

Progress Report STP 2019-050 (FY 2019-2020)

The population and spatial ecology of the numbat in the Upper Warren

Animal Science

Project Core Team

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Project Team	required
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A Wayne

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The aim of this project is to increase knowledge about the baseline population and spatial ecology of the numbat population in the Upper Warren region. This information will assist in informing future management practices for this population.

Initial methods for location of numbats have been trialled including: 1) the use of a detection dog to assist with locating numbats for capture and collaring; and 2) a pilot study to assess the viability of obtaining trace DNA from numbat scats for individual identification. Pilot studies for the above methods were unsuccessful. Results showed that a detection dog was unable to adequately track numbats to bolt holes or burrows. Trace DNA of sufficient quantity and quality was found only on scat samples from Perth Zoo that had not been exposed (freshly deposited) and all scat samples from wild animals (including fresh scats) failed to amplify.

Preliminary analysis of camera trap images using spatially explicit capture recapture modelling has demonstrated that this may be a viable method for studying numbat populations and estimated a density of 0.014 numbats ha^{-1} (± 0.004). In upcoming work, camera and hair traps will be used to assist with individual identification and population parameter estimates. Collars fitted with GPS receivers and VHF transmitters will be used to study numbat spatial ecology.