

Progress Report

This project focused on investigating the correlation of the trypanosomes found in the blood of woylies and the overall population decline of the host. Trypanosomes in the blood of the woylie can be grouped into three morphologically distinct trypomastigote forms, encompassing two different species; two phenotypes of *Trypanosoma copemani* and one form of the smaller, *Trypanosoma vegrandis* sp. nov. The prevalence of parasitic infections varied among the study sites, with contrasting trypanosome prevalence observed from the two declining indigenous populations within the Upper Warren region in south-west Western Australia. Parasitaemia associated with trypanosome infection in the peripheral blood of the woylie exhibited a temporal decline as the infection progressed, being indicative of the infection transitioning between the acute and chronic phase. *Trypanosoma copemani* also exhibits a predilection for certain tissues of the host, where they can display *Trypanosoma cruzi*-like pathology at the time of autopsy. It appears that the chronic intracellular association of trypanosomes with the internal organs of the woylie may be potentially pathogenic and adversely affect the fitness and coordination of the woylie, making them more susceptible to predation, and contributing to the overall decline. Three scientific papers have been published, and one is in preparation.