THE PETREL

2018

Annual Report for Southport

The Brisbane Seabird Study Group

SOSSA, Northern Sector

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Cover Photo: - Coral Sea Storm-Petrel – P. Walbridge.

This page: - 46 ft Steber monohull M.V. Grinner II.

Foreword

Pelagic trips were first conducted in the region in the late 1970s, mainly out of Brisbane. Initial trips were conducted by a number of people, notably Tony Palliser, David Stewart, Tom Tarrant and Chris Corben etc. circa 1990, Chris Corben handed the reins over to me and I continue to run these trips to this day, albeit on a more organized and regular basis. From before 1990 until April 1995 the trips were run out of Manly Boat Harbour in Brisbane using the wooden hulled Murphy Star. This meant a long trip, usually under cover of darkness across Moreton Bay before we got out into open ocean. Also, the trips were at best sporadic and four trips a year would be a good year.

Early in 1995, the late Tony Ashby (a founding member of SOSSA) not long from Sydney and newly arrived on the Gold Coast negotiated with Sea World to trial their Research & Rescue Vessel. The trial was successful and from April 1995 until late 2000 we enjoyed a fruitful relationship with Sea World and trips became as a rule, monthly when weather permitted. The trips were now operating out of Southport and via the Southport Seaway we were entering open ocean almost immediately! This partnership ended towards the end of 2000 and I took a year off running pelagics.

Early in January 2002, Steve McCourt, who had worked with us when he was a Sea World employee, contacted me. He'd recently acquired a boat and was keen to start trialling it as an ongoing concern as a pelagic trip and fishing charter. We trialled the vessel which was fast but ran with a pair of large outboard motors and when the number crunching was complete the eventual pricing for that time proved to be too high. I might mention here that we had been rather spoilt by Sea World with charter costs, as the trips were subsidised somewhat, therefore the price now being asked was too big a jump.

Whilst working with Sea World, on the odd occasion when the vessel was unavailable we would use one of the local 'Wahoo Charters' vessels based at Mariner's Cove. I approached the owner of this fleet of four charter boats and negotiated a deal which enabled us to use one of the vessels, once a month at a reasonable cost per head. With four boats ranging from 42 feet to 65 feet there was always a vessel available. Due to circumstances however, by 2005 the operation was becoming less viable and we needed to find yet another operator & vessel.

It must be said here, that finding an operator and vessel prepared to take a bunch of birders out to sea further than they would normally go and for considerably less money than their usual commercial rates, is extremely difficult. Even in a highly competitive arena like the Gold Coast. There was however, yet another option open to us. During our tenure with both Sea World and Wahoo we had been supplied (with written permission from DPI) with free shark liver for berley, by the local beach protection contractor for the Gold Coast beaches, Craig Newton. Craig was keen to start something different and he and various crew over time have become enthusiastic supporters of what we do.

Weather permitting there is a minimum of one trip a month and apart from January these trips are conducted on the 3rd Saturday of each calendar month. When it looks like a trip is sufficiently overbooked then an extra one may be put on, also when conditions are looking ideal an extra trip might be called at short notice. As a contract has now been signed I can now announce on Craig the skippers behalf that in January 2017, work will start on a new 46" Bass Strait cray boat inspired vessel for the Southport Pelagics. The work in Smithton, Tasmania should be complete by July 2017, with the vessel then being trucked up for final completion on the Gold Coast, hopefully ready for use in early 2019. Apart from being designed to aid in his continuing work as beach protection officer for Gold Coast waters, the skipper intends the Grinner II, in consultation with our group to be a purpose built state of the art pelagic vessel.

A new section has been added to the Gallerie this year, called 'Bird Combos' it's intended to show relative bird size comparisons when they are close enough together or on roughly the same plane, both on the water and in flight. We are hoping this will prove to be a useful tool, particularly for those new to seabirding and we'll be making more of an effort to capture these kinds of photos. The feature articles this year are from my visit to Raine Island and Rob Morris and Andrew Sutherlands trip to Chile to seek out some special storm-petrels.

Introduction

Fifteen pelagics were conducted out of Southport in 2018 for a total of 138 hours 14 minutes out on the water. A grand total of forty three species were recorded, the same as for last year but with a few more Winter species recorded in 2018. However for the first time in many years there were no new species for Southport recorded. Again, for the second year in a row, there were no trips out to the sea mounts as I'd given the big charter operators away after the shenanigans of 2017 but this should be rectified with the launch of the new 46 foot Grinner II in 2019.

The year started off in a fairly positive way with good numbers of Tahiti Petrel, a Kermadec Petrel and White-necked Petrel, along with both Pomarine and Arctic Jaegers and a few Sooty Terns. A second January trip on the 26th revealed less numbers of Tahiti Petrels but yet another White-necked Petrel a Black Noddy, three White Terns and good numbers of Sooty Terns, for a January total of nineteen species, well up on last year. The 17th February saw nineteen species recorded with a real tropical feel about it, the first Wilson's Storm-Petrels for the year, a welcome sighting of Buller's Shearwater and again good numbers of Tahiti Petrel. Singles of Kermadec and Gould's Petrel along with a single Coral Sea Masked Booby and a juvenile Red-footed Booby, topped off by a Long-tailed Jaeger.

March turned out to be the leading month diversity wise with a total of twenty four species sighted over two trips. Beginning with 17th March, when five species of shearwater were recorded, the usual Tahiti Petrel, up to seven Kermadec Petrels, a dozen Grey-faced Petrels and a very early returning Providence Petrel and Australasian Gannets. The following weekend on the 24th saw Wilson's Storm-Petrels starting to build, Tahiti Petrels still around in good numbers , twenty Kermadec Petrels, sixteen Grey-faced Petrels, six Providence Petrels, three Gould's Petrels and five White-necked Petrels. This was topped off by all three Jaeger species and four White Terns, it was quite a day. The April trip on the 21st was a storm-petrel day with sixty three Wilson's Storm-Petrels, twenty nine White-faced Storm-Petrels and the bird of the day in the first sighting since 2016 of a Coral Sea Storm-Petrel which hung around for a couple of hours. Tahiti Petrels were still present and Pterodromas also with seventeen Kermadec Petrels, fourteen Grey-faced and sixty six Providence Petrels, a big count for April. This was topped off with a couple of Lesser Frigatebirds and on the way back a pale-phase South Polar Skua harassing a Flesh-footed Shearwater on the water.

May 19th produced a few surprises with masses of Providence Petrels, good numbers of Wilson's Storm-Petrels and a single White-faced Storm-Petrel, while three Fairy Prions were early for this species. The real surprise though was the presence of both a Black-browed Albatross, as usual a young bird and an adult Indian Yellow-nosed Albatross. There were two trips in June, with the first on the 16th with the belated return of Black-bellied Storm-Petrels, ten of them, ten Fairy Prions and a big count of 129 Providence Petrels. The 30th June produced another species of Albatross, an Antipodean and the second Coral Sea Storm-Petrel for the year. A Brown Skua was a welcome addition to the year list, completing the set and a couple of Black Noddies was a rare Winter record.

Little of note on 21st July, with singles of Black-bellied Storm-Petrel and Kermadec Petrel, five Fairy Prions and a few Providence Petrels and the first returning Wedge-tailed Shearwater. 18th August saw more returning Wedge-tailed Shearwaters, a couple of Black-bellied Storm-Petrels and a couple of Kermadec Petrels, with Providence Petrels numbers quite low. Low diversity on 15th September but good numbers of Black-bellied Storm-Petrel with twenty eight counted and sixteen Kermadec Petrels. The 20th October pelagic was most disappointing diversity wise but did see large numbers of Wilson's Storm-Petrels with 145 counted and the welcome return of seven Tahiti Petrels. Finally, two trips in November with the first on the 10th producing fourteen species with the standout being a Black-winged Petrel and on 17th November a count of seventeen species, with the highlights being the first Black Petrel since 2015, eleven Kermadec Petrels, two Gould's Petrels and a Long-tailed Jaeger. The planned double-header for the weekend of 15th-16th December was cancelled due to poor weather.

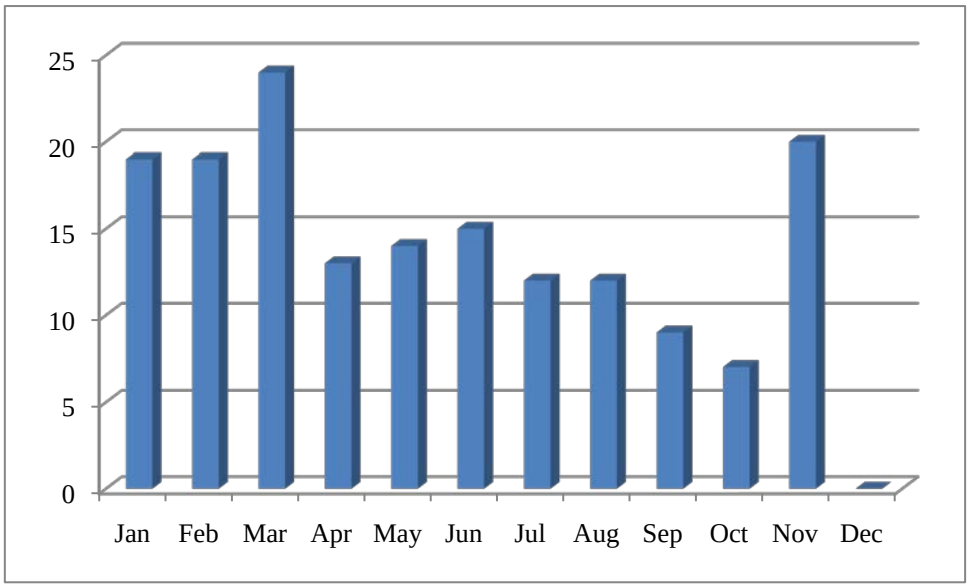
Monthly Maxima Table

Species	Jan*	Feb	Mar*	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wilson's Storm-Petrel	0	3	11	63	22	27	0	3	3	145	29	
White-faced Storm-Petrel	0	0	0	29	1	0	0	0	0	0	0	
Black-bellied Storm-Petrel	0	0	0	0	0	11	1	2	28	2	0	
Coral Sea Storm-Petrel	0	0	0	1	0	1	0	0	0	0	0	
Antipodean Albatross	0	0	0	0	0	1	0	0	0	0	0	
Black-browed Albatross	0	0	0	0	1	0	0	0	0	0	0	
Indian Yellow-nosed Albatross	0	0	0	0	1	0	0	0	0	0	0	
Fairy Prion	0	0	0	0	3	16	5	0	0	0	0	
Black Petrel	0	0	0	0	0	0	0	0	0	0	1	
Wedge-tailed Shearwater	331	125	400	31	0	0	1	37	49	14	247	
Buller's Shearwater	0	1	0	0	0	0	0	0	0	0	0	
Flesh-footed Shearwater	5	16	13	13	0	0	0	0	3	0	4	
Short-tailed Shearwater	2	0	1	0	1	0	0	0	0	0	39	
Fluttering Shearwater	2	1	1	0	19	1	0	0	0	0	0	
Hutton's Shearwater	1	2	3	0	0	1	1	6	0	0	0	
Tahiti Petrel	46	30	51	14	0	0	0	0	0	7	22	
Kermadec Petrel	1	1	27	17	1	0	1	2	16	0	12	
Grey-faced Petrel	0	0	28	15	0	0	0	0	0	0	0	
Providence Petrel	0	0	7	66	92	151	28	6	13	29	17	
Gould's Petrel	0	1	3	0	0	0	0	0	0	0	2	
White-necked Petrel	2	0	5	0	0	0	0	0	0	0	0	
Black-winged Petrel	0	0	0	0	0	0	0	0	0	0	1	
Lesser Frigatebird	0	0	0	2	0	0	0	0	0	0	0	
Australasian Gannet	0	0	3	0	3	13	5	9	1	0	0	
Masked Booby	0	1	0	0	0	0	0	0	0	0	0	
Red-footed Booby	0	1	0	0	0	0	0	0	0	0	0	
Little Pied Cormorant	1	0	0	0	0	0	0	0	0	0	0	
Great Cormorant	1	0	0	0	0	0	0	0	0	0	0	
Little Black Cormorant	1	0	0	0	0	0	0	0	0	0	1	
Pied Cormorant	5	6	8	0	1	5	1	3	0	0	2	
Brown Skua	0	0	0	0	0	1	0	0	0	0	0	
South Polar Skua	0	0	0	1	0	0	0	0	0	0	0	
Pomarine Jaeger	9	1	19	0	0	0	0	0	0	0	5	
Arctic Jaeger	2	0	1	0	0	0	0	0	0	0	4	
Long-tailed Jaeger	0	1	1	0	0	0	0	0	0	0	1	
Common Noddy	0	0	2	0	7	5	7	2	0	0	2	
Black Noddy	1	0	0	0	0	2	0	0	0	0	0	
White Tern	3	0	4	0	0	0	0	0	0	0	0	
Sooty Tern	51	5	4	0	0	0	13	3	0	0	58	
Little Tern	0	2	55	0	0	0	0	0	0	0	0	
Common Tern	0	51	25	0	0	0	0	0	0	0	1	
Crested Tern	155	4	434	8	40	61	13	80	47	2	39	
Silver Gull	227	1	146	48	55	71	26	120	38	3	166	

***Denotes more than one trip carried out for the month.**

*** Denotes a new species recorded for Southport.**

Monthly Species Diversity 2018

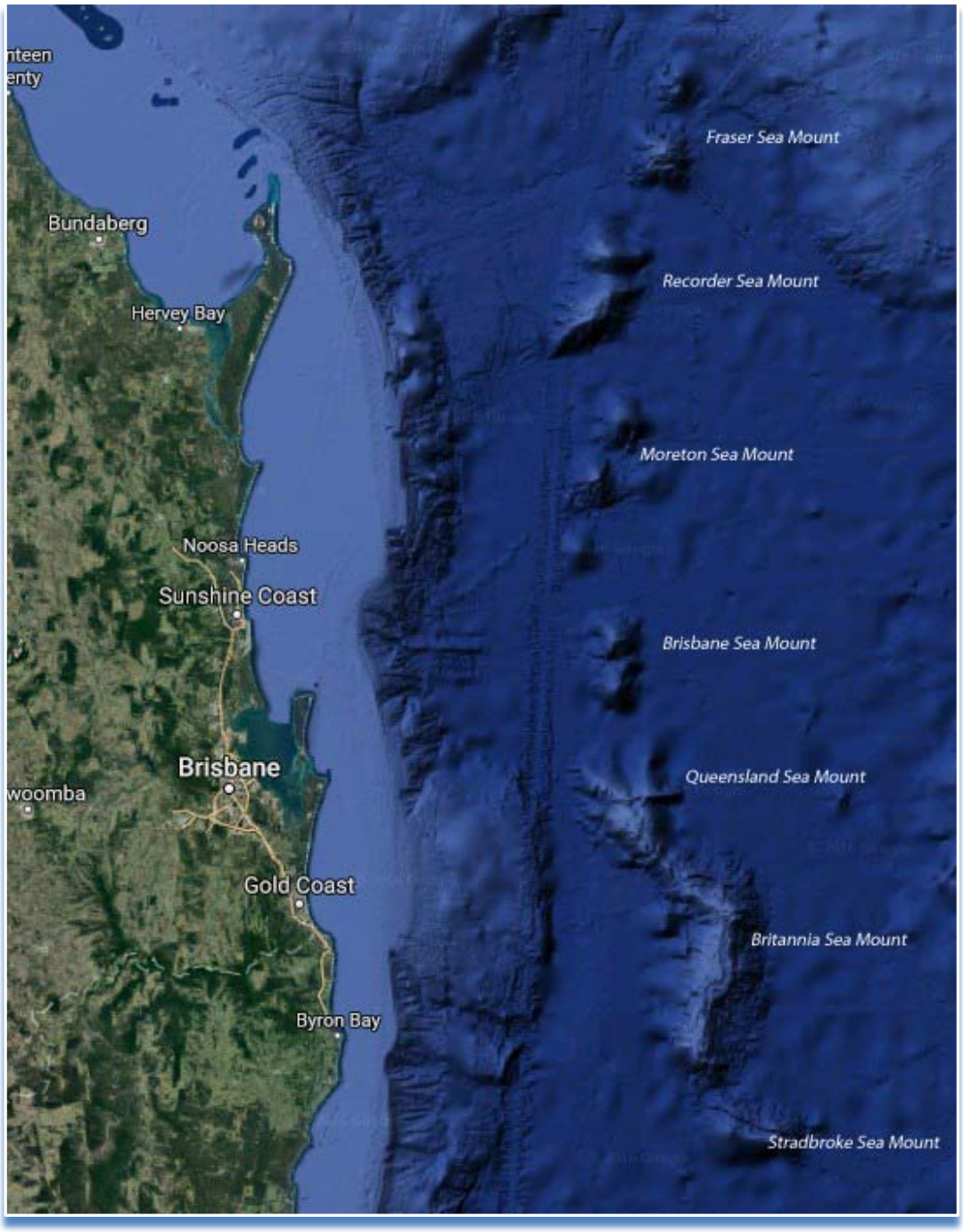


In general terms in most years in the southern Coral Sea, March - April in the Autumn and October through November in the Spring are seen as the main migration periods, with a rise in species diversity. The summer months, December - February, numbers are quite settled with the local resident birds and the summer breeding visitors, such as Wedge-tailed Shearwater bolstered by wintering visitors from the northern hemisphere, such as Common Tern and Streaked Shearwater, plus the three Jaeger species.

The months of May and September are seen as transition months and usually showing lower diversity. Winter in the region, June to August, see the Summer visitors and most of the transient birds gone but with Winter breeders such as Providence Petrels from Lord Howe, arriving. In the main though, Winter sightings rely heavily on both baitfish migration north and adverse weather conditions in the southern part of the continent with prevailing strong southerly wind conditions. Another variant, albeit an artificial one, is the reliance on the local trawling fleet of some species, such as Gull-billed and Caspian Terns, species not generally sighted on pelagic trips, plus the various species of Cormorant. Periods of bad weather can prevent the fleet from getting out and there is a closed season of several weeks toward the end of the year. Of course for all those pelagic tragics out there, the vagrant species or megas can turn up at any time of year and Southport is renowned for them.

A much stronger start to the year than 2017 with good diversity for both January and February and March being up eight species from last year. April though was down considerably but Autumn, through Winter, although down generally was still an improvement on the previous year, especially May with two species of Albatross and June with another species of Albatross. Early Spring is starting to show a trend in the region where once October use to be the month of diversity but now apparently has been taken over by November. Due to bad weather the month of December had no trips conducted.

