

Exploring the Palms and Cycads of Belize

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On the Yucatan Peninsula of Central America, Belize is nestled like a jewel on the Caribbean Sea between Mexico and Guatemala. This small country presents a diversity of ecosystems to the explorer, from mangrove swamp and savannah around Belize City on the central coast, to dry pine forests in the interior, to the moist tropical forests of the Maya Mountains in the south. During July and August 1999, in collaboration with Montgomery Botanical Center, we and field assistant Jerrod Butcher investigated this diversity in search of palms, cycads, and other interesting plants.

Within the southern Maya Mountains are numerous villages populated by Mayan indigenes who live with few modern conveniences in traditional *Attalea cohune*-thatched houses. While collecting in the vicinity of San Felipe and Pueblo Viejo villages, an unexpected find were fruiting plants of what we tentatively identified as *Chamaedorea nationsiana*, a species known as "corn-palm" to the Maya due to the tightly-packed infructescences. Our find is the first documentation of this species in Belize. In the high limestone ridges, we also found the rare *Chamaedorea*

adscendens and sterile specimens of *C. graminifolia*. While collecting these palms, we became acquainted with the frequent downpours and devilish iridescent blue mosquitoes that were to plague us for the rest of our time in the Maya Mountains.

Small sinkholes occur throughout the Maya Mountains, resulting from the collapse of underground rivers and caves. During our exploration of a particularly large and deep sinkhole, our guides pointed out jaguar footprints leading to and from a still-warm spot under a rock ledge. We cautiously explored the sinkhole and found numerous sterile individuals of a species tentatively identified as *Zamia prasina*, a rare cycad that has also been collected in mountainous eastern Guatemala. The plants were growing on the floor and walls in a thick layer of bat guano.

The highlight of our trip was a week spent in the Columbia Forest Reserve, a huge tract of wet forest stretching to the Guatemalan border. With three Mayan guides and two horses, we followed hunting trails, collected by day, and spent nights in the camps once used by chicle harvesters. We experienced terrifically intense thunderstorms nearly every night, and nothing we owned was dry; but fresh

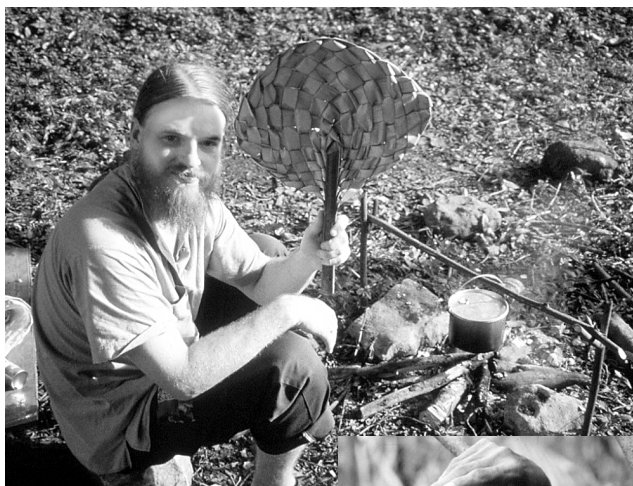
tortillas and instant coffee fortified us each morning. Along with the typical lowland palm species, we also collected *Chamaedorea geonomiformis*, *Asterogyne martiana*, and species of *Geonoma*. One particularly beautiful palm, *Synechanthus fibrosus*, could be spotted easily in the dark forest with its jewel-like clusters of yellow, orange, and red fruits. At the same time, we were careful to avoid unintentional contact with species of *Astrocaryum* and *Bactris*, two palms whose slim trunks are covered with painful spines. One learns to look carefully before grabbing for support on the steep and slippery trails.

The pinnacle of our week in the Reserve was the ascent of Little Quartz Ridge, an igneous formation which reaches an elevation of 900 meters and is more floristically similar to the highlands of Guatemala than to the karst topography surrounding it. During our strenuous climb, we made collections of *Colpothrinax cookii*, a majestic palm occurring only in this area of Belize. We took a break in a clearing on top of the ridge, surrounded by waist-high bracken ferns, which our guide Valentino began to clear with his machete. Our break ended quickly as our Belize associate, Valentino Tzub, uncovered one,

two, three! large pit-vipers sunning themselves too close for comfort. These snakes are known as "two-steppers"—apparently a victim only gets two steps after being bitten!

During our month in Belize, we were fortunate to find so many palms fruiting. Out of 40 palm species known or expected to occur in Belize, we collected herbarium specimens and took photographs of 24 species, totaling 87 individuals.

Of these, seeds were collected from 18 species. Although we were less successful in finding reproductive cycads, we have maintained a collaborative research program with our Mayan friends in which they monitor several cycad populations. Seeds of *Ceratozamia robusta* were collected by them in late December, 1999, and are headed for the nursery at MBC.



Title Box: Victor Sho, age 9, holding up a broom leaf (*Cryosophila stauracantha*). **Above:** John Janovec cooling off with a fan made out of *Attalea cohune* leaves. **Right:** Mayan field botanist Valentino Tzub.



ADVENTURES ABROAD