

The New Zealand Storm-petrel is not extinct

Bob Flood

On 17th November 2003, Bryan Thomas and I chartered a small fishing boat (the MV *Assassin*) from Sandspit, near Warkworth, just north of Auckland, North Island, New Zealand. Our main purpose was to see White-faced Petrels in the Hauraki Gulf. We wanted close-up and an extended view, so we replicated the method we had used to attract Storm Petrels and Wilson's Petrels off the Isles of Scilly – drifting for two or three hours whilst hanging several 'rubby dubby' bags (onion bags filled with pummelled fish) over the side just below the surface.

We left harbour at 7.30am and steamed to about two kilometres north of Little Barrier Island, arriving at approximately 9.00am, and started drifting with 'rubby dubby' deployed. The wind was westerly force 5-6 and that, coupled with the strong currents in the Hauraki Gulf, resulted in a relatively rough sea and quite tricky viewing conditions from the small boat.

After about 20 minutes, a storm-petrel arrived from down-wind, as expected, having smelt the 'rubby dubby'. However, it was a medium to large black-and-white storm-petrel, which we did not expect. We thought it was a Black-bellied Storm-petrel *Fregatta tropica*; it was generally blackish-brown, with a white rump and belly, and appeared large-headed, with very obvious foot-projection beyond the tail-tip. We saw dark markings on the belly, but these were difficult to place given our viewing conditions and the flight and feeding behaviour of the bird (see below). Its appearance certainly did not fit White-bellied Storm-petrel *F. grallaria*, given the dark on the belly and the long foot-projection amongst other things. The bird fed over the oily slick from the rubby-dubby down-wind at about 30 metres from the boat, but unfortunately directly into the sunlight.

Over the next hour-and-a-half, more of these black-and-white storm-petrels arrived from down-wind, again heading straight for the slick. Brett, the skipper, chopped-up pilchards and threw them down-wind, creating a food source away from the sunlight that encouraged the birds to feed, albeit for short periods, in improved light for photography. They remained

mainly over the slick, where 10 were counted at one time (three can be seen together on video footage). We estimated that, overall, 20 of these black-and-white storm-petrels visited the slick. At the time, we thought that they were all Black-bellied Storm-petrels, of which we have minimal experience, although we noted that the wing structure did not appear as broad and rounded as expected for Black-bellied Storm-petrel. We did not see White-faced Petrels or any other storm-petrels for comparison.

We then changed location and drifted from 1.00pm until 4.00pm about two kilometres off Needles Point, at the north end of Great Barrier Island. Here we saw many White-faced Petrels, but none of the black-and-white storm-petrels. After a fantastic day watching storm-petrels and many other seabirds, we decided to head home and, in the end, we were relieved to get ashore after a 'lumpy' day out and a bumpy steam back to Sandspit.

That evening, at the cottage we were renting, BT downloaded his digital images onto his laptop computer and checked them to evaluate the results of his efforts. He called to me in another room, asking why the presumed Black-bellied Storm-petrels were streaked on the belly and lacked a central black stripe. I went to look at his images, bearing in mind that the field guides warn that the black central stripe is a variable feature of Black-bellied Storm-petrel and can be absent. However, whilst reviewing the images, I was struck by an emerging pattern on all the underside shots of a number of different individuals: (1) the breast-band not clear-cut, but had blackish-brown projections 'bleeding' onto the white belly; and (2) the white flanks and bellies were streaked blackish-brown to varying degrees and, especially obviously on the more heavily streaked individuals, these formed lines from the edges of the breast to the undertail-coverts, while the central belly was unmarked white on all of them. This was quite different from anything we expected for Black-bellied Storm-petrel. Also, the wing structure did not look as we expected, and the foot-projection was longer than we expected...

