

VALE VELLEIA (AND OTHERS) – THE FINAL CHAPTER OF OUR *GOODENIA S.L.* SAGAKelly Shepherd<sup>1</sup>; Rachel Jabaily<sup>2</sup><sup>1</sup>Western Australian Herbarium; <sup>2</sup>Colorado College

Close scrutiny of *Goodenia* (Goodeniaceae) and allied genera in the ‘core Goodeniaceae’ over recent years has clarified our understanding of this iconic group. While expanded sampling (> 90% of described species), sequencing of multiple regions, and an NGS reinforced backbone clearly support *Goodenia s.l.* as monophyletic and distinct from *Scaevola* and *Coopernookia*, there appear to be no synapomorphic characters that uniquely characterise this morphologically diverse clade. Within *Goodenia s.l.* there is strong molecular support (nuclear, chloroplast and mitochondrial) for three major clades (clade A including *Selliera*, clade B, and clade C including *Velleia*, *Verreauxia*, and *Pentaptilon*) and various subclades. This led to earlier suggestions for the possible recognition of a number of supported clades as new genera, while retaining *Velleia*, *Verreauxia*, and *Pentaptilon* as distinct. Through ongoing work it has become evident that this is impractical as conflict remains between subclades of the morphologically diverse clade C, likely due to recent radiation, possible hybridisation and incomplete lineage sorting. In light of this, it is proposed that a combination of morphological characters should be used to circumscribe an expanded *Goodenia* to include the embedded genera. Preparation of a new infrageneric classification is underway that aims to recognise the supported subclades within *Goodenia s.l.*



Dr Kelly Shepherd is a Senior Research Scientist based at the Western Australian Herbarium. She is a taxonomist currently working on a range of plant groups in Western Australia, focusing on naming and describing new species of conservation concern. A full bio can be found at [science.dpaw.wa.gov.au/people/?sid=241](http://science.dpaw.wa.gov.au/people/?sid=241)



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