Seabird research on the “Albatross Islands” of the Chatham Islands, Aug-Dec 2025.

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1. Introduction

The Chatham Islands are a seabird biodiversity hotspot. A total of 21 Procellariidae species have been recorded breeding in the archipelago, including 4 endemic species, and a further 2 species having >99% of their global population breeding in the group. Central to this hotspot are the “Albatross Islands” of the Chathams. Three scattered motu, which are the most distant islands in the Chathams group; Rangitutahi (The Sisters) is the most northern islet, Motuhara (The Forty Fours) the most eastern, and Te Tara Koi Koia (The Pyramid) the southernmost. These motu support the entire global breeding population of Chatham Island Mollymawk (*Thalassarche eremita)* and Pyramid Prion (*Pachyptila pyramidalis);* along with >99% of Northern Royal Albatross (*Diomedea sanfordi)* and Northern Buller’s Mollymawk (*Thalassarche bulleri platei)*. In addition, they support Aotearoa’s largest population of Northern Giant Petrel (*Macronectes halli)*.

Visits to all the three “Albatross Islands” in the Chathams was conducted in mid to late 2025 to undertake a range a research objectives. As all three island groups are privately owned, I am grateful to the various island owners for their continued support of this research and granting permission to land and camp on each motu.

Three separate research visits are covered in this report. The first and third research visit, to Rangitutahi and Motuhara, respectively, were short trip’s part funded by the Department of Conservation directly, outside of the Conservation Services Programme (CSP). Each with a range of objectives revolving around obtaining abundance and tracking information on the key species characteristic of these islands (Northern Royal Albatross, Northern Buller’s Albatross, Northern Giant Petrel with additional work on Cape Petrel *Daption capense* and Pyramid Prion) while continuing building up capture-resight data. The second research visit, however, to Tara Koi Koia, was funded through CSP (POP2025-07) with the following explicit objectives for Chatham Albatross:

1. To provide an updated population estimate
2. To update the at-sea distribution
3. To provide the first breeding success estimate, and potentially the first estimate of breeding probability
4. To contribute to the demographic dataset to enable estimates of adult survival

To increase efficiency, this report summaries the results of all three research trips. As with previous recent reports (e.g., Bell 2023, Bell 2024), this report provides a summary of the trip and the associated raw data (e.g., abundance and tracking data) with no specific specialised analyses of the data included. All these species are long-lived, and demographic data hasn't been collected for enough years to warrant analyses capture-recapture/resight survival analyses yet.

2. Rangitutahi/ The Sisters

Rangitutahi/ The Sisters are a small group of three (main) remote, steep-sided islands located to the north of the Chatham Islands. These islands are Māori Land held collectively by more than 250 registered owners, and access is tightly restricted to safeguard both cultural values and fragile wildlife communities that depend on these isolated motu. Permission is required to land, and we are deeply grateful to the traditional owners for granting us permission to undertake this research.

Rangitutahi form one of the most important seabird islands in the Chatham islands group. Their isolation, absence of introduced predators, and minimal human disturbance have allowed dense breeding colonies of several taonga species to persist. Little (Middle) Sister, the central island of the group, supports significant populations of Northern Giant Petrel, Northern Buller's Albatross, and Northern Royal Albatross, among other species. For Northern Giant Petrels, the Chatham Islands represent one of only a handful of breeding sites across their range, making the population here particularly valuable for understanding regional trends and broader ecology. Northern Royal Albatross, endemic to Aotearoa New Zealand and nationally vulnerable, also maintains an important breeding presence on this island.

A day trip to Little (Middle) Sister was carried out on August 26th, 2025. A field team of three landed at 08:00 and departed at 13:00, working within a narrow weather and sea-state window. During the visit four GPS/PTT satellite transmitters were deployed on breeding Northern Giant Petrels to support ongoing movement and fisheries-interaction research. Time also allowed for a census of Northern Royal Albatross chicks, contributing to annual abundance and productivity monitoring for this important colony.

Little (Middle) Sister appeared to be in good condition, with vegetation typical of this time of year (late winter) (Figure 1). The annual Button Daisy had died back suggesting the island was largely devoid of vegetation, but tiny seedlings were starting to germinate everywhere across the "Runway." The three "Domes" and the "Rock Pile" have good growth of ice plant, *Carex* and *Poa*. The "Runway" area had good soil coverage, and the motu appeared to be in similar condition to when last visited in 2017.

Figure 1. Photos of Little (Middle) Sister showing the "Runway" between the "Main Dome" and the "South Dome" and "Rock Pile." Note annual die back of Button Daisy exposing deep soils in the "Runway," and good vegetation on the "Domes" and "Rock Pile;" all signifying the current good condition of the motu. Northern Royal Albatross chick density is highest through this area, with almost all birds visible near fledged chicks.

2.1 Northern Royal Albatross Census

A complete census of Northern Royal Albatross chicks approaching fledging recorded a total of 517 chicks across Little (Middle) Sister. Count methodology follows ground-based methods use on Northern Royal Albatross on both Rangitutahi and Motuhara. The entire island was traversed with each chick marked with a small dot of spray paint to avoid double counting. In the Chathams Royal Albatross chicks this age are known to walk considerable distances, so chicks must be marked, rather than nests sites to avoid double counting. Northern Royal Albatross only breed on the tops of Rangitutahi and Motuhara, and as such in is possible to visit every nest site (or in this case mobile chick). Chick distribution across the motu was similar to previous knowledge, with higher densities observed in the "Runway" between the "Domes," and the "Rock Pile" (See Figure 1).

