



## **INT 2019/02 IDENTIFICATION OF SEABIRDS CAPTURED IN NEW ZEALAND FISHERIES QUARTERLY REPORT: 1 July 2021 to 31 December 2021.**

Elizabeth Bell <sup>1</sup>

1. Wildlife Management International Ltd, PO Box 607, Blenheim 7240, [biz@wmil.co.nz](mailto:biz@wmil.co.nz), [shannon@wmil.co.nz](mailto:shannon@wmil.co.nz)

### **Scope of work completed:**

New Zealand waters support a diverse range of seabird species, and much of the commercial fishing activity in the region overlaps with their 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 birds caught and returned from 1 July 2021 to 31 December 2021.

Identifications using photographs or Central Observer Database (COD) records from Ministry of Primary Industries were unable to be done as these extracts and images were not received at the time this report was written. These will be reported on at a later date.

There were a total of 72 seabirds captured and returned from New Zealand commercial fisheries, primarily from longline vessels, between 1 July 2021 and 31 December 2021.

There have been 72 seabirds from 16 taxa necropsied from this period. 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.

Government observers correctly identified 69.4% of the dead seabirds and identified 22.2% into the correct group (i.e., grey-backed storm petrel as storm petrel).

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

In some necropsy cases (i.e. those specimens damaged by fishing gear and machinery, or by sea lice) it was not possible to collect all data; these 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 are received of an individual bird, the best image is used to match to the corresponding Access database entry, but all images are 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 an Access database.

**Table 1** Common and scientific names of seabirds captured and returned or photographed from New Zealand fisheries between 1 July 2021 and 31 December 2021.

COMMON NAME	SCIENTIFIC NAME	NECROPSY	PHOTO	INTERACTION	TOTAL
Buller's albatross	<i>Thalassarche bulleri bulleri</i>	14			<b>14</b>
Chatham albatross	<i>Thalassarche eremita</i>	1			<b>1</b>
Common diving petrel	<i>Pelecanoides urinatrix</i>	4			<b>4</b>
Fairy prion	<i>Pachyptila turtur</i>	1			<b>1</b>
Grey-backed storm petrel	<i>Garrodia nereis</i>	1			<b>1</b>
New Zealand white-capped albatross	<i>Thalassarche steadi</i>	12			<b>12</b>
Northern giant petrel	<i>Macronectes halli</i>	3			<b>3</b>
Otago shag	<i>Phalacrocorax chalconotus</i>	1			<b>1</b>
Salvin's albatross	<i>Thalassarche salvini</i>	15			<b>15</b>
Snares cape petrel	<i>Daption capense australe</i>	1			<b>1</b>
Sooty shearwater	<i>Puffinus griseus</i>	2			<b>2</b>
Southern royal albatross	<i>Diomedea epomophora</i>	4			<b>4</b>
Westland petrel	<i>Procellaria westlandica</i>	8			<b>8</b>
White-chinned petrel	<i>Procellaria aequinoctialis</i>	3			<b>3</b>
White-faced storm petrel	<i>Pelagodroma marina</i>	1			<b>1</b>
Yellow-eyed penguin	<i>Megadytes antipodes</i>	1			<b>1</b>
<b>Total</b>		<b>72</b>	<b>N/a</b>	<b>N/a</b>	<b>72</b>

**Table 2** Species and numbers of seabirds killed and returned from observed fishing vessels between 1 July 2021 and 31 December 2021, by sex (M = male, F = female, U = unknown) and age (A = adult, BA = breeding adult, NB = non-breeding adult, SA = sub-adult, I = immature and J = juvenile, U = unknown).

SPECIES	SEX			AGE							TOTAL	% TOTAL
	M	F	U	A	B	NB	SA	I	J	U		
Buller's albatross	6	6	2	13	6	1				1	14	19.4%
Chatham albatross		1		1	1						1	1.4%
Common diving petrel	1	3		4							4	5.6%
Fairy prion	1			1							1	1.4%
Grey-backed storm petrel	1			1							1	1.4%
NZ white-capped albatross	6	5	1	7	3		5				12	16.7%
Northern giant petrel		3		3							3	4.2%
Otago shag	1			1							1	1.4%
Salvin's albatross	8	5	2	14	10					1	15	20.8%
Snares cape petrel	1			1	1						1	1.4%
Sooty shearwater	2			2							2	2.8%
Southern royal albatross	2	2		4	2						4	5.6%
Westland petrel	5	2	1	8	3	2					8	11.1%
White-chinned petrel	2		1	3	3						3	4.2%
White-faced storm petrel	1			1							1	1.4%
Yellow-eyed petrel	1								1		1	1.4%
<b>TOTAL</b>	<b>38</b>	<b>27</b>	<b>7</b>	<b>64</b>	<b>29</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>72</b>	
<b>% TOTAL</b>	<b>52.8%</b>	<b>37.5%</b>	<b>9.7%</b>	<b>88.9%</b>	<b>45.3</b>	<b>4.7%</b>	<b>6.9%</b>		<b>1.4%</b>	<b>2.8%</b>		

