



## **Assessing population structure and potential genetic declines in the cycad *Macrozamia moorei*.**

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Cycads, a group of plants that are globally and locally threatened with extinction, typically exist as isolated, patchy populations. In Australia, some populations have been reduced through deliberate clearing since European occupation because they are toxic to livestock. To date, we do not know what effect this has had on the genetic diversity and population structure of cycads. Here, we focus on *Macrozamia moorei*, a large trunk-forming cycad in central Queensland. It was directly targeted for destruction in some regions to prevent livestock loss and, in some areas abundance was severely reduced in the early 1900s. We use data derived from ddRADseq to assess the extent of recent gene flow within and among populations and test whether there has been a reduction in genetic diversity in those populations subjected to the greatest disturbance since European land clearing.

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