

# Interim Code of Practice

## For the Mitigation of Incidental Seabird Capture in New Zealand Bottom Longline Fisheries



**Original draft: Ling Autoline Working Group 2007**

*Revised Interim draft for use in other bottom Longline fisheries*

June 2013

***Since the original draft in 2007, new Fisheries Bottom Longline Regulated measures have been introduced, offal control, Night setting & Line weighting are all regulated, ensure you know and understand the new regulations.***

**Disclaimer:**

This document has been produced to serve as a guide to the MPI Fisheries Regulations for Bottom Long Lining measures for use by industry. This not intended to be nor should it be used, as a substitute to any statutory, regulatory, and/or non-regulatory requirements for Bottom Long line and deepwater fishing. Before acting in reliance, either wholly or partially, on any information contained in this document-‘guide/manual’, readers should seek advice as to how current legislation, rules and regulations may affect their interests. It is the duty of the operator to know and understand the current Regulations that apply.

## Summary of the Code of Practice for Bottom Longline Fishers

To ensure success, parties to the Code of Practice have committed to abide to the following measures:

1. Report captures (dead or alive) record on the mandatory MPI; NFPSCR form, and all Trigger-Point reports made to the DWG within 24hrs; 3+dead Albatross/Mollymawk Big birds & 5+ dead Petrel or Shearwaters/Small birds in a day (& 10 birds in any 7 day period)
2. Vessels must report incidental seabird captures daily to their companies.
3. To accurately identify seabirds, all vessels operating under this COP will have an appropriate reference onboard. Options include the book 'Identification of Seabirds reference books or identification guides produced by MPI and DOC.
4. Every, assistance will be given to MPI Observers on board – they will provide independent verification that this COP is being adhered to.
5. Crews will be encouraged to undertaken Environmental training by the DWG
6. Parties to this s COP will be proactive in using seabird mitigation techniques.
7. The following seabird mitigation measures are to be used at all times when fishing with longlines:
  - Effective tori line(s) will be in place and a back up tori line will be available for immediate deployment should the primary tori line be lost/damaged.
  - Nigh time setting or if fishing/setting during the day, lines will be weighted to increase hook sink rates to achieve approximately 0.3m/s.
  - Offal will not be discharged during setting
  - Offal discharge at hauling will be avoided or batched discharged from the other side of the vessel from the hauling station.
  - All effort must be made to remove embedded hooks from offal before discharge.
  - The use of totally frozen bait is to be avoided
  - Vessel lighting at the stern will be minimal (i.e. shielded from shining on the longline) during night time setting while maintaining the required safety standard for crew unless being used in such a way that works as a mitigation device (such as lasers or spotlights).
  - Extra mitigation is to be used during times of high risk and/or if several (3-5) birds have been caught on a set in one day.
  - High risk times include around full moon, feeding 'frenzy', periods of high bird activity
  - Options include: increasing line sink rate, adding another tori line, and setting at night, or moving fishing area.
8. Where practical, additional mitigation techniques are to be implemented at every opportunity to minimise incidental seabird capture

## **Parties to the COP**

All Bottom Long line vessels over 20m, targeting:

- Ling
- Blue Nose
- FMA 3 and FMA 4

## **Introduction:**

The purpose of this COP is to provide a suite of mitigation measures that will help minimise the incidental capture of seabirds within the bottom longline fisheries of the NZ EEZ. They are measures that are practical, sensible and are known to work. Adopting and implementing this COP demonstrates a commitment to the principles of sustainable utilisation.

## **Reporting:**

### **Vessel Action (Trigger Points)**

If, in **any 24 hour period** you:

- **Capture 3 or more (dead) Albatross / Mollymawk (Big/birds)**
- **Capture 5 or more (dead) Petrels & Shearwaters (small/birds)**

If, in **any 7 day period** you:

- **Capture 10 or more dead seabirds (all species of seabird/dead)**

Record the seabird interactions and any other relevant information in the Bridge Log and Report to your onshore Vessel Manager promptly and Reassess your mitigation, offal control and what part of the operation is causing the risk. Wherever appropriate, take additional steps to mitigate risk of further capture events. Unless your 100% sure of the species use the generic codes below! Complete the mandatory MPI: Non-Fish/ Protected Species Catch Return form:

- Use the species code or the type code supplied by MPI as listed here:

XAL - Albatrosses (Unidentified)

XXP - Petrels, Prions and Shearwaters (Unidentified)