The Region



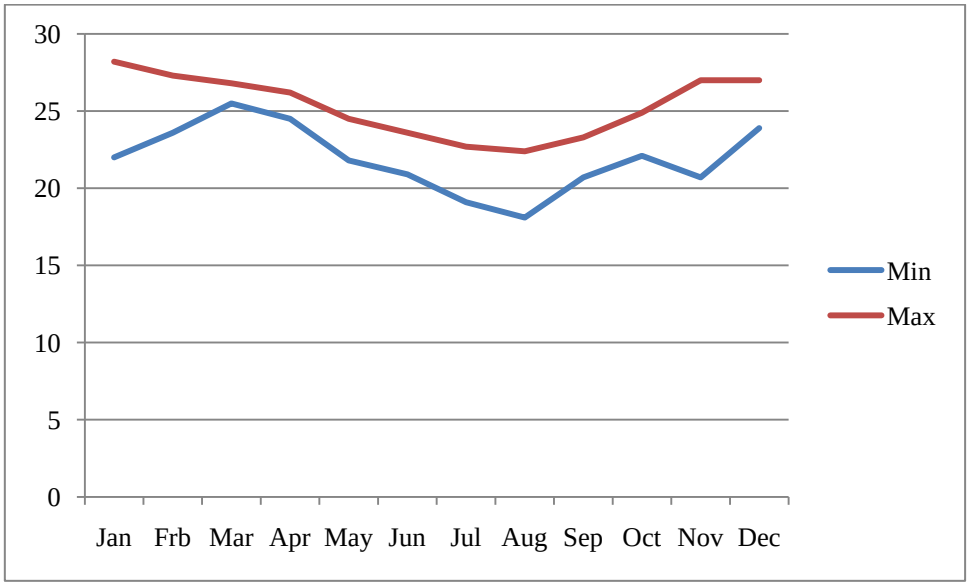
The area around Southport is situated in the south Coral Sea, with the warm, north/south moving East Australian Current being the major influential feature. The main offshore underwater structures in this region are a series of Sea-mounts and Guyots, ranging north to south from adjacent to Fraser Island Queensland, down to Ballina, NSW. These are in order north/south, Fraser Seamount, Recorder Sea Mount or Guyot, Moreton Sea Mount, Brisbane Sea Mount, Queensland Sea Mount or Guyot, Britannia Sea Mount or Guyot and Stradbroke Seamount, with distances from shore ranging from the widest, Fraser Seamount at 138 nautical miles to the closest the Queensland Guyot at 91.1 nautical miles. The highest of these are the Fraser Seamount, rising to within 359 metres of the sea surface and the Queensland Guyot which comes within 306 metres of the sea surface, it is

these areas where upwelling is most likely to occur. The largest of these undersea structures is the Britannia Guyot which adjoins the southern edge of the Queensland Guyot. The seamounts in the southern Coral Sea are the northern most cluster of a long chain of seamounts running down the east coast of Australia to the south of Tasmania, known as the Tasmantid Seamounts and possibly the only ones lying within the Australian EEZ.

Closer to shore and in the vicinity of Southport, the main offshore structures range from Mick's Mountain, ENE of Southport, moving south through Jim's Mountain, the Riviera Grounds and the Tweed Canyon's south of the Qld/NSW border adjacent to Fingal Head or just to the south. These rises are all around roughly 30 nautical miles offshore but the Tweed Canyons are considerably closer to the coast, however all these sea floor rises and canyons lie just off the Continental Shelf. As a reference the entry/exit to the Seaway is located at 27 56.00S/153 26.00E.

As with any part of the Australian coastline or anywhere else for that matter the Continental Shelf ends at the 100 fathom (or approx. 200 metre) mark, this is also referred to as the Shelf-break. Distance from shore varies greatly around the Australian coastline but off the Gold Coast it is roughly around 23 nm offshore at 153 51.50E ranging further out, moving further north, approaching the southern reaches of the Great Barrier Reef.

Understandably, given the region lies in the southern Coral Sea and not that far south of the world's largest collection of coral reefs, the water temperatures are warm in summer and still relatively warm in winter. During these winter months, May-August, colder water currents from the south push up, forcing the weakening warm current further out wide. Another phenomenon that can occur is when persistent winds blow from the north producing what is known as the Eckman Effect, where the northerly winds force the warm surface water further out to sea, causing colder water to come to the surface, forming a kind of upwelling.

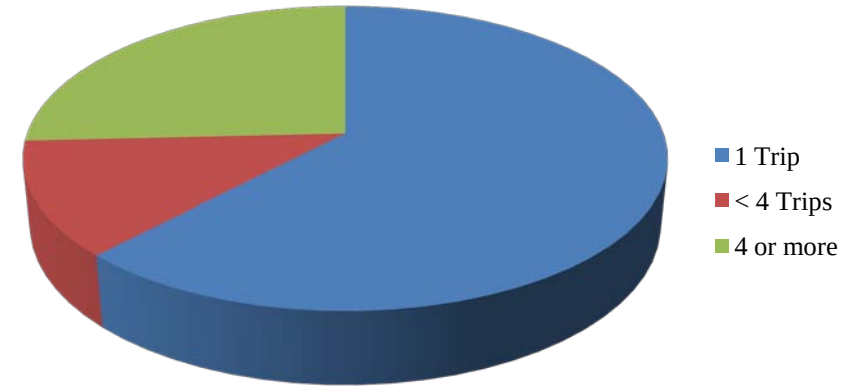


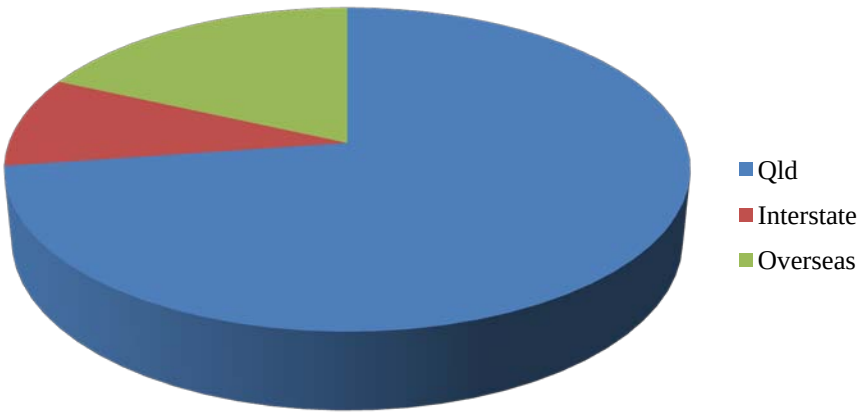
With prevalent northerlies in January the Eckmann Effect kicked in with a big variation in sea surface temperatures but this settled over the next three months with reduced differential between close in and out wide. From May the differential widened as per normal, with the peak spike in August with a 4.3° C difference. The range gradually decreased as normal until early November when sustained northerlies again produced what would appear to be the Eckmann Effect with the differential being 4.5° C, even greater then the peak Winter readings.

Participation

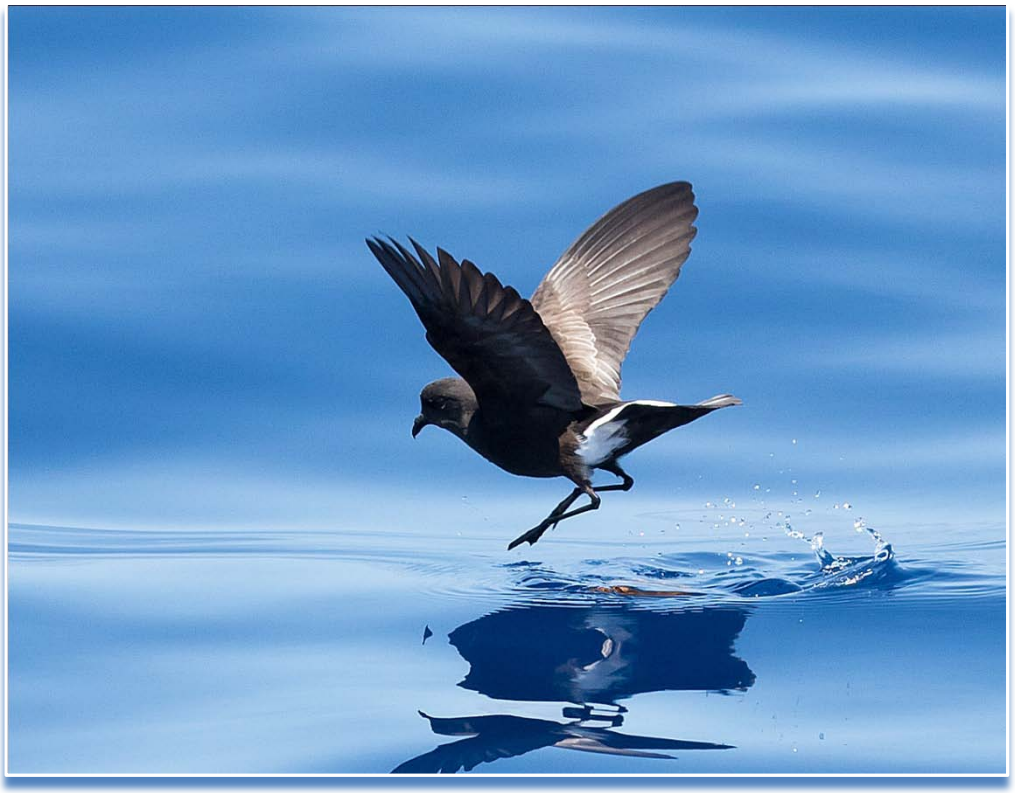
A total of only sixty six came out on Southport trips in 2018 on a total of fifteen trips., twenty four less than for 2017, which on the surface would seem disappointing but the average for each trip was 14.2 which was 2% up on last year. Forty eight or 73% of participants were from Queensland, which was a far higher percentage than for 2017 as visitors from interstate comprised only six or 9% and twelve international visitors for 18%. Interstate visitors comprised of three from Victoria, two from South Australia and one from Western Australia. As for international, one was from Hong Kong, three from the US, two from the UK, three from the Netherlands and two from New Zealand.

For the first time no-one participated in every trip as even I missed one, being way for the June 30th trip conducting surveys on Raine Island. A total of forty one or 62% were single trippers for 2018, down 8% on the previous year, with the remaining twenty five or 38% returning for at least another trip. Of those, fourteen or 21% participated in more than half the trips, encouragingly up on the previous year, reinforcing the core group.





Gallerie



Wilson’s Storm-Petrel *Oceanites oceanicus*, 20/10/2018. P. Walbridge.

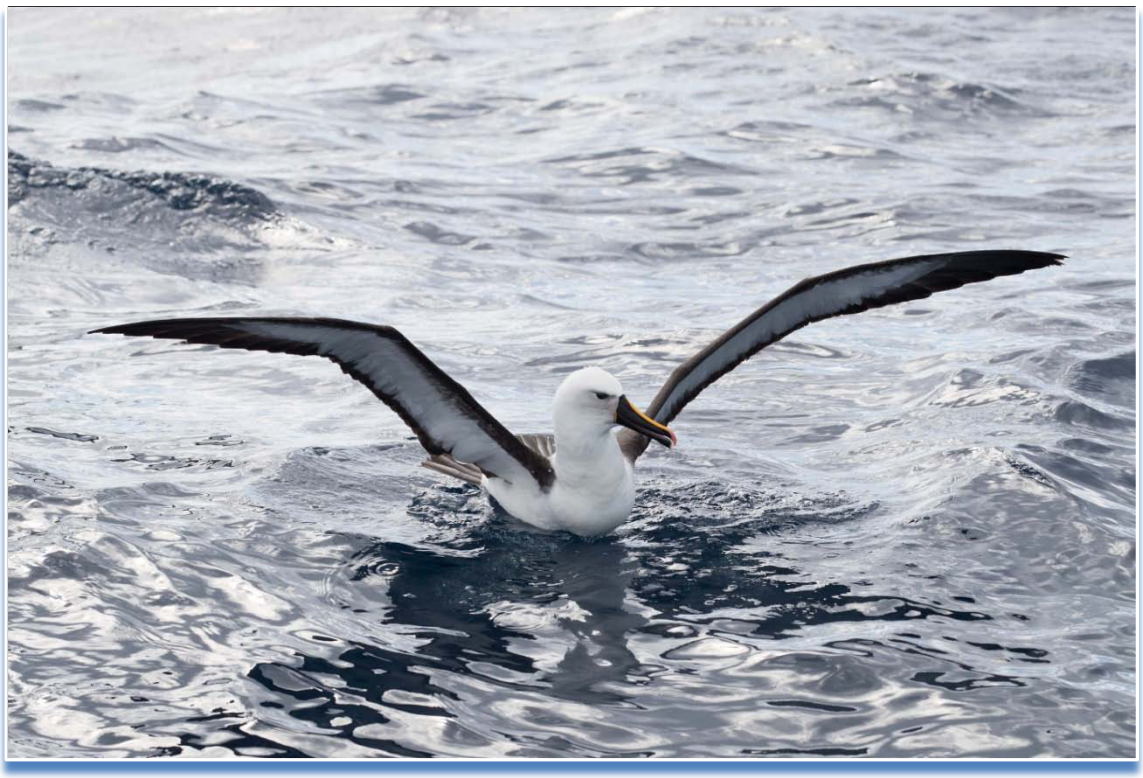
White-faced Storm-Petrel *Pelagodroma marina*, 21/4/2018. P. Walbridge.

Black-bellied Storm-Petrel *Fregetta tropica*, 15/9/2018. P. Walbridge.

Coral Sea Storm-Petrel *Fregetta sps*, 21/4/2018. P. Walbridge.

New Zealand Wandering Albatross *Diomedea antipodensis*, 30/6/2018. B. Russell.

Black-browed Albatross *Thalassarche melanophris*, 19/5/2018. P. Walbridge.



Indian Yellow-nosed Albatross *Thalassarche carteri*, 19/5/2018. P. Walbridge.

Fairy Prion *Pachyptila turtur*, 19/5/2018. P. Walbridge.

Black Petrel *Procellaria parkinsoni*, 17/11/2018. P. Walbridge.

Wedge-tailed Shearwater *Ardenna pacificus*, 13/1/2018. P. Walbridge.

Flesh-footed Shearwater *Ardenna carneipes*, 13/1/2018. P. Walbridge.

Fluttering Shearwater *Puffinus gavia*, 19/5/2018. P. Walbridge.

Tahiti Petrel *Pseudobulweria rostrata*, 13/1/2018. P. Walbridge.

Kermadec Petrel *Pterodroma neglecta*, 24/3/2018. P. Walbridge.

Providence Petrel *Pterodroma solandri*, 24/3/2018. P. Walbridge.

Grey-faced Petrel *Pterodroma gouldi*, 24/3/2018. P. Walbridge.

White-necked Petrel *Pterodroma cervicalis*, 24/3/2018. P. Walbridge.

Gould's Petrel *Pterodroma leucoptera*, 17/2/2018. P. Walbridge.

Masked Booby *Sula d. dactylatra*, 17/2/2018. P. Walbridge.

Red-footed Booby *Sula sula*, 17/2/2018. P. Walbridge.

Pomarine Jaeger *Stercorarius pomarinus*, 17/3/2018. P. Walbridge.

Arctic Jaeger *Stercorarius parasiticus*, 17/11/2018. P. Walbridge.

Sooty Tern *Onychoprion fuscata*, 17/2/2018. P. Walbridge.

Sooty Tern *Onychoprion fuscata*, 26/1/2018. P. Walbridge.

Images from South West Rocks, New South Wales.

Wilson's Storm-Petrel *Oceanites oceanicus,* 14/4/2018. P. Walbridge.

Tahiti Petrel *Pseudobulweria rostrata,* 14/4/2018. P. Walbridge.

Grey-faced Petrel *Pterodroma gouldi*, 14/4/2018. P. Walbridge.

Pomarine Jaeger *Stercorarius pomarinus*, 14/4/2018. P. Walbridge.

Bird Combos

Tahiti Petrel, Pomarine Jaeger, Flesh-footed Shearwater, Wedge-tailed Shearwater, 17/2/2018. P.Walbridge.

Wedge-tailed Shearwater, Kermadec Petrel, 17/11/2018. P. Walbridge.

Flesh-footed Shearwater, Tahiti Petrel, Wedge-tailed Shearwater, 17/11/2018. P. Walbridge.

Kermadec Petrel, Flesh-footed Shearwater, 17/11/2018. P. Walbridge.

Systematic List

PROCELLARIIFORMES
Oceantidae

Wilson's Storm-Petrel *Oceanites oceanicus*
Common Spring and Autumn passage migrant with small numbers over-wintering and occasionally in Summer. Has been recorded in all months.
No records for January, with the first sightings on 17th February, a single at 27 49.46S/153 51.66E and two birds at 27 49.60S/153 51.37E. A single only on 17th March, 27 51.01S/153 51.73, with an increase on 24th March when ten sighted between 28 01.73S/153 52.60E and 27 57.83S/153 54.22E. Autumn northward migration peaked in April with a total of sixty three on the 21st, ranging from 28 00.80S/153 39.85E to 28 05.33S/ 153 53.77E. Numbers easing off on 19th May with twenty two recorded, 27 49.21S/153 54.86E to 27 51.34S/ 153 57.85E and again on 16th June with twenty five sighted between 27 46.90S/153 54.13E and 27 51.03S/ 153 55.81E. Numbers dropped right off then for the Winter on 30th June with single birds at 27 51.02S/ 153 58.23E and 27 51.46S/153 58.37E, no records in July, then recorded next on 18th August with a single at 27 46.39S/153 58.39E and two at 27 46.69S/153 58.49E. Just three on 15th September with a single bird at 27 49.82S/153 51.99E and two at 27 49.82S/153 57.34E. Southward migration kicked in on 20th October with a total of 145, from 27 54.30S/153 36.92E out to 27 50.14S/153 58.12E. Numbers still coming through in November, with a total of twenty on the 10th, 27 51.22S/153 52.69E out to 27 52.79S/153 57.25E and on 17th November with nine counted, 27 45.48S/153 55.92E out to 27 56.43S/153 59.62E.

White-faced Storm-Petrel *Pelagodroma marina*
Once considered rare in the region, sightings becoming increasingly regular, Autumn/Winter/Spring.
Good numbers around on 21st April with twenty nine sighted (high count of fourteen) between 28 04.07S/ 153 53.65E and 28 05.33S/153 53.79E. A single on 19th May, 27 51.24S/153 57.75E.

Black-bellied Storm-Petrel *Fregetta tropica*
Regular Winter visitor and Spring passage migrant.
Not recorded until 16th June with ten sighted, with singles at 27 45.53S/153 55.41E, 27 46.16S/153 54.80E, 27 46.90S/153 54.13E, 27 47.89S/153 54.59E and 27 48.66S/153 54.92E. Another two at 27 50.08S/153 55.47E and three more at 27 51.03S/153 55.81E. Just a single on 30th June, 27 49.84S/153 57.87E and again just a single on 21st July at 27 52.66S/153 57.22E. On 18th August, single sightings at 27 44.78S/153 57.58E and 27 44.87S/153 57.62E. Largest count for the year on 15th September with a total of twenty eight sighted, largest single count of four, ranging from 27 49.82S/ 153 57.34E out to 27 57.42S/154 00.33E. Two single birds on 20th October, 27 45.96S/153 57.63E and 27 46.51S/153 57.70E.

Coral Sea Storm-Petrel *Fregetta sps*
A possibly previously undescribed taxon, until recently thought to be New Zealand Storm-Petrel, now known not to be and probably the same as the birds sighted off southern New Caledonia. Annual since 2011. Work in progress.
After the hiatus of 2017, two sightings for 2018, with singles on 21st April at 28 04.03S/153 53.60E, a bird which hung around for at least two hours and another on 30th June, 27 50.40S/153 57.82E, the second June record.

Diomedeidae

Antipodean/Gibson's Albatross *Diomedea antipodensis/ gibsoni*
Uncommon visitor, mainly April – October, recorded most years.
A single, possibly 4th cycle female Antipodean on 30th June at 27 51.02S/153 58.23E.

