Progress Report

The aim of this study is to increase understanding of the role of the protozoan parasite *Toxoplasma gondii* in wild woylie populations, particularly with regard to the recent population declines. *Toxoplasma gondii* can infect virtually any warm-blooded vertebrate, and has a worldwide distribution. In asymptomatic laboratory and wild rodents, *T. gondii* is reported to cause subtle changes in behaviour that may make infected hosts more susceptible to predation. In conjunction with the woylie project, we are also investigating mouse behaviour in response to *T. gondii* infection, particularly behaviours related to activity level, anxiety behaviour and cat urine avoidance behaviour.

If *T. gondii* alters the behaviour of woylies, this could predispose infected individuals to predation and increase mortality rates, thus contributing towards the decline of woylie populations. Serum samples collected by Department of Parks and Wildlife staff over the past six years will be analysed to determine *T. gondii* infection status. This will provide insights into the ecology of *T. gondii* infection in woylie populations and an opportunity to investigate whether this parasite alters woylie behaviour by correlating infection status with behavioural attributes. Three posters have been presented on this work at conferences and another is planned for later this year. One scientific journal article and one book chapter concerning the effect of *T. gondii* on host behaviour have been published so far.