



Leptocereus arboreus and its environment

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***Leptocereus* brings together a group of primitive lineage cacti native to the Greater Antilles, the highest number of described species living in Cuba, where it is considered the most important genus within the subfamily Cactoideae. One of the taller and more robust species that grows in this island is *Leptocereus arboreus*.**

Its habitat is on the south coast of the central region, in an area occupied by provinces of Cienfuegos and Sancti Spiritus, specifically from around the Jagua Castle at the entrance of the bay of Cienfuegos up to a few miles west of the Trinidad City (World Heritage Site).

The predominant vegetation is coastal scrub and semi-deciduous dry forest (Capote and Berazaín, 1984) at low elevations that are part of the mountains of the Massif Guamuhaya. It occurs on limestone karstic soil, with quartz mineral formations and outcrops of coral origin.

Leptocereus arboreus is apparently absent in areas where conditions are favorable for their development and grows scattered in large patches of these plant formations. One of these populations survives in Yaguanabo.

I visited the site in March 2013, at the end of the dry season. With help of Lisvany Garcia, a member the Orchid Garden in Ranchuelo and specialist ex-situ conservation of endangered plants. There is a tourist road that goes through this town full of natural charm, with a small beach, coral reefs, rivers and mangroves, also a small hotel and houses built in the hills east of the bridge of the Yaguanabo River. In the backyard of one house, we saw our first specimens of ***Leptocereus arboreus***.

They are the largest ones and can be seen from the road or the beach. From a short distance, it is possible to admire the large size and breadth of the trunks, some are old and from one of them I was able to obtain fruits that had matured and had fallen on the lower branches or on the rocky ground.



Leptocereus arboreus, habitat, Cuba .

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Leptocereus arboreus and ***Plumeria trinitensis*** growing north side on an elevation at Yaguanabo, the Guamuhaya massif in the background .
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Young ***L. arboreus*** ; right, ***Harrisia eriophora***, another rather uncommon cactus in this region. © J.M. Acuña.

The place's owners had cut the surrounding vegetation but they respected the cacti, the free spaces giving way to invasive species that occupy large areas of their habitat. The main ones are: *Dichrostachys cinerea*, *Acacia farnesiana* and *Leucaena leucocephala*. But *Leptocereus arboreus* doesn't seem to be affected. There are species in different stages of development that grows up under the shadow of the invasive plants.

These tree-like cacti, have an erect trunk and a maximum height which varies between 6 and 8 meters, the stem becomes woody in age and the lower short ones become new branches in time.

Branches are between 30 centimeters to 1 meter long. Ribs are straight, margins curved, 5 to 7. Radials and central spines approximately 15, yellow to grayish brown colour, straw-coloured in age, stiff and sharp.

Although plants do not bloom at this period of the year, sometimes, dried buds appear at the tip of young branches. According to descriptions, flowers are whitish-yellow, nocturnal. Fruits are elliptic, yellowish when mature, and the areoles have golden spines.



An invasive vegetation surround two adult plants.

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Nouvelles ramifications de couleur vert brillant chez un exemplaire adulte.

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Opuntia dillenii growing on a sand dune, Playa Limones, west of Playa Yaguanabo. © J.M. Acuña

When they are completely dry, they partially open or they do it when they have fallen on the ground. Seeds are dark, semi-flattened and irregular.

Adult plants maintain a distance between them of at least six meters. Young specimens do not grow near other adult ones, it looks as if they keep a designated distance between them.

The flowers appear when the plants reached a considerable height and have a developed trunk. *Leptocereus arboreus* shares habitat and live together with *Pilosocereus brooksianus*. Sometimes, these two form sympatric colonies.

