# Temporal variation in the genetic composition of a newly established population of dibblers (*Parantechinus apicalis*) reflects translocation history

**Rujiporn Thavornkanlapachai[1], Harriet R. Mills[2], Kym Ottewell[3], W. Jason Kennington[4], J. Anthony Friend[3]**

*1. Melbourne University, Melbourne, Victoria, Australia*

*2. Edith Cowan University, Joondalup, Western Australia, Australia*

*3. Department of Parks and Wildlife, Perth, Western Australia, Australia*

*4. School of Biological Sciences, University of Western Australia, Perth, Western Australia, Australia*

Loss of genetic variation and increased population differentiation from source populations are common problems for translocations that use captive animals or a small number of founders to establish a new population. This study evaluated the genetic changes occurring in captive and translocated populations of the dibbler (*Parantechinus apicalis*) that were established from multiple source populations over a ten year period. While the levels of genetic variation within the captive and translocated populations were relatively stable and did not differ significantly from the source populations, their effective population size reduced 10–16 fold over the duration of this study. Evidence of genetic bottlenecks was detected only after the translocated population was established. There were also marked changes in the genetic composition of both populations that were strongly associated with the origins of individuals introduced to the populations. Interbreeding between individuals from different source populations lowered genetic relatedness among offspring, but this was short-lived. These results highlight the importance of the origins and the timing of release of founding individuals in determining the genetic composition of a newly established population.


# 12th International Mammalogical Congress Perth, Western Australia 9th -14th July 2017

# ABSTRACT BOOK