

Montgomery Botanical NEWS

*Advancing Research, Conservation, and Education
through Scientific Plant Collections*

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**Integrated
Plant
Conservation**

A new model for cycad

Integrated

A Remote Expedition

Patrick Griffith and Michael Calonje recently led a collaborative team to distant caves in the Maya Mountains. In addition to the Montgomery staff, the team included botany, horticulture and wildlife experts from Belize Botanic Gardens (BBG), Teakettle Enterprises, and the Ya'axché Conservation Trust, in addition to local and national support teams – a total of 18 people, three horses and three dogs!

The species at the center of this work – The Sinkhole Cycad, *Zamia decumbens* – has been of great recent interest (please see page 2 and also the back cover). The same geographic circumstances that make this cycad ideal for research and conservation – remote caves in the mountain forest – prompt careful logistics and planning. The field sites are over a full day's walk beyond where the roads end and quite near the Guatemalan border. Three nights of distant bivouac with food, camp gear and botanical tools – for such a large group – necessitated the significant pack train. In addition, the increased presence of xateros (palm poachers) in the area made security support necessary.

These major efforts were absolutely worth it: Michael and Patrick were delighted to learn of and document a third major remote population of this cycad! The team took extensive notes, photographs, DNA samples and seeds for research and conservation. These seeds will augment conservation plantings at BBG and Montgomery. Based on our recent DNA studies (see page 2), seed collection from multiple sites and different years will be vital to represent the full range of genetic diversity in the wild.

Closing the Loop

In addition to the field study, initial work on conservation outreach and education began at BBG. To "close the loop" on conserving this rare cycad, BBG expert Rudy Aguilar is incorporating cycad horticulture into their very successful Professional Gardeners Training Program.

These carefully integrated efforts – DNA analysis, field survey, horticulture and education – are designed to fully envelop this living treasure in a safe, secure and thriving network of protection and understanding. For Montgomery, this level of integrated effort sets an even higher standard to apply in future projects.

Background: The largest known population of *Zamia decumbens* thrives in a unique sinkhole habitat
Front cover: The expedition team studying cycads – 200 feet below ground level!

conservation

horticulture, science and education



Professional Gardeners Training at Belize Botanic Gardens



The team packing up camp —Top row, left to right: Chaparro, Patrick, Valentino, Darius, Freddy, William, Orleano, Helen, Kevin & Marmaduke. Bottom row, left to right: Michael, Jose, Katarina & Marvin.



صندوق محمد بن زايد

للمحافظة على الكائنات الحية

The Mohamed bin Zayed SPECIES CONSERVATION FUND



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