

The ultramafic flora of Western Australia

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Ultramafic lithologies are known to host very significant proportions of plant biodiversity in places such as Cuba (1,400 taxa – 66% endemic), New Caledonia (1,844 taxa – 69% endemic) and California (650 taxa – 24% endemic). Comparative figures for Western Australia have not previously been compiled. Data from 1:500,000 geology maps, >600,000 herbarium records and >54,000 survey records indicates an ultramafic flora of 1,355 taxa in Western Australia, but only 14 (1%) appear to have their distributions largely restricted to ultramafic substrates. The small number of restricted taxa is similar to that reported for the ultramafic areas of Queensland, Tasmania and Witwaterstand in South Africa, but contrasts greatly with the well known untramafic floras of Cuba, New Caledonia and California. Of the 14 ultramafic taxa found in Western Australia, nine are restricted to the Ravensthorpe Range. Five of these are restricted to one location, which is also the site of the major laterite nickel mine. The Ravensthorpe Range has long been recognised as a centre of diversity with over 60 taxa largely restricted to it. In general, the lack of clear differentiation between ultramafic and adjacent substrates across Western Australia may have resulted from both the long period of weathering of these ancient soils and the complex nature of the regolith acting to ameliorate the harsh edaphic conditions often associated with ultramafic substrates.



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