Black-browed Albatross *Thalassarche melanophris*
Uncommon Winter visitor, recorded most years in low numbers.
A single juv/immature bird at the back of the vessel on 19th May, 27 51.24S/153 57.75E.

Indian Yellow-nosed Albatross *Thalassarche carteri*
Uncommon Winter visitor, scarcer than in the past, most likely due to large scale long-line mortality.
A single adult bird on 19th May, 27 50.90S/153 57.34E.

Procellariidae

Fairy Prion *Pachyptila turtur*
Erratic Winter visitor June-August, some years more numerous than in others, depending on sea-surface temps. Records spread over three months, starting with 19th May with two sighted at 27 50.61S/153 57.19E and a single, 27 51.34S/153 57.85E. In June, ten sighted on the 16th 27 56.64S/153 26.41E (just outside the seaway) out to 27 46.90S/153 54.13E, and six sighted on the 30th ranging from 27 52.61S/153 37.91E to 27 49.44S/153 57.67E. On 21st July, two birds at 27 55.42S/153 29.55E, another two sighted at 27 51.17S/153 45.07E and a single at 27 51.00S/153 48.62E.

Black Petrel *Procellaria parkinsoni*
Once considered a very rare Spring/Autumn passage migrant, now appearing almost annually in low numbers. After a hiatus of nearly three years, a single on 17th November, 27 47.30S/153 58.06E.

Wedge-tailed Shearwater *Ardenna pacificus*
Common Summer visitor and local colony breeder August-April, with large local colonies on Mudjimba Island on the Sunshine Coast and on Cook Island off Fingal Head, Tweed Coast, NSW. The Queensland Government threatened species programme has now declared the species Vulnerable.
Records for the year start on 13th January when 181 sighted (maximum count fifty), ranging from 27 55.93S/ 153 27.02E out to 28 04.26S/153 54.46E then again on 26th January when 130 counted ranging from 27 56.29S/ 153 26.92E. Numbers still low on 17th February with just 125 counted, 27 56.07S/153 26.27E out to 27 48.49S/ 153 52.54E and numbers up slightly on 17th March with 295 recorded ranging from 27 55.98S/153 26.44E out to 27 47.67S/153 52.87, with a pale intermediate bird sighted at 27 55.92S/153 26.61E, a form rarely sighted in Queensland waters. A second March trip on the 24th saw numbers drop to just 105 from 27 56.18S/153 26.49E out to 27 57.36S/153 54.32E. Numbers dropping right off by the 21st April with just thirty one counted ranging from 27 56.97S/153 29,08E out to 28 05.71S/153 53.68E. Absent then until 21st July with a single bird sighted at 27 51.27S/153 44.62E then numbers picking up on 18th August with a total of twenty seven recorded between 27 55.39S/153 27.52E and 27 47.09S/153 58.66E. In September numbers still alarmingly low on the 15th with just with just forty nine sighted, 27 55.09S/153 29.84E to 27 54.81S/153 59.27E. Numbers even lower on 20th October with just fourteen counted from 27 54.27S/153 30.64E out to 27 48.46S/153 57.93E. Numbers improved on the two November trips with the 10th recording 187, 27 55.67S/153 27.26E out to 27 51.58S/ 153 57.26E. and the 17th recording just sixty, 27 55.93S/153 26.74E out to 27 56.43S
153 59.62E.

Buller's Shearwater *Ardenna bulleri*
Rare Spring/Autumn passage migrant and occasional summer visitor.
A single bird on 17th February, 27 55.27S/153 29.44E, just over three miles outside the seaway.

Flesh-footed Shearwater *Ardenna carneipes*
A once common and numerous summer visitor, September – April, now in much lower numbers.
Sightings started on 13th January, with five recorded, 28 05.90S/153 51.95E to 28 04.26S/153 54.46E, then on 17th February a total of sixteen between 27 49.13S/153 51.34E and 27 48.71S/153 52.79E. On 17th March just nine recorded from 27 51.91S/153 30.96E out to 27 48.07S/153 52.72E and finally for the Autumn a total of thirteen on 21st April ranging from 27 58.56S/153 33.24E to 28 05.33S/153 53.77E. None then until the Spring

with just three on 15th September, 27 52.43S/153 58.25E to 27 57.52S/154 00.55E, with the last recorded for the year on 17th November, with four sighted, a single at 27 48.37S/153 58.18S and three more at 27 53.23S/ 153 58.31E.

Short-tailed Shearwater *Ardenna tenuirostris*
A sometimes numerous Spring passage migrant, with small numbers still trickling through into summer. less so in Autumn, on the return passage.
In the first half of the year, single birds recorded on 13th January, 27 52.79S/153 35.09E, 26th January 27 55.57S/153 30.23E and on 17th March at 27 51.91S/153 30.96E. Not sighted then until the Spring with twenty nine recorded on 10th November ranging from 27 54.98S/153 29.71E out to 27 51.58S/153 57.26E. Then on the 17th November, eight in a flock sighted at 27 53.82S/153 33.42E and another two at 27 56.29S/ 153 35.55E.

Fluttering Shearwater *Puffinus gavia*
A common, mainly Autumn/ Winter visitor which tends to form large feeding flocks close inshore and not usually encountered in any numbers on pelagic trips.
First sighted on 26th January with singles at 27 56.29S/153 26.92E and 27 54.65S/153 33.06E then on 17th February, 27 53.50S/153 35.10E and again on 17th March at 27 51.91S/153 30.96E. Bigger numbers on 19th May with four sighted at 27 56.63S/153 27.19E and fifteen more at 27 56.08S/153 26.24E. Last sighting on 30th June with a single at 27 56.64S/153 27.66E.

Hutton's Shearwater *Puffinus huttoni*
A common visitor from New Zealand, occurring any time of the year. Sighted off the Shelf more often than the preceding species.
A single bird on 26th January, 27 55.48S/153 31.19E, then two singles on 17th February at 27 54.90S/153 30.89E and 27 55.27S/153 29.44E. Two singles again on 17th March, 27 49.00S/153 43.59E and 27 48.75S/153 52.48E and another single bird on 24th March, 27 56.63S/153 28.23E. Singles again on 16th June, 27 53.58S/153 45.93E and on 21st July, 27 51.57S/153 35.82E. Finally six were sighted on 18th August, ranging from 27 51.25S/ 153 35.82E out to 27 45.32S/153 57.81E.

Tahiti Petrel *Pseudobulweria rostrata*
A common Summer visitor, mainly September-April but has been recorded every month of the year, numbers usually peaking around Feb/Mar. when birds are returning to breeding sites in New Caledonia. Doesn't usually tolerate water temperatures < 23° C.
A count of forty one on 13th January, with a peak count of fifteen, ranging from 27 49.48S/153 46.75E to 28 04.26S/153 54.46E then numbers dropped somewhat on 26th January with just five sighted from 27 50.40S/ 153 51.58E out to 27 50.92S/153 57.31E. 17th February produced a count of thirty six, 28 01.73S/153 51.37E to 27 48.78S/153 52.69E while 17th March saw fifteen birds counted from 27 51.01S/153 51.73E to 27 49.07S/ 153 52.37E and again on 24th March where numbers rose to thirty six ranging from 28 01.73S/153 52.60E out to 27 57.36S/153 54.32E. Final count for the Autumn on 21st April with fourteen sighted, 27 57.05S/153 28.77E (just a couple of miles out from the seaway) out to 28 03.71S/153 53.68E. None recorded then until 20th October when seven sighted from 27 54.30S/153 36.92E out to 27 49.98S/153 58.07E. Recorded on both November trips with a count of just five on the 10th, 27 55.05S/153 57.24E to 27 57.29S/153 57.29E and seventeen on the 17th from 27 46.35S/153 57.96E out to 27 56.77S/153 59.70E.

Kermadec Petrel *Pterodroma neglecta*
With the species now having been recorded every month of the year and a pattern of occurrence forming, the status of this species has been revised to common visitor to SEQ waters.
Recorded in nine months in 2018, starting on 13th January with a single bird at 28 04.26S/153 54.46E, then a single on 17th February, 27 48.99S/153 52.54E. As usual numbers started to pick up in March with seven on the 17th from 27 50.83S/153 51.80E to 27 47.67S/153 52.87E then twenty on the 24th March, with a high count of five ranging from 28 00.60S/153 45.61E to 27 57.83S/153 54.22E. Similar numbers on 21st April with seventeen

recorded, 28 02.93S/153 46.13E out to 28 05.33S/153 53.77E. Then numbers dropping off for the Winter with singles on 19th May, 27 50.90S/153 57.34E, 21st July 27 51.81S/153 57.24E and 18th August with two singles at 27 45.32S/153 57.81E and 27 45.67S/153 57.99E. Back with a vengeance on 15th September with sixteen sighted between 27 50.78S/153 47.53E to 27 56.88/154 00.11E. Surprisingly, none recorded in October and next sighted on 10th November with a single bird at 27 55.05S/153 57.24E and again on 17th November with eleven recorded between 27 46.35S/153 57.96E and 27 56.43S/153 59.62E.

Grey-faced Petrel *Pterodroma gouldi*
An uncommon, mainly Summer visitor but also Autumn/Winter. Another species whose local status is under review.
Records started on 17th March with a total of twelve sighted, maximum count of six, between 27 51.17S/ 153 51.66E and 27 47.67S/153 52.87E and on 24th March with sixteen recorded, 28 01.73S/153 52.60E out to 2757.36S/153 54.32E. Finally, fifteen counted on 21st April from 28 00.98S/153 50.20E to 28 05.35S/153 53.77E

Providence Petrel *Pterodroma solandri*
A common Winter visitor, occurring March- November, breeding on Lord Howe Island some 600 kilometres to the southeast.
Records in March are on the increase with a single on 17th being particularly early, 27 48.07S/153 52.72E, then again on the 24th when six were sighted between 27 57.30S/153 51.19E and 27 57.83S/153 54.22E. Numbers really kicked in in April with a count of sixty six on the 21st ranging from 27 57.52S/153 30.19E to 28 03.63S/ 153 53.70E and numbers increasing again on 19th May with ninety two recorded (peak count of thirty) ranging from 27 49.69S/153 50.37E out to 27 51.34S/153 57.85E. A year high count on 16th June of 129 (peak of forty), from 27 46.54S/153 51.05E to 27 50.08S/153 55.47E, followed by just twenty three on 30th June, 27 49.15S/ 153 50.30E out to 27 51.46S/153 58.37E. A total of twenty eight sighted on 21st July from 27 50.63S/ 153 52.17E to 27 52.11S/153 57.25E, while numbers lightened right off on 18th August with just six recorded from 27 45.14S/153 57.74E to 27 47.15S/153 58.88E. Numbers picking up again 15th September where thirteen were sighted between 27 49.49S/153 53.41E and 27 56.88S/154 00.11E, then increasing again on 20th October with twenty nine birds sighted from 27 46.34S/153 52.55E out to 27 49.98S/153 58.07E. November records on the increase in recent years, starting with the 10th where twelve sighted from 27 56.92S/153 57.24E to 27 50.40S/153 57.26E and finally for the year on the 17th when five recorded with four sighted at 27 53.96S/ 153 59.19E and a single at 27 56.27S/153 59.70E.

Gould's Petrel *Pterodroma leucoptera*
An uncommon Spring/Autumn passage bird and Summer visitor.
Records in full for the year, staring on 17th February with a single bird at 27 49.44S/153 51.73E then on 24th March with a single at 27 57.36S/153 54.32E and two at 28 01.45S/153 52.70E. On 17th November single birds at 27 48.89S/153 58.24E and 27 51.66S/153 58.65E.

White-necked Petrel *Pterodroma cervicalis*
An uncommon, mainly Summer/Autumn visitor.
Records in full, singles on 13th January 28 07.23S/153 48.41E and again on 26th January, 27 51.38S/153 57.22E. On 24th March, a single bird 27 58.59S/153 53.89E, then two at 27 58.45S/153 53.61E and two more again at 28 01.45S/153 52.70E.

Black-winged Petrel (*Pterodroma nigripennis)*
Uncommon Spring/Autumn passage bird and Summer visitor.
One record only for the year with a single on 10th November at 27 55.95S/153 57.24E.

PHALACROCORACIFORMES
Fregatidae

Lesser Frigatebird *Fregata ariel*
Closest breeding Lady Elliott Island. Uncommon in SEQ waters.
Two sighted on 21st April, 27 58.48S/153 33.37E.

Sulidae

Australasian Gannet *Morus serrator*
Common Winter visitor, mainly from New Zealand late April-Oct.
March records on the increase in recent years, starting on the 17th with singles at 27 51.91S/153 30.96E and 27 55.92S/153 26.61E and again on the 24th with a single bird at 27 57.59S/153 32.43E. Surprisingly none then in April, with the next sightings on 19th May with single birds, 27 56.63S/153 27.19E, 27 52.24S/153 57.75E and 27 56.08S/153 26.24E. Numbers increased slightly on 16th June with eight sighted between 27 56.64S/ 153 26.41E and 27 53.28S/153 48.37E and just five on 30th June with three at 27 55.10S/153 28.01E and another two at 27 53.55S/153 42.61E. Just five on 21st July all singles between 27 53.51S/153 36.92E and 27 51.05s/153 57.25E, then on 18th August nine recorded from 27 55.77S/153 26.76E to 27 45.23S/153 57.77E. Finally on 15th September a single at 27 54.88S/153 30,70E, a very early finish to the year.

Masked Booby *Sula dactylatra*
Uncommon visitor from both Lord Howe Island and presumably the Coral Sea Territories.
A sub-adult bird of the race *S. d. dactylatra.* on 17th February, 27 49.25S/153 52.13E.

Red-footed Booby *Sula sula*
A rare visitor to SEQ waters most likely form the Coral Sea Territory and sightings on the increase in recent years.
A single juvenile bird on 17th February, 27 48.99S/153 52.54E.

Phalacrocoracidae

Little Pied Cormorant *Microcarbo melanoleucos*
Only occasionally sighted outside the seaway.
One behind a trawler on 26th January, 27 56.29S/153 26.92E.

Great Cormorant *Phalacrocorax carbo*
In most years the least frequently seen of the Cormorants outside the Seaway.
A single bird sighted on 13th January at 28 03.18S/153 27.03E.

Little Black Cormorant *Phalacrocorax sulcirostris*
Regularly sighted, usually on or behind returning trawlers.
Sightings continue to decline outside the seaway despite large numbers still congregating in the Broadwater, with a single on 26th January, 27 56.29S/153 26.92E and on 17th November with a single at 27 55.95S/ 153 26.74E. Other species eg. Crested Tern still perch on the trawlers, maybe the trawlers cleanup routines have changed.

Pied Cormorant *Phalacrocorax varius*
As with above but usually in smaller numbers.
Unlike the preceding species this one doesn't seem to have changed in its occurrence but also this species isn't known for perching on the trawlers as Little Black Cormorant does. On 13th January three single birds behind trawlers just outside the seaway and on 26th January another two also behind a trawler just outside the seaway. On 17th February a total of six recorded from 27 55.59S/153 28.45E to 27 54.90S/153 30.89E, whilst on 17th March six sighted with five together at 27 55.86S/153 27.03E and a single at 27 55.92S/153 26.61E and again

on 24th March when two sighted at 27 56.39S/153 27.73E and a single at 27 56.47S/153 35.46E. On 19th May a single bird at 27 55.43S/153 27.88E, five behind a trawler on 16th June, 27 53.63S/153 28.55E, a single on 21st July right outside the seaway, three on 18th August at 27 55.39S/153 27.57E and finally two on 17th November, 27 55.95S/153 26.74E.

CHARADRIIFORMES
Stercorariidae

South Polar Skua *Stercorarius maccormicki*
Rare Spring/Autumn passage bird, sometimes Summer.
A single pale bird on 21st April, 28 02.80S/153 45.91E, harassing a Flesh-footed Shearwater on the sea surface.

Brown Skua *Stercorarius antarcticus*
An infrequent Winter visitor, May-Aug, possibly associated with prion influxes.
A single on 30th June, 27 48.96S/153 50.99E.

Pomarine Jaeger *Stercorarius pomarinus*
The most often encountered of the group in the region, Spring to Autumn.
Starting on 13th January with a single at 27 55.93S/153 27.02E, three at 27 55.10S/153 27.97E then another single at 27 53.23S/153 33.65E, followed on 26th January by three at 27 53.94S/153 35.39E and a single at 27 52.87S/153 39.21E. Just a single bird sighted on 17th February at 27 55.59S/153 28.45E then on 17th March northward movement starting to kick in with nine recorded from 27 51.91S/153 30.96E to 27 49.68/153 52.19E and backed up by ten more on 24th March, ranging from 27 56.18S/153 26.49E to 27 57.36S/153 54.35E. None then until the Spring with a single on the 10th , 27 53.81S/153 33.84E, then on the 17th singles at 27 55.10S/ 153 29.80E, 27 55.13S/153 55.53E and two at 27 52.11S/153 38.43E.

Arctic Jaeger *Stercorarius parasiticus*
Most often occurs in inshore waters in SEQ and not recorded on pelagic trips as often as the above species.
Two on 13th January, 27 55.10S/153 27.97E and a single on 24th March, 27 56.44S/153 28.15E. None then until the Spring with a single bird on 10th November at 27 52.03S/153 48.26E and on the 17th November three singles at 27 53.07S/153 35.89E, 27 47.89S/153 58.12E and 27 49.86S/153 58.36E.

Long-tailed Jaeger *Stercorarius longicaudus*
Rare Spring/Autumn passage migrant.
Recorded on three occasions in 2018, starting with 17th February with a single at 27 49.60S/153 51.20E, then a single on 24th March at 27 58.69S/153 53.86E and finally on 17th November with a single at 27 48.37S/ 153 58.18E.

Laridae

Common Noddy *Anous stolidus*
Frequent visitor, which can occur any time of year but largest numbers usually in Winter.
First record was of a single on 17th March, 27 48.75S/153 52.48E, then on 24th March another single at 28 02.14S/153 52.78E. 19th May produced seven birds at 27 50.23S/153 56.95E and a single at 27 51.15S/ 153 57.65E. two singles on 16th June, 27 45.53S/153 53.41E and 27 51.39S/153 55.93E, while on 30th June, three birds sighted at 27 51.46S/153 58.37E. On 21st July four birds sighted at 27 51.05S/153 57.25, a single at 27 51.57S/153 57.25E and another two at 27 51.81S/153 57.24E. Two singles on 18th August at 27 46.94S/ 153 58.59E and 27 47.09S/153 58.66E and finally on 10th November two birds at 27 57.35S/153 53.00E

Black Noddy *(Anous minutus)*
Infrequent visitor to SEQ waters.
A single bird on 26th January sighted at 27 53.68S/153 45.90E then an unusual record for this species with a sighting on 30th June, 27 48.14S/153 54.58E, rarely sighted in Winter,

White Tern *Gygis alba*
Uncommon visitor to SEQ waters January-April.
On 26th January a single at 27 50.92S/153 57.31E and another two at 27 52.78S/153 56.96E and on 24th March, four birds fishing with other species at 28 01.45S/153 52.70E.