XHG - Shags (Unidentified)

XLA - Gulls and Terns (Unidentified)

XPG - Penguins (Unidentified)

- Record any leg band numbers on the form

Meet your legal requirements. Complete & record all captures (dead or released alive) in the: Non-Fish/ Protected Species Catch Return form furnish to MPI as required under the fisheries reporting regulations. Your onshore Vessel Manager must notify the DWG Environmental Liaison Officer within 24 hours of trigger breaches so that any follow-up deemed necessary can be carried out. DWG 24/Hour Contacts

**Report Triggers ASAP**, or for advice on this COP or other fishing-related matters: **Industry contact: Deepwater Group;**

[admin@deepwater.org](mailto:admin@deepwater.org) Cc [john.fvms@xtra.co.nz](mailto:john.fvms@xtra.co.nz) or /Ph **John Cleal; 021 305825**

Richard Wells; 021 457123, [richard@resourcewise.co.nz](mailto:richard@resourcewise.co.nz)

## Scope of the fishery and seabird interactions

The bottom longline fishery in New Zealand is complex and dynamic with many factors changing within and between fishing seasons. The fishery operates across several geographic areas and the presence, abundance and behavior of target fish species and the seabirds that interact with them are constantly changing in response to their environment. Similarly, vessels and fishing techniques vary widely within the fishery, as does fishing effort in response to market demand.

Seabirds are natural scavengers and appear to learn that fishing vessels provide a reliable easy meal during fishing operations and when used baits and offal are discarded at sea. Seabirds can become hooked during line setting and hauling. Seabirds can get caught by ingesting baited hooks or by being foul hooked. In addition to the New Zealand bottom longline fishery, other New Zealand and international fisheries can also incidentally catch the same species of seabirds. For threatened seabird species, this is obviously especially problematic.

Key fishing areas of interaction between seabirds and bottom longline vessels include:

**Albatross species** From the Chatham Rise area (10 to 200 nautical miles offshore) extending to the southern areas of the South Island, including the Snares shelf, Puysegur Bank and the Fiordland Trench

**Petrel species** From the Chatham Rise area (10 to 150 nautical miles offshore) extending northwards to the Bay of Plenty, Hauraki Gulf area, and southwards to Puysegur Bank, Snares Shelf, Auckland Islands and the Campbell, Pukaki and Bounty Plateaus

### Main Seabird Species Caught by Bottom Longline Vessels in New Zealand:

Common name	Species name	IUCN Threat Status 2007
Chatham albatross	<i>Thalassarche eremita</i>	Critically endangered
Salvin's albatross	<i>Thalassarche salvini</i>	Vulnerable
Buller's albatross	<i>Thalassarche bulleri</i>	Vulnerable
White chinned petrel	<i>Procellaria aequinoctialis</i>	Vulnerable
Black petrel	<i>Procellaria parkinsoni</i>	Vulnerable
Grey petrel	<i>Procellaria cinerea</i>	Near Threatened
Sooty shearwater	<i>Puffinus griseus</i>	Near threatened
Grey-faced petrel	<i>Pterodroma macroptera</i>	Least concern
Flesh-footed shearwater	<i>Puffinus carneipes</i>	Least concern
Cape pigeon	<i>Daption capense</i>	Least concern

## Mitigation Measures used to Minimise, Incidental Seabird Captures

The following mitigation methods will help to reduce the likelihood of accidentally catching a seabird. Either birds can be scared away from the line or the line can be sunk faster to put the baited hooks out of reach. Using a combination of methods is required to prevent birds from taking baited hooks.

