Tackling *Tephrosia* (Fabaceae) in north-Western Australia

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Tephrosia (Fabaceae) is a globally-distributed genus with >400 species, concentrated in Africa–Madagascar, northern and central Australia, and Central and tropical North America. Its taxonomy is far from resolved—within Australia there are *c*. 136 taxa (46% informally named), with 60 taxa (38% informally named) currently recognised in the Eremaean and Northern Botanical Provinces of Western Australia (WA). Studied by Les Pedley (BRI) and Ian Cowie (DNA) for many years, focussed taxonomic investigation of *Tephrosia* in WA was initiated in 2011 through mining industry offset funding. A key aim of the project has been to improve the accuracy of specimen identifications by all stakeholders. Improvement of the PERTH collection (and hence FloraBase) as an ID tool has been facilitated by the return of >750 annotated sheets from loan, a research visit from Cowie, ongoing specimen curation, including an overhaul of the reference herbarium collection, subsequent taxonomic research and timely communication of findings to the consultancy community. Ongoing research and collaborations have led to eight new names and four pre-existing names being recognised on the State plant census, two names being removed and 12 informal synonyms reconciled between PERTH, DNA and BRI. As a result, the status and distribution of many taxa are better understood; however, further new questions have been raised. In addition to developing identification tools and preparing new taxon descriptions for *Tephrosia* in WA, current research is focused on the *T. supina* complex, which contains a number of different orange- and pink-purple-flowered taxa across Australia. An International Barcode of Life (iBOL) DNA barcoding study has also been undertaken, which aims to assess the utility of different-aged herbarium specimens as sources of DNA for barcoding, and the utility of those barcodes (*rbc*L and *mat*K) for the identification and differentiation of taxa.

Program and Abstracts

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