't be in the future, as the god of rain is not smiling here. True enough, when there is a rain, it is a torrential one that create temporal lakes in the desert (like the dry lake "laguna Chapala seca") which evaporate as you watch, producing fata morgana phenomenon of far away locations. Once we saw a large ship anchored in the middle of the simmering desert (the closest harbor is over 200 km).

The large desert agave *Agave shawii* is not an uncommon plant here as long as it grows vegetatively as a rosette of leaves like most agave species found in Mexico. True enough, even though they are heavy, bright green, and succulent, they are not defenseless against herbivores and the inevitable cattle grazing all over Baja. Each leaf is well armored with a single strong and sharp spine at the tip, and by other ferocious-looking spines along its sides. It will pierce your skin in a fraction of a second, if you walk too close. Like most agave plants, when it reaches maturity after 15 to 20 years, it displays a huge spectacular yellow flowering stalk up to 5 meters tall. This is pollinated by insects or bats, and then the entire plant dies out. Its progenies pollinated by insects or bats, and then stalk up to 5 meters tall. This is a huge spectacular yellow flowering maturity after 15 to 20 years, it displays most agave plants, when it reaches pierce your skin in a fraction of a second, if you walk too close. Like most agave plants, when it reaches maturity after 15 to 20 years, it displays a huge spectacular yellow flowering stalk up to 5 meters tall. This is pollinated by insects or bats, and then the entire plant dies out. Its progenies pollinated by insects or bats, and then stalk up to 5 meters tall. This is a huge spectacular yellow flowering maturity after 15 to 20 years, it displays most agave plants, when it reaches

October to April, as otherwise, the temperature is scorching. Do not forget your sturdy shoes; you can not do without them unless you were born here. Bring a partner and a cellular phone for your own security; you are in the company of snakes and other biting creatures. Another bright side, when you've had your fill of desert scenery or desert hardship, the nearest village beach is relatively close in Bahia de Los Angeles, an American type refuge on turquoise blue water equipped with bays and all the necessary islands, and warm waters year around. And a final tip for a safe return home, if you encounter major troubles deep in the desert, and in the absence of any helpful soul, you can always count on the permanent road block of the Mexican army in the middle of the park. The baby-faced young lieutenant promised us, when he took his entire platoon and Hummer truck to rescue our stranded pickup, "we are here to serve, whatever it takes". And they did.

ADDITIONAL LITERATURE


The authors are researchers in the Center of Biological Research of the Northwest, La Paz, Mexico. Dr. Yoav Bashan: bashan@cibnor.mx; Dr. Luz-Estela deBashan: legonzal@cibnor.mx; Dr. Jose Luis Leon de la Luz: jileon@cibnor.mx. Luz, and Yoav are Wildflower's Field Editors for Baja, Mexico.

ACKNOWLEDGEMENTS

The field survey on which part of this article is based was supported by a travel grant of the Center of Biological Research of the Northwest, La Paz, Mexico and by the Bashan Foundation. www.cibnor.org/conserv/cardon/icardon.html. Thanks to Dr. Cheryl Patten for polishing the English.