

**BIRDS AUSTRALIA RARITIES COMMITTEE (BARC)  
SUBMISSION**

**New Zealand Storm-petrel *Pealeornis maoriana* on continental shelf  
off Port Stephens, NSW Australia.**

**28 March 2010**

**First Australian Record**

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## Summary

A New Zealand Storm-petrel *Pealeornis maoriana* was present on the continental shelf off Port Stephens NSW, Australia on the 28 March 2010. This is a submission to BARC, outlining the first record of this species anywhere in Australia or Australian Territory.

## Introduction

During a Port Stephens pelagic outing on Sunday 28<sup>th</sup> March 2010 the boat was drifting along a location above the shelf about 25 nautical miles off Port Stephens, NSW. The drift commenced at 10:25 at 32 55.772 S / 152 33.927 E and finished at 13:20 at 32 57.134 S / 152 32.613 E. A berley designed to attract Storm-petrels was set using a rag soaked in cod liver oil and attached to a length of string and tied to the rear of the boat. Just after midday, there were around 30 Wilson's Storm-petrels (*Oceanites oceanicus*) foraging over the slick, which was to the north of the boat as the boat drifted generally south. Some Wilson's Storm-petrels were seen moving down wind and passing close to the boat through the area where the main berley (comprised of chicken mince mixed with tuna / fish oils) was being sparsely delivered off the stern.

Observers on the boat were scanning the attending birds and at about 12:15 a call came from Michael Kearns referring to a “Storm-petrel with light coloured belly”, which was situated some 50m or so off the south-facing starboard side. Observers on the boat endeavoured to pick the bird up from amongst a number of Wilson’s Storm-petrels moving through the area behind the boat and once located a number of photographers worked to get some images of the now somewhat distant bird. Identification of the bird involved two steps, the first, after the bird’s initial approach, was to review the photographs taken after the first sighting of the bird. Allan Richardson, Mick Roderick and Richard Fuller each managed to get images of the bird. Allan then showed his best image (Photo AA) to Richard Baxter, who announced that it could only be a Black-bellied Storm-petrel or a New Zealand Storm-petrel.

Onley and Scofield was then consulted and it was confirmed to those on board who were not familiar with NZSP that the bird was most similar to a New Zealand Storm-petrel (NZSP) due to the distinctive striations on the white underside. However, due to the likely rarity of such a record, combined with the fact that much variation possibly occurs on the two *Fregatta* Storm-petrels (Black-bellied and White-bellied), the latter species could not be ruled out at that time. As a consequence and despite the similarity to NZSP a final identification was not assumed and the search was resumed to gain better views, which would hopefully enable a more positive identification.

There was a gap of about 10-15 minutes before the bird was seen again, about 40-50m to the south of the stern. The bird then made its way away from the boat in a south-westerly direction until out of sight. This pattern was repeated twice more before the bird was not seen again. A number of characteristics were noted during this “second phase” of passes by the bird, as follows:

- On each passage the bird was difficult to find due to its size and foraging habits being very similar to the abundant Wilson’s Storm-petrels that were around the boat; and
- Although there were good numbers of Wilson’s Storm-petrels around the boat the bird did not appear to join them on the slick off the port (north) side and it followed the same pattern of arriving off the starboard stern and moving through an area to the south-west of the stern.

The subsequent observations after the initial passage concentrated on trying to determine if the bird may have been exhibiting a variation on the belly plumage of either of the two *Fregatta* Storm-petrels. The only obvious feature that was clearly observed was that the bird was of a similar in size and shape to the Wilson’s Storm-petrel, and not showing any significant difference in foraging technique and flight pattern to the Wilson’s.

### **Prior Sightings of this species in Australia**

In relation to prior occurrence at or near this location, there is no evidence to suggest that it has. The only confirmed record of this species away from the immediate vicinity of New Zealand prior to this sighting was a single bird seen on 8th April 2008 just south of New Caledonia during a Western Pacific Odyssey pelagic trip (B. Stephenson; M. Carter pers. comm.) – said to be “only around 15km south of New Caledonia” (J. Davies pers. comm.).

Of relevance, a second possible New Zealand Storm-petrel was observed on the morning after our observation, approximately 35 nautical miles off the coast at Ulladulla (D. Mantle pers. comm. and subsequent postings on Birding-aus etc). It is understood that a BARC submission will be forthcoming for this bird.

## Description

Dark upperparts with obvious white rump. No obvious pattern or wing bar on the upperwing. The upperwing primary feathers tapered to a pointed tip. Head and breast dark brown with a white belly streaked with obvious dark, 'wavy lines'. The demarcation of the dark breast to white belly quite distinct although affected by the presence of the streaking. White of rump extending around to the flanks and belly. Detail of underwing pattern and coverts difficult to see, although much white was noted in middle of the underwing. Undertail dark, detail on undertail coverts not seen sufficiently. Legs clearly extending well beyond the tail. Size difference with Wilson's not obvious and assumed to be about the same size.



Photo AA. New Zealand Storm-petrel. Port Stephens NSW 28 March 2010  
Photo: Allan Richardson

## Previous experience with this species:

No-one on the boat had seen NZSP previously. Many observers had seen both WBSP and BBSP (including a WBSP seen the day before by 7 of the people on board on this day). When the obvious distinctive feature (dark streaking on the flank and belly) was noticed, the possibility that we were looking at a rare bird (specifically a NZSP) was relayed to all on the boat, initially by Richard Baxter.