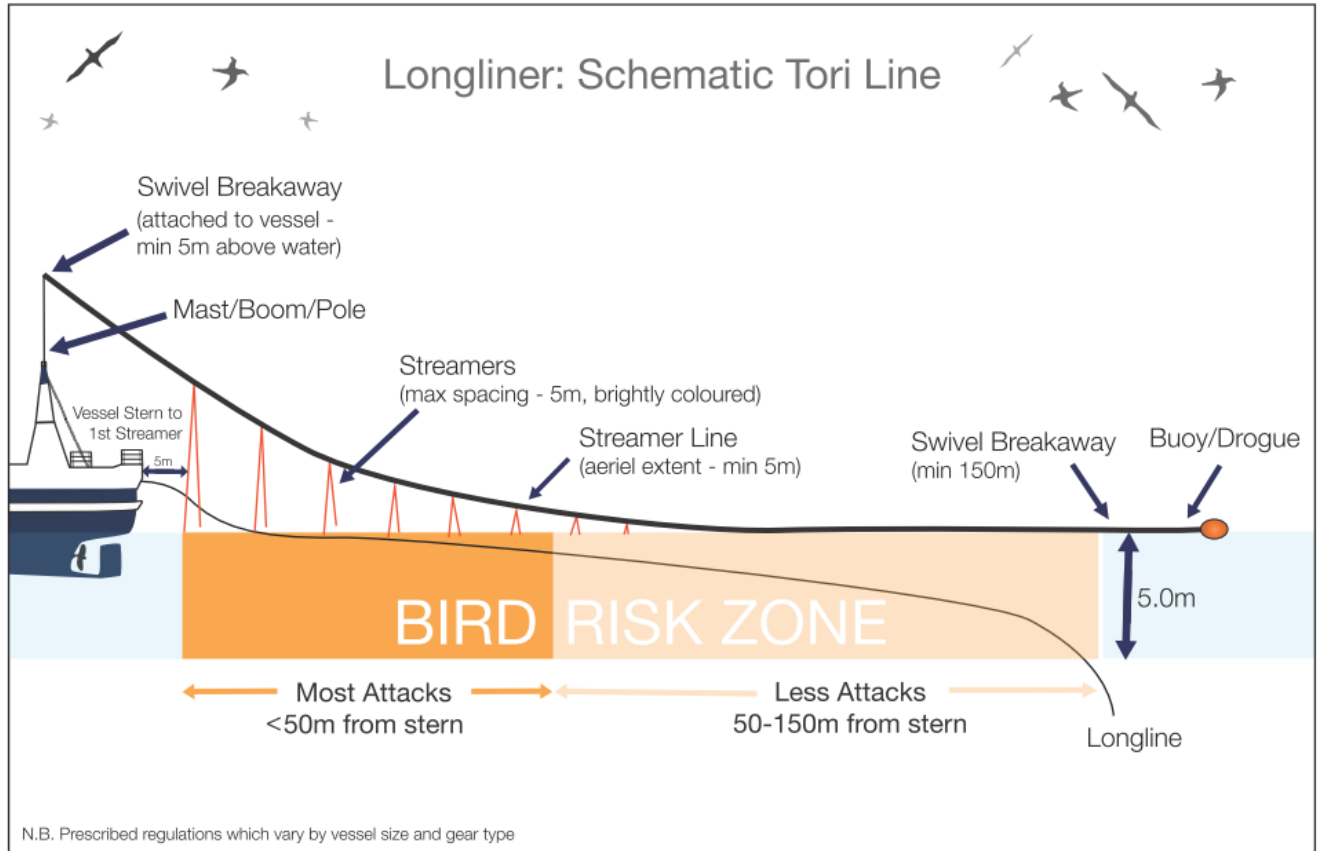
### 1. Tori Lines

It is mandatory to always use a bird scaring line(s) when setting a bottom longline.

**Tori lines** are designed to trail out behind the fishing boat to deter birds from entering the area where the fishing lines are set and hauled. They need to be deployed in such a way as to adequately protect your vessel's 'vulnerable zone' - that area where birds can access baited hooks.

Guidelines for an effective tori line:

1. The aerial extent of the tori line, which is the part of the line supporting the streamers, is the effective seabird deterrent component of a tori line. Vessels are encouraged to maximise the aerial extent and ensure that it protects the baited hooks as far astern of the vessel as possible, even in crosswinds.
2. The tori line shall be attached to the vessel, so that the line is at least 5 m above the water where the longline enters the water. The Streamer line must achieve a minimum of 50m aerial extent, (back bone must stay above the water line for at least 50m)
3. The tori line shall be a minimum of 150 m in length and include an object towed at the seaward end to create tension to maximise aerial coverage. The object towed should maintain the tori line over the longline, even in crosswinds.
4. Branched streamers, each comprising two strands of a minimum of 3 mm diameter brightly coloured, UV resistant, plastic tubing or cord, shall be attached to the tori line backbone. Streamers shall be no more than 5 m apart, commencing 5 m from the point of attachment of the tori line to the vessel, and from there, along the aerial extent of the line. When a tori line is fully deployed, the branched streamers should reach the sea surface in the absence of wind and swell. Swivels or a similar device shall be placed in the tori line to prevent streamers being twisted around the streamer line. Each branched streamer may also have a swivel or other device at its attachment point to the tori line to prevent fouling of individual streamers.
5. Vessels are encouraged to deploy a second tori line such that tori lines are towed from a point of attachment each side of the longline. The leeward tori line should be of similar specifications (in order to avoid entanglement the leeward streamer line may need to be shorter) and deployed from the leeward side of the longline.
6. Vessels should carry a spare tori line that is ready to deploy at all times. Spare parts should also be carried in case of damage or loss.