Overall chick condition appeared good with most individuals showing plumage (most chicks with little down) and behaviour (high mobility) indicating chicks were close to fledging. During banding, two chicks were caught, but not banded as they were found to be in poor condition, (low weight with no fat stores; as assessed by holder these chicks were not weighed, but were light, skinny and bony). During the census, 2 dead near-fledged chicks were recorded, with causes of mortality unknown. A further dead near-fledged chick was found at its nest site where it had regurgitated a large amount of plastic (Figure 2). This is the first example plastic being implicated in the death of a Northern Royal Albatross chick in the Chathams. Adult attendance was low, as is typical for this stage of the breeding season, and time of day during the visit.

Figure 2. Dead near fledged Northern Royal Albatross with large amounts of regurgitated plastic in its nest, Rangitutahi August 2025.

As part of long-term demographic monitoring, a cohort of 139 chicks were banded using stainless steel metal bands. Banding was carried out in the "Runway," to maximise the number of chicks possibly banded in our limited time (i.e. within the highest chick density to limit travel and capture time between chicks). These marked individuals will contribute to future mark–recapture analyses aimed at estimating juvenile survival, recruitment rates, and dispersal patterns within the wider Chatham Islands population.

A comparison with previous years' data indicates that the 2025 fledging cohort is consistent with recent trends (357-670 chicks), although no census of breeding pairs was carried out during incubation to determine productivity.

2.2 Northern Giant Petrel Census

A census of incubating Northern Giant Petrels was carried out across Little (Middle) Sister and recorded a total of 102 active breeding pairs. Surveys were completed using ground searches across the motu, ensuring complete coverage. To prevent double counting each nest site was marked with a small spot of paint close, but not immediately next to the nest to minimise disturbance. Northern Giant Petrels are particularly skittish, and birds stood or raised themselves up to enable nest contents to be checked. Northern Giant Petrel nests are clustered on Little (Middle) Sister, with sub-colonies in the "Rock Pile" rocky area in the "Runway" and along the eastern edge of the "Main Dome" (along the "Main Dome" and "Runway" boundary) These same nesting locations have been recorded as used by birds since the 1970's. No empty or failed nests were recorded, and all nests counted contained an incubating bird. This count coincided with early/mid incubation and suggests egg laying was completed, but no nest loss had yet occurred.

This is the first recent count of Northern Giant Petrel during incubation on Little (Middle) Sister, with most censuses occurring during chick rearing to coincide with work on Northern Royal Albatross. The total breeding population is then extrapolated from this, using this method Bell *et al.* (2018) which estimated 110 breeding pairs in 2017; similar to the current result. These data contribute to ongoing efforts to understand the status of the Northern Giant Petrel population in the Chatham Islands, where the species maintains one of its few breeding sites. Continued monitoring supports assessments of population stability, breeding success, and potential environmental or anthropogenic pressures influencing the colony.

2.3 Northern Giant Petrel Satellite Tracking

Four Druid YAWL Argos C5 Max S 550 GPS/PTT satellite tracking devices were deployed on incubating Northern Giant Petrels using Tesa tape to back-feather mounts with a custom baseplate. These units are double-solar-panel tags, designed to maximise energy capture in low-light conditions typical of the Chatham Islands. Their lightweight, low-profile design reduces aerodynamic drag and minimises behavioural impacts on birds.

Each tag was programmed with battery-conditional duty cycling to balance data resolution with device longevity. When battery charge was high, GPS fixes were recorded every 30 minutes; when charge was medium, fixes were taken every 60 minutes; and when battery levels were low, intervals extended to 120 minutes. This adaptive schedule ensured fine-scale movement data during favourable charging conditions while conserving power during periods of reduced solar input.

Devices remained attached for between 55 and 129 days (Table 1), generating between 2,758 and 5,535 individual location points per bird. These data provided extensive coverage of at-sea movements, revealing that birds foraged widely across the Chatham Rise and surrounding waters, with several individuals travelling as far as the east coast of Aotearoa New Zealand; especially from Kaikoura to Omaru (Figure 3). Foraging trips varied in duration and range, reflecting the species' flexible scavenging strategy.

One bird exhibited particularly distinctive behaviour. Instead of ranging widely offshore, this individual fed almost exclusively on beached cetaceans around Pitt Island, including a Sperm Whale at Fraser's Hollow, Waihere Bay (Figure 4), and Pilot Whales at Tupuangi. The bird regularly overnighted on the cliff tops above Waihere Bay and also roosted on Seal Rock, off Rangitira / South East Island. Based on movement patterns and nest-attendance behaviour, this bird likely failed breeding around mid-September, after which its did not return to Rangituhai but remained each night on Pitt or Seal Rock.

These tracking data provide valuable insight into the at-sea foraging ecology of Northern Giant Petrels in the Chatham Islands region, including their use of coastal scavenging sites, long-range foraging corridors, and potential overlap with fisheries. Continued deployments will help refine understanding of individual variation, breeding-stage differences, and environmental drivers of movement.

Table 1. Summary of Northern Giant Petrel tracking deployments.

