



INT 2022/02 IDENTIFICATION OF SEABIRDS CAPTURED IN NEW ZEALAND FISHERIES QUARTERLY REPORT: 1 July 2022 to 30 September 2022.

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Scope of work completed:

New Zealand waters support a diverse assortment of seabird species, and much of the commercial fishing activity in the region overlaps with seabird foraging ranges. The accurate identification of seabirds captured in New Zealand fisheries is vital for determining the potential impact of fisheries on these populations.

This report summarises identification work completed on dead seabirds caught and returned from commercial fishing vessels, and identification work using photographs or Central Observer Database (COD) records from the Ministry of Primary Industries, across the 1 July 2022 to 30 September 2022 fishing period.

There were a total of 56 seabirds captured and returned, photographed, or recorded as interactions from New Zealand commercial fisheries, primarily trawl vessels, between 1 July 2022 and 30 September 2022.

There have been 22 seabirds from eight taxa necropsied from this period. These seabirds were caught on 15 vessels: 12 trawl vessels (17 seabirds), and two longline vessels (four seabirds). One necropsy record is yet to have the associated fishing method confirmed (this will be obtained from the next COD extract). Due to the length of some fishing trips and subsequent transport it is possible some birds captured in this period may not have been received at the time of writing. Any further specimens received will be reported at a later date.

One banded seabird was retained for necropsy during this period. This was a Salvin's albatross with the band number O-29191. This bird was banded by Paul Sagar on Toru Islet in the Snares Western Chain on 7/10/2010 as a breeding adult.

Government observers correctly identified 50% of the seabirds that were returned for necropsy to species level, and identified a further 27.3% into the correct group (e.g. *Procellaria* petrel for white-chinned petrel). Four returned seabirds (18.2%) were identified incorrectly, and one was labelled with a species code which did not exist, most likely a mis-spelling.

Examination of the Central Observer Database (COD) extract and images provided for this period gave a total of 34 records of seabirds that were reported as interacting with fishing vessels but not retained. These incidents were categorized as photographed (*photo*, $n = 10$) or not photographed (*interaction*; $n = 24$) interactions from 16 fishing vessels: 12 trawl vessels (27 seabirds), and four longline vessels (seven seabirds). These figures may include some non-capture interactions such as vessel impacts. Due to a lag between Observer data and images being entered into COD, it is possible some interactions within this period may not have been received at the time of writing. Any further specimens will be reported at a later date.

Details relating to each specimen are available on request from the Manager, Conservation Services Programme, DOC (email: csp@doc.govt.nz).

In some necropsy cases (e.g. specimens damaged by fishing gear and machinery, or by sea lice) it was not possible to collect all data; these categories are reported as 'unknown' and appear as such in the relevant tables.

Individual seabirds (i.e. necropsy, photo, or interaction birds) were allocated a unique necropsy number. If multiple photographs were received of an individual bird, the best image was used to match to the corresponding Microsoft Access database entry, but all images were used to confirm species identification. All data and associated information (such as vessel name, position, date of capture, time of capture, possible

identification, etc.) for each seabird specimen, photograph or interaction was entered into a Microsoft Access database.

Table 1: Common and scientific names of seabirds captured and returned (necropsy), photographed (photo), or listed as an interaction (interaction) from New Zealand fisheries between 1 July 2022 and 30 September 2022.

COMMON NAME	SCIENTIFIC NAME	NECROPSY	PHOTO	INTERACTION	TOTAL
Buller's albatross	<i>Thalassarche bulleri bulleri</i>	8	1		9
Buller's and Pacific albatross	<i>Thalassarche bulleri</i>			6	6
Campbell albatross	<i>Thalassarche impavida</i>	1			1
Fairy prion	<i>Pachyptila turtur</i>		1		1
Fluttering shearwater	<i>Puffinus gavia</i>			2	2
Giant petrel (unidentified)	<i>Macronectes</i> spp.			1	1
Great-winged (grey-faced) petrel	<i>Pterodroma macroptera gouldi</i>	1			1
New Zealand white-capped albatross	<i>Thalassarche steadi</i>	3	4	6	13
Northern giant petrel	<i>Macronectes halli</i>			1	1
Petrel (unidentified)				1	1
Petrel, prions, and shearwaters (unidentified)				3	3
Royal albatross (unidentified)	<i>Diomedea</i> spp.			1	1
Salvin's albatross	<i>Thalassarche salvini</i>	6	3		9
Seabird (large)			1	1	2
Sooty shearwater	<i>Puffinus griseus</i>	1			1
Southern royal albatross	<i>Diomedea epomophora</i>	1			1
Westland petrel	<i>Procellaria westlandica</i>			2	2
White-chinned petrel	<i>Procellaria aequinoctialis</i>	1			1
Total		22	10	24	56

Table 2: Numbers of seabirds returned from observed fishing vessels between 1 July 2022 and 30 September 2022, by species, sex (M = male, F = female, U = unknown), and age class (A = adult, U = unknown).

