

California State Polytechnic University, Pomona

Thesis Defense



**MORPHOLOGICAL VARIATION IN  
*MIMULUS* SECTION *DIPLACUS*  
(SCROPHULARIACEAE)**



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**ABSTRACT**

*Mimulus* section *Diplacus* consists of erect or prostrate shrubs found throughout California in many habitats. The group has a history of disagreement in taxonomic treatments, including its separation as a separate genus and the recognition of various species, subspecies, and varieties. Recent treatments describe as many as fourteen species or as few as two. Taxonomic boundaries between species and subspecies are obscured by hybridization, especially in southern California where there is some overlap in the distributions of six taxa. Measurements of twenty-one floral and vegetative characters have been made from samples of all taxa throughout the range of the section to delineate morphological gaps. Principal component analysis and discriminant function analysis show a clear separation between species based on variation in the morphology of corolla, calyx, and pedicel features. Hybrid populations are variable in floral features and show an intermediacy between their putative parents. Although hybrids are problematic for the taxonomy of the group, they appear to be geographically limited and confined to disturbed areas.

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