Progress Report

The aim of this project is to review the causes of deaths and histopathology in the woylies presented to Murdoch University in the last 10 years; with special attention dedicated to detecting the presence of Trypanosomes, their related histopathology and their significance. So far, two Woylies out of the (approximately) 50 have been identified to have organisms (morphologically similar to Trypanosomes) in association with muscle lesions in the oesophagus and heart. These muscle lesions may have potentially resulted in decreased food intake and abnormal function of the heart respectively; with possible contribution to the death of the individual. This project will also attempt to identify the Trypanosomes and demonstrate spatial association between *Trypanosoma* DNA and muscle (or other) lesions via the use of in-situ hybridization. In light of the recently published study by Botero et al. (2013), an increased understanding of the effects of *Trypanosoma* infections in the woylie will help aid the future management of this declining species.

A database has been developed that collates post-mortem results from woylies, including tissues examined (and findings) and tissues held in archive. The database is almost complete. The findings will be reviewed and collated. Additionally, various probes have been designed for use in *in-situ* hybridisation for the detection of protozoal DNA in tissue sections. Six probes have been designed and purchased, to include *Sarcocystis*, *Trypanosoma* and *Toxoplasma* organisms. Labelling efficiency tests will start June/July 2014, with trial runs on tissues from quolls, in partnership with a separate project.