

## HONOURS PROJECT

**Project Title:** Do quail and pigeons disperse seeds of the shrub, *Stachystemon*, that only grows under isolated trees at Eneabba?



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### Project

The small shrub, *Stachystemon axillaris*, only occurs under the crown of the mallee, *Eucalyptus tottiana*. Since the mallees are scattered through the shrubland the question arises: how do they get from one patch to another? There is good evidence that the seeds, that have an aril, are attractive to dispersal agents, especially ants. But ants cannot transport seeds far. Preliminary fieldwork shows that native birds consume seeds of the shrub, *Stachystemon axillaris*, and these will take the seeds much further. But granivorous birds are only effective dispersers if they a) readily consume the seeds, and b) the seeds survive digestion. Feeding trials with captive painted quail and native pigeons (*Phaps*, bronze-wing, crested) will be undertaken. Ejected seeds will be tested for their viability (X-ray technique) and germinability. Preliminary trials on the requirements for breaking dormancy may be needed. A literature survey on seed dispersal by vertebrates should be an interesting part of the project.

**Funding:** All fieldwork costs will be met

**Special requirements:** seeds will need to be collected in early December with academic staff

### References:

- Groom, P.G. and Lamont, B.B. 2015. Seed release and dispersal mechanisms. *in* Plant Life of Southwestern Australia: Adaptations for Survival. De Gruyter Open, Warsaw, Poland. pp. 172-188. ISBN: 978-3-11-037016-4 (chapter can be downloaded free from De Gruyter)
- Christianini, A. V., & Oliveira, P. S. (2010). Birds and ants provide complementary seed dispersal in a neotropical savanna. *Journal of Ecology*, 98(3), 573-582.
- Calviño-Cancela, M, Dunn, R, van Etten, E and Lamont BB 2006. Emus as non-standard seed dispersers and their potential for long-distance dispersal. *Ecography* 29, 632-640.