SPECIES	SEX			AGE		TOTAL	% TOTAL
	M	F	U	A	U		
Buller's albatross	3	3	2	7	1	8	36.4
Campbell albatross	1			1		1	4.5
Great-winged (grey-faced) petrel		1		1		1	4.5
NZ white-capped albatross	3			3		3	13.6
Salvin's albatross	2	2	2	6		6	27.3
Sooty shearwater	1			1		1	4.5
Southern royal albatross	1			1		1	4.5
White-chinned petrel	1			1		1	4.5
TOTAL	12	6	4	21	1	22	
% TOTAL	54.5	27.3	18.2	95.45	4.55		

Table 3: Numbers of adult seabirds returned from observed fishing vessels between 1 July 2022 and 30 September 2022, by species and breeding status (BA = breeding adult, NB = non-breeding adult, U = adult of unknown breeding status).

SPECIES	BREEDING STATUS		
	BA	NB	U
Buller's albatross	4	2	1
Campbell albatross	1		
Great-winged (grey-faced) petrel	1		
NZ white-capped albatross	1		2
Salvin's albatross	3	1	2
Sooty shearwater	1		
Southern royal albatross			1
White-chinned petrel			1
TOTAL	11	3	7
% TOTAL	52.4	14.3	33.3

Table 4: Stomach contents of seabirds killed and returned on fishing vessels between 1 July 2022 and 30 September 2022.

Note: Seabirds can have multiple items in their stomachs resulting in higher content figures than the total number of seabirds killed and returned ($n = 22$).

SPECIES	EMPTY	MISSING	BAIT	OFFAL (OR DISCARDS)	NATURAL	PROVENTRICULAR OIL	WORMS
Buller's albatross	1	2	8		1	1	
Campbell albatross			1	1			
NZ white-capped albatross	1		2	1			
Salvin's albatross	1	1	5	2			
Sooty shearwater					1		
Southern royal albatross			1				
White-chinned petrel			1	1			1
TOTAL	3	3	18	5	2	1	1
% TOTAL	13.6	13.6	81.8	22.7	9.1	4.5	4.5

Table 5: Gizzard contents of seabirds killed and returned on fishing vessels between 1 July 2022 and 30 September 2022.

Note: Seabirds can have multiple items in their gizzards resulting in higher content figures than the total number of seabirds killed and returned ($n = 22$).

SPECIES	EMPTY	MISSING	SQUID BEAKS	OTOLITHS	EYEBALLS	BONES OR SKIN	STONES, BARNACLES, FEATHERS, SEAWEED	KRILL
Buller's albatross		2	4	2	2	3		1
Campbell albatross						1		
Great-winged (grey-faced) petrel			1					
NZ white-capped albatross	3							
Salvin's albatross	1	1		1	1	4	1	
Sooty shearwater	1		1					
Southern royal albatross					1	1		
White-chinned petrel			1					
TOTAL	5	3	7	3	4	9	1	1
% TOTAL	22.7	13.6	31.8	13.6	18.2	40.9	4.5	4.5

Table 6: Number of seabirds returned from observed fishing vessels between 1 July 2022 and 30 September 2022, by species, fishery type (Bottom/Midwater Trawl or Longline), and location of capture.

SPECIES	BOTTOM/MIDWATER TRAWL				LONGLINE		UNCONFIRMED ¹
	NET	COD-END	LENGTHENER	WARP	HOOK	DECK STRIKE	
Buller's albatross	4	1	1	2			
Campbell albatross	1						
Great-winged (grey-faced) petrel						1	
NZ white-capped albatross				2			1
Salvin's albatross	2			1	3		
Sooty shearwater	1						
Southern royal albatross				1			
White-chinned petrel	1						
TOTAL	9	1	1	6	3	1	1
% TOTAL	40.9	4.5	4.5	27.3	13.6	4.5	4.5

¹ Fishing type to be confirmed using the next COD extract for the latest information.

Table 7: Number of seabirds returned from observed fishing vessels between 1 July 2022 and 30 September 2022, by species and injury type.

Note: Seabirds can have multiple injuries resulting in higher figures than the total number of seabirds killed and returned ($n = 22$).

SPECIES	NO VISIBLE INJURIES	HOOK IN WING	BROKEN WING	BROKEN LEG	LACERATIONS, SEVERED BODY PARTS	GREASED	LICED	WATERLOGGED
Buller's albatross	1		4	4	2	1	2	
Campbell albatross			1					
Great-winged (grey-faced) petrel	1							
NZ white-capped albatross			2	1		1		
Salvin's albatross	1	2	2	1	1		2	1
Sooty shearwater				1				1
Southern royal albatross								
White-chinned petrel					1	1		
TOTAL	3	2	9	7	4	3	4	2
% TOTAL	13.6	9.1	40.9	31.8	18.2	13.6	18.2	9.1

Table 8: Comparison of fat scores in seabirds returned between 1 July 2022 and 30 September 2022 (1= no fat to 5 = extremely fat, U = unknown) by species.

SPECIES	FAT SCORE					
	1	2	3	4	5	U
Buller's albatross	5	1				2
Campbell albatross				1		
Great-winged (grey-faced) petrel	1					
NZ white-capped albatross	1	1				1
Salvin's albatross	3		1			2
Sooty shearwater		1				
Southern royal albatross	1					
White-chinned petrel	1					
TOTAL	12	3	1	1	0	5
% TOTAL	54.5	13.6	4.5	4.5	0.0	22.7