

Population monitoring of hoiho in the subantarctic – challenges, knowledge gaps and recommendations for the future

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Accurately and regularly monitoring the endangered hoiho/yellow-eyed penguin population is critically important for their conservation. However, this species is a cryptic breeder, making population monitoring extremely challenging. Monitoring in the northern population is time- and labour-intensive, involving rigorous nest searches along the South Island and Stewart Island coastline every year to monitor breeding effort and population trends. However, due to the size of the coastline, difficult terrain and isolation of the Subantarctic, the same nest search method cannot be applied in the southern population of hoiho in the Auckland and Campbell Islands. This means that despite constituting over 60% of the total population, much less is known about the status and trends of the southern population. While other methods to estimate population size and trends exist, these are often less accurate when applied to hoiho and have significant biases that must be accounted for. In light of these challenges, we created a report at the request of the Department of Conservation which synthesised the current state of hoiho monitoring in the Subantarctic, identified gaps in knowledge, and developed recommendations for a future hoiho monitoring programme in the Subantarctic. Herein we present the results of this report, including analysis of drone tracking and other new technologies, with a focus on the recommendations for future monitoring to achieve the objective of improved understanding of hoiho distribution, numbers and trend information.

The authors are students.