Systematics and the conservation of Perth's vascular native flora

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The interface of systematics and conservation is normally thought of as delimiting taxa that may be unrecognised and/or rare, but an adequate taxonomy allows many more conservation outcomes than this. The Perth area is probably the best-collected and recorded region of the Western Australia biodiversity hotspot. The high level of systematic study of the flora has defined 680 native vascular plant species, most of which have historical and recent collections. Having a more than adequate baseline systematics of the species present has allowed a quantitative assessment of change and loss of taxa and populations over time of the area. Over 20% of the recorded flora of the Perth area is now locally or regionally extinct, and 2 taxa are globally extinct.

While taxonomy should focus on delimitation of taxa, conservation as a science and practice should always be broader and based on loss of communities, species, populations (especially ecotypes) and genetic variation. With the concurrence of adequate herbarium collections, systematic studies and survey we have determined that Perth has over 200 of its native plants that have historic, genetic or geographical significance. This allows guidance for the conservation and management of this unique flora by the use of appropriate species and provenance as part of this management.

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