Bird ID	Sex	Date Deployed	End date	Transmission (Days)	Number of locations
40420	Female	Aug 26, 2025	Jan 13, 2026	140	2,758
40418	Male	Aug 26, 2025	Oct 19, 2025	55	2,769
40419	Male	Aug 26, 2025	Jan 1, 2026	129	5,492
40417	Female	Aug 26, 2025	Dec 4, 2025	101	5,535

Figure 3. Satellite-tracked movements of a Northern Giant Petrel fitted with a GPS/PTT transmitter, shown as pink track lines. The map illustrates extensive foraging across the Chatham Rise, including repeated long-distance trips to the east coast of Aotearoa/New Zealand with concentrated activity around Banks Peninsula.

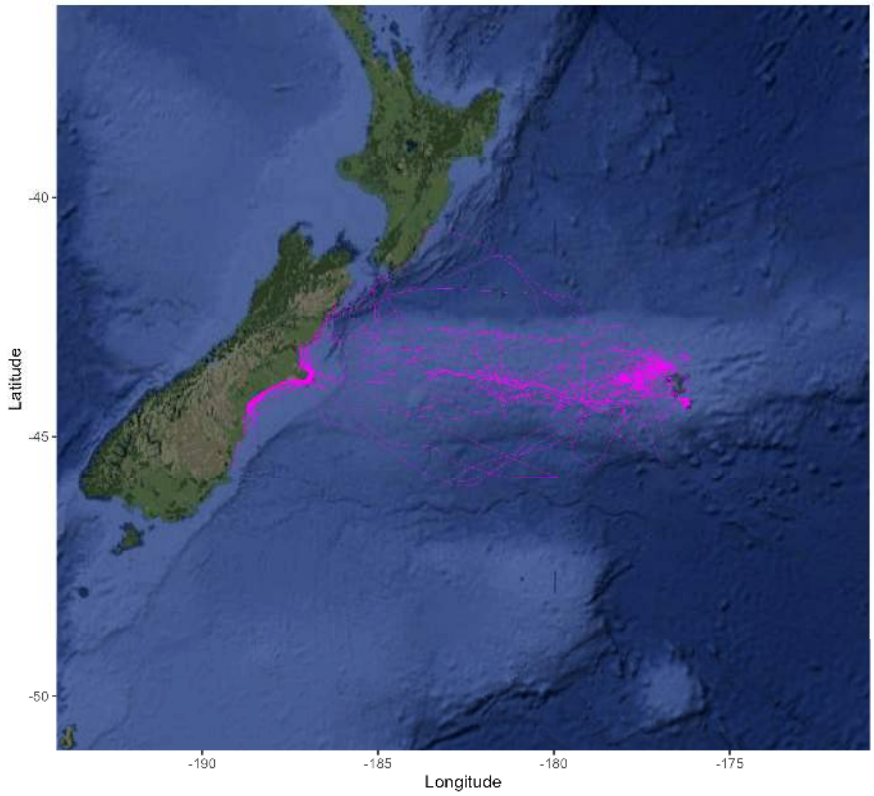
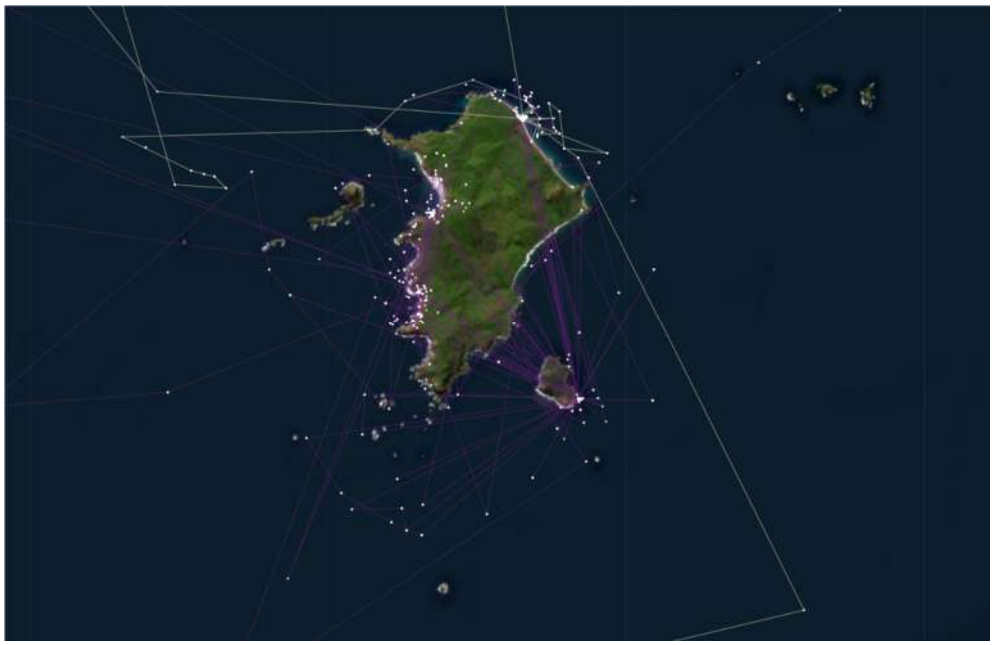


Figure 4. Movements of a GPS-tracked Northern Giant Petrel around Pitt Island, showing repeated visits to beached cetacean carcasses. Location points illustrate concentrated foraging activity at Fraser's Hollow, Waihere Bay (Sperm Whale) and Tupuangi (Pilot Whales), with additional roosting recorded on nearby cliff tops and Seal Rock.



