



Birds Australia Rarities Committee Unusual Record Report Form

This form is intended to aid observers in the preparation of a submission for a major rarity in Australia. (It is not a mandatory requirement) Please complete all sections ensuring that you attach all relevant information including copies of your notes, photographs or other supportive material. (PLEASE USE BLACK INK).

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| Full Name: Dr. Nikolas K. Haass (NH) | Office Use |
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| Species Name: New Zealand Storm-petrel (NZSP) | Scientific Name: <i>Pealeornis maoriana</i> |
| Date(s) and time(s) of observation: | 24 April 2010, 10am |
| How long did you watch the bird(s)? | 3 minutes |
| First and last date of occurrence: | 24 April 2010 |
| Distance to bird: | 50 meters |

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| Site Location: Continental shelf break, off of Wollongong, NSW |
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| Habitat: Pelagic. Continental shelf break. |
| Sighting conditions: Good light conditions, clear visibility, overcast, sun in the back. See attached pictures |
| Optical aids used: Leica 12x50 BA (NH) and others; Photos: Canon 30D, Canon 400mm, 5.6 (RS) The attached photographs are low quality to keep the size of the document as small as possible. Higher quality images of the better photos are available on RS's website (www.adarman.com/Birds/Stormpetrels , click on the New Zealand Storm-petrel link: first three photos; [photos 4-38 show the Ulladulla bird]). Also see RS's images of NZSP from Hauraki Gulf in Dec 2010 (2010 December 22 Hauraki Gulf Pelagic (NZ) on http://www.adarman.com/Pelagics). |

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| Were other observers present? Do any of the other observers disagree with your identification? Raja Stephenson (RS; photographs: Figs. 1-3), Lindsay Smith (LS), Brook Whyllie (BW, photograph: Fig. 4), Martin Cachard (MC), Rob Hynson (RH) and more participants of the pelagic. Nobody disagreed with the ID. |
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| To your knowledge, is the species seen frequently at this site? After the sightings of 28 March, 2010 off of Port Stephens, NSW, and 29 March, 2010 off of Ulladulla, NSW, this is – if accepted – only the third record for Australia (NH, RS, LS and RH were among the observers of the Ulladulla bird, MC was among the observers of the Port Stephens bird). |
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| Did you use a field guide? The bird was identified spontaneously without using a field guide – several observers (NH, RS, LS, RH & MC) had previously studied all available literature and were involved in a discussion with international experts on white/streak-bellied storm-petrels regarding all three streaked storm-petrels in NSW in March/April, 2010. For confirmation ONLEY & SCOFIELD (2007) was consulted on the boat. Additional references (most of them to compare to other species, since NZSP is only covered by a few): ENTICOTT, J. & D. TIPLING (1997): Seabirds of the World. London. • DOWDALL, J., S. ENRIGHT, K. FAHY, J. GILLIGAN, G. LILLIE, M. O'KEEFE (2009): Unidentified Storm-Petrels, Puerto Montt, Chile, February, 2009. http://scillypelagics.com/Oceanites_Puerto_Montt_Chile.html • FLOOD, B. (2003): The New Zealand Storm-petrel is not extinct. <i>Birding World</i> 16: 479-482. • FLOOD, B. (2009): A quest for storm-petrels. <i>Birding World</i> 22: 125-127. • GASKIN, C. & K. BAIRD (2005): Observations of black and white storm petrels in the Hauraki Gulf, November 2003 to |
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June 2005. Were they of New Zealand Storm-petrels? *Notornis* 52: 181-194. • HARRISON, P. (1983): Seabirds, an identification guide. Beckenham. • HARRISON, P. (1987): Seabirds of the World. A Photographic Guide. London. • HARRISON, P. (2011): A New Species of Seabird - A new species of storm-petrel found in Chile <http://www.birdingnz.net/forum/viewtopic.php?f=15&t=1070> • HOWELL, S.N.G. & C. COLLINS (2008). A possible New Zealand Storm-petrel off New Caledonia, southwest Pacific. *Birding World* 21: 207-209 • DEL HOYO, J., A. ELLIOTT & J. SARGATAL (eds) (1992): Handbook of the Birds of the World. Vol. 1. - Barcelona. • MARCHANT, S. & P.J. HIGGINS (eds) (1990). Handbook of Australian, New Zealand and Antarctic Birds. Volume 1: Ratites to Ducks. Melbourne. • MARTIN, J.P. (2009): The *Fregatta* petrel in Avon – a bird new to Europe. *Birding World* 22: 457-458. • MURPHY, R.C. & J.P. SNYDER (1952): The "Pealea" phenomenon and other notes on storm petrels. *American Museum Novitates* 1506: 1-16. • ONLEY, D. & P. SCOFIELD (2007): Albatrosses, Petrels & Shearwaters of the World. Princeton. • PIZZEY, G. & F. KNIGHT (2007, 8th ed.): The Field Guide to the Birds of Australia. Sydney. • SAVILLE, S., B. STEPHENSON & I. SOUTHEY (2003): A possible sighting of an 'extinct' bird – the New Zealand Storm-petrel. *Birding World* 16: 173-175. • SHIRIHAI, H. (2007, 2nd ed.): A Complete Guide to Antarctic Wildlife. London. • SIMPSON, K. & N. DAY (2004, 7th ed.): Birds of Australia. Princeton. • STEPHENSON, B.M., C.P. GASKIN, R. GRIFFITHS, K.A. BAIRD, R.L. PALMA & M.J. IMBER (2008): The New Zealand storm-petrel (*Pealeornis maoriana* Mathews, 1932): first live capture and species assessment of an enigmatic seabird. *Notornis* 55: 191-206.

