Fungi nourish Gilbert's potoroo from the brink of extinction

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Gilbert's potoroo was presumed to be extinct until being rediscovered in 1994 at Two Peoples Bay Nature Reserve - the animal's only known natural refuge. Fungi largely determine the survival and breeding of Gilbert's potoroos because truffles are their major food. Therefore we needed to determine if potoroos translocated into new areas could find enough fungi to survive and breed. We also needed to determine what types of areas and vegetation may be suitable for translocations. The diet of potoroos translocated to Bald Island was assessed by examining their scats within days after their release, and again 1 and 2 years later. Four potoroos released into the shrubby vegetation of Bald Island only 4 to 8 days previously were found to have consumed 23 species of fungi. No plant material, insects or other animal material was present in the scats. Consumption of fungi was sustained over time. Three potoroos released onto Bald Island 1-2 years previously and one island-born individual were found to have consumed 27 species of fungi during a two day sampling period. This included successfully reproducing individuals. Potoroos translocated into other areas with different types of vegetation were also able to rapidly find diverse truffles, e.g. two potoroos in a mainland site dominated by eucalypt woodland consumed 14 species of truffles within 3 months. This study confirmed that sustained survival and breeding of translocated potoroos at sites with at least two different vegetation types parallels sustained production and consumption of a wide diversity of fungi. To help determine the suitability of other target areas for future translocations the abundance and diversity of fungi at the sites should be pre-assessed.

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