3. Te Tara Koi Koia/ The Pyramid

Te Tara Koi Koia/ The Pyramid, the southernmost island in the Chatham Islands, is privately owned by the Daymond Whanau. Permission is required to land and camp on the motu, and we are very grateful to the Daymond Whanau for granting us permission to undertake this research. Te Tara Koi Koia is one of the most important seabird islands in the Chathams, as the motu is the only breeding site for Chatham Island Mollymawk globally, and one of only two breeding sites of Pyramid Prion.

A visit to Te Tara Koi Koia was carried out in early November, with a team of two camping on the motu. We arrived at dawn on November 8th and departed at 9am November 12th, 2025, to beat poor weather on its way to the Chathams – shortening our planned trip duration.

On arrival the motu was found to generally be in good condition, although the vegetation was showing signs of drought stress following an unseasonally dry October (Figure 5). Many plants such as Button Daisy and *Senecio* were wilting and more exposed areas were showing considerable die-back. Even hardier species such as Iceplant, *Carex* and *Poa* showed signs of wilting. Ironically during our visit this mini drought broke, and plants showed immediate signs of recovery. Since this time, the Chathams has been having a wet summer, with some significant rainfall events recorded in January.

Figure 5. Nesting Chatham Island Mollymawk on the Camp Slopes with surround vegetation showing signs of water stress, with *Senecio* and Button Daisy wilting unseasonably early.

Chatham Island Mollymawk census

A full census of all nest sites on Te Tara Koi Koia was carried out between Nov 8-11th 2025 following a similar format used since the original ground count of 1999 (Robertson *et. al*. 2003). The island was divided into 19 count sections and each of these sections was counted individually predominantly on foot, with some vantage point counts included.

When accessible each nest site was marked with a small dot of spray paint to ensure no nests were double counted, and nest contents were assessed to determine breeding status On Nov 8th the first sections counted were Summit Ridge and Yellow Spur (Table 3). In these sections empty nests were recorded separately from failed nests. However, determining true empty nests (so nests not laid in this season) and failed nests (nests where eggs have been laid but the nest had failed by the time of our visit) was difficult. In 213 failed or empty nests, only 2 (<1%) were considered empty (Table 1). Distinguishing between nest sites that were used for breeding and any that truly weren't is extremely difficult. I believe, that with limited nest site availability on Te Tara Koi Koia, virtually all nests are bred in each season. As such, for the rest of the census failed and empty nests were counted together without detailed inspection.

Parts of sections that were not accessible on foot, were counted using binoculars from vantage points. At these sites, nest contents could not be determined, and status is listed as unknown; however, any nests that were visibly empty (i.e. either birds standing on empty nests, or no bird was present at an obvious nest site) were counted as empty/failed. These figures should be treated as minimum, as some nests recorded as unknown status, will also be birds sitting on failed/empty nests.

Given the above, where nests could be accessed the nest contents were recorded as either:

- Egg – a nest with an adult bird incubating an egg.
- Chick – a nest with an adult bird guarding a chick (note the timing of this count was during hatching, so no chicks were old enough to be left unguarded).
- Failed/empty nest – a nest without an egg or chick, but in most cases still had an adult bird attending the nest. In almost all cases nests contained remains of eggs, or dead chicks and most will have been breed in this season.

A total of 5,227 nest sites were counted (Table 2). This is similar to what has been recorded since 2009, with the population appearing to be relatively stable.

Table 2. Results of census of Chatham Island Mollymawk per count section on Te Tara Koi Koia, 8-11th Nov 2025.

Area	Area code	Egg	Chick	Failed/Empty	Unknown[1]	Total
Cave	G	126	10	45		181
Camp flat and slopes	A,B,C	84	55	87	7	233
Western ledges	I	434	96	189	27	746
South Basin	F	103	23	43	1	170
Bell's ledge	D	82	28	31	45	186
Main slope	M,N	310	45	181	13	549
Yellow spur	O	81	15	32	14	142
Moriori ledge	K,L	346	111	145	13	615
Northern Slopes	P	456	154	247	35	892
Round Rock basin	Q	91	18	63	20	192
Summit ridge	J	484	99	181		764
Inaccessible basin	H			12	110	122
The Steeps	C	86	34	30	21	171
Yellow-nosed Basin and Ridge	S,R	54	26	23	161	264
Total		**2,737**	**714**	**1,309**	**467**	**5,227**

[1] Counted from vantage point

Table 3. Nest contents of Summit Ridge and Yellow Spur count sections carried out on Dec 8th 2025; when separating out failed nests and empty nests.

Area	Area code	Egg	Chick	Failed	Empty	Unknown[1]	Total
Yellow spur	O	81	15	32	0	14	142
Summit ridge	J	484	99	179	2		764

[1] Counted from vantage point

There appears to potentially be some pressure on Chatham Island Mollymawk breeding site availability by the expanding New Zealand Fur Seal population on Te Tara Koi Koia. The number of breeding pairs in the count sections Main Slope and Northern Slopes were down, whilst the count in Moriori Ridge and Summit Ridge were significantly up.

Both Main Slope and Northern Slopes count sections start from sea level, and there was clear evidence that Fur Seals were well up these slopes and had been displacing breeding birds. Further, we found evidence of where seal haul outs had taken over marked nest site on the Camp Slopes and Flat (Figure 6). Increases in numbers in the higher sections, Summit Ridge and Morori Ledge suggest birds may be shifting up the island, to occur at higher densities.

