



## Testing species delimitation in *Acacia*: are gidgee (*A. cambagei*) and Georgina gidgee (*A. georginae*) two distinct species?

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*Acacia cambagei* R.T. Baker and *A. georginae* Bailey are dominant woody species found in the Australian arid zone, spanning from Queensland to the Northern Territory and into the north of South Australia. These species, commonly known as gidgee, gidyea or gidgea, have significant cultural value in indigenous communities. *Acacia georginae* is valued for its edible resin, while *A. cambagei* is renowned for its durable timber, fuelwood and soil stabilisation. Distinguishing between *A. georginae* and *A. cambagei* remains challenging because, although existing keys rely on differences in pod and seed shapes, there is actually a continuum in the field. Keys state that *A. cambagei* has thin, straight pods with small oval seeds, whereas *A. georginae* is listed as having curved pods with large circular seeds. *Acacia georginae* is toxic and can be lethal to livestock, although there is variation in toxicity among individuals. Applying the Biological Species Concept, we use Angiosperm 353 sequence data to assess gene flow between and among populations of both taxa in sympatry and allopatry. Initial morphological analysis of herbarium material has confirmed a continuum of pod and seed characteristics across their distributions. Clarifying the taxonomic status of *A. georginae* and *A. cambagei* will contribute to managing and conserving these valuable woody species.

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