

Automated monitoring system for Fiordland penguins/tawaki

Until recently, the Fiordland penguin or tawaki has been one of the least known penguins in the world. The IUCN red list estimates that the species' current population ranges between 5,500 and 7,000 mature individuals. Moreover, the population is thought to be in decline affording the species threat ratings of 'vulnerable' (IUCN) and 'nationally vulnerable' (NZ). Yet, in recent years, a number of reports and publications indicate that there may be a lot more tawaki than previously thought and that the population may in fact be increasing and even expanding its range. However, tawaki often breed in inaccessible sea caves, labyrinthine cave passages under glacial moraines, and impenetrable rain forest making traditional monitoring methods like nest counts highly unreliable.

Over the past 5 years, we have established a population of tawaki marked with subcutaneous transponders ("microchips") in Harrison Cove, Milford Sound/Piopiotahi. With support of the Birds NZ Research Fund, we will install an automated transponder reader gate, which will automatically register all the comings and goings of the penguins without the need for nest checks. Over time, the data gathered with this system will provide us with demographic information that allows reliable assessment of population trends. This study will serve as a pilot study to develop a network of automated monitoring systems across the species' breeding range.

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