Novel perspectives on the evolution of the world’s richest flora: insights from extreme botany

How landscape change has shaped patterns of diversity on Earth is a central question in Biology. In Plant Systematics, a great volume of research on this problem has centered on how major geological events shaped the evolution of the Neotropical flora (the world’s richest flora). In this talk, I will show how I rely on natural history observations as a powerful tool for identifying plant groups whose biology make them ideal model systems for approaching long-standing questions from unexplored angles. I will describe how my previous contributions to Plant Systematics forge the path for exciting future studies of population-level processes in natural laboratories, constraining geological hypotheses, and investigating macroevolutionary patterns in the Neotropics. I will show how my program integrates modern analytical tools in phylogenetics and population genetics with field exploration and herbarium collections.