

# Montgomery Botanical NEWS

Advancing research, conservation, and education  
through scientific plant collections.

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## URUGUAY 2006 | ON EXPEDITION FOR CONSERVATION

For years I have studied various coconut-related palm genera, including *Butia* and *Syagrus*. Originally, *Syagrus* was thought to have its origin in a *Butia*-like ancestor. However, my recent work suggests it was just the opposite—*Butia* evolved from a grass-like *Syagrus* ancestor. To fully explore those questions, I needed more collections of *Butia*, more field observations, and more field measurements.

What better place to collect *Butia* than Uruguay where more than half the native palm species are *Butia*. I had seen dried collections and images of *Butia* from populations in Argentina and southern Brazil that did not fit known species. I thought those species might extend into Uruguay. So, at the long-standing invitation of my Uruguayan friends, I collected the palms of Uruguay in 2006. From my journal, I recount two days during which I saw most of Uruguay's palm species.

SATURDAY, MARCH 11, 2006

We arrived in Rivera on the Brazilian border in late afternoon. The area (once natural pastures) is being turned into eucalyptus forest. Our guide from the lumber company took us on a dirt road southwest of Rivera to see a curious multi-stemmed *Butia*. We climbed a steep slope to view one under a large overhanging rock. It had seven fire-damaged stems and I encountered only five seeds. This species also grows in the southwest corner of Rio Grande do Sul, Brazil, and I have been curious about it for years. Its unusual multiple short trunks and pendant leaves form an attractive "palm dome". We did not have time to explore the area as we needed to get to Cerro de Mirinaque before nightfall.

On the way back to the main road, we spotted a near perfect specimen of the same palm in an open field. It was identical to the images I had seen from Rio Grande do Sul, Brazil! This *Butia* probably represents a sixth species for Uruguay and a new species for science. We continued on to Cerro de Mirinaque where *Butia paraguayensis* had been collected.

Arriving at dusk, we hurried up the flat-topped mount. The sides of Mirinaque are steep and broken. The palm grows on its flat top, the remains of an ancient eroded plain. I only had time to take a few measurements, collect a specimen, and descend the steep rocky slope before nightfall. A full moon aided our descent.



A spectacular population of *Butia yatay* in Quebracho.

We drove until midnight to Paysundu, on the frontier with Argentina, in order to be closer to our location for collecting the following day. By the time I finished taking measurements, pressing and bagging my plant material in alcohol, it was 4:30 a.m. Fortunately, daylight saving time was changing to standard time that very night, so I had an extra hour to rest before setting out at 8:00 a.m. the next day.

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## Uruguay 2006 ON EXPEDITION FOR CONSERVATION *(continued from front page)*

SUNDAY, MARCH 12, 2006

We drove along the scenic Uruguay River and continued north to Quebracho. Along several dirt roads we saw healthy populations of *Butia yatay*. Young *B. yatay*, with their persistent, long, spiny petioles, defend themselves well against cattle. However, at germination, the unarmed seedlings are just as vulnerable as the coastal *Butia capitata* var. *odorata* which, because of herbivory, have few young plants to reinvigorate the aging palmetums. Since the arrival of cattle, the seedlings have all been eaten, and the old palms are often not replaced



A possible new *Butia* species near Rivera forming a "palm dome".

naturally. Uruguayans believe the aging palmetums may be 400 years old. We collected several population seed samples.

After spending quality time with the *Butia yatay*, we returned to Paysandu and headed south. When we reached the bridge over Arroyo Rabon, we stopped at a small population of *Trithrinax campestris*. We found one plant with flowers, but most had immature fruit. I searched under the plants, rooting like a feral pig, to find a few old seed. Crawling under *T. campestris* is dangerous business as the leaflet tips of the stiff fan leaves are like spears and I had the bloodstained cap and forehead to prove it. I was only able to identify about 20 "good" seed after my float test. Once again, it was early morning before I finished processing the plants.



View from the top of Cerro de Mirinque with a relic population of *Butia paraguayensis*. (Photo, courtesy Dr. Mauricio Bonifacio)

### ADVANCING CONSERVATION

I am pleased to report that seven *Trithrinax campestris*, one *Butia paraguayensis* (from Mirinaque), and, so far, 16 *B. capitata* var. *odorata* have germinated in Montgomery Botanical Center's nursery. There is still time for the new *Butia* and *B. yatay*, which, historically, can take a couple



*Trithrinax campestris* with its stiff spine-tipped fan leaves and inflorescence with inflated bracts.

of years to germinate. It takes diligence in the field and patience in the nursery to build a scientifically valuable palm collection. I am proud to be a part of the Montgomery Botanical team playing an important role in the conservation of these species.

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