

# ADVENTURES IN GUANTANAMO BAY I.

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## Looking for *Opuntia militaris*.

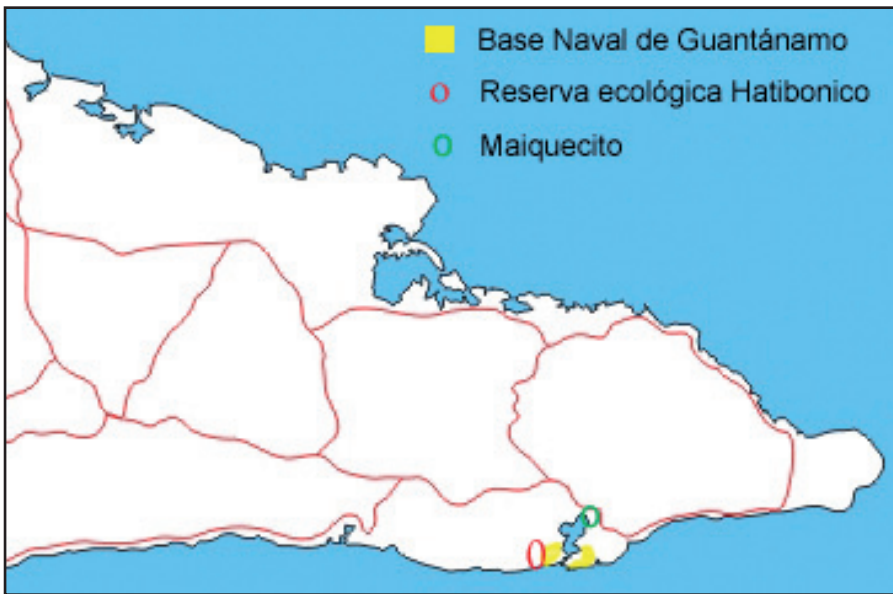
José Miguel Acuña (Cuba)

The bay of Guantánamo is a geographical accident of the Cuban southeast coast. Formed by an entrance channel in its southern part and for several bays to the north, it is a place of multiple coastal ecosystems. Varied vegetal formations surround this bay, mangroves, dry semi deciduous forests, coastal and sub coastal matorrales among others. (Capote & Berazaín, 1984).

Some of the valleys that surround these bays are flooded during the rainy season, others remain totally dry or are flooded with seawater, product of the tides. Several towns are dispersed in their surroundings. The predominant economic activities are the agriculture and salt extraction. The hydrographic drainages are poor and scarce, rainfall is low and aridity prevails. We are in the habitat of *Opuntia militaris*. (Britton & Rose, 1912).



Dense population of *Opuntia militaris* in habitat near Maiquecito. © José Miguel Acuña



Map of the eastern part of Cuba

This *Opuntia* was discovered and collected between 17th and 30th of March, 1909 by Doctor N. L. Britton at the U.S. Naval Station in the bay of Guantánamo. In 1912, it was described as a plant of 30 cm long, with weak branches, thick joints narrowly oblong to obovate, 5 cm to 8 cm long, easily breaking apart. 1 to 2 spines from areoles, sometimes more, acicular, 1 cm to 2cm long, white. Flower buds pointed; flowers small, 3 cm; tepals greenish cream, tinged with pink; pericarpel small, areoles without spines. Endemic. (Britton & Rose, 1919).

Many authors have ignored it in their works. According to Rodríguez (2005) *Opuntia militaris* is endemic of the surroundings of the U.S. Naval Base of Guantánamo, but he points out that it is a synonym of *O. triacantha*; without doubts he had as his reference to *The cactus family* (Anderson 2000). Other Cuban authors accept *O. triacantha* but it has been erroneously located in Cuba (Berazaín *et al.*, 2005). In Plan of Action for the Conservation of Cuban Cacti (González-Torres, 2007) appears *O. triacantha* as a Cuban plant again. In this case, the reference is *The New Cactus Lexicon* (Hunt *et al.*, 2006). Obviously, these synonymy and confusion come from *The Cacti of United States and Canada* (Benson, 1982).