On 25th January 2003, a Wrybill Birding Tours pelagic trip from Whitianga on the Coromandel Peninsular, North Island, New Zealand, had encountered a storm-petrel thought to be a New Zealand Storm-petrel *Oceanites maorianus*, near to the Mercury Islands, just south of Great Barrier Island. We recalled the article in *Birding World* by Saville *et al.* (pages 173-175) and, as far as we could remember, our birds showed the same characteristics as the putative New Zealand Storm-petrel discussed therein. However, the authors were bravely presenting the possibility that they could have seen a New Zealand Storm-petrel that was presumed extinct and known only from three skins collected in the 1800s. Dare we conclude that we had seen at least 10 and probably around 20 of them? Hold on, we thought, we had better get to read the article again and soon.

The next day we joined a pelagic trip organised by Kiwi Wildlife Tours. The weather and seas had calmed. We told the organisers that we had seen a good number of Black-bellied Storm-petrels off Little Barrier Island the

previous day and that we were keen to see the article by the Wrybill Birding Tours group on their apparent New Zealand Storm-petrel. The preset itinerary for the day allowed for a relatively brief visit to the Little Barrier Island area, where 'rubby dubby' bags were hung over the sides but, with virtually no wind and a calm sea, there was little advertisement to storm-petrels of the food source. At various locations during the day, whilst steaming, we did encounter White-faced Petrels, but no black-and-white storm-petrels.

That evening, we had dinner at Te Kaura Lodge, where Kiwi Wildlife Tours are based, and an internet version of the article on the New Zealand Storm-petrel was made available to us. The lead photograph of the 25th January storm-petrel looked just like our ones, and the photographs of the three museum skins collected in the 1800s reflected the pattern show in the images of our birds. There seemed to be only one reasonable conclusion: it has to be that the New Zealand Storm-petrel is not extinct!

Plate 1. New Zealand Storm-petrel *Oceanites maorianus*, c.2km north of Little Barrier Island, North Island, New Zealand, November 2003 (*Bryan Thomas*). Note the white belly and undertail-coverts, with blackish-brown streaking especially on the upper belly, flanks and undertail-coverts, and the central belly unmarked. Breast-band not clear-cut, but with blackish-brown projections 'bleeding' onto white belly. There is a hint of a dark line from the breast sides to the undertail-coverts (more obvious in more heavily streaked individuals). Also note the underwing pattern, relatively pointed wing tips and significant foot-projection.



Plate 2. New Zealand Storm-petrel *Oceanites maorianus*, c.2km north of Little Barrier Island, North Island, New Zealand, November 2003 (*Bryan Thomas*). Note the large-headed appearance, relatively pointed wings, carpal bar (most obvious on the right wing) and significant foot-projection.



Description

The following description is based on digital images (the best of which are reproduced here) of the New Zealand Storm-petrels seen on 17th November 2003, but also takes into account our field experience. The details of flight and feeding behaviour also takes into account approximately five minutes of video footage, but naturally only covers force 5-6 wind conditions. This is, of course, the first-ever full description of live New Zealand Storm-petrels, so further research may determine that modifications are required.

Structure A medium-sized to large storm-petrel. Large-headed, with a thick and short neck, and also a heavy chest. Wings of medium width, not broad; relatively long; the hand often appearing pointed, with P8 and P9 longer than P7 and P10. Tail of medium length, not short; at least as long as the length of the white rump and uppertail-coverts. Legs long, with feet seeming particularly long; feet project noticeably beyond the tail, with perhaps two-thirds of the central toes' length visible. Typical storm-petrel bill, with size in expected proportion relative to the head and body.

Upperparts Head, neck, mantle and back blackish-brown. Rump and uppertail-coverts white.

Underparts Belly, flanks and undertail-coverts white streaked with blackish-brown; variable between individuals, from light to medium streaked; heaviest on belly sides and tending to form lines on both sides from the edges of the breast to the undertail-coverts. Breast blackish-brown, with the breast band not clear-cut, but with blackish-brown 'bleeding' projections onto a white belly.

Upperwing Primaries and secondaries blackish-brown – roughly the same tone as the body feathers. Upperwing-coverts blackish-brown, but a slightly paler tone than the body feathers, especially the secondary median and greater coverts. This paler effect was accentuated on some individuals by very pale fringes to the secondary greater coverts. On some individuals, these features were clearly visible in the

field as pale carpal bars (although nowhere near as obvious as in Wilson's Petrel).

