



QSB SEMINAR SERIES 291

Towards understanding the evolution of plant diversity: Insights from Integrative Systematics

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ABSTRACT

Understanding the origin and evolution of biodiversity is one of the main aims of systematics. Because the mountains of South America are hotspots of plant diversity, they provide an ideal opportunity to study the role that multiple factors play in the origin and evolution of plant species. In this seminar, I will present an integrative analysis of *Escallonia*, an ecologically diverse group of shrubs widely distributed in montane South America. Integrating phylogenetic, biogeographic, and bioclimatic analyses with a multidimensional approach to species delimitation, I show that species in *Escallonia* have largely diversified across environmental gradients in close geographic proximity. This is consistent with the hypothesis that niche evolution and parapatric speciation have been important mechanisms in the radiation of this group, and suggests that ecological adaptation may be a key force in generating and maintaining plant species diversity in the mountains of South America.