NB. Each vessel's Tori line maybe slightly different, or specific to each vessel, to increase the effectiveness in reducing interactions with seabird, **ensure it meets the regulated MPI specifications!**

## 2. Weighting of Hooks or Longline Gear

Weighting of the Longline gear (to increase the sinking speed of baited hooks) will be done to reduce the exposure time of baited hooks to seabirds.

*Restrictions on use of bottom longlines-No commercial fisher may set bottom longlines to take fish, aquatic life, or seaweed between the hours of 0.5 hours before nautical dawn and 0.5 hours after nautical dusk, unless line weighting is employed in accordance with regulations.*

- **Increasing the sink rate of baited hooks is the single most effective measure to reduce seabird captures on longline gear.**

N.B. Care must be taken - this procedure can be dangerous especially during the hauling operation when weights can “fly” over the overboard roller.

**The weighting regime required, must meet the mandatory legal requirements set out in the Fisheries regulations, ensure you know and can meet the mandatory line weighting regime;**

- IWL line lead core of at least 50g/m
- **External weighting of 4kg of metal weight or 5kg (non-metal) weight attached every 60m of hook bearing line**
  - There is more definition in the regulations, for line-backbone of less than 3.5mm

*For significantly accelerated line sink rates using standard auto line 7- 11 mm backbone is at least 5 kg every 30-50 hooks. Accordingly, this as a minimum line weighting regime for vessels using such backbone*

Note that:

1. The greater the diameter of the backbone the slower the sink rate, and so the larger the amount of weight required
2. Large swells create more line jerks and reduce sink rate
3. Slower setting speeds allow the line to sink to greater depths in shorter distances.
4. The greater the distance between weights, the slower the line sink rate
5. The use of floats reduces sink rates

#### **Floats:**

- When floats are used, extra weight must be added to the line to maintain accelerated line sink rates.
- Suggested:  $x$  buoyancy /  $x$  kg weight
- The number of weights required on board a vessel to successfully use line weighting as a mitigation measure is very important. Work this out before you sail!
- An alternative approach to assess whether line-weighting regimes are effective is to set a target sink rate. You should know your sink rate; carry out tests to ensure your meeting the best practice rate. Sink rate can be tested using the 'bottle test'
- **For vessels not using IWL, the best practice sink rate is 0.3 m/s.**
- A faster sink rate is required when setting with any of the following: speed greater than 6 knots, a shorter tori line, propeller pushing gear to the surface, gear lofting, etc.

#### **Conducting bottle tests (using 'Pump' type 'pop-up-cap' water bottle)**

1. Randomise bottle placement on the longline. All tests should be applied midway between weights
2. Determine the average sink rate using all bottle sink rates
3. To prepare bottles, secure 10 m of 2/3mm multifilament nylon snood twine, or equivalent, tie to the neck of a 500–1 000 ml plastic bottle with a longline clip attached to the other end.
4. Reflective tape should be wrapped around the bottle to allow it to be observed in low light conditions and at night.
5. Empty the bottle, leave the stopper/cap 'open' and wrap the twine around the body of the bottle for setting. The bottle with the encircled twine is attached to the longline, midway between weights (the attachment point).
6. Record the time at which the attachment point (shark clip) enters the water as  $t_1$  in seconds. The time at which the bottle is observed to be pulled completely under is recorded as  $t_2$  in seconds. The result of the test is calculated as follows:  
Longline sink rate =  $10 / (t_2 - t_1)$ . (Time divided by 10 = sink rate)
  - The result should be around 0.3 m/s or more.

Sometimes the sink rate test fails as the bottle and or line tangles around a snood etc, so it may take a few goes, best done in good conditions as the bottle can be 100m behind the vessel before it sinks; one crew to lunch the bottle & run the stop-watch and another crew with binoculars to sight when the bottle is fully submerged.