Salvin's Mollymawk, Erect-crested Penguin and Fur Seal co-exist on The Bounty Islands, but clearly Chatham Island Mollymawk are unable to co-exist with Fur Seal, and the increasing Fur Seal population on Te Tar Koi Koia and its effects on Chatham Island Mollymawk is potentially concerning and should be subject to future research.

Figure 6. New Zealand Fur Seal sleeping on haul out area on Camp Slopes, historical nest tag glued to rock (red arrow points to nest tag) used during 2009-2011 indicates this was previously a Chatham Island Mollymawk nest site.

Chatham Island Mollymawk band recoveries

A total of 114 banded birds were re-sighted during the trip (Table 4). Most were found on the Camp Flat and Slopes, where most banding of study birds has been carried out. From the cohorts of chicks banded in 1993, 1994 and 1995, a total of 26 birds were resighted; 4 from 1993 (with an age of 33 years), 10 from 1994 (32 years) and 12 from 1995 (31 years).

Table 4. Number and location of band recoveries of Chatham Island Mollymawk from Te Tara Koi Koia, November 2025.

Area	Number of recoveries
Camp Flat and Slopes	75
Northern Slopes	12
Moriori Ledge	7
The Cave	6
Main slope	5
Summit Ridge	4
Yellow Spur	3
South Basin	1
Western Ledges	1

A total of 20 banded Mollymawks from the attempted 2014-2018 translocation to Main Chatham we resighted (Table 5). Of these 9 birds were recorded breeding, with ranging from 9-11 years old. No 8 year old birds were recorded breeding, and no 7 year old birds were recorded on the motu. During our time on Te Tara Koi Koia, we had no evenings which saw large numbers of pre-breeding birds ashore, so I expect these results to be a minimum return rate, and further re-sighting effort is required.

Table 5. Number, age and breeding status of re-sighted chicks from the 2014-2018 translocation of Chatham Island Mollymawk chicks to Main Chatham.

	Number re-sighted	Age	Breeding
2014	4	11	4
2015	4	10	3
2016	7	9	2
2017	4	8	0
2018	0	7	

Only 28 new Chatham Island Mollymawk were banded, with all these being birds that were equipped with tracking devices. No significant banding was carried out to increase the marked population, but this would be beneficial to be undertaken in the future.

All new banding and band recoveries have been added to the FALCON bird banding database. It is noted that a lot of banding events and recoveries from previous research trips to the motu are currently not in FALCON, and attempts are ongoing to collate all banding and recovery data from all past research trips into FALCON, so that all the data is in a single repository.

Chatham Island Mollymawk tracking device deployment

We deployed 25 C331 Migrate Technologies GLS devices on breeding birds on the Camp Flat, in and around the rock pile by the pond (-44.434661; -176.239007). These will be recovered next season (year two of POP2025-07). These devices will provide coarse-scale year-round insights into the movements of this species. In addition, to provide high-resolution, shorter-term insights, a total of 20 GPS tracking devices were deployed on breeding Chatham Island Mollymawks, including 10 Druid YAWL Argos C5 Max S 550 GPS/PTT devices and 10 Telonics TAV 2630 PTT devices. To date, these birds have remained relatively close (200-400km) to the Chathams, with most birds foraging to the South to Southeast of the Chathams (Figure 7 and 8, Table 6).

Figure 7. Movements of 10 Chatham Island Mollymawk tracked from Te Tara Koi Koia with 10 Telonics TAV 2630 PTT devices from November 2025 to January 2026.