Sooty Tern *Onychoprion fuscata*
Far more commonly encountered than Bridled Tern, occurring throughout the year but mostly Summer months Four birds sighted on 13th January, with three at 27 56.38S/153 52.82E and a single at 28 01.17S/153 53.60E, then much larger numbers on 26th January, many in fishing flocks with a total of forty seven sighted between 27 02.52S/153 42.67E and 27 49.84S/153 57.47E. Five on 17th February between 27 49.29S/153 52.04E and 27 48.81S/153 52.45E and just a single on 17th March at 27 48.02S/153 45.25E with another three birds on 24th March, 28 01.45S/153 52.70E. on 21st July a single bird at 27 52.11S/153 57.23E then a party of twelve at 27 53.31S/153 55.79E, then on 18th August a single at 27 45.23S/153 57.77E and two more at 27 46.94S/ 153 58.59E. Much larger numbers on 10th November with fifty one counted between 27 51.04S/153 54,55E and 27 51.58S/153 57.26E and just seven sighted on 17th November, 27 48.67S/153 47.34E out to 27 52.42S/ 153 58.37E.

Little Tern (*Sterna albifrons)*
Small numbers breeding locally on the larger sand islands but most birds summer visitors from northern Asia. Records in full of birds sighted mainly just outside the seaway, foraging in the intertidal zone, starting with 17th February, two at 27 56.07S/153 26.27E, then 0n 17th March with a party of six at 27 55.98S/153 26.44E and another thirty seven at 27 55.92S/153 26.61E. On 12th March a foraging party of twelve at 27 56.18S/ 153 26.49E.

Common Tern *Sterna hirundo*
Summer visitor, with small numbers, probably immature birds, overwintering.
Again like the preceding species all records just outside the seaway of foraging birds starting 17th February with a party of fifty 27 56.07S/153 26.27E and a single 27 55.91S/153 27.11E. On 17th March a single at 27 56.00S/153 26.00E then a party of twenty at 27 56.18S/153 26.49E Final record of a single bird on 10th November at 27 56.07S/153 26.06E.

Crested Tern *Thalasseus bergii*
Common, breeds locally on Cook Island off Fingal Head, NSW.
Although largest numbers occur close in, associated with returning trawlers some do occur out wide, with forty three sighted on 13th January form 27 56.10S/153 26.00E to 28 00.17S/153 53.60E and again on 26th January when 112 recorded all within four miles offshore outside the seaway. 112 on 26th January confined to within four miles offshore, just four sighted on 17th February all close inshore and 428 sighted on 17th March ,ranging from 27 56.06S/153 26.00E to 27 53.38S/153 31.62E. Also wide ranging on 21st April, with sightings from 27 56.08S/153 26.10E to 28 05.09S/153 53.72E and again on 19th May when forty recorded 27 55.96S/153 26.49E out to 27 50.23S/153 56.95E. On 16th June, a total of forty one recorded from the seaway out to 27 52.11S/153 56.11E and on 30th June just twenty recorded from 27 55.10S/153 28.01E to 27 48.97S/153 57.42E. In July a total of just thirteen sighted on the 21st ranging from 27 55.05S/153 37.50S out to 27 51.75S/153 57.25E and on 18th August numbers rose to eighty, 27 56.09S/153 26.20E to 27 45.23S/ 153 57.77E. Just two sighted on 20th October, not far from shore, with just a count of seven on 10th November from just outside the seaway out to 27 55.95S/153 57.24E, while on 17th November just thirty two foraging birds outside the seaway.

Silver Gull *Chroicocephalus novaehollandiae*
Common locally, breeds. Mainly associated with trawler activity just offshore.
Recorded on every trip with highest counts of 200 on 26th January, 144 on 17th March, 120 on 18th August and 104 on 10th November, with nearly all sightings within five miles of the seaway and as usual behind trawlers but sometimes with fishing parties around baitfish. However two were sighted on 16th June out at 27 50.08S/ 153 55.47E, approx. twenty nautical miles offshore and on 18th August with two singles at 27 35.14S/ 153 57.74E and 27 45.67S/153 57.99E both approx. thirty one miles offshore.

Rarities Submissions (with some carried over from previous years)

Species	Submitter	Sighting Date	Case No.	Verdict
Brown Skua *Stercorarius antarcticus*	R. Morris	25/7/2015	BQRAC	Pending
South Polar Skua *Stercorarius maccormicki*	R. Morris	17/10/2015	BARC	Pending
Arctic Tern *Sterna paradisaea*	G. Daly	7/8/2016	BQRAC	Pending
Mottled Petrel *Pterodroma inexpectata*		18/11/2017	BQRAC	Pending
Phoenix Petrel *Pterodroma alba* *	P. Walbridge	26/06/2018	BARC 1033	Accepted

***** Record from Raine Island.

Destination Raine Island

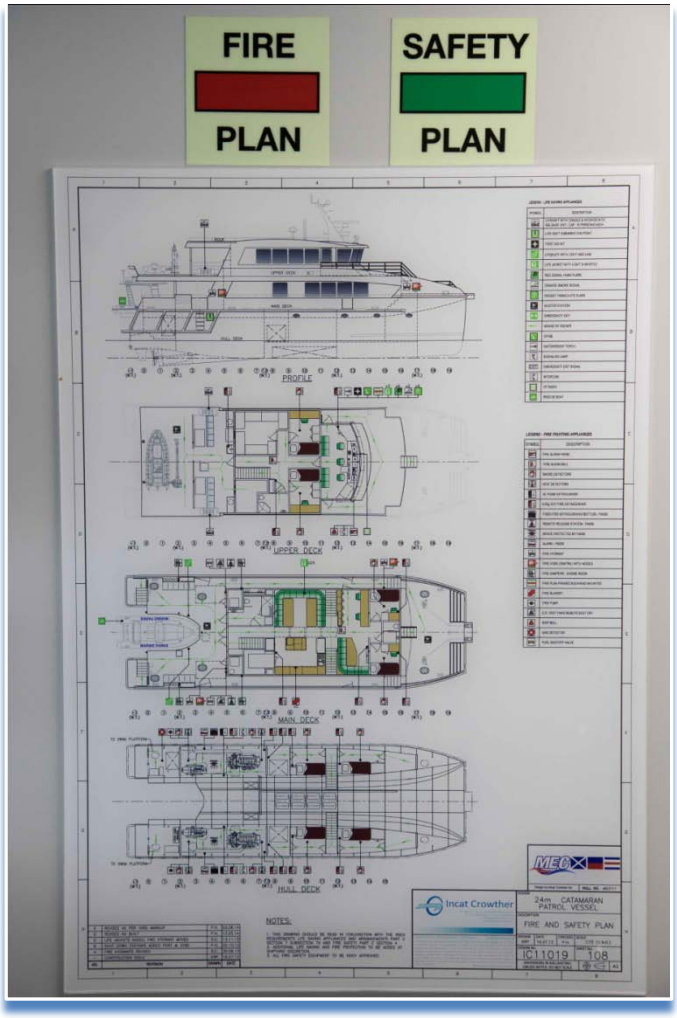
Paul Walbridge

On the 6th June I received an e-mail from close friend Dr. David Stewart, scientific officer for the threatened species program of the Queensland Department of Environmental Services. Dave was to be heading to Raine Island on the 21st June as part of the Raine Island Recovery Project to further his studies of the threatened Herald Petrel *Pterodroma heraldica*, a project he was running in conjunction with a team from the UK studying Herald, Trindade and Kermadec Petrels on Round Island in the Indian Ocean. Davids usual assistant, a fellow departmental officer, had come down with a condition that wouldn't allow him to travel, particularly on an aircraft and after some consideration my name had been selected as a replacement. The trouble was, I worked for the Health Department and couldn't just drop tools and join him. I immediately showed the e-mail with all the details to my line manager, it was too good an opportunity to miss. My main problem was that I already had booked my annual allowance for leave for August but as luck would have it I had accrued sufficient ADOs to cover the two weeks or so needed for the trip and was given immediate permission for time off – phew!

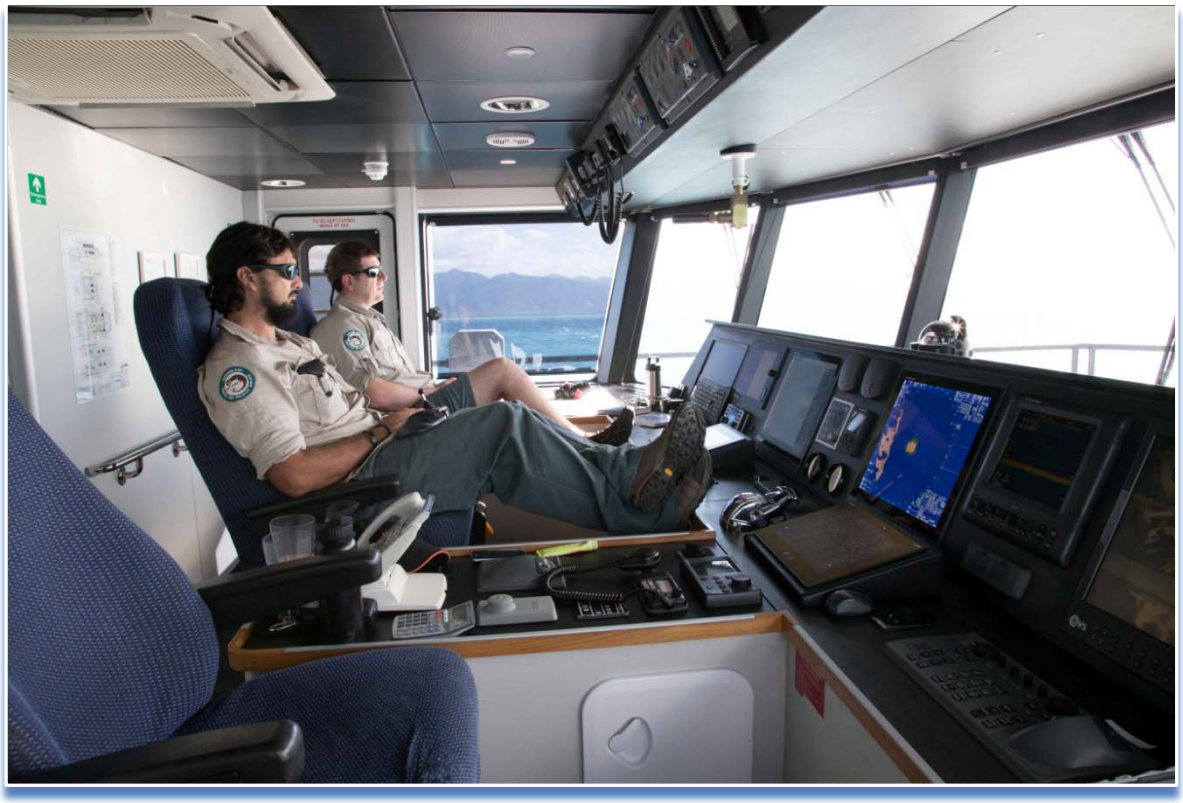
With just so many days notice to get ready, there was extra gear to purchase for such a trip. As well as being an assistant to Dave, I would be going as photographic expert for the excursion and I also had previous experience with Herald Petrel. I would be bringing my old faithful Leica 10X50 BA binoculars with me as well as my Canon 1DX MKII and 100-400 mm MK II, 100 mm macro and 24-105 mm lenses, all designated as 'L' lenses, therefore weather sealed, plus my Canon MR – 14EX Ring Lite. Knowing the conditions I would be working in both day and night, I would be performing wet landings ashore on not just Raine Island but other cays to be surveyed so a major purchase was a dry bag of sufficient size to hold not just my camera bag but wet weather gear as well. Also, I needed a new pair of reef boots, wet boots with a sufficient sole to withstand walking on coral sand all day along with the occasional sharp turtle bone.

I would be paying my own airfares Brisbane- Cairns – Brisbane but my time onboard the Marine Park vessel Reef Ranger and my subsequent trip back from Horn Island to Cairns by air would paid for by Marine Parks, I was pretty happy with that. With our airfares booked and overnight accommodation booked in Cairns, Dave and I met at Brisbane Central Station around midday on 20th June and arrived in Cairns late afternoon, booked into our lodgings, then went for an evening meal and a few beers, our last until 1st July. The next morning we headed down to the wharf at the Marine Parks office in Tingira Street and met up with Katharine Robertson, Senior Conservation Officer and OIC for the trip. We were shown onboard and shown our cabins and with most of the rest of the crew arriving, introductions were made, all of whom Dave already knew but all new to me. We weren't taking a full contingent, with a total of thirteen, comprising of seven National Parks staff, three Indigenous Rangers, two surveying contractors and of course, myself. We got underway with twelve on board and headed out of Cairns, picking up one of the Indigenous Rangers at sea from an outlying settlement. Shortly afterwards we were given a safety brief and drill instructions, which would be enacted not long after.

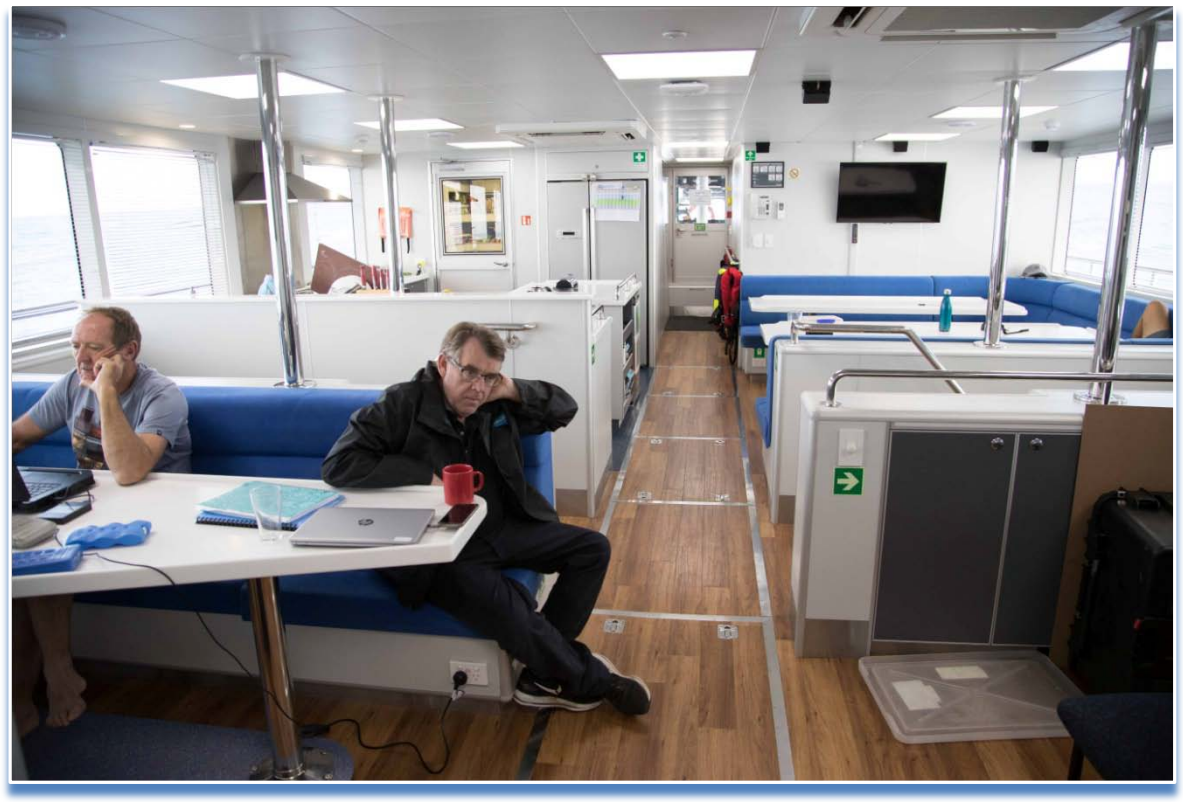
24 metre Incat Crowther Reef Ranger.



Impressive Floor plan.



Impressively appointed bridge with room for three seated crew.



Spacious recreation/cafeteria area with Andy the turtle specialist and Dr Dave Stewart.

Large galley/food storage/library space.

Cabin for two, with ample seating/storage space each with fire extinguisher.

The main tender, in constant use and reliable.

The Reef Ranger is a joint Federal/Queensland Government venture for studying and protecting the Great Barrier Reef, working out of Cairns and mainly to the north along the Reef and outside to places like Raine Island and into the eastern Gulf of Carpentaria. Completed in 2013 at the Runaway Bay Marina on the Gold Coast, it's a 24 metre alloy Incat Crowther Patrol Catamaran capable of handling most conditions. Inside, there is cabin space for up to eighteen crew, researchers and passengers, The main central area inside is the recreation space, cafeteria and galley, well appointed with everything needed for extended time at sea, with satellite reception and department computers for work and research use. Each cabin although looking cramped has ample space for two, considering that most of the time will be spent in the main recreation area, when not working.

The bridge area is extremely well appointed, modern and along with the satellite reception is the nerve centre of the vessel and crewed 24/7 by at least one watchkeeper. When travelling up through the Reef, the vessel comes to a halt late afternoon and moors for the night. The crew and researchers aboard this vessel are required to land frequently on coral cays and islands and for this purpose the vessel is well equipped with two tenders. The smaller inflatable is kept on 01 deck and is lowered to the water by crane, then operated from the aft pontoon transoms either side of the vessel, this tender is used for short crossings, ship to shore and occasional dive sessions for the crew and researchers. The main tender has a roofed centre console with room for heavier gear up front and pax behind the centre console, this tender performs the main gear landings and longer sea crossings to cays and islands. It launches from a clever set-up at the rear of the vessel between the twin hull pontoons, lowered into the water then launched. This configuration can be seen on many of the similarly built police catamarans of similar design. Another Reef Ranger is currently being built on the Gold Coast and is slightly larger with a few design tweaks and will cover the southern part of the Reef, mainly out to the Swains.

We got underway at 1130 hrs and headed north out of Cairns, a few kilometres out the tender was lowered as it was to pick up the third Indigenous Ranger, who finally arrived on board at 1240 hrs. The vessel continued heading north with the high mountainous vegetation covered coastline to port and ever increasing reefs and cays to starboard. Mid afternoon the higher coastline gave way to sandy vegetated headlands with evidence of sand mining, with long jetties, conveyer shutes and large ships waiting for their load of sand to export, this was the Cape Flattery region. With the evening approaching it was time to head for mooring for the night, that being

Egret Reef where we anchored at 1710 hrs. Despite constant surveillance throughout the afternoon very little was sighted, with just one or two Brown Boobies, the occasional Sooty Tern and on approaching Egret Reef a few Common Noddies.

22/6/2018

Part of the Reef Rangers mission on these trips is to survey several of the reefs and cays up through the northern sector of the Great Barrier Reef, and we stopped to survey a few cays/islands prior to reaching Raine Island. On raising anchor on the 22nd June we continued north, heading towards two cays to be surveyed for birds, namely Davie Cay and Tydeman Island. We arrived at Davie Cay sometime after 1300 hrs, anchored and after lunch prepared to land for a bird survey. Davie Cay is a coral cay with surrounding reef and devoid of any vegetation on the island, thus limiting species diversity.

