



Drivers of Diversity of *Darwinia*'s Common Scents and Inflorescences with Style: Phylogenomics, Pollination Biology, and Floral Chemical Ecology of Western Australian *Darwinia* (Myrtaceae).

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This ongoing research strives to analyze the relative importance of different drivers of plant species diversification in the highly morphologically diverse and geographically limited genus *Darwinia* (Myrtaceae). This group is ideal to examine such factors due to many small species ranges, apparent sky-island biogeography of several taxa, and diversity of inflorescences and associated pollinators. The major aims of this research: **First**, to use phylogenomic data and a pending Myrtaceae bait set to construct a dated phylogeny to elucidate evolutionary relationships and species-level historical biogeography within *Darwinia*; **Second**, to investigate reproductive ecology and pollination syndromes of several species through studies of pollinator behavior, inflorescence morphometrics, floral volatiles, and nectar composition. Data resulting from these studies will funnel into an analysis of diversification rates to understand which factors drive diversification in *Darwinia*. This research is being conducted in conjunction with collaborators at the Western Australian Herbarium, Australian Tropical Herbarium, and King's Park Botanic Garden, and will aid in our understanding of plant speciation as well as contribute to our knowledge of the ecology and evolution of threatened elements of the Western Australian flora.

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