### **Integrated Weighted Line (IWL)**

Some fishers use integrated weighted line to increase line sink rates. This is proving to be very effective in reducing the accidental capture of birds. IWL is line with lead beads interwoven through the lay of the rope. To maximise mitigation effectiveness while still maintaining good handling characteristics and fish catching, the addition of weight in IWL should be approximately 50gms/ meter.

If using IWL, and floats, additional weights may be required to sufficiently accelerate line sink rate to achieve effective seabird bycatch mitigation.

### **3. Night Setting**

Setting longlines at night is a recommended practice as the visibility of the bait is reduced for most seabirds

*Restrictions on use of bottom longlines-No commercial fisher may set bottom longlines to take fish, aquatic life, or seaweed between the hours of 0.5 hours before nautical dawn and 0.5 hours after nautical dusk, unless line weighting is employed in accordance with regulations.*

- Research indicates that more seabirds are caught on longlines set during the day.
- The effectiveness of setting longlines at night depends on various factors e.g. fishing method, season, seabird species behavior, weather, mitigation measures already in place etc.
- Vessel lighting needs to be shielded to avoid shining out onto the longline, less light on the longline helps reduce the ability of the bird to see the baited hooks.
- Crew safety is paramount so light levels must be safe on board the vessel.
- The stern lights should be switched off when not required for shooting and hauling as lights attract seabirds to the vessel

**Setting lines at night reduces the visibility of the bait for most seabirds. However care must be taken:**

- 1. In the three days before and after a full moon, and,**
- 2. In the hour after sunset and the hour before sunrise. This is when many seabirds are most actively feeding so are danger times.**

### **4. Disposal of Waste, Discards, Baits and Offal**

Offal will not be discharged during setting. Avoid discharge when hauling.

Line setting is a very dangerous time for seabirds – the disposal of waste overboard during this time attracts seabirds to the longlining operation and puts seabirds in danger from baited hooks.

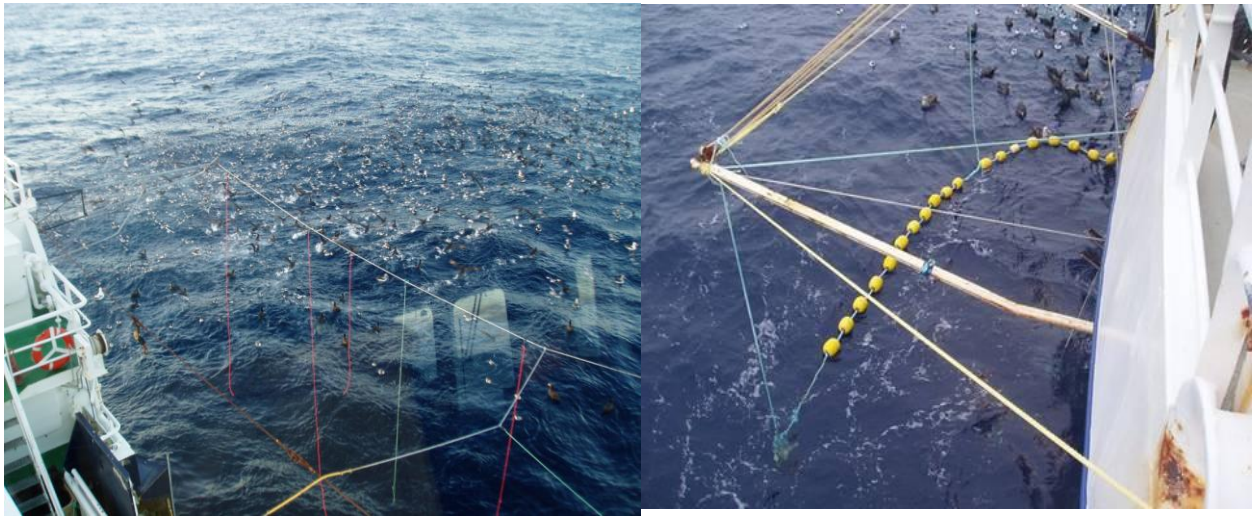
- Offal may be released when the vessel is steaming, or, when carefully managed (as below) during hauling.
- During hauling, offal may be discharged at the opposite end and side of the vessel, from the hauling station. This is to prevent offal floating around the hauled line.



- Offal will not be discharged during setting - this includes the unhooked bait.
- If offal or missed baits are drifting into the area where the line is being set, steps must be taken immediately to prevent this happening.
- **All efforts must be made to remove embedded hooks from offal.**

### **5. Seabirds caught during the haul**

If birds are being caught during the haul a seabird scaring device can be fitted around the hauling station. Brickle curtains are often used for this purpose and are very effective in preventing birds attacking the returning baits.



