

Appendix 1: Supplementary Material

Geolocator devices did not affect chick growth or adult return rates in Wedge-tailed Shearwaters (*Ardenna pacifica*) despite interannual variation in chick development

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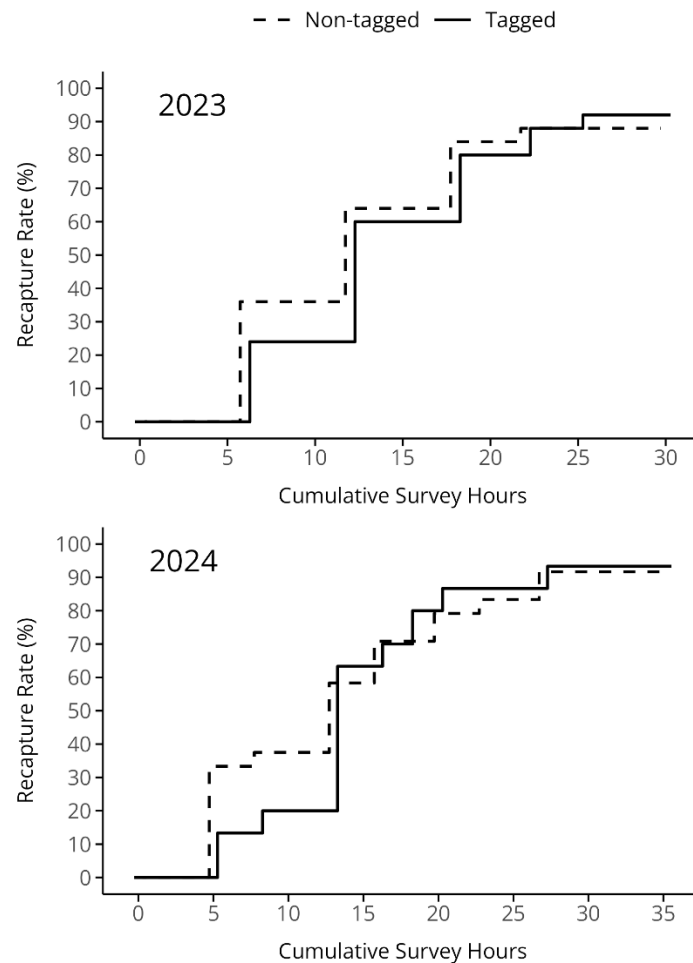


Figure S1. Cumulative recapture success of adult Wedge-tailed Shearwaters by tagging treatment with increasing survey effort. Solid lines represent tagged individuals (banded and fitted with geolocators) and dashed lines represent non-tagged individuals (banded only). Similar recapture rates between groups indicate similar return rates and detectability between tagging groups in each year.

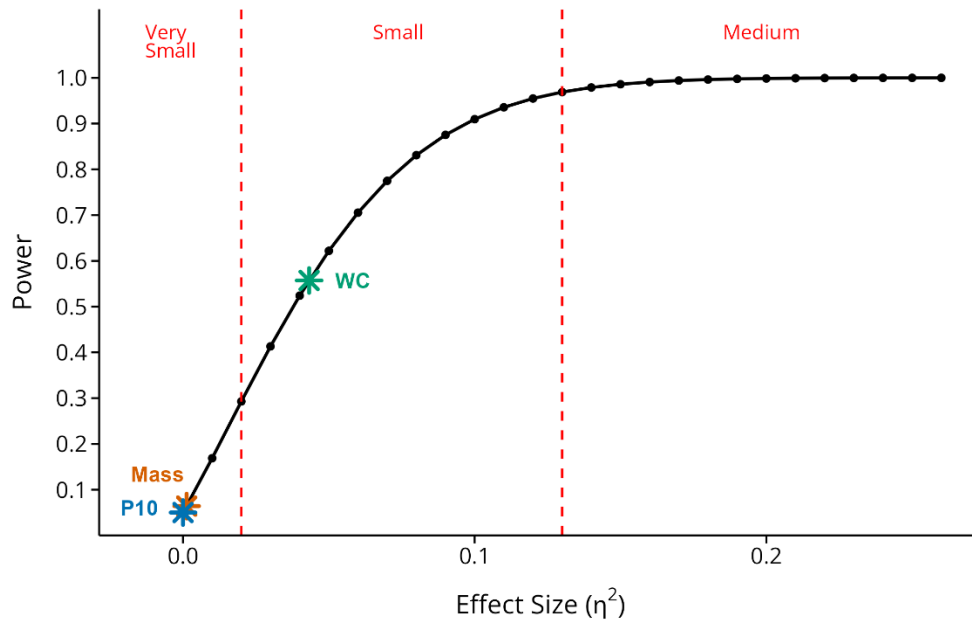


Figure S2. Power curve for ANOVAs testing effects of geolocator deployment on chick growth rates in Wedge-tailed Shearwaters. Power is shown as a function of effect size (η^2) based on a total sample size of 100 chicks (46 in 2022 and 56 in 2023). Stars indicate the observed tagging effect size on each growth metric: daily mass gain, wing chord growth (WC), and tenth primary feather growth (P10). Thresholds for effect sizes are based on Cohen (1992): Very Small ($\eta^2 < 0.02$); Small ($0.02 \leq \eta^2 < 0.13$); Medium ($0.13 \leq \eta^2 < 0.26$).

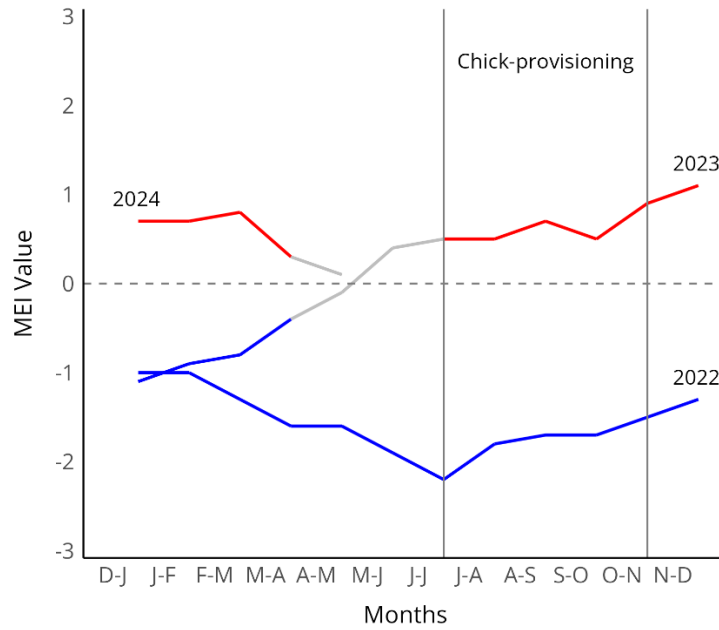


Figure S3. Multivariate El Niño Southern Oscillation Index (MEI) during the Wedge-tailed Shearwater chick-provisioning period across the study years (2022–2024). Warm (red), cold (blue), and neutral (grey) periods are based on a threshold of ± 0.5 °C. MEI values are available from the NOAA Physical Sciences Laboratory website (<https://psl.noaa.gov/enso/mei/>).