QPWS Coastal Bird form

Site name: **DAVIE CAY**				Site Id or lat/long (dec deg, GDA94) **13130-S-CA**	
Survey:	Essential	Significant	Incidental	Project:	
Survey start date: 22/6/18		Survey start time: 1420		(24hr time)	
Survey leader K. Robertson				site perimeter seen 0-25 26-50 51-75 (76-100)	
Other observers E. Zietlow David Stewart C. Bradshaw P. Walbridge				site interior seen	
Tide status: L.....(half).....H.....half.....L				0-25 26-50 51-75 (76-100)	

Breeding species	Nests	Chicks	Young	Adolescents	Adults	Count options
Common name specified on WildNet.	How many active nests? Include bonded pairs, nest containing egg/s & sitting adults.	How many nests contain chicks? Can be on or off nest, chicks naked or downy.	How many nests contain young? Can be on or off nest. Pin feathers present.	Fully feathered, plumage other than adult.	Total number of adults (include birds on nests, beach birds and flying birds).	In the count row put "P" for present if the species was seen but numbers are unknown. Otherwise provide lower and upper estimates below each count. If you are 100% accurate put "A".
e.g. "common seabird"	*54*	*12*	*15*	*0*	*P*	counts
	A	*12 to 20*	*15 to 30*	*A*		lower/upper
	Notes e.g.: other adults courting, this survey may not be representative of the peak breeding effort.					
brown booby	2			29	300	counts
	2			20-40	250-350	lower/upper
sooty tern						counts
						lower/upper
crested tern				6	1	counts
				6	1	lower/upper
black-naped tern						counts
						lower/upper
common noddy	4				32	counts
	4				32	lower/upper
Silver gull					9	counts
					9	lower/upper
						counts
						lower/upper
						counts
						lower/upper
Survey finish date: 22/6/18		Survey finish time: 1515		(24hr time)		

survey sheet _____ of _____

The above QPWS survey sheet is self explanatory and was used on every island surveyed, it shows that with almost zero vegetation on Davie Cay, the bird diversity was quite low and dominated by Brown Booby, which can nest in grassy tussocks or on broken down coral substrate. In the main, five observers, including myself were used for each survey, with some circling the perimeter and a couple working through the centre to give an overall count and nesting status. A total of 55 minutes was spent surveying Davie Cay, with just Brown Booby and Common Noddy noted as breeding, with a few Crested Terns and the ever present Silver Gull. Silver Gulls were present on most of the islands where breeding of other species was evident. Only four species recorded on the island.

Davie Cay, 22/6/2018.

Brown Booby *Sula leucogaster*, Davie Cay, 22/6/2018.

Brown Booby *Sula leucogaster,* Davie Cay, 22/6/2018.

Shortly after arriving back on board the Reef Ranger after surveying Davie Cay it was time to head a few miles back to the south to carry out the survey on Tydeman Island. Like Davie Cay Tydeman is a coral cay but has extensive grassy areas in the centre interspersed with low, shrubby plants. A total of one hour twenty five minutes was spent on this island as along with more diversity, overall larger numbers of birds were present. Large numbers of Brown Booby, Common Noddy and Sooty Terns were breeding and not surprisingly therefore larger numbers of Silver Gulls with young birds evidence of this species breeding on the island.

In the Australian Bird Guide, illustrations are shown of both Sooty and Bridled Terns in a non-breeding plumage but concedes this plumage rarely sighted in Australian waters. On a December cruise through the Coral Sea Territories in 2006 to the south east and outside the Barrier Reef, large numbers of Sooty Terns were found to be breeding and I mistakenly thought I would be encountering non-breeding birds at the northern end of the Barrier Reef in the Winter months. This was not to be the case with both Sooty and Bridled Terns found breeding all the way up to Raine Island and no evidence from many photographs taken, of any non-breeding plumaged birds.

As with all these coral islands, turtle bones were encountered everywhere and it is wise to wear some sort of footwear as with a lot of rotting dead bodies over the years there will be a lot of bacteria present and the chance of infection. Even with wet boots on, coral sand gets inside and rubs against the skin creating sores, then infections. On our way back to the beach head to be picked up we came across another interesting denizen of coral reefs. Along the foreshore, movement was noted in the shallows and on close approach a 60 centimetre speckled grey Moray Eel was encountered almost out of the water. Whether this Moray was heading up the beach to prey on something or just waiting in the shallows is anyones guess but it did allow my close approach for several photos. It did however take offence when I tried to guide it out of the shallows. A total of seven species of birds were recorded.

Tydeman Island 22/6/2018.

Nesting Brown Booby *Sula leucogaster*, Tydeman Island, 22/6/2018.

Brown Boobies, Tydeman Island, 22/6/2018.

Sooty Tern *Onychoprion fuscata*, Tydeman Island, 22/6/2018.

Nesting Sooty Tern *Onychoprion fuscata*, Tydeman Island, 22/6/2018.

Moray Eel sps Tydeman Island 22/6/2018.

23/6/2018

Sandbank No 8, 23/6/2018.

Surveyors working on Sandbank No 8, 23/6/2018.

We slipped anchor from Davie Cay on the 23rd June and headed further north, arriving mid morning at another small coral cay named merely Sandbank No 8, must have been at the end of a long voyage and the discoverer had run out of naming options, again this was a longish but narrow island surrounded by reefs. Five of us went ashore first to conduct the bird survey, arriving at 1030 hrs and finishing at 1155 hrs, the rest of the day was spent on board the Reef Ranger while the two surveyors on board did a full survey plot of the island for future work.

There were a few new birds on this island that we hadn't seen so far this trip, such as good numbers of Black-naped Terns, a couple of Lesser Frigatebirds, up to ten Red-footed Boobies and on the rocky reef, a Pacific Golden Plover and a Nankeen Night Heron. Night Heron numbers swell on these cays in the late Summer months coinciding with the hatching of turtles. Breeding in good number here, were Brown Boobies, Sooty Terns and Common Noddies and once again with large numbers of terns breeding, Silver Gulls were in apparent abundance. A total of eleven species were recorded on the island, proliferation of species on these cays were increasing as we travelled north.

24/6-1/7/2018

Early on the 24th June we up anchored and left Sandbank No 8 and headed for the main object of our cruise, Raine Island. We arrived at Raine Island just after lunchtime and anchored initially a couple hundred metres offshore in the lee of the island in water deep enough for the vessel. Raine Island is situated outside the Barrier Reef to the east of far north Cape York 620 kilometres north west of Cairns. The island is a protected national park/scientific conservation zone with highly restricted access and along with nearby Moulter and MacLennen Cays part of the cultural land of the Wuthathi people of Cape York and the Kemer Kemer Meriam nation of the eastern Torres Strait, joint custodians.

Raine Island is 21 hectares in size and it is a vegetated coral cay with surrounding reef, the vegetation in the raised central part of the island consists of various species of grasses and small coarse shrubs. This is circled by a low coral cliff averaging around 1.7 metres in height and between that and the shore in the Winter months, April-November the coral sand dunes are covered by mainly tussock grasses interspersed by low shrubs. The central area used to be much higher but was quarried for many years for guano. On one end of the island is a Heritage listed stone beacon, while adjacent to the mooring frontage are shipping containers where the day workers base from and contain a lot of the gear needed for this.

The island hosts the largest breeding population of Green Turtle on the planet, with the breeding season lasting from November to April. It also hosts Australias largest breeding population Of Red-tailed Tropicbirds with both Winter and Summer breeding populations. Most, if not all the species breeding around the perimeter breed in the Winter months as from November thousands of female Green Turtles come ashore to lay their eggs and basically trash any vegetation and anything else. With such a significant population of Green Turtles breeding here and with the threat of rising seas worldwide due to global warming, not surprisingly the turtle scientists/activists carry significant political clout both State as well as Federal and they jealously guard the input they have in the running of the island.

There is however another iconic species on the island that breeds from June to September, that in the grand scheme of things should carry more significant kudos. Raine Island is host to the only known Australian breeding population of Herald Petrel, a species that breeds on island groups across the Pacific. In recent times however it has also been found breeding on Round Island in the Indian Ocean, with proof of interaction between the two islands regarding breeding Herald Petrels. It is this interaction that is the subject of a joint international study between Royal Zoological Society of London and the Queensland Department of Environmental Services and the main reason I was accompanying Dr David Stewart as his assistant. Apart from helping in the bird census on the various islands we would be capturing Herald Petrels on Raine, taking measurements, bloods, putting metal ABBS bands on their legs and fitting GLS trackers also to one of the legs. Daves assistant, on the trip in 2017 had photographed a pair of birds on the ground which exhibited a much deeper grey collar then thought usual for previous birds sighted in Australia. I was particularly keen to photograph as many Herald

Petrels as I could to depict any variation in plumage. Before our first excursion everyone's gear was checked for foreign material and footwear and bags were sprayed with a powerful insecticide, before leaving the Reef Ranger. A couple of trips with the tender to drop a considerable amount of survey gear, drones etc and crew and we were ready for our first look at the island and the first job was the Welcome to Land ceremony by the three indigenous rangers. During this I sighted a Herald Petrel arriving from the lagoon, flying right past us and I was vocal about it much to the bemusement of those who didn't know me. Dave and I went immediately to the windward side of the island where the Herald Petrel had headed to and spent the rest of the afternoon looking for Herald Petrels, with me photographing them. Note the bird in flight below, it has a deeper, darker collar than is what was considered normal for birds sighted in Australia previously.

Brooding Herald Petrel *Pterodroma heraldica*, 24/6/2018.

Herald Petrel *Pterodroma heraldica*, 24/6/2018.

Dave and his fellow co-worker had banded several Herald Petrels on previous visits and in 2017 the co-worker had located several pairs and had marked the locations. While I was busily photographing any and every Herald Petrel that flew close enough, Dave asked one of the indigenous workers if they remembered where the pair in the coral cliff had been located before. It was late afternoon and with the prevailing conditions it was becoming increasingly difficult to photograph the swift moving Heralds, particularly against a darkening grey sky. Dave was shown a brooding bird in the coral cliff face and he immediately came over and grabbed me to take photos, which I duly did, see the above photograph of the brooding bird. It was sitting on a single white egg in a basic nest of dried grasses on top of coral sand. We returned to the vessel for dinner, looking forward to the 25th and what it had in store.

We woke up on the 25th to fairly good weather and hopeful of better photographic conditions than the previous day, which in the main turned out to be the case. We had breakfast and the first team was sent ashore, with myself and Dave landing around 0800 hrs, Dave's prime objective to search for any nesting Herald Petrels and mine to photograph anything of interest but also as part of the count team , we were allotted certain species to count eg. Bridled Tern as well as obviously Herald Petrels. We would be concentrating on the windward side of the island, where understandably most of the Herald Petrels would likely be nesting and immediately headed for the brooding bird in the cliff from the evening before.

On reaching the nest site, a pair were found, one on the nest and another a metre or so away and going on the extent of the neck pattern the birds had swapped duties. We picked up the non-brooding bird and found it was one of the first pair Dave had banded four years previously in 2014 and the bird photographed the previous evening. The band number was recorded and some photographs taken. The brooding bird was left alone, it being daylight and being ever mindful of the ever observant Silver Gulls and also not knowing how a disturbed brooding bird would react in daylight. We would address this at a night time visit in the coming days. The non-brooding bird of the pair once released made its way through the sparse undergrowth in an attempt to draw attention away from its brooding mate.

We then further along the windward side of the island, with me looking for photo opportunities of other species and Dave looking for any more brooding Herald Petrels. About an hour after leaving the brooding pair of Herald Petrels and probably just a couple of hundred metres away, I was called over by Dave to the heavier vegetated area behind the cliff. He'd found another brooding bird on an egg, which I duly took pictures of, rather quickly, as a pair of Silver Gulls were starting to show interest in our movements. It was another deeper collared bird and wasn't perturbed in the least that some foliage was temporarily pulled back for some clear photographs, as can be seen in the third photograph below. The pulled back foliage was sprung back and we backed away, carefully watching the Silver Gulls, who after a short while moved on.

Still only mid-morning it would be a while before the other Herald Petrels would be returning from out to sea, so as well as counting our allotted species I photographed several other species around the island, while the rangers carried out their species counts, in particular breeding birds. About mid-morning I was seated in our alcove, a gap in the low cliff where we were going to process the Herald Petrels at night when Dave arrive followed by Katharine and one of the other rangers. I had been photographing mostly low passing Red-tailed Tropicbirds when above the cacophony of Raine Island birds I heard another call. Looking up through my camera lens I saw a pair of almost pure white birds looking to be in courtship flight, the long white tail streamers and yellow bills a dead giveaway, White-tailed Tropicbirds. Also, earlier Dave had found the desiccated remains of a Bronze-cuckoo and on checking the tail pattern proving to be a Little Bronze-cuckoo, a new species for the island.

We headed back on board for lunch and chilled out for a while before heading back to the island early afternoon., where I awaited the return of the Herald Petrels. They started arriving around 1530 hrs and despite the worsening conditions I managed to get plenty of shots of single birds, calling courting birds and birds showing variable width collars, plenty of sky shots and plenty at less than shoulder height, with the island as

background. Later that evening when heading back up the beach to get picked up, I had one count of sixteen birds in the air at once.

Herald Petrel *Pterodroma heraldica*, 25/6/2018.

Herald Petrel *Pterodroma heraldica*, 25/6/2018.

Herald Petrel *Pterodroma heraldica*, 25/6/2018.

Herald Petrel *Pterodroma heraldica*, 25/6/2018.

Displaying Herald Petrels *Pterodroma heraldica*, 25/6/2018.

Female Great Frigatebird *Fregata minor*, 25/6/2018.

Male Lesser Frigatebird *Fregata ariel*, 25/6/2018.

Adult Brown headed morph Red-footed Booby, *Sula sula*, 25/6/2018.

Adult white morph Red-footed Booby, *Sula sula*, 25/6/2018.

Adult male Brown Booby *Sula leucogaster*, 25/6/2018.

Red-tailed Tropicbird chick *Phaethon rubricauda*, 25/6/2018.

Adult Common Noddy *Anous stolidus*, 25/6/2018. Perched on sound recording device.

Black Noddy *Anous minutus*, 25/6/2018.

Bridled Tern *Onychoprion anaethetus*, 25/6/2018.

26th June, the first day Dave and I would be working night shift, our objective to locate and capture Herald Petrels as part of the ongoing international study between Raine and Round Islands. This meant that Dave and I would get some extra sleep onboard during first half of the day to prepare ourselves for several hours of work during the evening and possibly spending the night on the island if the tides were against us. I don't need an awful amount of sleep and couldn't help myself when confronted with so many sulids coming and going from the ocean to the island and approaching so close to the vessel. Red-footed Boobies in particular being the most prolific sulid species in the region were present in many stages and morphs and are depicted below.

Juvenile Masked Booby *Sula dactylatra*, 26/6/2018.

Early immature Red-footed Booby, *Sula sula.* 26/6/2018.

Sub-adult white morph Red-footed Booby *Sula sula.* 26/6/2018.

Adult Red-footed Booby *Sula sula.* 26/6/2018.

Adult white morph Red-footed Booby *Sula sula.* 26/6/2018.

Adult brown headed Red-footed Booby *Sula sula.* 26/6/2018.

Immature Red-footed Booby *Sula sula.* 26/6/2018.

Sub adult Red-footed Booby *Sula sula.* 26/6/2018.

Herald Petrel *Pterodroma heraldica.* 26/6/2018.

Herald Petrel *Pterodroma heraldica.* 26/6/2018.

Herald Petrel *Pterodroma heraldica.* 26/6/2018.

Herald Petrel *Pterodroma heraldica.* 26/6/2018.

Herald Petrel *Pterodroma heraldica.* 26/6/2018.

Dave and I went ashore in the afternoon and awaited the return of Herald Petrels, now fully the main focus for our being there. As can be seen in the above shots of Herald Petrels, the weather conditions had deteriorated somewhat, with increasing cloud cover, frequent rain squalls and 25-30 knot winds. Late in the afternoon, before returning for the evening meal onboard another call was heard from a circling petrel, similar to but discernibly different from Herald Petrel, being slightly more staccato and just a little different in pitch. Although not photographed both of us noticed that the bird appeared almost totally dark on the underwing. That evening was the first one spent ashore to catch Herald Petrels, we had caught and processed two Herald Petrels and Dave Stewart headed into the weedier interior of the island, while I headed along the beach amongst the grass tussocks. At approx. 2020 hrs Dave had already caught one Herald Petrel and I heard a bird calling on the ground in front of me and came across two courting Herald Petrels which I picked up and called over to Dave. As he arrived another bird called almost at our feet, which we duly picked up and we returned to the processing area where we could sit on the chairs between the relative shelter between two rock faces.

With four birds to process we placed two birds each into large holding bags, to await processing. The first three birds pulled out of the bags were Herald Petrels and were duly processed then released. The fourth bird was extracted from the second bag and immediately we both knew we had something different as the bird showed a considerably darker head and upperparts, we were pretty sure we were looking at a potential first Australian record of Phoenix Petrel. We took measurements and placed the bird back into the bag after fitting a geolocator to its right tarsus but no band and we proceeded to catch and process more Herald Petrels until returning back on board where a crew member provided us with a large enough box for the Phoenix Petrel which spent the next 24 hours in our cabin.

Early next morning, the 27th the bird was brought out to the recreation area for detailed photographs, confirming our suspicions and placed back into its box. The bird remained calm with no attempt to escape and didn't struggle. The bird was released safely that evening back into the dense grass tufts on the beach where it quickly found cover and not seen again, while we headed back along the beach to the processing area to catch more Herald Petrels.

Phoenix Petrel *Pterodroma alba.* 27/6/2018.

Phoenix Petrel *Pterodroma alba.* 27/6/2018.

Phoenix Petrel *Pterodroma alba.* 27/6/2018.

A full description was written up by Dave and myself and sent into BARC, case number 1033 but from the above photographs it can be seen that it is quite different from the Herald Petrels that we also caught. There was fair mention on Facebook at the time in regard to hybrid Herald/Phoenix Petrels that had allegedly been encountered in the eastern Pacific but this bird exhibited no plumage signs of this. Blood was also taken from this bird and sent overseas for analysis. Several more Herald Petrels were caught in the evening, all banded and fitted with geolocators, and measurements taken, albeit in increasingly adverse conditions. We radioed back to the vessel in the hope that we had beaten the tide cut-off, we had and arrived back on board around midnight, preferable to spending a night on a wet and windy island.

A full day was spent on the island on the 28th, catching up with various species. In particular we'd noticed that the Black-naped Terns bred in the coral sand around the outskirts of the grassy area just above the high tide line and we notified the surveyors as the smallish eggs could be easily missed and trodden on. The birds would take flight on approach and soon let you know that you were encroaching on their territory, so it wouldn't be difficult for the various teams to make small diversions. One thing I hadn't really noticed before and not mentioned in literature that I'm aware of but against the white coral sand the birds took on a light pinkish flush to the underparts.

The Herald Petrels started arriving around 1430 hrs and once again I concentrated on this species from my usual vantage point between the two rock ledges where we processed the birds at night. On this day and I'm not sure whether the birds were finally getting used to me being at that spot or not but they were coming towards me incredibly close with their undercarriage down, preparing to land but veering off just at the last moment. It soon became apparent that the 100-400 mm lens was too much lens as the birds were so close to me at hip level that 100 mm was too much, incredible. I stayed almost until dusk and it was time to leave for the rendezvous spot further along the beach. During the last few days I'd often noted that as the Herald Petrels performed their display flights overhead they would break off and disappear low over the dunes. As I walked along the tide-line that evening Herald Petrels were coming towards me less than a metre above the sand and passing within a metre from me. I was already starting to formulate which lens I would be bringing with me next time if that ever eventuated.