In 2013, Lucas Majure of the University of Florida and his team carried out a magnificent work with a series of genetic studies, resuming the morphological and phylogenetic differences between *O. militaris* and *O. triacantha*. They pointed out that they come from different lineages, they separated them definitively and they determined that they are two independent species.



*Opuntia militaris* shares habitat next to *O. dillenii*. © José Miguel Acuña



*Opuntia militaris* prospers in an inhospitable and degraded landscape. © José Miguel Acuña

Now the taxonomy is clarified, we know where and how to see *Opuntia militaris*, that it is in the surroundings of the Guantánamo bay. But remember that in the entrance margins of the bay is the Naval Station of Guantánamo belonging to the United States of America (see map). The Cuban border and conterminous (sharing a common border) territories are protected inside a series of virtual rings with diverse levels of security. The military activity is evident in this part. Police checkpoints, border positions of the Ministry of the Interior and military polygons of the Revolutionary Armed Forces are habitual. For security reasons the access to certain areas is limited, only the locals have authorization. The only route that leaves the city of Guantánamo toward the municipalities of the southeast coast surrounds part of the bay and passes near these cacti.

During my trips I passed through this road and observed the opuntias from the window of the vehicle. Of course, *Opuntia militaris* doesn't grow only in the U.S. part of the Guantánamo bay. The "special" characteristics of the area and the scarce means of transportation made me desist to go see them closely. At the beginning of 2014 our friend Lodé communicated me the necessity of pictures in habitat of, among other cacti, *Consolea monilliforme* subsp. *guantanamana* and *O.militaris* for his taxonomic work in progress.



*Opuntia dillenii* inside a colony of *Opuntia militaris*. © José Miguel Acuña

On a trip to Imías to take pictures of the consoleas I went before through the route mentioned. Now with a new obstacle, a long wall of *Euphorbia lactea* defines the land wherein grows *O. militaris* although this time I was not going to admit defeated. When returning from Imías, I saw a possible access near the village of Maiquecito (see map); here, a part of the wall had a wire fence and at this place two days later I would take the pictures found in this article.

I took advantage of those two previous days as I obtained permission to enter the village of Hatibonico, bordering with the U.S. base at the western part of the bay. I made a pending visit to the ecological Reservation with the purpose of picturing *Melocactus evae* for a future article in this magazine. I was authorized to enter, although not to photograph; also I was not able to take out the camera from my bag. I was not allowed to take pictures here. That was the worst thing, but the best one was my surprise to see *Opuntia militaris* growing here also.

Then, I returned to Guantánamo with the firm decision of taking pictures of the plants seen near Maiquecito. Coincidentally in those days, Juan Suárez, a colleague collector from Havana, was in Guantánamo. I knew that he has family in Hatibonico and always visits it when he comes to this province. For this reason he doesn't need safe-conduct to enter in that territory. In a text message I requested him to take



Invasives *Euphorbia lactea* and *Acacia farnesiana* dominate the landscape © José Miguel Acuña



Detail of *Opuntia militaris* flower.

© José Miguel Acuña

pictures of the plants since he always travels with his camera, then in Havana I would pick up the pictures. Juan kindly consented and then I left for Maiquecito to prove lucky.

This area is surrounded with military polygons and after a few metres, there is a police checkpoint. It is very arid and not very inhabited. Accompanied by a cousin residing in Guantánamo, we pass below the wire fences and found a field

full of *Opuntia militaris* in full bloom. Without losing time and camera in hand I completed my task, in these properties it is not permitted either take pictures; signs indicate this all along the road. Although this habitat resembles a savanna, the vegetation is characteristic of coastal xeromorphic matorral.

The region is highly damaged, remains of buildings and fences that separate several areas in pasture fields exist. The dry season was finishing and the effects were visible in the vegetation. Only *O. militaris* was blooming and attracting bees, ants or butterflies.

