

A Phylogenomics Approach to Resolving Evolutionary Relationships in Cactaceae

Chollas, prickly pears and Andean relatives



Science and Mathematics Colloquium Series

Presentation by Lucas Majure

Biologist for New World Succulents
Desert Botanical Garden, Phoenix

Wednesday, Nov. 8, 2017
3 – 4 p.m.

Santan Hall, Room 135, ASU Polytechnic campus

There are about 355 species in the Cactaceae subfamily of Opuntioideae, found throughout the Americas from Patagonia to Saskatchewan. The well-known prickly pear and chollas are used by an array of animals, including humans, for food, medicine and as ornamentals. Phylogenetic relationships among the three major clades of Opuntioideae have mostly been obscured by the lack of resolution and taxon sampling in phylogenetic studies. Majure will talk about his use of a phylogenomics approach based on chloroplast genome data (i.e., plastomes) to resolve relationships among major clades and subclades within this group. Plastome data prove to be highly useful for resolving most of the recalcitrant nodes within subfamily Opuntioideae.

Faculty and practitioners discuss their current research and field projects in the college's Science and Mathematics Colloquium Series, held throughout the academic year at the ASU Polytechnic campus. All seminars are free and open to the public.

Lucas C. Majure became biologist of New World succulents at the Desert Botanical Garden, in Phoenix, in fall 2014.

His work as a plant systematist is focused on understanding the biogeography, evolutionary relationships and morphological evolution of cacti throughout the Americas but with a focus on tropical regions, such as the Greater Antilles (primarily Cuba and Hispaniola) and Peru.

Majure earned a doctorate in botany at the University of Florida in 2012 and carried out post-doc work there, investigating Greater Antillean members of the family Melastomataceae.

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