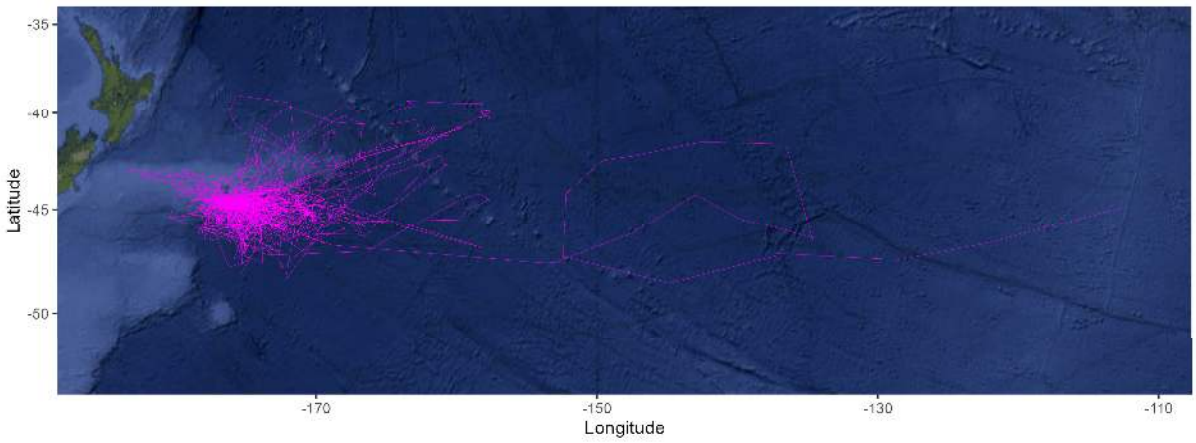
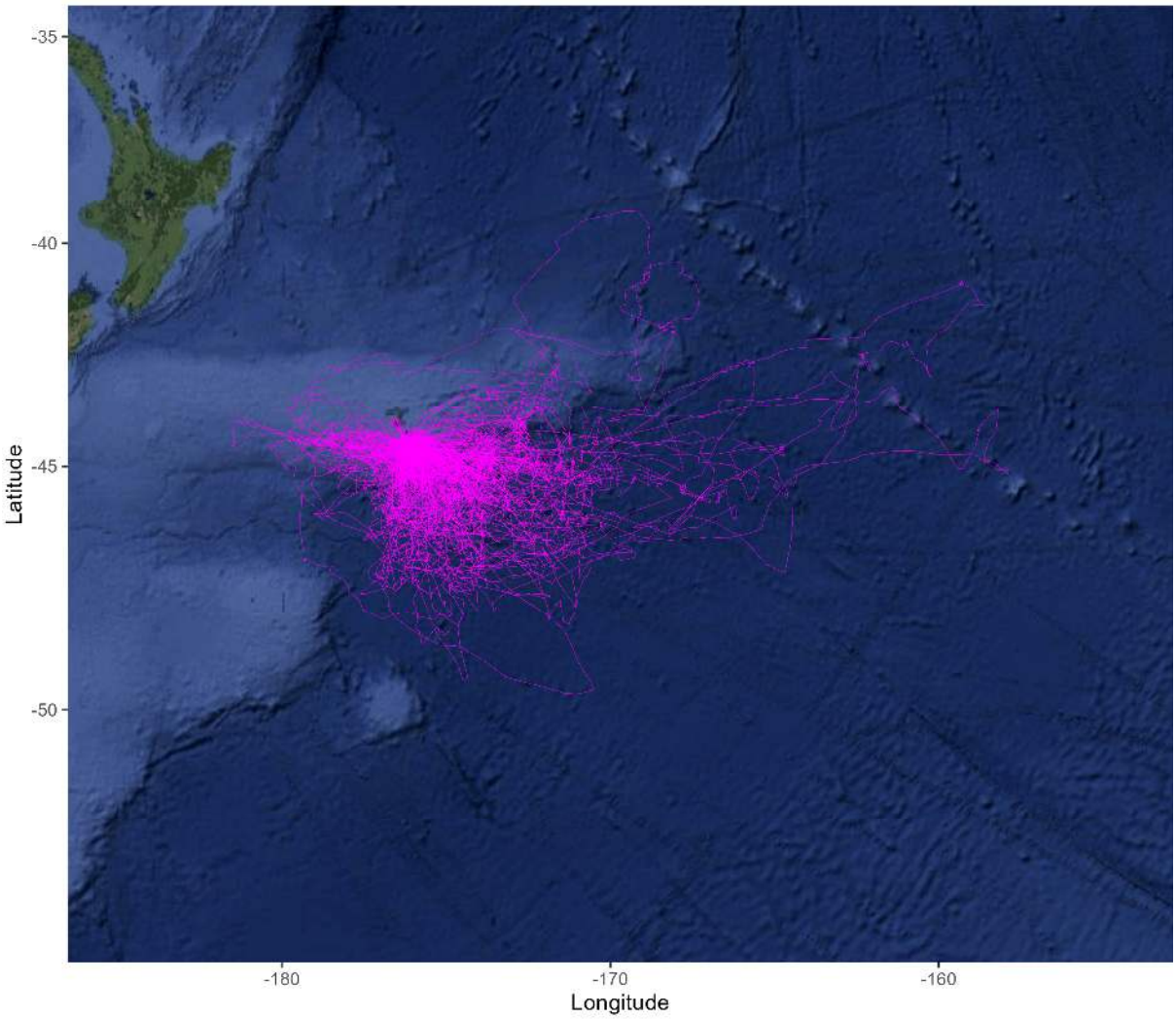


Figure 8. Movements of 10 Chatham Island Mollymawk tracked from Te Tara Koi Koia with Druid YAWL Argos C5 Max S 550 GPS/PTT devices from November 2025 to January 2026.



At the time of writing, 3 of these 20 tags had stopped transmitting data, with these tags likely falling off birds (Table 6). These three tags are all Druid YAWL Argos C5 Max S 550 which suggests that the attachment method for these tags is not as robust. Alternatively, the solar panels could be covered by feathers, causing the battery to be depleted. Likely the design of the base plate, which limits the amount of tape that can be attached to the front end of tags.

Table 6. Duration of tag deployment on Chatham Island Mollymawk from Te Tara Koi Koia Nov 2025.

Bird ID	GPS type	Date deployed	Last transmission	Transmission days	Number of Locations
40428	Telonics	12-Nov-25	24-Jan-26	73	152
32441	Telonics	12-Nov-25	24-Jan-26	73	145
33969	Telonics	12-Nov-25	24-Jan-26	73	154
40429	Telonics	12-Nov-25	24-Jan-26	73	167
40427	Telonics	12-Nov-25	24-Jan-26	73	159
33734	Telonics	12-Nov-25	24-Jan-26	73	151
33825	Telonics	12-Nov-25	24-Jan-26	73	170

33810	Telonics	12-Nov-25	24-Jan-26	73	135
33996	Telonics	12-Nov-25	24-Jan-26	73	149
40426	Telonics	12-Nov-25	24-Jan-26	73	163
40443	Druid	10-Nov-25	24-Jan-26	75	5,281
40422	Druid	10-Nov-25	17-Dec-25	37	2,994
40448	Druid	10-Nov-25	24-Jan-26	75	3,497
40446	Druid	10-Nov-25	24-Jan-26	75	5,453
40444	Druid	10-Nov-25	24-Jan-26	75	3,003
40445	Druid	10-Nov-25	21-Dec-25	41	2,660
40450	Druid	10-Nov-25	24-Jan-26	75	5,393
40447	Druid	10-Nov-25	10-Jan-26	61	4,375
40449	Druid	10-Nov-25	24-Jan-26	75	4,721
19795	Druid	10-Nov-25	24-Jan-26	75	3,523

Chatham Island Fulmar Prion (Pyramid Prion) tracking device deployment

We also deployed 10 C65-SUPER Migrate Technologies GLS devices on incubating Chatham Island Fulmar Prion (Pyramid Prion; *Pachyptila pyramidalis*) in The Cave. (-44.434508; -176.240133). Again, these will hopefully be recovered next season during a planned field trip to the motu.

