

Conservation biology of threatened native olives (genus *Notelaea*) in southern Queensland

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Introduction...

- To establish appropriate conservation & management regimes, it is important to explore the reasons for rarity
- The genus *Notelaea*
 - Family Oleaceae
 - Endemic to Australia
 - 12 species





N. ipsviciensis & *N. lloydii* – rare & threatened (EPBC Act, 1999 & NCA Act, 1992)



N. longifolia & *N. ovata* – common

Objective of this Study

- To improve our knowledge & understanding of the conservation biology of two endemic, threatened *Notelaea* species in southern Queensland

Conduct a comparative life history analysis of rare Vs common *Notelaea* spp.

Study the reproductive biology of rare *Notelaea* spp.

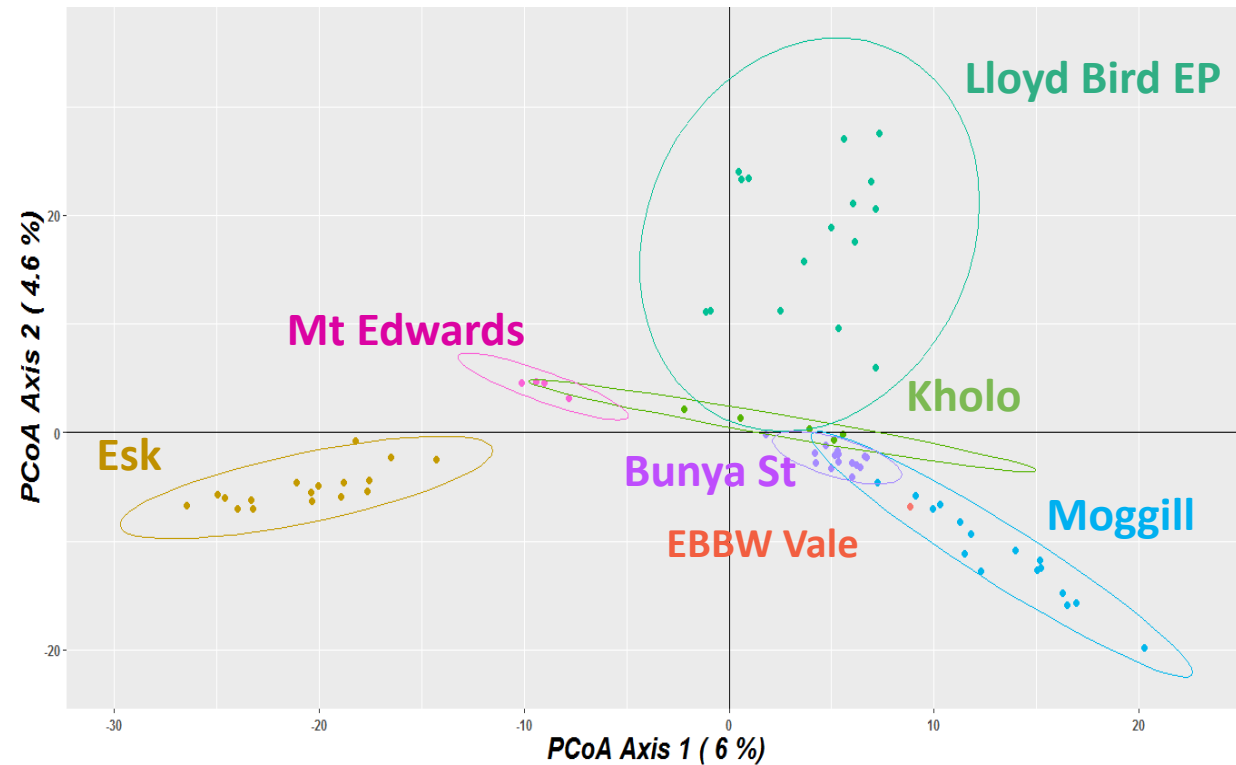
Objectives

Study the population genetics of rare *Notelaea* spp.

