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Development of aerial monitoring techniques to estimate population size of great albatrosses

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SUMMARY

This paper reports on two approaches trialled recently in the Auckland Islands, New Zealand, to robustly estimating the population size of Gibson's albatross and southern royal albatross. The first approach used a series of aerial photographs taken on Adams Island to produce high-resolution maps suitable for counting nesting Gibson's albatross (*Diomedea gibsoni*). The second involved a direct count of southern royal albatross (*Diomedea epomophora*) breeding on Enderby Island, using a helicopter as an aerial platform. Both techniques produced results that closely matched counts of albatrosses attending nests derived from ground counts, although aerial counts cannot reliably determine if birds sitting on nests contain eggs, necessitating correction of aerial counts if estimates of annual breeding pairs are required. The two techniques provide a method to robustly estimate the population size of great albatrosses breeding in remote areas where it may be logistically difficult to undertake regular on-ground site visits to census the entire population.