



MONTGOMERY BOTANICAL CENTER

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

EXPEDITION REPORT

MBC Cycad Conservation Expedition Kuna Yala Province, Panama | July 9-18, 2007

Expedition Team and Contact Information

*Michael Calonje, Cycad Biologist
Montgomery Botanical Center
michaelt@montgomerybotanical.org*

*Randal J. Moore
Heritage Member
Montgomery Botanical Center*

*Montgomery Botanical Center
11901 Old Cutler Road
Coral Gables, FL 33156
(305) 667-3800*

*Alberto Taylor, Ph.D.
Cycad Researcher
University of Panama*

*Heraclio Herrera
Botanist and Biologist
Fundación Dobbo Yala*

*Domingo Díaz
Agricultural Technician
Fundación Dobbo Yala*

SUMMARY

The Montgomery Botanical Center (MBC) Panama 2007 expedition to Kuna Yala Province successfully obtained important conservation material and data.

The expedition was supported by a generous donation from MBC Heritage Member Randy Moore. Successful international cooperation and close collaboration with the Kuna communities helped accomplish the expedition objectives.

In addition to his financial support, Randy's prior experience in Kuna Yala and his network of contacts allowed MBC access to Kuna tribal areas previously unexplored for cycads. This led to the discovery of dense and extensive populations of *Zamia cunaria*, a cycad previously known from only one location, and believed to be extremely rare. Randy's support also allowed for the participation of Dr. Alberto Taylor, cycad researcher at the University of Panama.

Extensive morphological measurements and field observations of two *Zamia cunaria* populations taken by Dr. Taylor and the rest of the expedition team suggest that *Zamia cunaria* and *Zamia ipetiensis* may be the same species, as the morphological variability presented by the studied plants falls within the accepted description of both species.

This expedition led to a greater understanding of the distribution, conservation status, and ecology of *Zamia cunaria*, and lays the groundwork for further study. The nine-day expedition resulted in the valuable addition to MBC's collection of 471 seeds representing eight species and 17 accessions of palms and cycads. The scientific data, photographs, herbarium specimens and seeds collected during

the expedition have greatly increased the scientific, educational, and conservation value of MBC's collection.



Zamia cunaria in habitat in Kuna Yala.

Cycad Conservation Expedition

Summary of Seeds and Herbarium Specimens Collected

Species	Collection #	MBC Accession #	Seeds		Herbarium Specimens
			MBC	PMA	
<i>Calypstrogyne costatifrons</i>	MAC07-001A	20070587	37	---	2 complete specimens
	MAC07-001B	20070588	1	---	
<i>Geonoma interrupta</i>	MAC07-002A	20070589	100	---	2 complete specimens
<i>Pholidostachys pulchra</i>	MAC07-003A	20070590	34	---	2 complete specimens
<i>Desmoncus orthacanthos</i>	MAC07-004A	20070591	16	---	1 complete, 1 sterile
<i>Zamia cunaria</i>	MAC07-005A	20070592	78	79	1 complete female, 1 female cone only
	MAC07-005B	20070593	13	12	
	MAC07-005C	20070594	9	9	
	MAC07-005D	20070595	32	32	
	MAC07-005E	20070596	3	3	
	MAC07-005F	20070597	3	0	
	MAC07-005G	---	0	1	
	MAC07-005H	---	0	1	
<i>Zamia cunaria</i>	MAC07-006A	20070598	71	71	1 sterile, 1 complete male, 1 female cone only
<i>Elaeis oleifera</i>	MAC07-007B	20070599	30	---	---
<i>Attalea allenii</i>	MAC07-008A	20070600	24	---	2 complete specimens
	MAC07-008B	20070601	11	---	
	MAC07-008C	20070602	4	---	
<i>Synechanthus warscewiczianus</i>	MAC07-009A	20070603	5	---	2 complete specimens

MBC=Montgomery Botanical Center PMA=Panamanian National Herbarium



Expedition Team on Carti River



Male cones, *Zamia cunaria*