Motuhara/ The Forty Fours

Motuhara is Māori Land with >250 registered owners, Permission is required to land on the motu and we are very grateful to the traditional owners for granting us permission to undertake this research.

Like Rangitutahi, Motuhara is one of the most important seabird islands in the Chatham islands group. Motuhara has the largest populations of Northern Giant Petrel, Northern Buller's Mollymawk, and Northern Royal Albatross both in the Chatham's, and Aotearoa. Next to Te Tara Koi Koia, Motuhara also hosts the second population of Pyramid Prion.

A field trip to Motuhara was carried out in late November/early December 2025, with a team of two camping on the motu from 26th November to December 2nd 2025. Landings were achieved at the front/northern landing in moderate conditions. The island was in excellent condition, with growth of Button Daisy especially luxuriant, covering the eastern end of the island with thick dense growth of this species (Figure 9).

Figure 9. The eastern end of Motuhara showing the exceptional growth of Button Daisy. The area in the forefront of this photo is the banding Study Plot One, on the eastern side of the summit.

Northern Royal Albatross census

A census of breeding Northern Royal Albatross was carried out on foot on December 1st. The motu is divided into 3 sections, with the two smaller sub-colonies counted separately. The main concentration of birds on the eastern end of the island is counted as a single block, with the count achieved by traversing the motu in parallel sections (roughly N-S, lines only several metres apart) and working eastwards. Each nest site is marked with a small dot of paint right beside the nest to prevent double counting. At the same time, nest contents were checked when the bird raises itself up to reveal the incubated egg (note the time of the census is well before hatching, so any displacement obvious in feathers above the feet was recorded as an egg and ensured birds did not need to lift much to confirm breeding). Given the extensive growth of button daisy during our visit, special care was taken to ensure all parts of the island were covered, this required constant back tracking. Royal Albatross nest on the top of the motu, and as such no nests were needed to be counted from vantage points.

A total of 1,376 breeding pairs (Table 7) were recorded, a small proportion of which had failed already (where broken eggshell remains were visible). The dense growth of Button Daisy had swamped older nest from last season (which can get confused with failed nests from the current breeding season). Likewise, empty nests being constructed by pre-breeding birds (often termed “play” nests) visiting the island had button daisy growing right up to, and even growing in nests

bowls, (whereas failed breeding nests had clear areas surround the nest where birds had striped vegetation to build their nest). These pre-breeder "play" nests were not counted, and no well-formed nests clear of Button Daisy, we seen that might be considered as empty nests where no breeding was taking place. However, it would be impossible to determine if some of the "play" nests, were in fact breeders that had failed very early, and Button Daisy growth had already covered egg remains. This season's count results are lower than previous counts.

Table 7. Northern Royal Albatross census results for each sub-colony, Motuhara December 1st, 2025.

Area	Egg	Failed	Total
Camp sub-colony	78	1	79
Bowling Green Sub-colony	23	0	23
Main Colony	1,243	31	1,274
Total	**1,344**	**32**	**1,376**

In addition to the complete census, a count of the five study girds on Motuhara was also carried out, which represented 8.6% of the overall island (Table 8). This data adds to the pool of data collected from these study girds which is available for further analysis.

Table 8. Results of counts of the five Royal Albatross Study Girds on Motuhara, December 1st, 2025.

Study gird	Egg	Failed	Total
One	28		28
Two	21	1	22
Three	24		24
Four	26		26
Five	18	1	19
Total	117	2	119

Northern Royal Albatross tracking

In a collaboration between DOC, The Australian Department of Climate Change, Energy, the Environment and Water, and Monash University, eight PTT/GPS satellite tracking devices were deployed on incubating Northern Royal Albatrosses. These devices were customised to include pressure sensors enabling insights into flight heights of this species, results of which will be covered elsewhere. In addition to this, 25 C331 Migrate Technologies GLS devices were deployed on incubating birds at the Camp sub-colony (-43.961685 -175.838242), these devices will be recovered in future trips to the island. All PTT/GPS and GLS birds were banded.

Northern Royal study plot re-sighting

Re-sighting of banded birds in the two study plots was undertaken to continue to build the dataset within the marked populations. A total of 196 banded birds were recorded during the visit; all re-sightings have been added to the FALCON database. No additional banding was carried out, other than replacing lost engraved darvic bands on resighted birds.

Northern Buller's Mollymawk Census

An island wide census of Northern Buller's Mollymawk was carried out between Nov 28 and Dec 1st, 2025, using the same format as previous censuses (See Bell *et al*. 2017). The island was divided into 18 count sections based on micro-topographical features. Each of these sections is counted individually, predominantly on foot, but where nests are inaccessible from vantage points. When accessible each nest site was marked with a small dot of spray paint to ensure no nests were double counted, and nest contents assessed to determine breeding status.

