

The New Zealand fairy tern (*Sterna nereis davisae*): Endangered or common? Preliminary analysis using mtDNA

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ABSTRACT:

Fairy tern (*Sterna nereis davisae*) population numbers in New Zealand are one of the lowest compared to other native bird species, with an estimated population size of 40 individuals. Nationally listed as "Endangered", the New Zealand Department of Conservation Recovery Plan for this species has been implemented from 1997-2002, and re-assessment of this Plan is underway. Several questions within continuation of the Recovery Plan have been raised, with particular concerns about the endemism and genetic relatedness of the New Zealand fairy tern population to the main breeding population in Australia. This study sequenced the complete NADH dehydrogenase subunit 2 (ND2) region of the mitochondrial DNA, with samples collected from New Zealand, and Australia. The results show a significant distance between the New Zealand and Australian population, with very restricted gene flow. The single but private haplotype found in New Zealand warrants the continued conservation efforts of the Recovery Plan, to maintain this distinct population. The study also supports the conclusion of previous studies that significant differences occur in morphology and behaviour between the two populations, we recommend that future studies incorporate these characteristics (e.g. morphometrics) to help ascertain their subspecies status.