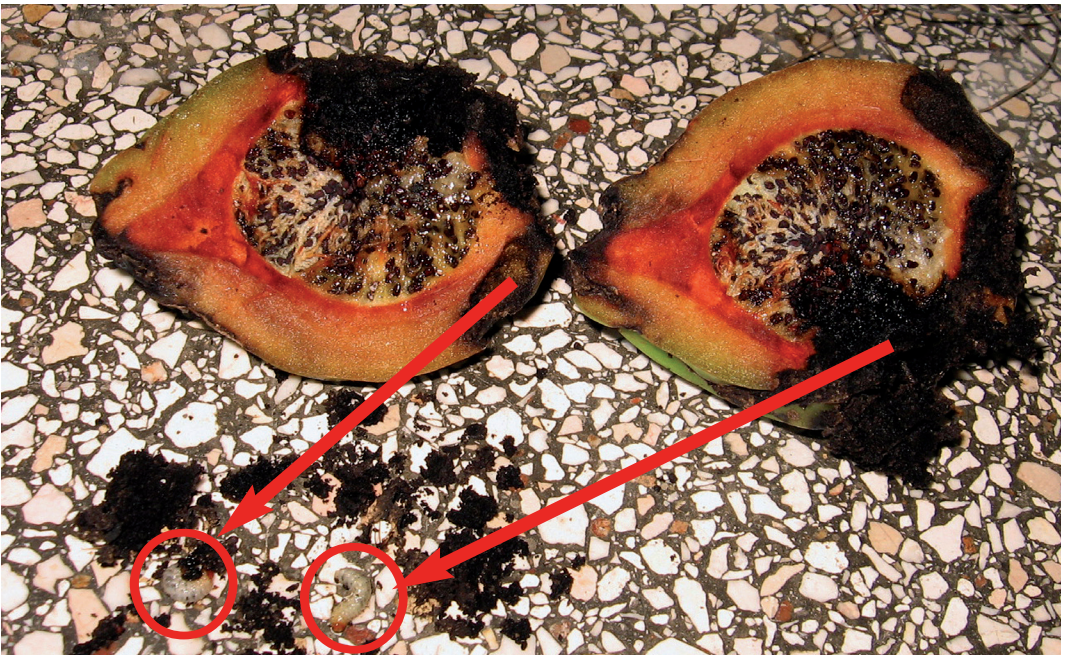
There, the biodiversity is remarkable: *Bursera simaruba* is an introduced plant. *Plumeria trinitensis*, *Erythrina elenae* and *Harrisia eriophora* are also present. On the beach *Opuntia dillenii* (= *O. stricta* in Hunt *et al*, 2006) grows at full splendor on the sand dunes.

Three months later, my friend Lisvany accompanied this time by an agronomic student, Adrian Valladares and we travelled along the Rio Yaguanabo and took photos of very old specimens growing on big rock blocks.



Plumeria trinitensis & Flower

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Fruit of *Leptocereus arboreus* ravaged by coleoptere larvae.

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The author of this article, Jose Miguel Acuña, with a young *Leptocereus arboreus* among vegetation.



Adrian Valladares, with a *Leptocereus arboreus* over the river.

© L. Garcia



Leptocereus arboreus & fruit, habitat, Cuba .

© Lisvany Garcia

These *Leptocereus* showed a very robust trunk and many green coloured fruits.

This area is not degraded and is typical of xerophytic vegetation and evergreen forest. The human activities are reduced to breeding cattle.

What is admirable is the resistance of these species to the invaders. They have a strong ability to adapt to adverse weather conditions such as hurricanes, extreme droughts and human activity that degrades the Yaguanabo's environment with grazing, logging and urbanization.

Leptocereus arboreus grows in unprotected areas, its population spread over a vast and degraded habitat, making its conservation status considered as VULNERABLE (Berzaín *et al*, 2005).

Like many others, Yaguanabo is a place where the survival of the species depends on our work with nature.

Text: J.M. Acuña, photos: J.M. Acuña & L. García



BIBLIOGRAPHICAL REFERENCES:

- Berazaín R., F. Areces, J. C. Lascano & L. R. González-Torres. (2005). Lista roja de la flora vascular cubana. Documentos Jardín Botánico Atlántico, Gijón, 4: 1-86.
- Capote R. & R. Berazaín (1984). Clasificación de las formaciones vegetales de Cuba. Revista Jard. Bot. Nac. Habana, 5(2): 27-75.
- Hunt, D. R., Taylor, N.P., Charles, G. (2006). The New Cactus Lexicon.