Again in the dense colonies of Buller's Mollymawk on Motuhara determining true empty nests (so nests not laid in this season) and failed nests (nests where eggs have been laid but the nest had failed by the time of our visit) is difficult, so no attempt to separate failed nests from empty nests was made (See also discussion in study gird section below). Counts from vantage points are listed as unknown, except where clearly, they were seen to be empty.

Given the above, where nests could be accessed, the nest contents were recorded as either:

- Egg – a nest with an adult bird incubating an egg, note the timing of this census was during incubation, and was well before the earliest chick hatching has been recorded)
- Failed/empty nest – a nest without an egg or chick, but in most cases still had an adult bird attending the nest. In almost all cases nests contained remains of eggs, or dead chicks and most will have been breed in this season.

A total of 14,224 breeding pairs were recorded (Table 9). This is lower than the 17,410 pairs recorded in 2016, but similar to the c.14,000-15,000 pairs recorded in 2007-2009 (Bell *et al*. 2017).

Table 9. Results of Northern Buller's Mollymawk census per section on Motuhara, November/December 2025.

Section	Egg	Failed	Unknown*	Total
A	602	270		873
B	400	180		580
C	543	244		787
D	514	231		744
E	1,409	638	12	2,060
F	806	362		1,168
G	194	90	6	289
H	335	156	13	504
I	207	97	9	314
J	791	356		1,147
K	421	190	3	614
L	445	202	5	653
M	549	247		796
N	670	312	25	1,007
O	585	263		847
N cliffs	220	107	18	345
NE cliffs	414	212	57	683
S cliffs	478	252	83	813
Total	**9,584**	**4,409**		**14,224**

*From vantage point count

Northern Buller's Mollymawk study grids

Prior to the motu wide census a count of nests within the 10 traditional Buller's Mollymawk study grids was carried out on November 28th, 2025 (Table 10) which represent 4.8% of the overall population. Here, a very detailed inspection of each nest was carried out to try and determine if there were any truly empty nests in which birds were not nesting. All empty nests showed signs of breeding, with failed broken eggs, or eggshell found in/ adjacent to nests. Further, a small proportion of nest had birds incubating nests, with a second egg (usually broken) on the ground beside the nest. Potentially indicating that the nest was used by two pairs that season. One pair laying an egg, that was then tufted out by a second pair that went on to lay their own egg. Further examples of this were seen throughout the motu wide census, but no count was kept.

A total of 686 nests were recorded in the study girds, with 31% of nests having failed already, mirroring the overall count (also 31%). Eleven (1.6%) of nests showed evidence of use by two pairs.

Table 10. Nest counts from the ten Northern Buller's Mollymawk study grids on Motuhara, November 28th, 2025.

Plot	Egg	Failed	Total		Second failed egg present
1	50	22	73		0
2	48	21	71		3
3	36	22	61		0
4	49	26	79		0
5	34	21	60		1
6	49	23	78		1
7	35	22	64		0
8	42	22	72		2
9	43	16	68		1
10	32	18	60		3
Total	**418**	**213**	**686**		**11**

Northern Buller's Mollymawk study plot re-sightings

Re-sighting of banded birds in the two study plots was undertaken to continue to build the dataset within the marked populations. A total of 131 banded birds were recorded during the visit; all re-sightings have been added to the FALCON database. No additional banding was carried out, other than replacing lost engraved darvic bands on resighted birds.

Fulmar Prion (Pyramid Prion) GLS recovery

A total of 7 (47%) of the 15 GLS devices deployed on Fulmar Prions in August 2023 were recovered. Four have been downloaded, but three require data extraction by the manufacturer. Obtained data from these devices is yet to be analysed and will be reported once this has been carried out.

Cape Petrel GLS recovery

One further GLS was recovered from a Cape Petrel (device deployed December 2022); adding to the three collected in Jan 2024 (giving a total retrieval rate of 40%). Data from this device has to be extracted by the manufacturer, is yet to be analysed, and will be reported once this has been carried out.

Recommendations

- Undertake a breeding population census of Northern Royal Albatross, Buller's Mollymawk and Northern Giant Petrel on Rangitutahi. The last full ground census was in 2016.
- Undertake a second breeding population census of Chatham Island Mollymawk to confirm this season's results and check for any interannual variation.
- Return to Te Tara Koi Koia to recover GLS deployed on Chatham Island Mollymawk and Pyramid Prion.
- Undertake a population census of NZ fur seals on Te Tara Koi Koia to determine base line numbers (Note, this may be best achieved by using a drone to take photos and then count females and/or pups from images collected).
- Map (using handheld GPS) the current maximum haul out zone of NZ fur Seals on the motu to be able to measure ongoing changes in Fur Seal distribution on the island.
- Band a proportion of Chatham Mollymawk on the Camp Flat and Slopes to increase the marked population to support demographic studies. Consideration should be given to undertaking chick banding trips to get known age cohorts marked, as the 1993-95 birds are starting to significantly decline now, reaching their maximum life expectancy.
- Undertake a repeat of the Buller's Mollymawk breeding population census on Motuhara to confirm this season's results, and check for any interannual variation.
- Continue re-sighting and maintenance of banded Northern Royal Albatross and Buller's Mollymawk on Motuhara to continue collecting demographic data on these species.
- Undertake chick banding trips to band Northern Royal Albatross and Buller's Mollymawk on Motuhara to develop a known aged, marked population, and measure juvenile survival and recruitment rates.

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