



Biogeography of the only irises disjunct across the Pacific Ocean.

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Taxa with disjunct distributions have long fascinated biologists and have provided important insights into biological evolution in the southern hemisphere. *Libertia* and *Orthrosanthus* are two understudied genera, and the only representatives of Iridaceae (~70 genera), that are disjunct across the Pacific Ocean. Both groups naturally occur in South and Central America, and in Australia; *Libertia* is also found in New Zealand and New Guinea. Previous studies have suggested that *Libertia* and *Orthrosanthus* are sister within the tribe Sisyrinchieae, which likely arose in South America ~21.6 million years ago. Since previous studies have included only one species from each genus, their biogeographic origins and distribution remains uncertain. Here we present a dated phylogeny based on a large plastome data set, assembled from a combination of genome-skimming and Angiosperms353 by-catch, that includes representatives of all species of *Libertia* and *Orthrosanthus*. The results provide novel insights into the biogeography of these two genera and provide a foundation for further studies into polyploidy and floral evolution.

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