## Confusion Species

### Discussion – Black-bellied Storm-petrel & White-bellied Storm-petrel

Appraisal of photos was resumed once they could be viewed more easily on a computer screen. All aspects of the bird were investigated with the following conclusions drawn:

- The bird was viewed overall and from appearances was consistent with drawing 1(b) of the NZSP in Onley and Scofield although the striations on the belly were of greater extent over the belly area than shown (which was based on one of the museum specimens). However, the bird did look somewhat more similar to illustration 1(c), being based on recent sighted birds in the Hauraki Gulf in NZ. Furthermore, comparison with web images and those contained within Shirihai (2007) were found to be consistent with NZSP. Due to the rarity of such an occurrence close examination of the photos was made in comparison with the two potential confusion species, being White-bellied Storm-petrel (*Fregetta grallaria*; WBSP) and Black-bellied Storm-petrel (*F. tropica*; BBSP). (See Photos BB & CC)
- The belly was white below with a black breast, with the white belly extending up the flanks and demarcated rather low on the breast more consistent with BBSP than WBSP and consistent with NZSP. The belly was marked boldly with black striations in a rather uniform manner across the entire white belly unlike the central line clustering of a BBSP or the peripheral black marking of darker WBSP individuals. The belly striations are very consistent with numerous photographic examples of the NZSP.
- The bird displayed no scalloping to the back feathers as would be expected on NZSP and which are otherwise evident on fresh plumage of WBSP and to a lesser extent on BBSP.
- The feet extension beyond the tail is considerable and consistent with that of the NZSP differing from both BBSP and WBSP, which do not exhibit the same extent of feet extension when it occurs.
- The general size and shape of the bird was a light, relatively slim build more consistent with Wilson's Storm-petrel than the more robust profiles exhibited by the BBSP and WBSP.
- Examination of the white rump area revealed a broad white band, wider than that of the BBSP and to a lesser extent the WBSP.
- A relatively brown and narrow upper wing compared to the broader wings of the BBSP and WBSP. The shape of the wing in flight appeared to be quite "sharp", visible in one of the dorsal views on the photographs. (Photo: EE & GG)
- The tail was relatively short and very slightly forked, which is consistent with NZSP examples.



Black-bellied Storm-petrel  
Photo BB: Richard Baxter



White-bellied Storm-petrel  
Photo CC: Richard Baxter

### **Elimination of further possible confusion species.**

There are five Hydrobatidae that are either potential vagrants to Australia or already known and breeding in Australian waters. All are readily eliminated from further consideration as determined below.

#### **White-throated Storm-petrel**

Although it is possible this species could occur on the east coast of Australia in the summer months, the size and structure of this distinctive species, 25cm, broad rounded wings, moderately forked tail, white throat and brownish chest band eliminate it as a possibility.

#### **Hornby's Storm-petrel**

A distinctive eastern pacific storm petrel, rarely observed more than 300km from the South American coast. Although possessing a white belly, the large size, forked tail, grey back, white chin, throat and forehead as well as the distinctive dark band across the chest eliminates this species as a possibility.

#### **White-faced Storm-petrel**

A relatively common Australian breeding species. Although it too has a white belly, the bold white lores and supercilium, face pattern, greyish brown upper side and exceptionally long legs make this a readily identifiable species. This species is also well known to all observers on board.

#### **Grey-backed Storm-petrel**

This species is well known to several observers on board. It is a cold water species being unlikely to occur in 24deg late March waters off central NSW. It's distinctive grey back, small size, grey rump and short wings eliminate this species from further consideration.

## **Elliott's Storm-petrel**

Another Eastern Pacific species and similar in many respects to the bird observed off Port Stephens on the 28 March 2010. Both species are similar in size and mostly sooty black above as well as dark headed with a white rump. Although superficially similar several characteristics eliminate this highly unlikely visitor.

- A) Elliott's Storm-petrel has a obvious pale upper wing bar.
- B) Underwings of Elliott's Storm-petrel are brown to dark grey with a silvery central patch. NZSP has an obvious white central area to the underwing.
- C) The belly of Elliott's Storm-petrel is white with dark flanks and smudgy edges. The central lower breast (white), lower abdomen is separated from the white uppertail by narrow brownish thighs. NZSP has the blackish streaks on a predominantly white belly, flanks and undertail coverts. These black streaks are mentioned elsewhere in this document and clearly visible in photo AA.

## **Conclusions**

After the above examination of a wide variety of features we have further concluded that the bird is a New Zealand Storm-petrel for the following reasons:

- Slight build and size are consistent with NZSP in direct field comparison with Wilson's Storm-petrel and in comparison to the more robust BBSP and WBSP;
- Wing shape is relatively narrow and pointed, which is consistent with NZSP and unlike the broader wings of both WBSP and BBSP;
- Demarcation of black breast and white belly, although not obvious, appears to be relatively low which is inconsistent with the higher demarcation on WBSP;
- Rump band is distinctively broad unlike that of BBSP and to a lesser extent WBSP, but consistent with NZSP;
- The bird displays no back scalloping, which might suggest WBSP or to a lesser extent BBSP.
- Carpal bar was not visible.
- The bold black linear striations across the entire white belly are distinctively NZSP and unlike the central black clustering of the BBSP or the peripheral black markings of darker WBSP individuals;
- The jizz of the bird was very similar to Wilson's, which made the bird difficult to distinguish and pick at a distance from abundant Wilson's on the day; and
- The considerable leg extension in relation to a somewhat shorter tail separates it from the rather minimal leg extensions sometimes displayed in BBSP and WBSP.



New Zealand Storm-petrel  
Off Port Stephens NSW 28/3/2010  
Photo: DD Allan Richardson



New Zealand Storm-petrel  
Off Port Stephens NSW 28/3/2010  
Photo: EE Allan Richardson



New Zealand Storm-petrel  
Off Port Stephens NSW 28/3/2010  
Photo: FF Allan Richardson



New Zealand Storm-petrel  
Off Port Stephens NSW 28/3/2010  
Photo: GG Richard Fuller

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