

Two cryptic conifer species separated by a mid-Miocene aridity barrier in southern Australia.

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The conifer species *Callitris canescens* (Cupressaceae), as currently circumscribed, has a disjunct distribution in south-west Western Australia and south-east South Australia. The species is absent from the low, arid limestone plateau of the Nullarbor Plain, that separates the two populations. Here we segregate the South Australian population as a distinct species, *Callitris calcareana*, based on congruent differences between the populations in nuclear and chloroplast DNA. Moreover, the populations are reciprocally monophyletic, having multiple fixed differences in nuclear and chloroplast DNA. The two species also differ phenotypically: in stature, foliage colour and soil preferences.

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