



## Foraging ecology and climate change vulnerability of Chatham Island tāiko

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Climate change is one of the most important threats to seabirds worldwide, affecting almost as many species as bycatch and hunting/trapping. It mostly affects species by altering habitats (breeding sites and/or oceanographic conditions) and ecosystem processes. Around Aotearoa New Zealand, ocean temperature, acidity, and the frequency of marine heatwaves are increasing and one of the most important climate change impacts on oceanographic conditions is predicted to occur along the Chatham Rise, near the Chatham Islands. The Critically Endangered Chatham Island tāiko/tchāik *Pterodroma magentae* (c. 100 adults, Nationally Critical) is endemic to the archipelago, and these predicted climate change induced alterations of the marine environment around the Chatham Islands could reduce the forage availability of this threatened species and have knock on effects on its population dynamics. To better assess and predict how climate change might affect this critically endangered species it is crucial to improve our understanding of the species foraging ecology.

To this end I will track breeding Chatham Island tāiko with GPS. As the population of this species is sensitive (i.e., only c. 100 adults), I carried out a pilot study during the 2022-23 breeding season to assess the effect of GPS deployment on the species. Results were positive, therefore, during the 2023-24 breeding season I will deploy 10 GPS on breeding Chatham Island tāiko from late incubation and throughout the full chick-rearing period. Using GPS loggers to track birds' movements will provide insights into the species' at-sea behaviour and distribution during breeding. It will enable us to identify the environmental factors that drive the movements and distribution of Chatham Island tāiko and derive areas of importance for the species. This information can then be used to inform marine spatial planning. It will also enable us to make predictions about how future climate might impact the availability of suitable marine habitats for breeding Chatham Island tāiko.

