



Montgomery Botanical Center

Advancing research, conservation, and education through scientific plant collections

REPORT

Summary of Montgomery Botanical's Participation in the 8th International Conference on Cycad Biology:

CYCAD 2008

January 12-18, 2008 – Panama City, Panama

Introduction: Cycad 2008 assembled cycad researchers worldwide to present and discuss progress in cycad research and conservation. A significant number of participants were affiliated with Montgomery Botanical Center, as MBC staff, Montgomery Botanical Research Fellows, MBC Research Associates, MBC Heritage Members, or MBC Honorary Members. This report details the participation of those attendees, acknowledgement of MBC during the conference, and institutional support of MBC for Cycad 2008.

MONTGOMERY BOTANICAL CENTER: INSTITUTIONAL SUPPORT

Co-sponsor of conference. Provided:

- One student scholarship
- One researcher scholarship
- Support for conference materials.

MBC STAFF

Michael Calonje (MBC cycad biologist)

- Presented research poster, titled: **A Morphological Comparison between *Zamia fairchildiana* and *Zamia pseudomonticola*.**
- Translator of research abstracts for conference program.
- Translator for audience questions.

Patrick Griffith (MBC executive director)

- Presented research talk, titled: **Time, place, and relationship: Cycad phenology in phylogenetic and biogeographic context**, coauthored with Damon Little, Michael Calonje, Dennis Stevenson, and Chad Husby.
- Moderator for conference session: **Generalidades / Overviews**
- Participated in IUCN Cycad Specialist Group meeting.

MONTGOMERY BOTANICAL RESEARCH FELLOWS

Alberto Taylor (Universidad de Panama)

- Chaired, organized, and ran entire conference and all related functions.
- Presented research talk, titled: **Ethnobotany of Panamanian cycads.**
- Lead author of research talk, titled: **The plicate-leaved *Zamia* species of Panama**, with Jody Haynes (presenter) and Greg Holzman.
- Presented research poster, **Natural pollination, seed cone development and viable seed production in an “ex situ” *Zamia* species in Panama**, with Gaspar Silvera.
- Coauthor of research talk, titled: **Characterization of the carotenoids in the red-brownish leaves and seed coats of some endemic zamias from Panama**, with José Robinson (presenter) and Enrique Murillo.
- Coauthor of poster, **Population biology and comparative leaf differentiation of four disjunct populations of *Zamia obliqua* A.Br. (Cycadales: Zamiaceae) in Panama**, with Ruby E. Caballero (lead author).
- Coauthor of poster, **Features of population biology and foliar morphological variation of a population of *Zamia pseudomonticola* L.D. Gómez in western Chiriqui, Panama**, with María Félix Ríos (lead author).
- Coauthor of poster, **Comparative morphological analysis and population biology of *Zamia elegantissima*, Schutzman, Vovides and Adams, under allopatry and sympatry in Panama**, with Ada Rodríguez (lead author).
- Participated in IUCN Cycad Specialist Group meeting.

Damon Little (The New York Botanical Garden)

- Presented research talk, titled: **Cycads in the Gymnosperm Tree of Life**, coauthored with Dennis Stevenson.
- Presented research talk, titled: **DNA barcoding in cycads: progress and problems**, coauthored with Dennis Stevenson.
- Coauthored research talk, titled: **Time, place, and relationship: Cycad phenology in phylogenetic and biogeographic context**, with Patrick Griffith (lead author), Michael Calonje, Dennis Stevenson, and Chad Husby.
- Coauthor of poster, titled: **DNA barcoding in the Cycadales: testing the potential of proposed barcoding markers for species identification of cycads**, with Chodon Sass (lead author) Dennis Stevenson, and Chelsea Specht.
- Coauthor of poster, titled: **Origin of the bitegmic integument? Investigations in ovules of unitegmic *Zamia furfuracea***, with Christian Schulz (lead author), and Dennis Stevenson.

Silvia Salas-Morales (SERBO)

- Presented research talk, titled: **SERBO and the Zamiaceae of Oaxaca**, with Jeff Chemnick.

MBC RESEARCH ASSOCIATES

Cristina Lopez-Gallego (Universidad de Antioquia)

- Presented research talk, titled: **Effects of habitat degradation on the within- and between-population genetic structure of a rainforest *Zamia* L.**
- Presented research talk, titled: **Population-level studies on Colombian Cycads**, with Ana-Maria Benavides.
- Participated in IUCN Cycad Specialist Group meeting.

