



# THE INTERNATIONAL PALM SOCIETY

June 2020

NEWSLETTER

## Virtual hiking on Reunion Island, highlands edition by Andy Hurwitz

So many IPS members were looking forward to visiting Reunion Island for the 2020 IPS Biennial. The coronavirus pandemic forced us to forgo planned travel and group events, and stay-at-home orders have us longing to get outside. In lieu of a real hike in forest, we offer you this virtual hike.

The islands of the Mascarene archipelago were formed by emerging volcanoes. Reunion Island is steep and mountainous, encompassing two adjoining volcanic massifs. The iconic pitons (peaks), three naturally occurring amphitheatres or cirques, and the steep rock walls known as ramparts are recognized by UNESCO as a world heritage site. It is this topography which provides many disparate ecosystems thereby creating tremendous variability of flora. For example, the eastern coast, in 1987 received rainfall totaling 2735 mm over a three-day period (which is reportedly a world record), while the western coast is a dry ecosystem supporting many *Euphorbia* species. The archipelago is isolated, and as a result species have had substantial time to evolve. Of the nearly 600 endemic species to the Mascarene Islands, most are on Reunion in part due to the inaccessibility of the central mountainous interior. Thus, the flora was protected from human encroachment.

### ACANTHOPHOENIX

The taxonomy of the genus *Acanthophoenix* (*Acantho* = spine) has an interesting backstory. In the late 19<sup>th</sup> century Jacob de Cordemoy nimbly noted two distinct species. The *rouge* (red) found in the windward eastern lowlands and the *noir* (black) growing in the mountainous interior. By 1980 Drs. Moore and Gueho defined the genus as an extremely variable monotype. Their confusion was understandable given the research was conducted at lower elevation reserves with hybridized plants. Over a century later, Professor Cordemoy was vindicated when Nicole Ludwig, published data in *Palms* 50 (2006). This definitively established that not only are there two species, but also a third (A.



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The entire genus is solitary, pleoanthic (does not die after flowering) and monoecious (male and female flowers on the same plant) and very spiny! All demonstrate a characteristic “elephant foot” base. Leaves are pinnate. Fruits are black and plentiful.

*Acanthophoenix crinita* (provincial name: *palmier noir des Haute*, or black palm of the highlands) is found in a singular habitat; high elevation, humid with typical late morning fog. The species is endemic to Reunion Island and found on none of the other islands.

Although all members of the genus have conspicuous crownshafts, those of *A. crinita* are the most prominent and even appear swollen. Ludwig describes the stiff bristles of the leaf sheath as “tenrec fur” (the tenrec is a hedgehog endemic to Madagascar). Some 65,000 mature trees were felled by the forest agency to reap the economic benefit of selling the edible hearts. And sadly, illegal poaching still occurs. In cultivation, this palm requires 4000 mm of rain per year and cool temperatures averaging <17°C. Typical weather characteristics are “cloud cover and frequent fog” (Ludwig). Because of its remote location, conservation status is not threatened.



*Acanthophoenix crinita* (left) showing a crown of dark green, pinnate leaves, a bulging, spiny crownshaft, and three flower stalks and their attendant boat-shaped bracts.

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Let's Hike!

We will begin our hike in the mountainous interior visiting the Belouve forest. This is a primary forest with unique biodiversity. We will encounter endless waterfalls, and the scents and sounds of what is referred to as an enchanted forest. The forest is moist and often foggy. There will be spectacular views from the edge of the ramparts. The path will likely be wet. Two enormous pitons will be visible. Here, at 1500 meters elevation, we will find *Acanthophoenix crinita*.

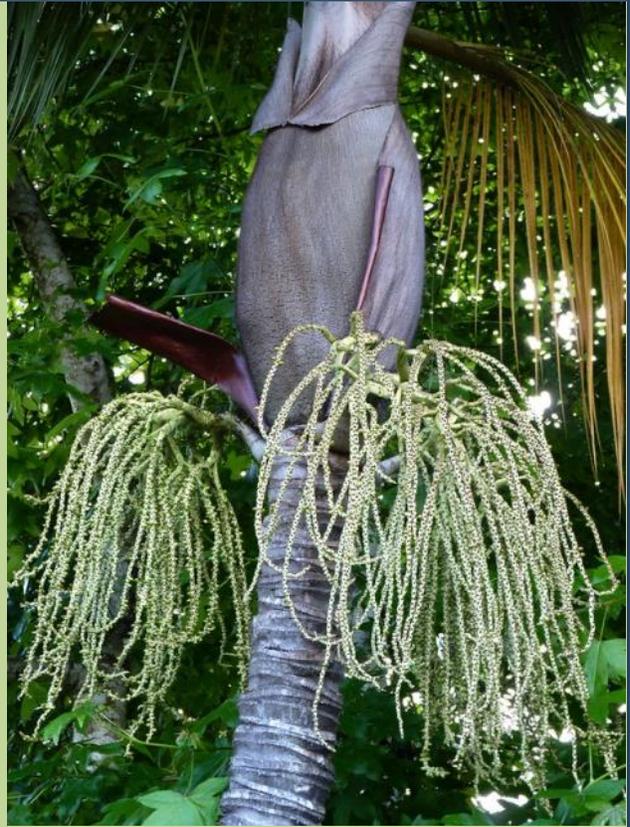


FOREST OF BELOUVE



## Virtual hiking on Reunion Island, highlands edition

Three views of *Acanthophoenix crinita* showing its bulging crownshaft and densely stacked leaf-scars (right), its foggy montane habitat (lower right), and a handsome specimen with a fine coating of needle-like, black prickles on its crownshaft (lower left).



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### Piton de Takamaka

Next we travel along a spectacular scenic winding road to the southern forest of Piton de Takamaka. There will be near continuous panoramic views of waterfalls, jagged peaks, and thick deep vegetation. We will be very close to the caldera of the volcano. The Takamaka valley is one of the wettest places on earth.



*A. crinita* growing among *Pandanus montanus* and the tree fern *Cyathea borbonica*. All three endemic only to Reunion Island.

*Pandanus montanus* (left) is endemic only to Reunion. It forms a “wet thicket” ecosystem at 1400–1800 m, where *A. crinita* grows.

*Angraecum borbonicum* (right), an orchid endemic to Reunion.



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### FORET d'EDEN

*Hyophorbe indica* is endemic to Reunion Island and found nowhere else. It occurs in moist forests such as the Foret d'Eden. This is a solitary palm with pinnate leaves and a smooth trunk. The trunk has no bulge, which differentiates it from other members of the genus. Furthermore, the inflorescence branching pattern distinguishes it from *H. vaughanii*.



## Next month: Virtual Hiking in Reunion, lowlands edition

*Acanthophoenix rubra* in the hamlet of Ilet a Guillaume (below, left).



The author gratefully acknowledges Olivier Reilhes, without whom these “hikes” would certainly not be possible. Olivier kindly permitted his magnificent botanical photography to be used for this edition of the newsletter. All photos are his.

Additionally, Olivier is the editor of Lantania, the journal of the Palmeriae-Union. The journal (above, right) can be found here:

<http://www.palmeraie-union.com/latania.php>

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