This photo shows a haul mitigation device used to exclude seabirds from the hauling bay on a large bottom longline vessel. Smaller versions of such a device can also be made. Often just good blast for a deck hose will deter the birds away from the immediate area

### **6. Thawing of Bait**

The use of totally frozen bait is to be avoided.

- **Generally, totally frozen bait sinks at a slower rate.**
- **Bait must be taken out of the freezer or ice several hours before the set.**

Partially frozen bait works well as the bait is cut up as it is hooked. The auto baiters need firm bait. If bait is fully thawed, baiting efficiency reduces.

## Seabird handling

If despite the precautions, seabirds are incidentally caught alive, every reasonable effort should be made to ensure that birds are released alive and unharmed.

### Seabird handling after capture in longlines:

1. You will need:
  - gloves, long sleeves
  - two people
  - a net
2. When you see a bird caught in your gear:
  - Stop drag on the gear (take vessel out of gear/reverse to bring bird alongside)
  - When you can reach the bird, bring it gently onboard by hand or with a long-handled net
3. Once the bird is onboard, keep it calm:
  - Move slowly around the bird
  - Covering the bird's eyes and head with a cloth can help calm it
4. Holding the bird:

#### Crew 1

- Hold the wings gently but firmly to the bird's body
- Support the head/neck and feet, gently but securely

#### Crew 2

- Gently isolate the hooked or tangled area

#### 5. To remove line:

- Carefully cut all line off the bird

#### 6. To remove hooks:

- Hooking through a body part
  - trim line
  - cut barbs off the hook
    - use bolt-cutters, OR
  - cut the hook in two
  - thread the hook out
- If the hook has been swallowed:
  - do not pull on the visible line
  - cut the line as close as possible to the swallowed hook
    - leave the hook in place

#### 7. After removing the bird from the gear:

##### Use your common sense:

- If the bird is waterlogged, put it in a safe space, e.g. an empty fish crate, box, or an open, safe area on deck
- Let the bird dry out

##### When the bird is dry or active again:

- Ease the bird back into the water as close to the water surface as possible
- Do not throw seabirds into the air

#### 8. Don't forget to complete your reporting as required.





## Appendix 2- Seabird Species and Group Codes used by MPI

Unless you are 100% sure of the species identification, use these two main seabird ‘group-codes’

- **AXL- All Albatross & Mollymawk**
- **XXP- All Shearwaters & Petrels**

	<i>Common name: Alphabetic</i>
XAL	Albatross (unidentified)
XAP	Antarctic Petrel
XPR	Antarctic Prion
XAN	Antipodes Island Wandering Albatross
XAU	Auckland Island Wandering Albatross
XBG	Black-Backed Gull
XBP	Black Petrel
XKM	Black-Browed Albatross (unidentified)
XPV	Broad-Billed Prion
XBS	Buller’s shearwater
XCP	Cape pigeon (unidentified)
XCI	Chatham Island Albatross
XDP	Diving Petrel
XFP	Fairy Prion
XFS	Flesh-footed Shearwater
XFL	Fluttering shearwater
XGT	Gannet
XTP	Giant Petrel (unidentified)
XGF	Grey-Faced Petrel
XGM	Grey Headed Albatross
XGP	Grey Petrel
XLM	Light-Manteled Sooty Albatross
XWM	New Zealand White Capped Albatross
XNB	Northern Buller’s Albatross
XNP	Northern Giant Petrel
XNR	Northern Royal Albatross
XCM	New Zealand Black-Browed Albatross
XPE	Petrel (unidentified)
XPN	Prion (unidentified)
XSA	Salvin’s Albatross
XSB	Seabird
XSL	Seabird Large
XSS	Seabird Small
XSG	Seagull
XTS	Short-tailed shearwater
XSX	Shy Mollymawk
XCA	Snares Cape Pigeon
XAS	Snowy Wandering Albatross
XSH	Sooty Shearwater
XSM	Southern Black-Browed Albatross
XBM	Southern Buller’s Albatross
XCC	Southern Cape Pigeon
XSP	Southern Giant Petrel
XRA	Southern Royal Albatross
XST	Storm Petrel
XWA	Wandering Albatross (unidentified)
XWP	Westland Petrel
XWC	White-Chinned Petrel