Herald Petrel *Pterodroma heraldica*. 28/6/2018.

Herald Petrel *Pterodroma heraldica*. 28/6/2018.

Herald Petrel *Pterodroma heraldica*. 28/6/2018.

Herald Petrel *Pterodroma heraldica*. 28/6/2018.

Herald Petrel *Pterodroma heraldica.* 28/6/2018.

Displaying Herald Petrels *Pterodroma heraldica.* 28/6/2018.

Red-tailed Tropicbird *Phaethon rubricauda.* 28/6/2018.

Masked Booby *Sula dactylatra.* 28/6/2018

Common Noddy *Anous stolidus.* 28/6/2018.

Black-naped Tern *Sterna sumatrana.* 28/6/2018.

Black-naped Tern *Sterna sumatrana*. 28/6/2018.

Thursday the 28th was meant to be the third night in a row for night work and Dave was keen to go ashore to check if that pair in the rock face were together as we knew that they were the first birds that Dave had banded back in 2014, I wasn't so keen and Dave couldn't get another volunteer, so went ashore alone. After a few hours ashore he arrived back onboard, no luck there had been just one bird sitting on the egg, we would both try again the following night.

Most of the 29th was spent on board catching up on notes, backing up images etc and getting ready to spend the final evening on Raine, hoping to catch up with the second bird of the pair of Herald Petrels in the cliff face, to fit a tracking device to it. Late that afternoon, with the wind picking up I noticed several dark Procellariiformes approaching the island and on closer inspection they proved to be Wedge-tailed Shearwaters, a species we had found in burrows during the day. Do they breed on Raine Island in Winter, probably not but it would appear some birds remain on the island throughout the year.

After the evening meal both Dave and I were sent ashore on the smaller dingy and went to look for the cliff nesting Herald Petrels. For some reason it was proving difficult to locate the exact spot in the cliff walk and we found ourselves making several forays into the grassy dunes from the beach. On one attempt we both saw something move on a dead piece of driftwood, Dave managed to corner it and catch it, turned out to be a Buff-breasted Rail of a different race to the mainland birds and we took measurements etc. It was dark, sure and we were viewing it under head torches but it did appear darker than the ones we were used to seeing. Handling it I did notice one thing, constant walking in coral sand had finely honed its claws, they felt absolutely razor sharp!

We finally caught up with the roosting Herald Petrel and it proved to be the second bird. Being night time we took the risk in removing it from the egg to fit the tracker and on showing it the egg, it immediately nestled back on much to our relief. On arriving back on board the vessel up anchored and we headed west back toward Cape York, stopping at a reef later that evening for the indigenous rangers to catch some reef fish to take back to their communities, which they were most successful at. The 30th was spent heading to Horne Island, where on arrival we arranged for a few beers to be brought on board in the evening, after a couple of dry weeks, very much enjoyed. The next day we all took the tender to the wharf with our gear and caught the plane back to Cairns. From there it was back to Brisbane that evening, that was two of the best weeks of my life and an absolute privilege to have visited one of Australia's most iconic destinations.

Island Counts

Species:	Davie Cay	Tydeman Island	Sandbank No 8	Raine Island	Moulter Cay
Red-tailed Tropicbird				183	1
White-tailed Tropicbird				2	
Wedge-tailed Shearwater				>5	
Herald Petrel				>24	
Phoenix Petrel				1	
Lesser Frigatebird			2	1500	4
Greater Frigatebird				3+	
Masked Booby		2	3	402	85
Red-footed Booby			10	500	12
Brown Booby	350	700	1000	200	350
Nankeen Night Heron			1	1	
Buff-banded Rail				6	
Pacific Golden Plover			1		
Ruddy Turnstone				5	
Common Noddy	36	700	2500	5000	3000
Black Noddy				30	
Bridled Tern		50		50	9
Sooty Tern		2500	2500	100	700
Black-naped Tern			100	30	70
Lesser-crested Tern					14
Crested Tern	7	70	400		10
Silver Gull	9	60	11	100	25
Little Bronze-Cuckoo				1 dead	

As can be seen with the above table, the islands/cays with the most structural and habitat variation held the greatest species diversity – hardly surprising. None of them of course had a source of fresh water available so lacked any species of passerine, or for that matter raptor species.

Acknowledgements: The Raine Island Recovery Project is a five year, $7.95M collaboration between BHP Billiton, the Queensland Government, the Great Barrier Reef Marine Park Authority, Wuthathi Nation and Kemerkemer Meriam Nation (Ugar, Mer, Erub), Traditional Owners and the Great Barrier Reef Foundation, to protect and restore the islands critical habitat to ensure the future of key marine species, including Green Turtles and seabirds.

Memorandum to:	RACC, BirdLife Australia	
From:	BirdLife Australia Rarities Committee (BARC)	
Date:	30th April 2019	
Voting Members:	Chris Brandis	Rohan Clarke
	David James	Danny Rogers
	Mike Carter	Jeff Davies
	Jamie Matthew	Nikolas Haass

cc:

Submission No. 1033: Phoenix Petrel *Pterodroma alba* Raine Island, QLD 26th & 27th June 2018.
Submitted by: Paul Walbridge.

Verdict: Accepted

This submission relates to a Phoenix Petrel *Pterodroma alba* found on Raine Island, during a scientific exercise which was studying the breeding behaviour of Herald Petrels *P. heraldica* on the island. The bird was picked up on the 26th June 2018 and released unharmed the following day complete with a 'geolocator'. Taking measurements and photographing the bird in the hand alongside Herald Petrels greatly aided the identification process.

Biometrics were taken along with a series of photographs and a description. It was noted to be more black and white in appearance than the Herald Petrels with an almost entirely dark sooty brown underwing complete with the characteristic white leading edge to the marginal underwing coverts and dark lores. Kermadec Petrel, Tahiti Petrel and Magenta Petrel are superficially very similar and were convincingly eliminated within the submission. The call was also heard and noted to be quite different to the nearby Herald Petrels. Biometrics suggests the bird was a female.

Seven members voted in favour of acceptance. The one dissenting member felt that not enough was done to consider how variable Herald Petrel's can be; it was shown that Herald Petrel can also have dark lores and a variety of colour morphs. (It was not suggested, that the bird was anything other than a Phoenix Petrel). There is also a possibility of hybridization between the two species but there was no clear evidence of this as the measurements and plumage characters are entirely consistent.

For example 17% (5 of 28) of Herald-type Petrels sampled on Ducie Island in the Pacific were identified as hybrids on the basis of molecular screening [along with 10% (2 of 20) hybrids on Oeno, 13% (3 of 23) hybrids on Marquesas] and for Phoenix-type Petrels up to 17.6% from Pitcairn were identified as hybrids [3% to 13% hybrids across three other Pacific islands] (Booth Jones *et al.* 2017; Table S3). Note that Herald and Phoenix Petrels were not readily distinguishable from one another using 12 microsats in this study and as such documented hybridization was between Trindade, Kermadec and 'Herald/Phoenix' Petrels. Because of this Booth Jones *et al.* 2017 went on to say that Herald Petrels and Phoenix Petrels "may not be that well resolved".

This is the first record of this taxon for Australia. Raine Island is situated on the outer northern edge of the Great Barrier Reef approximately 120 km east-northeast of Cape Grenville, Cape York Peninsula, QLD. The nearest breeding colonies of Phoenix Petrel are on Tonga and Kiritimati Island in the Pacific (BirdLife International).

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Tony Palliser

BirdLife Australia Rarities Committee (BARC)
30th April 2019

Chile and the Humboldt Current

A visit to Chile in November / December 2018, was planned around maximising the number of opportunities to see the different pelagic species that occur along the length of the north-flowing Humboldt Current. It included a visit to Chiloe Island to see the recently described Pincoya Storm-Petrel and scheduled pelagics, with Albatross Birding, from Valparaiso in the centre of the country and off Arica, just south of the Peruvian border. The details for each trip are provided elsewhere within the Petrel. This broader article discusses the Current and discusses some of the species the pelagic birder could hope to encounter.

Seabird occurrence in Chile, away from the Drake Passage, is dominated by the cold, north flowing, Humboldt Current. It ranges from around 45° to 4° south. The effect of the current, which extends out some 300 to 600 nm from the coast, is to bring cold temperate waters into the tropics and sub-tropics. The associated upwellings dominate the various eco-systems and create, what is for many sea-birds, ‘paradise on earth’ or in this case ‘paradise on sea’. As a last hurrah, the current dissipates off-shore when it reaches Ecuador and brings cool water to the Galapagos Islands, where the only species of penguin to live in the northern hemisphere is found.

There is a price to pay for all this marine productivity and variety and paid it is, in spades, on the adjacent land mass. The stable presence of the cold surface water means that the local air mass is low in moisture and that, coupled with a double rain shadow, created by the Andes and the coastal ranges, has resulted in the driest place on earth, the Atacama Desert; parts of which have had no recorded rainfall: more about on that later.

Key Birds of the Humboldt Current

The Current is home to a number of breeding-endemic seabirds and, interestingly, is the principal, or exclusive, winter home for a whole host of others that breed on the other side of the Pacific, around New Zealand. The following table lists these breeding and habitual winter visitors and suggests from which ports a departing pelagic trip is likely to encounter them.

Humboldt Current Breeding Endemic		
Species	**Pelagic Ports**	**Breeding Locations**
Humboldt Penguin	Valparaiso, Quintero	Chilean Coast from Chiloe Island north
Masatierra Petrel	Valparaiso, Quintero	Juan Fernandez Islands
Juan Fernandez Petrel	Valparaiso, Quintero	Juan Fernandez Islands
Pink-footed Shearwater	Puerto Montt, Valparaiso, Quintero	Mocha Island, Chile
Fuegan (Wilson's) **Storm-Petrel**	Valparaiso, Quintero	Unknown – Andean Mtn range suspected
Elliot's Storm-Petrel	Arica	Islands off Chile
Wedge-rumped Storm-Petrel	Arica (rare)	Islands off Chile
Markham's Storm-Petrel	Arica	Atacama Desert
Hornby's Storm-Petrel	Outer current specialist	Atacama Desert
Peruvian Diving Petrel	Valparaiso, Quintero, Arica	San Gallán Island, Peru
Guanay Cormorant	Puerto Montt, Valparaiso, Quintero, Arica	Coastal islands and rocky headlands
Red-legged Cormorant	Puerto Montt, Valparaiso, Quintero, Arica	Coastal islands and rocky headlands
Peruvian Pelican	Puerto Montt, Valparaiso, Quintero, Arica	Coastal islands and rocky headlands
Peruvian Booby	Valparaiso, Quintero, Arica	Coastal islands and rocky headlands
Blue-footed Booby	Arica	Coastal islands and rocky headlands north of Chile
Grey Gull	Valparaiso, Quintero, Arica	Atacama Desert
Belcher's Gull	Arica	Coastal islands and rocky headlands north of Chile
Peruvian Tern	Arica	Sand dunes and beaches north of Chile
Inca Tern	Valparaiso, Quintero, Arica	Coastal islands and rocky headlands

Habitual Winter Visitor		
Species	**Pelagic Ports**	**Breeding Locations**
Antipodean (Wandering) **Albatross**	Valparaiso, Quintero	Antipodes and Campbell Islands (NZ)
Southern Royal Albatross	Valparaiso, Quintero	Campbell and Auckland Islands (NZ)
Northern Royal Albatross	Valparaiso, Quintero	South Island and Chatham Islands (NZ)
Buller's Albatross	Puerto Montt, Valparaiso, Quintero	Chatham and NZ Sub-Antarctic Islands
Chatham Albatross	Valparaiso, Quintero, Arica (main wintering area is off Peru)	Pyramid Rock, Chatham Islands (NZ)
Salvin's Albatross	Valparaiso, Quintero	Bounty and Snares Islands (NZ)
White-chinned Petrel (NZ population)	Puerto Montt, Valparaiso, Quintero, Arica	NZ Sub-Antarctic Islands
Westland Petrel	Puerto Montt, Valparaiso, Quintero	South Island (NZ)
Magenta Petrel (Outer current)		Chatham Islands (NZ)
Chatham Petrel (Outer current)		Chatham Islands (NZ)
Black Petrel (Northern current specialist)	Arica? (Main wintering area is off Ecuador)	North Island (NZ)
Cook's Petrel (outer current)	Arica? (Main wintering area is off Ecuador)	North and South Islands (NZ)

Humboldt Current Breeding and Habitual Winter Visitors

Seabirds encountered regularly in the Current, but not strictly associated with it, include Magellanic Penguin and Diving Petrels, Black-browed Albatross, Northern and Southern Giant Petrels, Southern Fulmar, Pintado (Cape) Petrel, Sooty Shearwater, Chilean Skua, Kelp (dominicanus) & Franklin's Gulls.

Humboldt Penguin, Cachagua – one of three species of Spheniscus penguin found in the Current

Humboldt Current Storm-Petrels

As the current progresses from south to north the tendency is for species to join the ensemble, with a few falling-away and only to be replaced by their stand-ins. For example, Magellanic Diving Petrel, found north to around Puerto Montt, is replaced by Peruvian Diving Petrel. Similarly, Humboldt Penguin takes over from Magellanic.

Most notably, there is a progressive change in storm-Petrels, in particular, within the genus Oceanites; Pincoya, Fuegan (Wilson's) and Elliot's. Pincoya, currently known only from Chiloe Island in the south, is supplanted to the north by Fuegan (Wilson's), with their white underwing secondaries. A third taxa, Elliot's, distinguished by its white belly patch, is recorded in the north.

Fuegan (Wilson's) **Storm-Petrels, Valparaiso December 2018**

Elliot's Storm-Petrels, Arica December 2018

In the far north of Chile two storm-petrels, from the genus Oceanodroma, join Elliot's in the mix. These eclectic species are northern Humboldt Current endemics. Recent discoveries have indicated that both species take advantage of predator-free, hyper-arid, parts of the Atacama Desert to breed but, their at-sea distributions are still to be mapped.

Familiar Species Problems

For an Australian-based sea-birder, one would expect to feel reasonably confident if asked to point out some of the 'local' species that winter off Chile. However, the south-western pacific breeding birds in the Humboldt Current often look markedly different to the same species when seen in the Tasman Sea. Many are in moult or sub-adult plumages, particularly the albatrosses and Procellaria.

Black-browed (left) and Salvin's (right) Albatrosses – Valparaiso December 2018

An example is Salvin's Albatross an uncommon, but regularly encountered species off the Victorian and Tasmanian coasts, whose key breeding sites are the Bounty and Snares Islands, off New Zealand. Their principal non-breeding and wintering area though is the Current. There they occur in a range of plumage states; from juvenile to immature to adult and in all stages of moult. Perhaps the less harsh sea conditions, away from the Roaring Forties, offer a more amenable climate in which to engage in this energy intensive metamorphosis?

In the prior photographs we see two individuals that have not yet attained full adult plumage. Both birds are immatures, as indicated by the grey on the lower hind neck of the Black-browed, and with neither species showing adult bill colouring. In the case of Salvin's Albatross, as this bird matures the bill will become paler, with the dark-tip retreating to only the end of the lower mandible. A full adult bird is shown below. It shows very limited signs of moult and the dark 'hand' of the primaries in the wing-tip is very much apparent.

Adult Salvin's Albatross – Valparaiso December 2018


Juvenile Salvin's Albatross, Valparaiso December 2018


Juvenile Salvin's Albatross, Valparaiso December 2018

In the above photos, the dark bill and slightly washed-out head and face could cause confusion with juvenile Shy-type albatrosses, but the extent of black in the hand of the primaries and messy under-wing pattern appear to be a key, consistent distinguishing feature.

Sub-Adult Salvin's Albatross, Valparaiso December 2018

This bird shows that the plates on the side of the bill are the last feature to develop the full adult colouring.

Buller's Albatross is another south-west Pacific breeder that can be found off Chile.

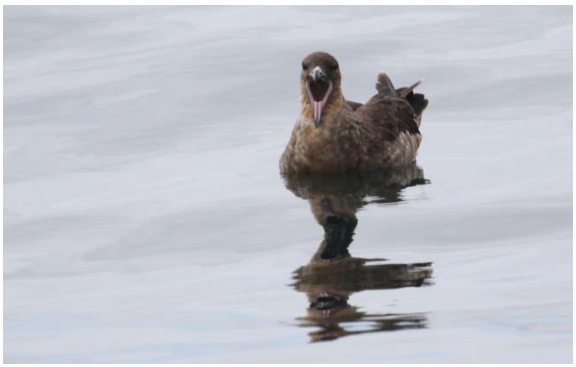

Buller's Albatross – Valparaiso December 2018

The melee behind the boat is dominated by Kelp Gulls and Pink-footed Shearwaters, with Salvin's, Buller's and Black-browed Albatrosses trying to joining in.

Chilean Pelagic - Seabird Ensemble

Skuas, Gulls and Terns

The local large skua is Chilean, with the smaller Pomarine and Arctic Jaegers also frequently seen. They can be found all along the length of the current.




Chilean Skua – Arica December 2018

Chilean Skua in heavy moult **– Arica December 2018**

Do Chilean skuas go through an accelerated moult compared to Sub-Antarctic (Brown) Skuas?

Gulls are very much a feature of the Current. The cosmopolitan Kelp Gull is found here, as it is along the southern coasts of Australia and Africa. Indeed the same sub-species, dominicanus, is shared between Australia, New Zealand and South America. The Current nevertheless has a few unique species in Grey, Belcher's, Swallow-tailed and Lava Gulls. The latter two are Galapagos Island specials. These are joined by Brown-hooded (a southern-cone endemic), Grey-hooded Gulls (mainly Ecuador and Peru) and large numbers of wintering Franklin's Gulls. In winter Andean Gulls also visit the coast from their mountain home.

Andean Gull - Lauca NP

Brown-hooded Gull - Chiloe Island

The most famous, and most sought after, of all the Humboldt Current endemics is a tern, Inca Tern. It is the only member of the genus Larosterna. Fortunately, it is quite common along the central and northern Chilean coasts. Other terns that are regularly seen are South American Tern, with apparently separate breeding populations in the north and south of Chile, and the scarce Peruvian Tern found in Chile only in the extreme north, near Arica.

Beach north of Arica, Chile – December 2018

Inca Tern – Concon, Chile

Guano Birds

The Humboldt Current is also famous for its guano birds, the cormorants and boobies, who, because they 'wet their nests', brought great riches to the early Spanish colonists. Indeed, bird poo was so highly valued by the Incas, that some of the first protection measures ever established, for birds, were instituted to protect its source.

The Current is home to four endemic species of 'guano birds', namely Guanay and Red-legged Cormorants, Peruvian Pelican and Boobies. The beaches around Valparaiso, Vina del Mar and Concon are good places to

look for boobies. Off Arica juvenile Blue-footed Boobies can also be seen. Whilst on Chiloe Island shags can be had, Imperial and Magellanic.

Imperial Shag - Chiloe Island November 2018

Peruvian Pelican, Valparaiso December 2018

Strange when the largest bird behind the boat is not an albatross. Peruvian Pelicans are found surprisingly far off-shore.