**Table 3** Stomach contents of seabirds killed and returned on fishing vessels between 1 July 2021 and 31 December 2021.

Note: Birds can have multiple items in the stomachs resulting in higher content figures than the total number of seabirds killed and returned ( $n = 72$ ).

SPECIES	EMPTY	MISSING	BAIT	OFFAL (OR DISCARDS)	NATURAL	BARNACLES OR SEAWEED	PLASTIC	PROVENTRICULAR OIL	WORMS
Buller's albatross	3	3		7	2	2		1	1
Chatham albatross				1					
Common diving petrel	2				2				
Fairy prion	1								
Grey-backed storm petrel	1								
NZ white-capped albatross	4	1		8					
Northern giant petrel			1	1	3	1		2	1
Otago shag				1					
Salvin's albatross	5	1		12	1				
Snares cape petrel					1			1	
Sooty shearwater	1		1						
Southern royal albatross	2			3					
Westland petrel		1	1	7					
White-chinned petrel	2		1	1					
White-faced storm petrel	1								
Yellow-eyed petrel	1								
<b>TOTAL</b>	<b>23</b>	<b>6</b>	<b>4</b>	<b>41</b>	<b>9</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>2</b>
<b>% TOTAL</b>	<b>31.9%</b>	<b>8.3%</b>	<b>5.6%</b>	<b>56.9%</b>	<b>12.5%</b>	<b>4.2%</b>		<b>5.6%</b>	<b>2.8%</b>

**Table 4** Gizzard contents of seabirds killed and returned on fishing vessels between 1 July 2021 and 31 December 2021.Note: Birds can have multiple items in the gizzard resulting in higher content figures than the total number of seabirds killed and returned ( $n = 72$ ).

SPECIES	EMPTY	MISSING	SQUID BEAKS	OTOLITHS	EYEBALLS	BONES OR SKIN	PLASTIC	WORMS	STONES, BARNACLES, FEATHERS, SEAWEED
Buller's albatross	2	3	2		1	3		1	3
Chatham albatross									2
Common diving petrel	1	1							3
Fairy prion	1								
Grey-backed storm petrel	1								
NZ white-capped albatross	4		2	1		4		1	
Northern giant petrel			1		4	2	1	1	3
Otago shag									
Salvin's albatross	3	1	2	3	3	11		1	1
Snares cape petrel						1		1	
Sooty shearwater			1	1		2		1	1
Southern royal albatross			4		3	1		1	
Westland petrel		1	7	4	1	5		3	1
White-chinned petrel			1	1	1	1		2	
White-faced storm petrel				1					1
Yellow-eyed petrel									1
<b>TOTAL</b>	<b>12</b>	<b>6</b>	<b>20</b>	<b>11</b>	<b>13</b>	<b>30</b>	<b>1</b>	<b>12</b>	<b>16</b>
<b>% TOTAL</b>	<b>16.7%</b>	<b>8.3%</b>	<b>27.8%</b>	<b>15.3%</b>	<b>18.1%</b>	<b>41.7%</b>	<b>1.4%</b>	<b>16.7%</b>	<b>22.2%</b>

**Table 5** Number of seabirds of each species killed and returned from observed fishing vessels between 1 July 2021 and 31 December 2021, by fisheries type and location of capture. Extracts not received at time report was written.

