

BIRD RESEARCH FUND 2024 SUMMARY ARTICLE: Pakahā/fluttering shearwater monitoring on Kokomohua/Long Island, Tōtaranui/Queen Charlotte Sound: understanding survival, recruitment and breeding occupancy.

Introduction:

Since 1991, the pakahā/fluttering shearwater (*Puffinus gavia*) colony nestled on the north-eastern slopes of Kokomohua/Long Island in Tōtaranui/Queen Charlotte Sounds has been the source for multiple translocations. Driven by the need to develop translocation techniques for the use in conservation management of endangered seabirds in Aotearoa New Zealand several translocations of pakahā have been undertaken from Kokomohua to nearby islands in Te Taihū-o-te-Waka/Marlborough Sounds (Te Pākeka/Maud Island), as well as further afield to Te Whanganui a Tara/Wellington, and now most recently to Mohua/Golden Bay. Despite these translocations and their important legacy for seabird conservation, little is known about how the source population has been faring on Kokomohua. In an effort to understand the long-term picture of the population and to improve future translocation endeavours a collaboration between Birds New Zealand, Wildlife Management International Ltd. (WMIL) and the Department of Conservation (DOC) seek to monitor a network of artificial burrows at the pakahā colony.

Thanks to funding from the Birds New Zealand Research Fund, trips to Kokomohua with local Marlborough Birds New Zealand members have occurred from 2021 to 2025. Trips have coincided with the egg laying and chick rearing periods of pakahā to assess breeding occupancy and breeding success. Breeding occupancy was calculated as 64.0% for the 114 artificial burrows during the November 2024 trip. Pakahā parents were mostly on eggs, with a few parents guarding chicks and some chicks were detected alone. This occupancy rate is 0.2% less than last season, and 17.8% higher than in 2022 when the colony was severely impacted by landslides. It is also the second highest occupancy recorded in this colony to date.

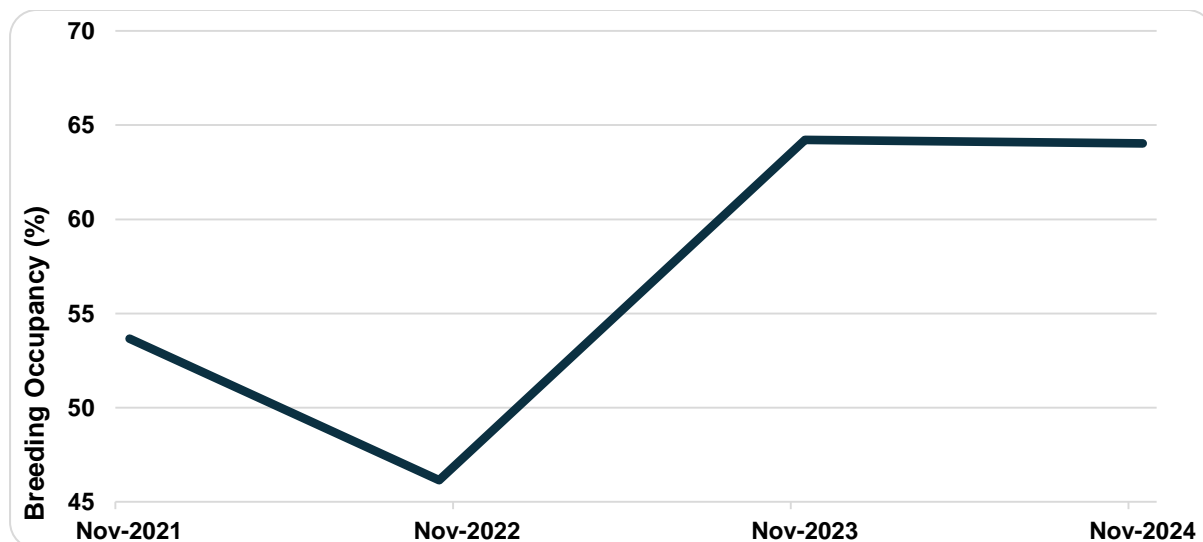


Figure 1. Pakahā/fluttering shearwater breeding occupancy (%) within the Kokomohua/Long Island artificial burrows, 2021-2024.

Within the artificial burrows a breeding success estimate of 80.3% was calculated for the artificial nestbox colony after a trip in January 2025, with 53 breeding pairs successfully producing a chick within the artificial nestbox colony (8 chicks were already presumed

fledged). The trip was also successful in getting 64 chicks banded (45 from artificial nestboxes, 19 from natural burrows).

Seventeen previously marked adults were resighted at the colony, and an additional 32 adults were banded this season. No pakahā that had been previously translocated away from the colony have been resighted back at the Kokomohua colony thus far, however further focused monitoring at night is needed to better understand this. One of the banded chicks was recovered dead as a beach-wrecked bird in Victoria, Australia, 56 days after fledging.

Further monitoring will help us continue to increase this valuable dataset to better understand occupancy, yearly survivorship (using mark-recapture tools), and much more. This is important to better inform conservation management decisions for this seabird, considering potential threats such as climate change.



Figure 2. Banding pakahā/fluttering shearwater chicks from the Kokomohua/Long Island artificial burrows, January 2025.

Acknowledgements:

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