



Florida Museum of Natural History
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International Association for Plant Taxonomy
Research Grant

February 29th, 2020

Dear Award Committee,

It is with great pleasure that I provide my strongest support for Shelby Krupar's application for the IAPT Research Grant Award.

Shelby joined my lab in August 2019 armed with an infectious enthusiasm and energy! She came to me with specific goals in mind, not looking for a project, but knowing exactly what she wanted to study and the type of environment she wanted to explore. Having been raised in Florida, her passion for our ecosystems is unquestionable. Despite her young age, she is an experienced botanist in the field, with a remarkable knowledge of bromeliads, their morphology, and habitats, especially of Florida species.

The focus of her dissertation research resides around the poorly studied *Guzmania monostachia* and the worrying fate of this species due to the invasion of the Mexican evil weevil, which is decimating bromeliad populations across the State. Shelby wasted no time and has already identified key people in the scientific community, in addition to amateur societies, who will provide intellectual and hopefully, financial support to pursue her project.

Shelby dived into her work with exceptional dedication and she has designed a compelling research plan that spans from large scale to population level analyses. Results from her studies will undoubtedly offer a much-needed insight in the evolution of *Guzmania monostachia*, with special focus on Florida populations, which are dramatically contracting due to their particular susceptibility to the invasive Mexican weevil.

There is no question that her proposed project would serve as the basis for a plan of action on how to deal with conservation of bromeliads and their habitats. *Guzmania monostachia* is not the only species being at risk, but its quick range contraction remains an overlooked problem.



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Shelby is well prepared to tackle the systematics and evolution of this species, using morphological, genetic and genomic data, with the goal of better understanding the diversity of this taxon within and across Florida populations, and identifying traits that might be key to its conservation. Her study involves extensive fieldwork and bioinformatics. However, the lack of recent specimen collections that would accurately document the current distribution range of *Guzmania monostachia*, in addition to helping with documenting its range contraction, is truly remarkable. Shelby is planning to start her field work in late spring and spend considerable time generating new material and new data necessary for her study. Importantly, she will enrich herbaria with collection from a clearly underrepresented taxon.

Shelby is very bright, very talented, and importantly, she has an exceptional drive and determination to successfully address major questions in systematics/evolutionary biology. She is building a fantastic skill set that will help her implement her research plan. The project she has designed so diligently is testament of her passion for Florida species and habitat conservation.

Finally, Shelby is a wonderful person, a truly talented and exceptional young scientist with great potentials. She is a delightful colleague to her peers and I give her application my strongest endorsement.

Sincerely,

Nico Cellinese
Associate Curator, Herbarium & Informatics
Joint Associate Professor, Department of Biology