SPECIES	BOTTOM/MIDWATER TRAWL						SETNET	LONGLINE		UNCONFIRMED <sup>1</sup>	TOTAL
	NET	COD-END	LENGTHENER	OTHER	WARP	DECK STRIKE		HOOK	DECK STRIKE		
Buller's albatross	3				3			4		4	<b>14</b>
Chatham albatross										1	<b>1</b>
Common diving petrel	1					1				2	<b>4</b>
Fairy prion						1					<b>1</b>
Grey-backed storm petrel						1					<b>1</b>
NZ white-capped albatross								10		2	<b>12</b>
Northern giant petrel	1									2	<b>3</b>
Otago shag							1				<b>1</b>
Salvin's albatross	4		1		5					5	<b>15</b>
Snares cape petrel				1							<b>1</b>
Sooty shearwater	2										<b>2</b>
Southern royal albatross	1				1					2	<b>4</b>
Westland petrel	2							5		1	<b>8</b>
White-chinned petrel				1						2	<b>3</b>
White-faced storm petrel						1					<b>1</b>
Yellow-eyed petrel							1				<b>1</b>
<b>Total</b>	<b>14</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>9</b>	<b>4</b>	<b>2</b>	<b>19</b>	<b>0</b>	<b>21</b>	<b>72</b>
<b>% Total</b>	<b>19.4%</b>		<b>1.4%</b>	<b>2.8%</b>	<b>12.5%</b>	<b>5.6%</b>	<b>2.8%</b>	<b>26.4%</b>		<b>29.2%</b>	

<sup>1</sup> Fishing type is confirmed using the COD extract which has not been received to date.

**Table 6** Number of seabirds killed and returned from observed fishing vessels between 1 July 2021 and 31 December 2021, by injury.Note: Birds can have multiple injuries resulting in higher figures than the total number of seabirds killed and returned ( $n = 72$ ).

SPECIES	NO INJURIES	HOOK						BROKEN BONES	LACERATIONS, SEVERED BODY PARTS	CRUSHED	GREASED	LICED	WATERLOGGED
		BODY	WING	BILL	THROAT	FOOT	UNKNOWN <sup>2</sup>						
Buller's albatross	1			1	1			8	10	1	2		1
Chatham albatross	1												
Common diving petrel								1		1			1
Fairy prion										1			
Grey-backed storm petrel	1												
NZ white-capped albatross	1		2	3	2			1	4			1	1
Northern giant petrel	1							2			1		
Otago shag												1	
Salvin's albatross								11	2	3	2		2
Snares cape petrel	1												
Sooty shearwater	2												
Southern royal albatross								7	2				1
Westland petrel	2			1	1		1		1			1	1
White-chinned petrel								1					1
White-faced storm petrel	1												
Yellow-eyed petrel								1					
<b>Total</b>	<b>11</b>	<b>0</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>32</b>	<b>19</b>	<b>6</b>	<b>5</b>	<b>3</b>	<b>8</b>
<b>% Total</b>	<b>15.3%</b>		<b>2.8%</b>	<b>6.9%</b>	<b>5.6%</b>		<b>1.4%</b>	<b>44.4%</b>	<b>26.4%</b>	<b>8.3%</b>	<b>6.9%</b>	<b>4.2%</b>	<b>11.1%</b>

<sup>2</sup> An unknown hook location relates to a seabird caught and killed on a longline vessel but with no apparent hook injury anywhere on the body. No additional capture information was provided by the observer. These seabirds may have been tangled in the line rather than hooked.

**Table 7.** Comparison of fat scores in the returned birds between 1 July 2021 and 30 September 2021 (1= no fat to 5 = extremely fat, U = unknown).

SPECIES	FAT SCORE					
	1	2	3	4	5	U
Buller's albatross	3	7	2			1
Chatham albatross	1					
Common diving petrel		3	1			
Fairy prion		1				
Grey-backed storm petrel			1			
NZ white-capped albatross	1	3		7		1
Northern giant petrel		1		2		
Otago shag			1			
Salvin's albatross	3	3	3	4		
Snares cape petrel	1					
Sooty shearwater	1	1				
Southern royal albatross	1		3			
Westland petrel	2	4	1			
White-chinned petrel		1	2			
White-faced storm petrel	1					
Yellow-eyed petrel			1			
<b>TOTAL</b>	<b>14</b>	<b>24</b>	<b>15</b>	<b>13</b>	<b>0</b>	<b>2</b>
<b>% TOTAL</b>	<b>19.4%</b>	<b>33.3%</b>	<b>20.8%</b>	<b>18.1%</b>	<b>0.0%</b>	<b>2.8%</b>