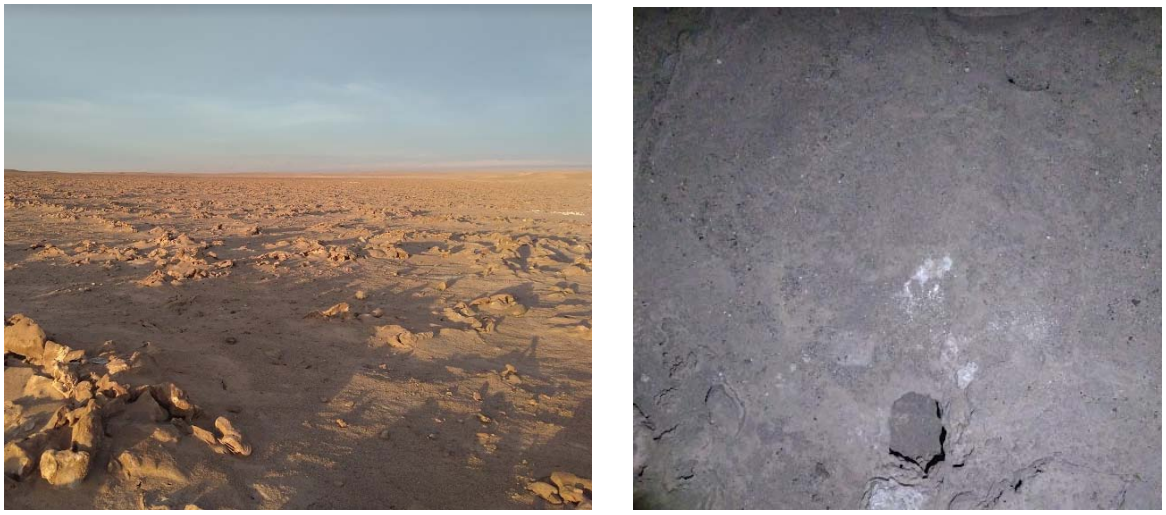
Go There

In summary, the Humboldt Current is a fascinating mixture of breeding endemic and wintering seabirds, from the other side of the South Pacific. It is well worth making the short 14-hour flight from Australia to go there and enjoy one of the world's great seabird spectacles.

Occurrence of Hornby's Storm Petrel at Markham's Storm Petrel Nesting Colony in Northern Chile.

Andrew Sutherland & Robert P. Morris

On the nights of 3rd and 6th December 2018 we made an off-season visit to a Markham's Storm Petrel colony in northern Chile. The area is extremely arid and consists of hard crusts of saltpetre, underneath which lie natural hollows. These are accessible via small openings or cracks. A photograph of the area visited is shown below along with one of an entrance hole.



Storm-Petrel Colony and a Nesting Hollow Entrance Hole

Our first visit was at 00:30 on 3rd December 2018 for about 45 mins. Shortly after arriving a pale, 'wader-sized' bird, was observed in flight. The bird returned to the torch-light, flying above the head of the observer and gave a clear view of its white under-wings and grey neck-band before flying-off. This identified it as a Hornby's Storm Petrel. Not the storm petrel species expected.

The observers then moved to an adjacent area where nesting holes were noted in the hardened salt crust, as evidenced by the presence of feathers, bird faeces and an egg and skull. There were a number of Markham Storm Petrel wings lying around on the surface, indicating that the colony is not entirely safe from predation.

Evidence of Markham's Storm-Petrel Presence

About 10 mins after the first sighting a second bird flew through the torch-light. Again, it showed the white under-wings and body and the grey breast-band and upper-wing pattern of a Hornby's Storm Petrel. Shortly beforehand another, darker, wader-sized bird was seen; a Markham's Storm Petrel. No vocalisations were heard from any of the three birds seen or from the surrounding area.

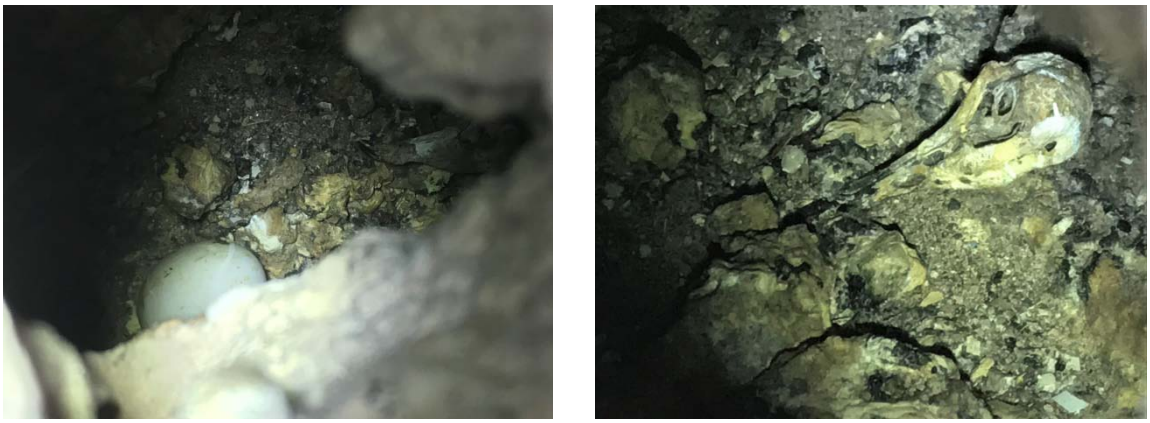
The second visit took place at 19:45 on the evening of 6th December 2018. The observers returned to the same location. A further number of nesting holes were investigated in more detail, none of which were in active use, but one contained an egg and the skull of a bird.

At around 21:30 a 'coo-cooing' call was heard at around three different locations. The sound differed from that of the call available on the xeno-canto website for Markham's Storm Petrel. The call was played to see if any response could be elicited. None was forthcoming. Shortly thereafter a Hornby's Storm Petrel was observed in the torch light. It was decided to play other storm petrel calls to see if they would provoke a reaction; a technique one of the observers was familiar with from its use in European Storm Petrel colony research projects in the United Kingdom. Among the calls played were European, Leach's and White-faced Storm Petrels. The calls played were those found on the App – 'Sibley eGuide to the Birds of North America'. The sound of the White-faced Storm Petrel elicited a strong response and repeatedly attracted Hornby's Storm Petrels at ranges of 3-5m. At one stage two Hornby's Storm Petrels were observed flying around the speaker.

We left the site at around 23:00 having seen ten Hornby's and six Markham's Storm Petrels in flight. Both visits occurred when there was very little moonlight, see below, and with a light mist.

2018	Moonrise/Moonset			Meridian Passing		
Dec	Moonrise	Moonset	Moonrise	Time	Distance (km)	Illumination
1	2:57 am → (84°)	3:08 pm ← (274°)	-	9:01 am (66.4°)	375,608	33.7%
2	3:39 am → (89°)	4:03 pm ← (268°)	-	9:49 am (71.6°)	378,626	23.5%
3	4:20 am → (94°)	4:58 pm ← (263°)	-	10:37 am (76.7°)	381,796	14.7%
4	5:01 am → (99°)	5:52 pm ↙ (258°)	-	11:25 am (81.5°)	385,097	7.9%
5	5:43 am ↘ (104°)	6:47 pm ↙ (254°)	-	12:14 pm (85.7°)	388,511	3.1%
6	6:27 am ↘ (108°)	7:41 pm ↙ (251°)	-	1:03 pm (89.1°)	391,985	0.5%
● 7	7:13 am ↘ (110°)	8:35 pm ↙ (248°)	-	1:53 pm (88.5°)	395,419	0.2%

We have reported our observations and further details to the Chilean team involved in the study of Markham's and Hornby's Storm Petrels. They were unaware of the presence of Hornby's Storm Petrels at this location. Only one breeding site is known for this species and that lies approximately 1000km to the south.



Some hollows are a source of new life; others a tomb

VALPARAÍSO PELAGICS – CENTRAL CHILE
Rob Morris – 25th November 2018

Pink-footed and Sooty Shearwaters – Valparaíso, Central Chile (Rob Morris, November 2018)

On the 25th November 2018, during a trip around Chile, I went on a pelagic trip out of Valparaíso in Central Chile. Valparaíso on the Pacific coast just over 100km north-west of Chile's capital Santiago. The trip was arranged through Albatross Birding and Nature Tours see: (http://www.albatross-birding.com/pelagic-trip-chile). The trip left from the main fishing port at 7.30am and retured around 1.30pm. The trip only goes approximately 25km offshore, so it does not get into really deep water in the Humbolt Current (which is c.100km offshore). However, the trip does record Pterodroma petrels, particularly in the November to April period. The number of tubenoses recorded from Valparaíso is far higher than on trips from Arica in Northern Chile. The trips cost $150 USD per person.

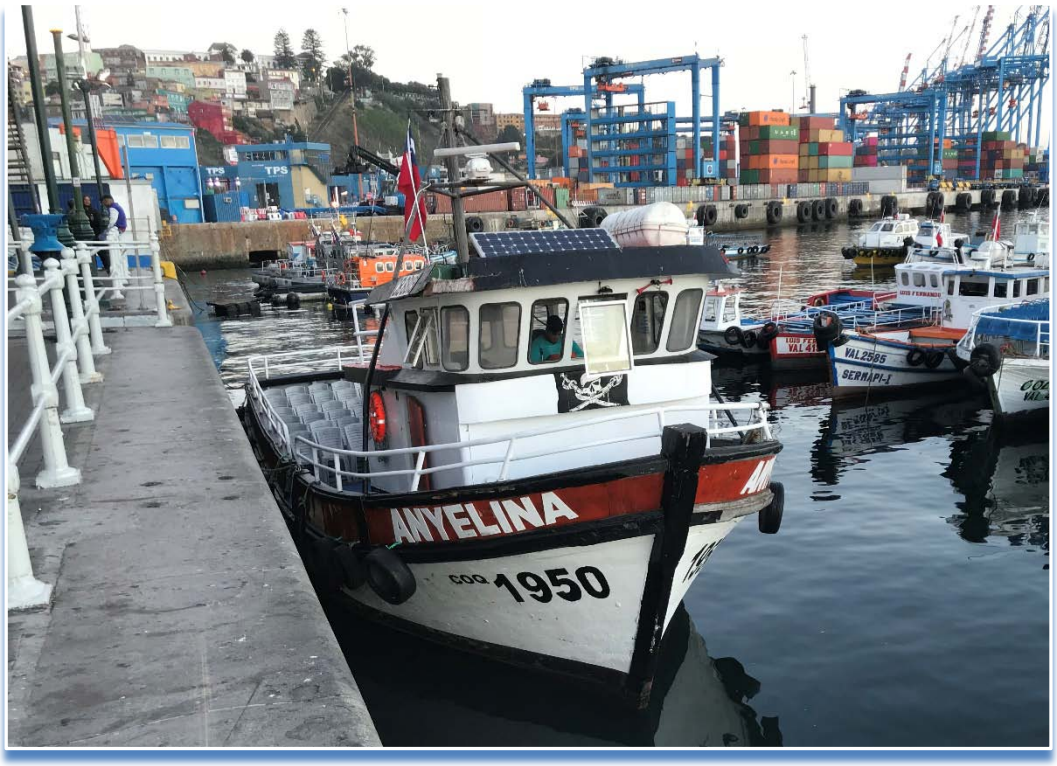


Figure 1. The Anyelina was our vessel for our trip offshore from Valparaíso (Rob Morris, November 2018)

Figure 2. Valparaíso Harbour (Rob Morris, November 2018)

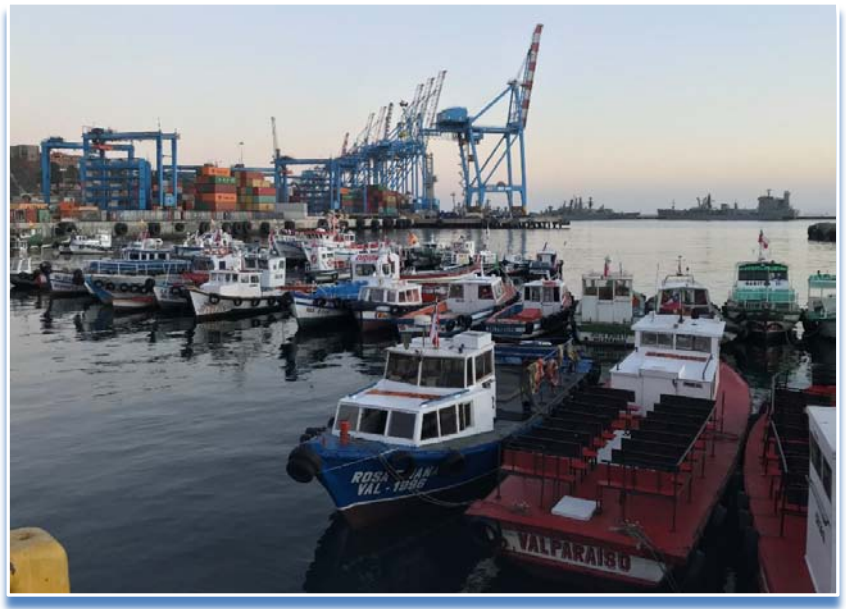


Figure 3. Valparaíso Harbour (Rob Morris, November 2018)

Table 1 below illustrates the species recorded from Valparaíso. Of note are:

- The large diversity of species, particularly tubenoses, when compared to Northern Chile. Central Chile is the best area for seabirds in Chile in terms of abundance and diversity of birds. In winter, antarctic species follow the cold water current northwards. In summer, temperate and sub-tropical species occur
- The increased chances of Pterodroma petrels (compared with Arica) particualrly from November to April.
- The increased abundance and diversity of albatrosses – up to 6 species
- The 'Wilson's' Storm-Petrel (Oceanites oceanicus) here is a resident, breeding in the Andes near to Santiago. Chilean ornithogists believe it is a separate species - Fuegian Storm-Petrel (*Oceanites chilensis*), which is more closely related to Pincoya Storm-Petrel (*Oceanites pincoyae)* (see Howell and Schmitt, 2018[1])

The list below only includes seabirds; other species which have been seen on the pelagic trips from Valparaíso were removed from this table.

[1]Howell,S.N.G and Schmitt, F (2018) Birds of Chile – A Photo Guide. Princeton University Proess

Table 1 – species recorded on Valparaíso Pelagics – source eBird (www.ebird.com)

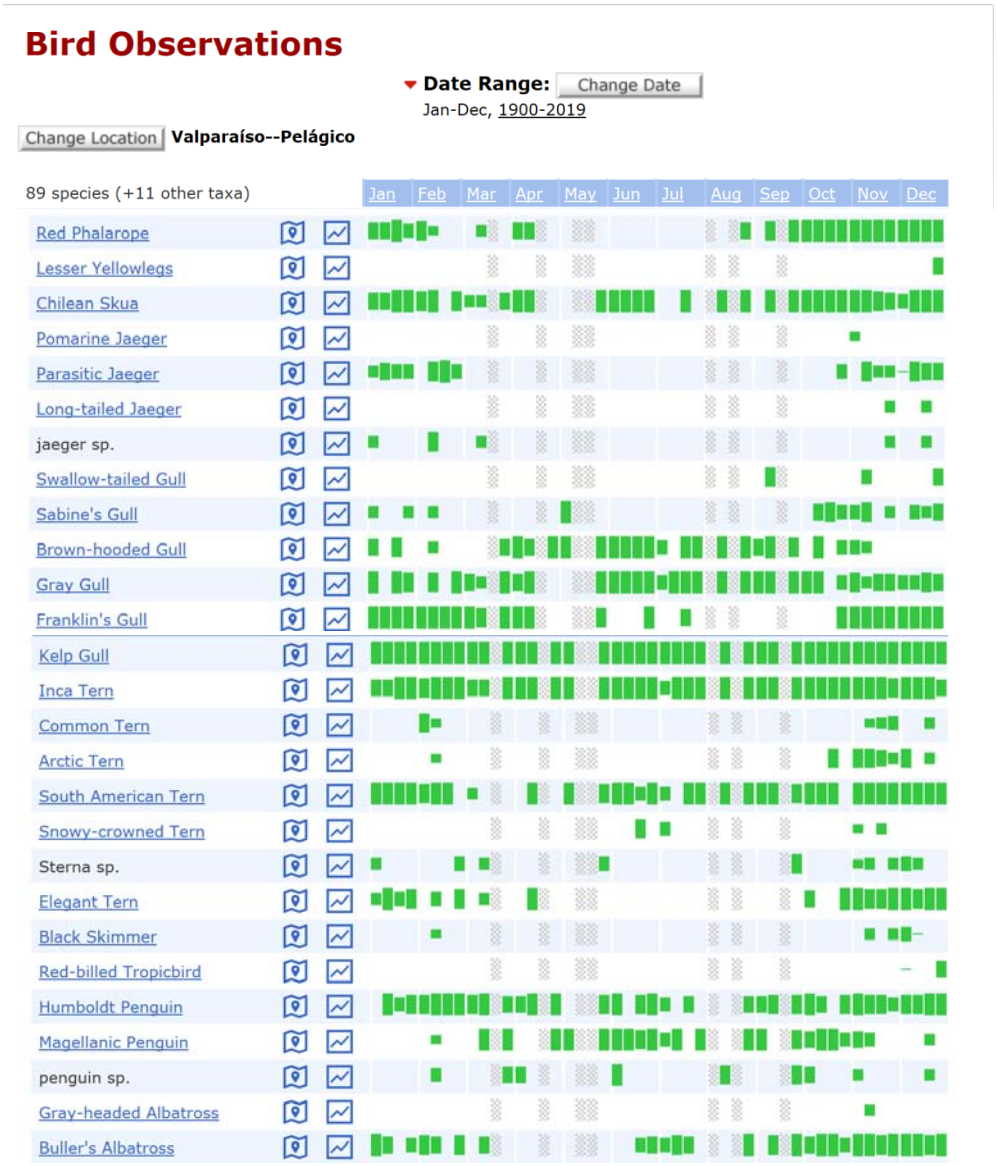
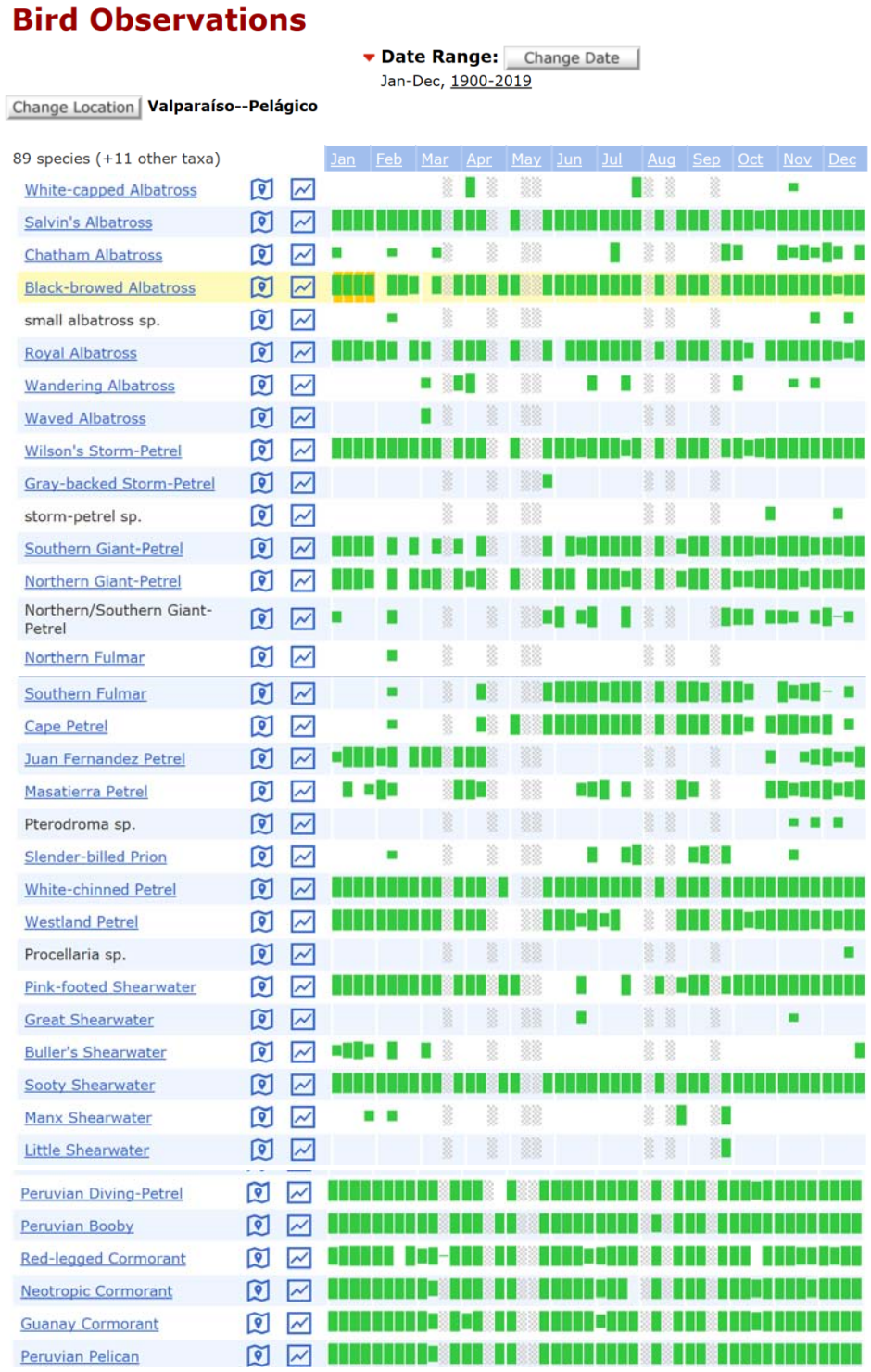


