

Victoria

Museum Victoria

DP0771913 Dr DG Chapple

Approved Project Title **The success and rapid evolution of invasive species: resolving a genetic paradox**

2007 : \$100,000

2008 : \$90,000

2009 : \$90,000

Primary RFCD 2707 ECOLOGY AND EVOLUTION

APD Dr DG Chapple

Administering Organisation Museum Victoria

Project Summary

Invasive species have an enormous economic impact on trade, agriculture, aquaculture, fisheries and eco-tourism in Australia. In order to negate such detrimental impacts, integrated strategies need to be formulated to effectively control and eradicate introduced species. Our limited knowledge of the factors underlying the success of invasive species has hampered such efforts. A detailed understanding of the invasion dynamics of introduced species is essential for identifying potential weaknesses that can be exploited in management strategies. My research will examine the invasion dynamics of a successful invasive species, the delicate skink, providing information directly relevant to the management of introduced species in Australia.

DP0769975 Dr JE Melville; Dr JB Losos

Approved Project Title **Convergent Evolution of Desert Lizards: Phylogenomic and Morphological Analyses of Limb Development.**

2007 : \$90,000

2008 : \$88,000

2009 : \$85,000

Primary RFCD 2702 GENETICS

Administering Organisation Museum Victoria

Project Summary

Evolutionary convergence, where similar traits evolve independently in multiple lineages, is a fundamental biological process, which affects many aspects of an organism's morphology. Despite its importance we don't understand what underlies the convergence we observe in nature - does convergence in genetic make-up underlie convergence in morphology? We will investigate whether similar hindlimb morphologies are determined by the same genetic mechanisms in iguanian lizards of Australia and North America. Our study will be the first of its kind in vertebrates and will provide significant information about the evolutionary link between an animal's morphology and its genetic make-up.