

Public Abstract

First Name:Natalie

Middle Name:

Last Name:Olifiers

Adviser's First Name:Matthew

Adviser's Last Name:Gompper

Co-Adviser's First Name:

Co-Adviser's Last Name:

Graduation Term:SS 2010

Department:Fisheries & Wildlife

Degree:PhD

Title:Life-history and disease ecology of the brown-nosed coati (*Nasua nasua*) and the crab-eating fox (*Cerdocyon thous*) in the Brazilian Pantanal

Understanding the effects of parasites on hosts requires not only knowledge about the parasites themselves, but also about their hosts. This dissertation was developed with this aim in mind. The first chapter regards the development of a tool for aging coatis (*Nasua nasua*: Linnaeus, 1766) and the crab-eating fox (*Cerdocyon thous*: Linnaeus, 1766). In chapter 2, I provide information on reproduction, morphology, growth, and survival of coatis and foxes. These species have distinct social structures that were associated to the life features investigated. In chapter 3, I examined the relative importance of factors linked to the host (biotic) and to the environment (abiotic) in predicting abundance and prevalence of three species ticks on coatis and foxes. This chapter can be considered a model for investigating the relative importance of biotic and abiotic variables in parasite dynamics. Finally, in chapter 4 I focused on how hemoparasites (*Trypanosoma cruzi*, *T. evansi* and microfilariae) and gastro-intestinal parasites affect coati health (body condition and hemogram). In addition, I analyzed how host health changed with host sex and seasonality (reproductive vs. non-reproductive season). Coati health decreased with when *T. cruzi* or *T. evansi* were present in high numbers in the bloodstream. Females apparently cope better with infection than males and the negative association between hemoparasite numbers and changes in the hemogram was stronger during the reproductive season. This last chapter can also be viewed as a model for future studies focusing in the interplay between parasites and health of wild, free-ranging mammals.