Table 1 (continued) – species recorded on Valparaíso Pelagics – source eBird (www.ebird.com)



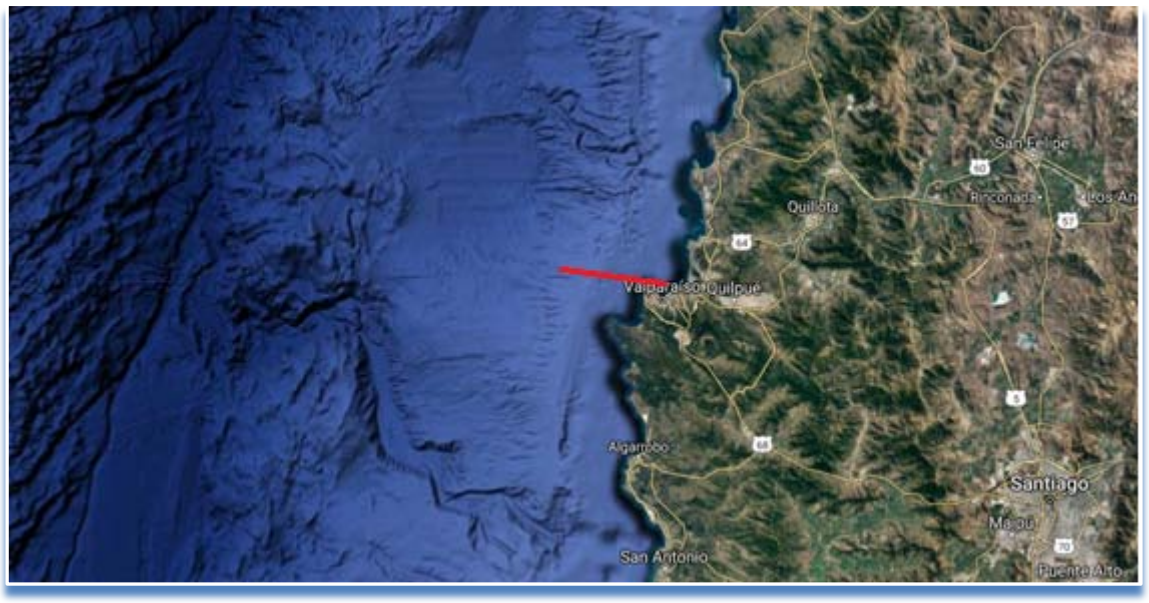


Figure 4. The location of Valparaíso on the Central Chilean Coast and the approximate route of the trip.

The following species were seen on the Valparaíso Pelagic 25 November 2018:

Humboldt Penguin 1
Northern Royal Albatross 2-3
(Northern?) Buller's Albatross c5
Black-browed Albatross c20
Salvin's Albatross c20
Northern Giant Petrel 1
Pink-footed Shearwater 100s
Sooty Shearwater 100s
Manx Shearwater 1 (rarity)
White-chinned Petrel c6
Westland Petrel 1
Fuegian (Wilson's) Storm Petrel c20
Peruvian Diving Petrel c6
Peruvian Booby c20
Peruvian Pelican 100+
Red-legged Cormorant c30
Guanay Cormorant c20
Neotropical Cormorant c30
Coscoroba Swans 2 (at sea)
Grey Phalarope c50-60
Kelp Gull 100s
Franklin's Gulls c20
South American Tern c50 inshore
Inca Tern c5 inshore

A photo gallery from the trip is presented below.

Photo 1. Peruvian booby (Sula variegata) Valparaíso Harbour (Rob Morris, Nov 2018)

Photo 2. Inca tern (Larosterna inca) (adult) Valparaíso Harbour (Rob Morris, Nov 2018)

Photo 3. Guanay cormorants (Leucocarbo bougainvillii) and Red-legged Cormorants (Phalacrocorax gaimardi) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 4. Red (Grey) Phalaropes (Phalaropus fulicarius) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 5. Humboldt Penguin (Spheniscus humboldti) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 6. Red-legged Cormorant (Phalacrocorax gaimardi) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 7. Fuegian (Wilson's) Storm-Petrel (Oceanites (oceanicus) chilensis) Valparaíso Pelagic (Rob Morris, Nov 2018) (See treatment in Howell and Schmitt, 2018)

Photo 8. Buller's Albatross (Thalassarche bulleri platei?) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 9. Mixed flock feeding at the back of the boat Valparaíso Pelagic (Rob Morris, Nov 2018)

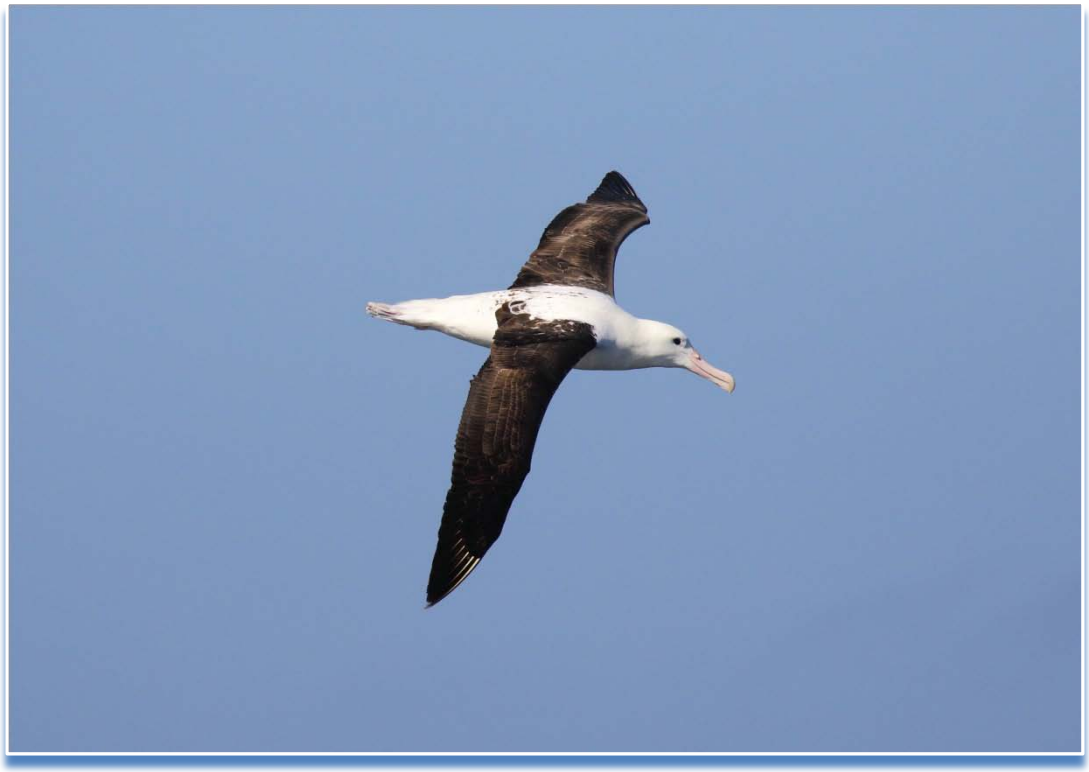


Photo 10. Northern Royal Albatross (Diomedea sanfordi) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 11. Peruvian Diving Petrel (Pelecanoides garnotii) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 12. Pink-footed Shearwater (Ardenna creatopus) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 13. Pink-footed Shearwater (Ardenna creatopus) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 14. Pink-footed Shearwater (Ardenna creatopus) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 15. Sooty Shearwater (Ardenna grisea) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 16. Fuegian (Wilson's) Storm-Petrel (Oceanites (oceanicus) chilensis) Valparaíso Pelagic (Rob Morris, Nov 2018) (See treatment in Howell and Schmitt, 2018)

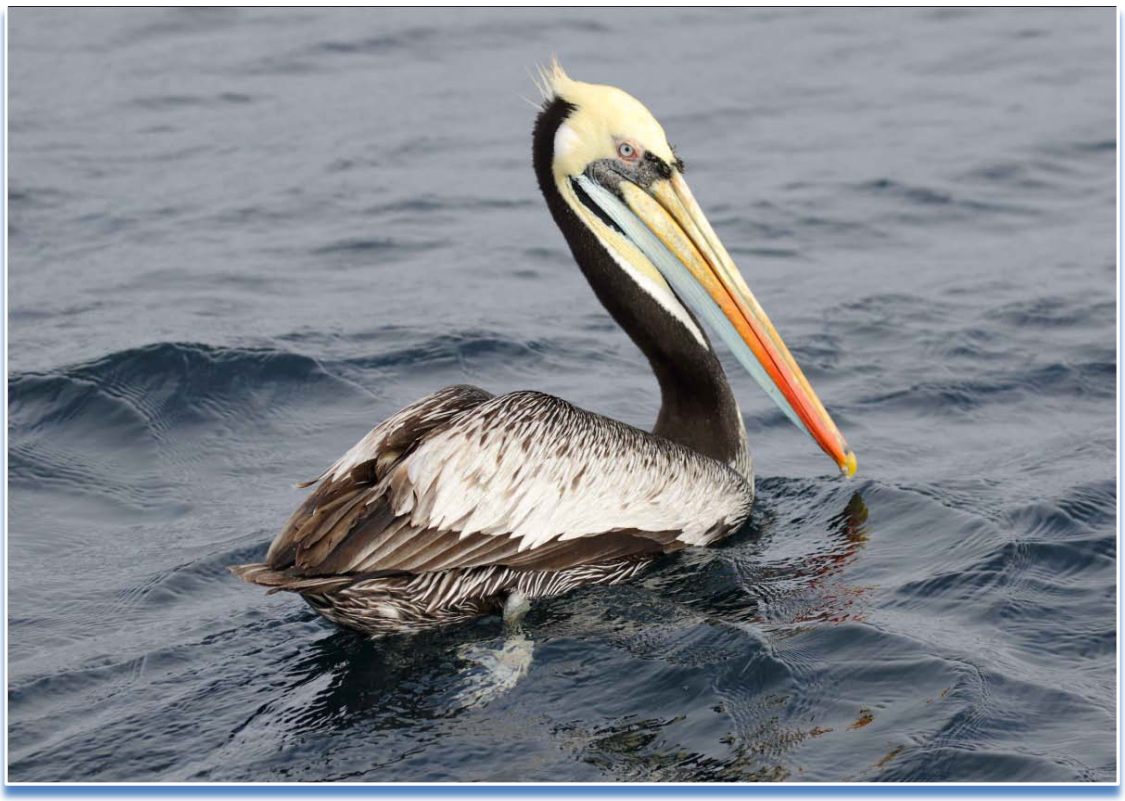


Photo 17. Peruvian Pelican (Pelecanus thagus) (adult) Valparaíso Pelagic (Rob Morris, Nov 2018)

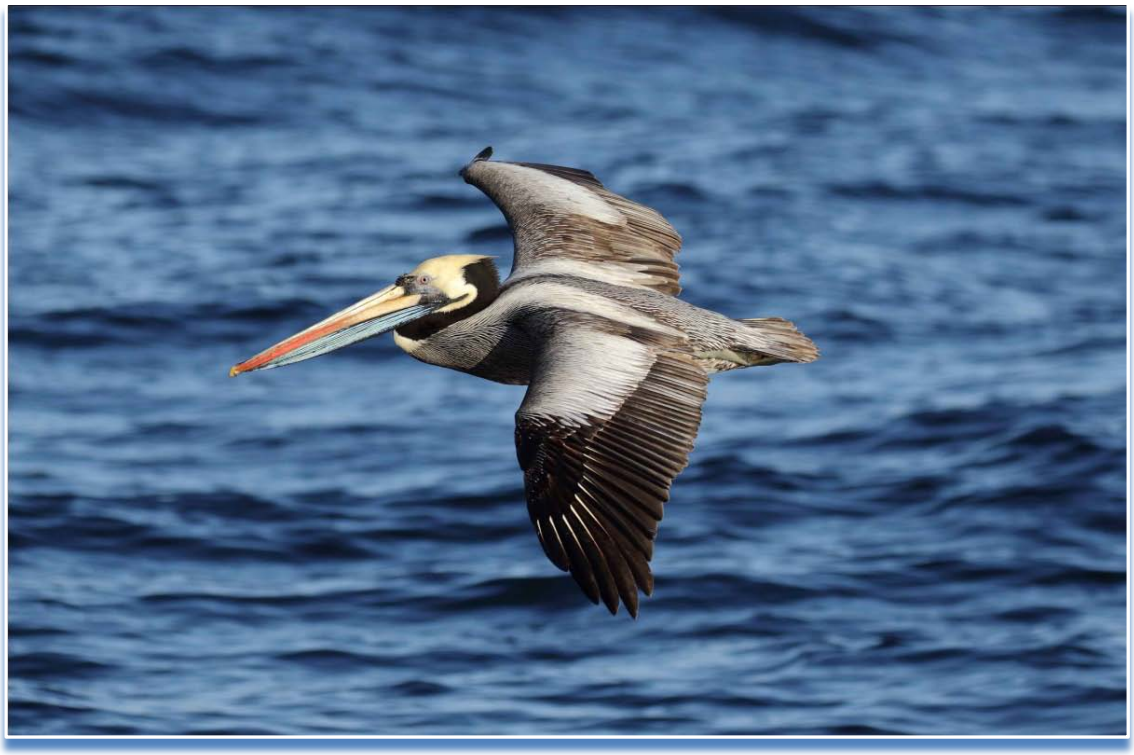


Photo 18. Peruvian Pelican (Pelecanus thagus) (adult) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 19. Salvin's Albatross (Thalassarche salvini) (imm) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 20. Salvin's Albatross (Thalassarche salvini) (imm)Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 21. Black-browed Albatross (Thalassarche melanophris) (sub-adult) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 22. Northern Giant Petrel (Macronectes halli) (imm) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 23. White-chinned Petrel (Procellaria aequinoctialis) Valparaíso Pelagic (Rob Morris, Nov 2018)

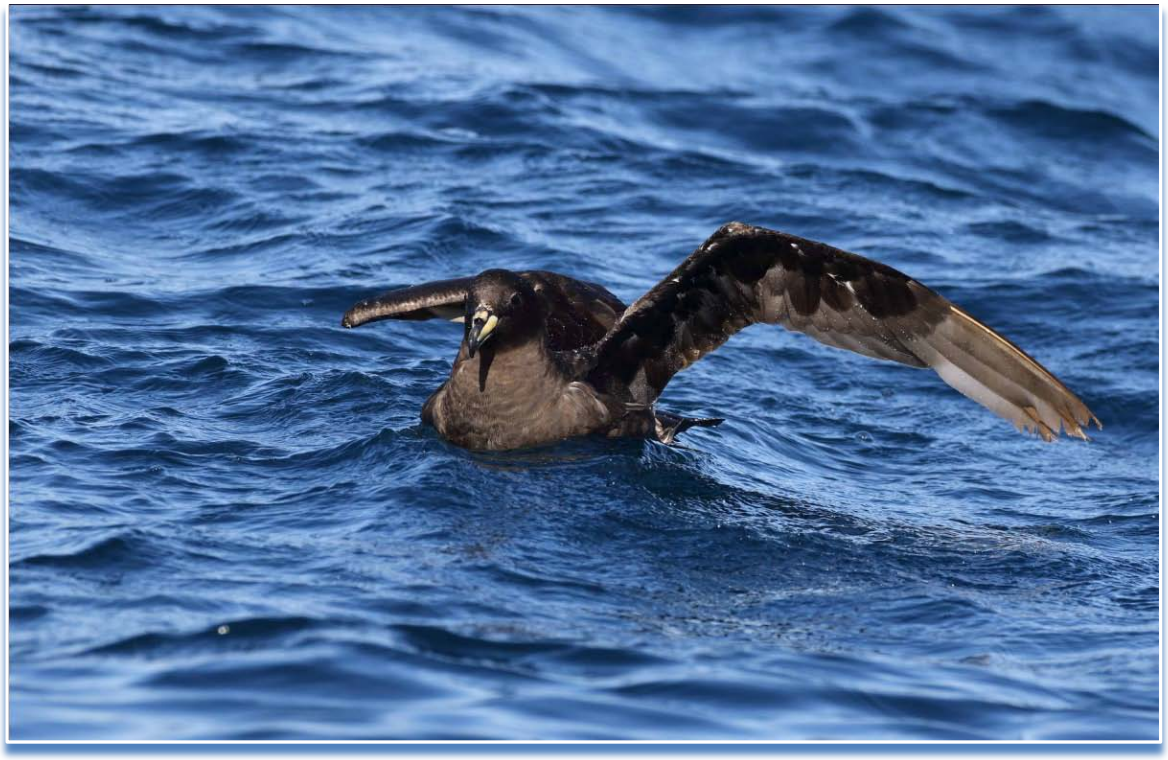


Photo 24. Westland petrel (Procellaria westlandica) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 25. Kelp Gulls (Larus dominicanus) Valparaíso Pelagic (Rob Morris, Nov 2018)

Photo 26. Mixed flock feeding at the back of the boat Valparaíso Pelagic (Rob Morris, Nov 2018)