Eric Brenner (The New York Botanical Garden)

- Presented research talk, titled: **The cycad (and gymnosperm) project**, with Dennis Stevenson, Eduardo de le Torre, Manpreet Katari, Ernest Lee, Rob DeSalle, W. Richard McCombie, and Gloria M. Coruzzi.
- Presented research talk, titled: **The role of glutamate receptors in plants**, with Phil Feinberg, Anna Nowogrodzki, Dennis Stevenson, and Gloria Coruzzi.
- Coauthor of research talk, titled: **Population genetics of the recently endangered cycad, *Cycas micronesica* K.D. Hill**, by Angelica Cibrian Jaramillo (lead author and presenter), Thomas Marler, and Rob Desalle.

MBC HERITAGE MEMBER

Loran Whitelock (Cycad Gardens)

- Coauthor of research poster, titled: **Key to the species of *Ceratozamia***, with Timothy Gregory (lead author), Jody Haynes, Jeffrey Chemnick, and Miquel Angel Pérez-Farrera.

MBC HONORARY MEMBERS

Alan Meerow (USDA—Chapman Field)

- Presented research talk, titled: **Searching for alternative nuclear markers for cycad molecular phylogenetics: Current research at USDA - Miami, Florida International University, and Fairchild Tropical Botanic Garden**, with Carl Lewis, Jeremy Moynihan, Kyoko Nakamura, Sandra Namoff, James W. Borrone, and Javier Francisco-Ortega.
- Presented research talk, titled: **Population genetics of Puerto Rican *Zamia***.
- Coauthor of research talk, titled: **Patterns of population genetic diversity in the *Dioon edule* Lindl. complex (Zamiaceae) inferred from DNA microsatellite data**, with Jeremy Moynihan (presenter), Jorge González-Astorga, Andrew Vovides, Matthew Osentoski, and Javier Francisco-Ortega.
- Moderator for conference session: **Nuevos enfoques / New Approaches**.

Willie Tang (USDA)

- Presented research talk, titled: **Taxonomy, behavior and evolutionary patterns of the cycad weevil genus *Rhopalotria* (Coleoptera: Curculionoidea: Belidae) in North and Central America and the Greater Antilles**, with Charles O'Brian.
- Coauthor of research talk, titled: **Pollination of island cycads: predictions on the role of isolation, island biogeography, insects and wind**, presented by Irene Terry.
- Presented research poster, titled: **Cone size in the Florida cycad *Zamia integrifolia*: Trade-off between seed size and seed number**.
- Participated in IUCN Cycad Specialist Group meeting.

Jeff Chemnick (Ganna Walska Lotusland)

- Coauthor of research talk, titled: **SERBO and the Zamiaceae of Oaxaca**, with Silvia Salas-Morales.
- Coauthor of research poster, titled: **Key to the species of *Ceratozamia***, with Timothy Gregory (lead author), Jody Haynes, Miquel Angel Pérez-Farrera, and Loran Whitelock.
- Participated in IUCN Cycad Specialist Group meeting.

ACKNOWLEDGEMENT OF MBC

The following research acknowledged MBC for providing plant specimens, support, or collaboration.

- **The cycad (and gymnosperm) project.** Eric Brenner, Dennis Stevenson, Eduardo de le Torre, Manpreet Katari, Ernest Lee, Rob DeSalle, W. Richard McCombie, and Gloria M. Coruzzi.
- **Cycads in the Gymnosperm Tree of Life**, by Damon Little and Dennis Stevenson.
- **Population genetics of Puerto Rican *Zamia***, by Alan Meerow.
- **Time, place, and relationship: Cycad phenology in phylogenetic and biogeographic context**, by Patrick Griffith, Damon Little, Michael Calonje, Dennis Stevenson, and Chad Husby.
- **An overview of the many possibilities of the use of cycads as elements in the home and commercial landscape**, by Alvaro Calonje Daly.
- **SERBO and the Zamiaceae of Oaxaca**, by Silvia Salas-Morales and Jeff Chemnick.
- **Effects of habitat degradation on the within- and between-population genetic structure of a rainforest *Zamia* L.**, by Cristina Lopez-Gallego.
- **The Dolmestch arboretum in Colombia**, by Alvaro Calonje Daly.
- **Population genetics of the recently endangered cycad, *Cycas micronesica* K.D. Hill**, by Angelica Cibrian Jaramillo, Eric Brenner, Thomas Marler, and Rob Desalle.
- **Cone size in the Florida cycad *Zamia integrifolia*: Trade-off between seed size and seed number**, by Willie Tang.