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Selection Committee
Graduate Student Research Grants
International Association of Plant Taxonomists

Dear Selection Committee Members:

I am writing in strong support of Shelby Krupar's application for a Research Grant from IAPT. Shelby is a new graduate student at the University of Florida, and I serve on her Ph.D. Committee.

Despite being a new student, Shelby already has developed a dissertation project. She is dedicated to the study of bromeliads, and she has chosen a project that is both intellectually stimulating (the phylogeny of Tillandsioideae) and environmentally important (conservation of *Guzmania monostachia*). Tillandsioideae, especially *Guzmania*, is in need of phylogenetic work, and it would be amazing if Shelby could resolve these relationships because of the downstream opportunities to study diversification, biogeography, and range shifts in this clade, once a well-supported and resolved phylogeny is in hand. Despite several attempts by members of the community, *Guzmania* in particular has evaded comprehensive phylogenetic study; thus, Shelby's proposed research will be very important for clarifying patterns and processes of evolution in this important element of the Neotropical flora. Moreover, Tillandsioideae are understudied relative to the rest of Bromeliaceae, and this work would be an important contribution to our overall understanding of Bromeliaceae.

Beyond the phylogenetic and evolutionary contributions of Shelby's proposed work, her goal of population and conservation genomics is very important as species of Florida bromeliads are attacked by introduced pests. In this case, *G. monostachia* is under attack, and despite its broad range across the Americas, this species merits protection and conservation at its northern limit. Shelby's proposed work will enable development of appropriate conservation and management plans, once patterns of population divergence are clarified through her analyses. This aspect of her work has impacts beyond the biologically interesting patterns of genetic structure to be obtained through this project.

Shelby is currently a student in our Taxonomy of Vascular Plants course, an advanced course in plant phylogeny and diversity, and I am very impressed by her scope of knowledge about Bromeliaceae in particular and monocots more generally. She is also dedicated to the course; as one of the requirements for the course, each student has the responsibility for contributing to setting up a lab of his/her choice. This includes obtaining material from the field (or campus) as

possible, plus set-up of materials in the lab, organization of review materials, etc. Last week we covered Bromeliaceae in lab, and Shelby volunteered to help with that lab session. She prepared early and helped develop some excellent review materials for the class prior to our exam – it was a very effective set-up.

In sum, Shelby is off to a very strong start as a Ph.D. student, and support from IAPT would really allow her to get right into her research. I strongly support Shelby's application for a grant from IAPT.

Sincerely,



Pamela S. Soltis
Director, UF Biodiversity Institute
Distinguished Professor and Curator
Florida Museum of Natural History
University of Florida