## Progress Report STP 2014-009 (FY 2015-2016)

# Pathogen transmission in the critically endangered woylie: a community, population, and individual approach

**Animal Science**

### Project Core Team

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### Project status as of July 18, 2016, 5:11 p.m.

Approved and active

### Document endorsements and approvals as of July 18, 2016, 5:11 p.m.

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| **Project Team** | granted |
| **Program Leader** | granted |
| **Directorate** | granted |

# Pathogen transmission in the critically endangered woylie: a community, population, and individual approach

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## Progress Report

Infectious pathogens may play a role the recent woylie decline; thus, characterising factors influencing pathogen transmission is a project priority. We are also investigating the impact of perturbations (habitat expansion and fire) on woylie behavior, social structure, and health. GPS collars were used to monitor woylies in a predator-proof reserve, Whiteman Park; social network analysis will be used to develop networks that reflect potential transmission pathways for refuge-based or environmental pathogens. Screening for pathogens while assessing health, reproduction, and behavioural attributes will allow assessment of risk factors and potential fitness effects of pathogens in isolation or combination. Furthermore, network transmission models can facilitate the identification of behavioural (e.g. connectedness) or demographic (e.g. sex) factors key to pathogen propagation. All these factors will be considered in light of perturbation effects.

Fieldwork finished in February 2016. Labwork should be completed by August 2016 and analyses and writing by February 2017.