## SHORT DESCRIPTION

The flowers are bell-shaped, 4 cm in diameter, the tepals in average number of 12, are slightly wavy, a pale yellow colour with a greenish tinge and a pale pink mid-stripe; 4-5 stigma lobes, yellow coloured, stamens greenish yellow; pericarpel 2 to 3.5 cm long, green with areoles 2 to 3 mm in diameter with numerous golden glochids of variable size, up to approximately 4 mm. *Opuntia dillenii* grows also here. The two species form groups, *O. dillenii* stands out inside the masses of *O. militaris*. The *O. dillenii* of this area, the same as those growing along the coast, were still not flowering.

Walking among the *Opuntia militaris* causes their cladodes comes off and they



A gigantic *Opuntia cochenillifera*, surprising in the natural habitat of *O. militaris*. © José Miguel Acuña

become hooked in clothes at the smallest close contact. Some plants were already showing the first fruits. They are oval, approximately 2 cm, dark purple red with areoles 3 mm, small golden glochids; the seeds are black, brilliant, wrapped in reddish transparent pulp, very sticky to the touch.

Due to the quantity of *Opuntia militaris* and *O. dillenii* specimens growing together, it suggests the possibility that *Opuntia cubensis* (Britton & Rose) grows here. It was observed in a valley near the southern coast in the bay of Guantánamo, Cuba. It differs in that plants have narrower joints, rather readily separable and smaller flowers, the stout spines are flattened a little. They grow near the colonies of *O. dillenii* and *O. militaris*, it is a probable hybrid between these two species. (Britton & Rose, 1912).

*Opuntia cubensis* is the hybrid resulting from *O. militaris* of the *Nopalea* clade as the mother and *O. dillenii* of the *Scheeriana* clade is the father. (Majure *et al.*, 2013). Thanks to science and determination, these discoveries are coming to light - secrets up to now kept by nature. Regrettably I didn't have more time to see if this was the valley where *O. cubensis* was seen before and document it in its natural habitat.



*Opuntia militaris* showing the first fruits of the season. © José Miguel Acuña



The extreme drought doesn't avoid that *Opuntia militaris* exhibits beautiful flowers.

© José Miguel Acuña





The author among opuntia population near Maiquecito. © José Miguel Acuña.

Regarding the populations of *Opuntia militaris* I didn't have references them existing in Hatibonico, west of the Guantánamo bay. With more than 100 specimens, maybe more, this population grows in conglomerate, polymictic rocky soil of volcanic origin. They bloom in vegetal formations of sub-coastal xeromorphic matorral and dry semideciduous forest, under bushes and other cactus like *Harrisia fernowii* and *Dendrocereus nudiflorus* or in full sun in company of *Melocactus evae*. Here, the vegetal formations are naturally fragmented in wide patches.

The population of Maiquecito seems more numerous in spite of being in a territory used as pasture, military polygon and infested by invasive plants: *Acacia farnesiana*, *Dichrodachis cinerea*, *Euphorbia lactea* and *Opuntia cochenillifera*. The conservation status is "least concern" (Berzaín *et al.*, 2005). A status that should be revised because of so many threats. Although the population of Hatibonico is somewhat protected by the ecological reserve, *O. militaris* and *O. cubensis* from this part of the bay are left to their fate, in the shadow of an unjust frontier.



*Opuntia militaris* gravel conglomerate, also a locality for *Melocactus evae* near Hatibonico, west side of the Guantánamo bay. © Juan Manuel Suárez.



The populations of *Opuntia militaris* in Hatibonico also grow under the shade of a dry forest vegetation. © Juan Manuel Suárez.



Branches detail of the two *Opuntias* species that grow very together. © José Miguel Acuña

One week later, already in Havana, I visited my friend Juan and he showed me the pictures. For my joy we had photographed all the cactus species that grow in Hatibonico and surroundings. Of course, it included *Opuntia militaris* and my requested *Melocactus evae*. This last is left for another cactus adventure....

To be continued...

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