

Albatross diet: Composition of natural prey versus fisheries bait/waste

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Seabird injury or mortality caused by interactions with New Zealand commercial fishing activities is a major conservation concern with many interactions occurring in the surface longline (SLL) and trawl (TWL) fisheries. Albatrosses (Diomedidae) are among the most threatened and most of these long-lived, large seabirds have broad geographic ranges. Seabirds are attracted to fishing vessel activity as an additional food source and this puts them at risk of interacting with vessel structures and fishing gear. This includes incidental capture whilst feeding on bait and discards. It is not clear to what extent the diet of albatrosses consists of naturally foraged prey in comparison to fisheries bait/waste associated with fishing activity, and ultimately their reliance on commercial fisheries as a food source.



Albatrosses scavenging bait discards from fishers (Bank Peninsula, New Zealand 2024). Photo credit: Aimee van der Reis.

In this dietary study, scat from colony birds and stomach contents from necropsy samples (commercial fishing mortalities) were used to detect taxa consumed by 10 albatross species using DNA metabarcoding. Scat samples (n=86) were opportunistically collected from four subantarctic islands between January 2019 to April 2024. Albatross necropsies (n=72) took place from September 2022 to February 2024. Based on the frequency of occurrence, the diet among all albatross samples consisted largely of fishes (> 50% deep-sea and beyond known albatross diving depths) and to lesser extent

cephalopods. Differences in prey diversity (higher in necropsy samples) were found to be significant between sample types, however, no specific prey species were found to be responsible for this difference. Observers and fisher reported bait and discard species were predominantly squid and mackerel.

Overall, the majority of fish and cephalopod species identified in both colony scat and necropsy samples overlapped extensively with species that were most likely to be made available through SLL and TWL fisheries activities, i.e., discard/species targeted/bait used. These results suggest that albatrosses are heavily reliant on fisheries as a food source whether they were sampled from fishing vessels (i.e., necropsy) or from nesting sites (i.e., scats).

This study was part of the Department of Conservation, Conservation Services Programme. For more information about this study, please see the [final report](#). Molecular reagent costs to expand methodology was supported by the Birds NZ Research Fund.