BIOLOGICAL SCIENCES & BIOMEDICAL SCIENCES SPRING RESEARCH SEMINAR SERIES

Conserving Genetic Diversity in Botanic Gardens Using Data and Models

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The world's botanic gardens and seed banks collectively safeguard millions of plants from more than 100,000 species. However, it is not known how to optimally sample each species to conserve genetic diversity and adaptive potential. I investigated this question with datasets from eleven rare taxa in five genera, as well as with computational simulations, and with a case study in a common tree species. In this talk I will discuss how species are meeting global conservation targets, the role of phylogeny in minimum sample size, optimal collection strategies, allocation of resources dependent on collector constraints, and how sample sizes depend on collector values and priorities. In summary, current plant collections are insufficient (not reaching targets) and suboptimal (not efficiently designed), but new guidance can be achieved with data and models. I will close with critical next steps for the plant conservation community.

MARCH 1, 4:00pm (EST)
Via Zoom

Zoom link: https://zoom.us/j/97211237332?pwd=bnhlQk85ZGVFTXRaYjVIUmtmNEgxQT09

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