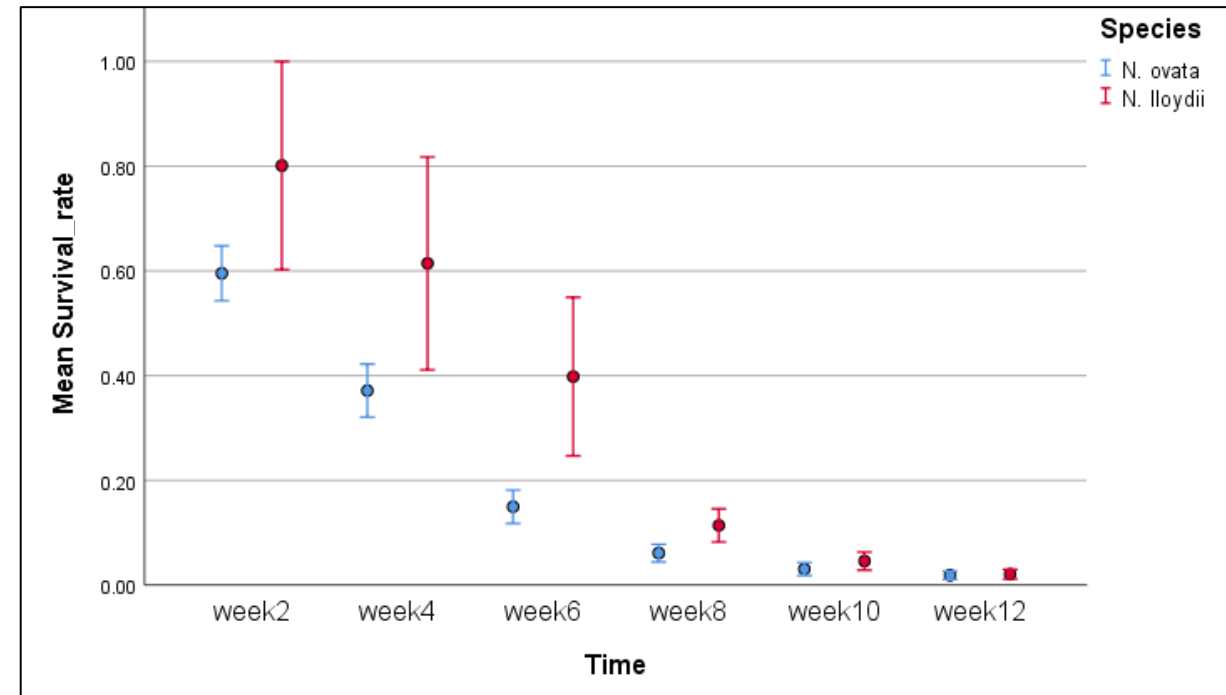
Conduct phylogenetic and morphometric analyses on the genus *Notelaea*

Preliminary results...

- SNP data of a small number of samples & populations of *N. lloydii* shows genetic structure & limited gene flow among populations
- Flowering & fruiting data of *N. lloydii* & *N. ovata* suggest that both *N. lloydii* & *N. ovata* currently exhibit poor reproductive success



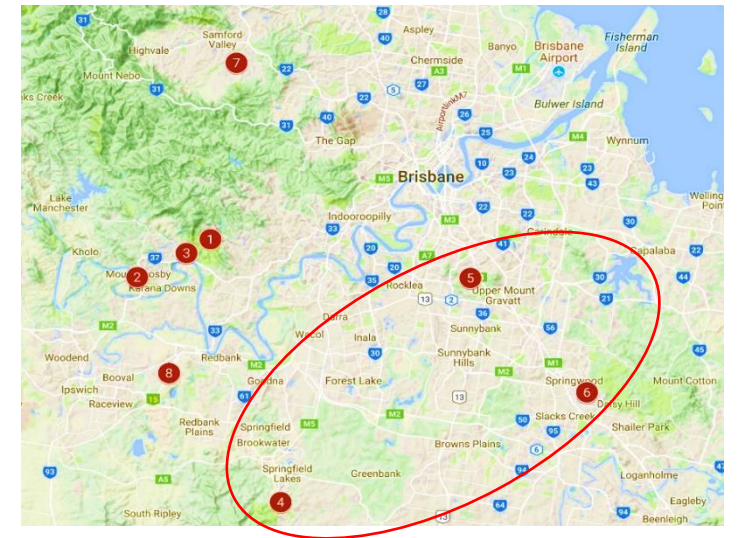
PCoA plot of seven *N. lloydii* populations



Error bar plot for the fruit survival rates of each species during October 2017 to February 2018 (error bars: ± 1 SE)

Notes on *N. ovata* ...

- Flowering & fruiting - limited only to few individuals
- Overall fruit survival rate was almost zero
- Only a few juvenile plants were observed at the three *N. ovata* sites
- Indicate the necessity of a population genetic analysis of *N. ovata*
- SNP analysis will be undertaken for *N. ovata*



THANK YOU !!!

- WCSP. (2016). World Checklist of Selected Plant Families. *Facilitated by the Royal Botanic Gardens, Kew.*
- EPBC Act- *Australian Environment Protection and Biodiversity Conservation Act 1999*
- NCA Act- *Queensland Nature Conservation Act 1992*