Underwing Marginal coverts dark blackish-brown. Primary greater coverts dusky with pale fringes. Primary median coverts dusky with wider pale fringes (possibly variable across individuals). Secondary greater and median coverts white. The overall effect in the field was a broad white central underwing that fades on the outerwing.

Tail blackish-brown as remiges.

Bare parts Bill, eye, legs, feet and (almost certainly) webbings all black.

Moult There was little or no evidence of wear, abrasion or bleaching, suggesting that the birds were in quite fresh plumage.

Flight and feeding behaviour All the individuals came from down-wind, and some were seen at a distance of about 100 metres or more, approaching the boat with a strong, direct and purposeful low flight. The feeding flight involved steady progress into the wind, keeping low most of the time and hugging the contours of the sea surface, which on the day was turbulent, resulting in a slight zig-zag progression according to changing contours. The wings were mainly held parallel to the sea surface. To maintain this relative position when the sea contours rapidly changed, the birds would rapidly change body and wing position. Food was taken by dipping and surface seizing. Occasionally, the birds stalled for short periods over 'rubby dubby' debris, pattering and dipping. Normally the wings were held with the trailing edge relatively straight, similar to Wilson's Petrel, and thus the wings were not strongly angled at the carpal joints. However, the flight was not as stiff-winged as Wilson's Petrel, although the gliding flight did sometime resembled that of Wilson's Petrel. Often glided for quite long periods whilst contouring and surface dipping. Glides interspersed with periods of rapid wing beats, sometimes involving just a couple of beats, but other times leading to an extended succession of beats for five seconds or more.

Plate 3. New Zealand Storm-petrel *Oceanites maorianus*, c.2km north of Little Barrier Island, North Island, New Zealand, November 2003 (Bryan Thomas). Note the upperwing pattern (although the secondaries are reflecting strong sunlight) and the blackish-brown streaking on the flanks.





Plate 4. New Zealand Storm-petrel *Oceanites maorianus*, c.2km north of Little Barrier Island, North Island, New Zealand, November 2003 (Bryan Thomas). Note the blackish-brown streaking on the flanks, the upperwing carpal bar and the very long feet.

Plates 6 & 7. Black-bellied Storm-petrel *Oceanites maorianus*, c.2km north of Little Barrier Island, North Island, New Zealand, November 17, 2003 (Bryan Thomas). Note the broad and rounded wings and the white belly with black central stripe and undertail-coverts.



Plate 5. New Zealand Storm-petrel *Oceanites maorianus*, c.2km north of Little Barrier Island, North Island, New Zealand, November 17, 2003 (Bryan Thomas). Note the pointed appearance of the wings and that P8 and P9 are longer than P7 and P10, and also the pale carpal bars, medium length tail and significant foot-projection.

Conclusion

The New Zealand Storm-petrel is not extinct. On 17th November 2003, a group of at least 10 and possibly up to 20 was observed, with at least four photographed and three videoed. The birds were in relatively fresh plumage. They were present in an area offering ideal breeding localities and a very rich food source that serves many breeding birds in November, including White-faced Petrels. If they were breeding locally, then this population would be comparatively remote from the nearest breeding populations of Wilson's Petrels, Black-bellied Storm-petrels and White-bellied Storm-petrels. We have published these details of our sightings straight away and have not yet discussed with seabird experts the taxonomic possibilities. It seems most likely that this is a distinct taxon, but obviously more research is required (eg DNA comparisons of the three skins of New Zealand Storm-petrel with similar storm-petrels). There is a need to refine the New Zealand Storm-petrels that we encountered and to establish the months that they are in the Hauraki Gulf region and, presumably, around the Mercury Islands. There is a pressing need to find out where these birds are breeding and to conserve them.

References

Saville, S., Stephenson, B. & Southey, I. 2003. A possible sighting of an 'extinct' bird - the New Zealand Storm-petrel. *Birding World* 16: 173-75.

Bob Flood, *Isles of Scilly*.

Flood, B. The New Zealand Storm-petrel is not extinct. *Birding World* 16 (11): 479-482.

