## What makes albatrosses good or poor breeders? Insights from a cross-fostering experiment

## M Genevieve W Jones

Percy FitzPatrick Institute of African Ornithology, DST-NRF Centre of Excellence, University of Cape Town, Private Bag X3, Rondebosch, 7701, South Africa

## mgenevievewjones@gmail.com

Lifetime reproductive success varies considerably among individuals, especially in long-lived species such as many seabirds. At Marion Island, of the Wandering Albatrosses Diomedea exulans that reach maturity, some are prolific breeders while others seldom rear young. With a few individuals producing most of the next generation it is important to understand the factors driving differences between highly successful and reproductively impoverished individuals. Long-term breeding records of individually-marked Wandering Albatrosses at Marion Island were used to identify historic reproductive success of pairs. We used a cross-fostering manipulation between these pairs to tease apart influences of genotype and behaviour on breeding success. Cross-fostering eggs between pairs with poor and good reproductive histories showed an increase in reproductive success for poor breeders with eggs from good pairs and a decrease in reproductive success for good pairs, indicating some innate (genetic component) to breeding success. However, eggs from poor pairs had greater chance of successful hatching and fledging when given to good pairs, and the success of poor pairs with 'good' eggs was lower than successful pairs with 'good' eggs, indicating that behavioural inadequacies among parents also contribute to breeding performance. Surprisingly, cross-fostering had no impact on chick growth rates or fledging size, indicating that chick development is largely independent of their parents' reproductive histories. My results suggest that a combination of both genetic and behavioural traits influence the success of a breeding attempt.