

Contribution ID: 413

Type: **Oral Presentation**

Optimal monitoring and decision support for the end of an eradication campaign

Monday, 9 July 2018 11:50 am (20 minutes)

Introduced species are a critical threat to Australian ecosystems and species. Particularly noxious examples include the European carp, feral cats, and a variety of weeds. A central aspect of introduced species management is eradication – if they can be completely removed from a region, the impact can be nullified. A central problem population eradications is knowing whether the species has been successfully removed or not. We develop a framework to model populations through time, explicitly accounting for imperfect detection and unknown detection probability. We use changing detection rates throughout a removal project to calibrate the model, which provides a quantitative method to trigger the end of a project. While invasive species are often the focus of removal efforts, they can also occur to prevent disease spread in an endangered species. I will describe how we applied this method to a Tasmanian devil depopulation, which enabled the establishment of a Tasmanian devil facial tumour disease population on Forestier Peninsular, Tasmania.

Primary authors: Dr BAKER, Christopher (The University of Queensland); Dr ROUT, Tracy (The University of Queensland)

Presenter: Dr BAKER, Christopher (The University of Queensland)

Session Classification: Predator-prey, competition, extinction

Track Classification: Ecology