How confident are you of your identification?

100%

Other details:

After the sightings of 28 March, 2010 off of Port Stephens, NSW, and 29 March, 2010 off of Ulladulla, NSW, this is – if accepted – only the third record for Australia (NH, RS, LS and RH were among the observers of the Ulladulla bird, MC was among the observers of the Port Stephens bird).

Physical Description of Bird

Summary description: A small-medium, square-tailed, long-winged storm-petrel with a dark head and upper breast and white belly, obvious dark streaks on flanks, lateral belly, and lower breast. The undertail coverts were mottled. The dark upperwings showed an inconspicuous thin brownish carpal bar. The long, broad white underwing panels extended well onto the primary coverts. The bird displayed a large white rump that wrapped around to the white underparts. The bird had very long black legs and the fully black feet protruded well beyond the tail tip.

(1) **Number:** one individual was observed

(2) **Age, sex:** unknown

(3) **Size and shape:** There appeared to be no obvious difference in size to the nearby Wilson's Storm-petrels. The wings appeared long and narrow. Structurally the bird appeared rather slim without the typical 'stout' feel to *Fregatta* storm-petrels. The bird had very long black legs and the fully black feet protruded well beyond the tail tip.

(4) **Plumage colour and pattern:** The head, upper breast and upperparts were wholly dark other than the contrasting broad clean white rump and a very thin, brownish carpal bar, although the latter feature was not easily visible in the field. The white of the rump wrapped around to the white underparts. The broad white underwing panel was formed by white secondary underwing coverts and extended well onto the primary underwing coverts. The lower breast and belly were white with obvious dark streaking. This streaking varied from dense broad streaks on the flanks to much finer and sparser streaking (if any) on the mid-belly. The border between the dark upper breast and white lower breast and belly was curved (white extended further towards the head along the mid-line of the breast/belly) and not sharply demarcated, rather it was a ragged edge as the dark streaking 'bled' down from the upper breast. The undertail coverts were mottled.

(5) **Colour of bill, eyes and legs/feet:** black

(6) **Calls:** none heard

(7) **Behaviour, movements, flight pattern, and anything else that might help to identify the bird e.g. feeding, interactions with other birds, describe where the bird was – on ground, in canopy, flying etc. Were comparisons made with other species?**

As opposed to the Ulladulla bird, the Wollongong bird was only seen in fast direct flight on two passes (first pass observed by all the above observers, second pass only by LS). There appeared to be no obvious difference in size to the nearby Wilson's Storm-petrels. The bird was not seen to 'chest-off' the waves as *Fregatta* storm-petrels commonly do. A large number of Wilson's Storm-petrels were observed at the same time allowing comparisons in size and jizz with the NZSP. Good numbers of Australasian Gannets, Wedge-tailed and Flesh-footed Shearwaters. Single Hutton's and Fluttering Shearwaters, Providence Petrel, Gibson's and Campbell Albatrosses, 2 Pomarine and 2 Arctic Jaegers were also seen at this time.



Figure 1 (RS): Slender jizz with long wings and square tail. Head and upper breast wholly dark. Lower breast and belly white with dense broad streaks on the flanks and much finer and sparser streaking (if any) on the mid-belly. White rump wrapping around to the white underparts. Border between the dark upper breast and white lower breast and belly not sharply demarcated, rather showing a ragged edge. Broad white underwing panel formed by white secondary underwing coverts and extended well onto the primary underwing coverts. Undertail coverts mottled.



Figure 2 (RS): Slender jizz with long, narrow wings and square tail. Head and upper breast wholly dark. Lower breast and belly white with dense broad streaks on the flanks and much finer and sparser streaking (if any) on the mid-belly. Border between the dark upper breast and white lower breast and belly curved (white extended further towards the head along the mid-line of the breast/belly) and not sharply demarcated, rather showing a ragged edge. Broad white underwing panel formed by white secondary underwing coverts and extended well onto the primary underwing coverts. Undertail coverts mottled. Large foot projection.



Figure 3 (RS): Slender jizz with long, narrow wings and square tail. Upperparts generally dark with large sharply demarcated white rump wrapping around to the white underparts. Paler narrow wing-bar. Head and upper breast wholly dark. Lower breast with dense broad streaks on the flanks. Border between the dark upper breast and white lower breast and belly not sharply demarcated, rather showing a ragged edge. Large foot projection beyond square tail.



Figure 4 (BW): Slender jizz with long, narrow wings and square tail. Upperparts generally dark with large sharply demarcated white rump wrapping around to the white underparts. Paler narrow wing-bar. Head and upper breast wholly dark. Lower breast with dense broad streaks on the flanks. Border between the dark upper breast and white lower breast and belly not sharply demarcated, rather showing a ragged edge. Large foot projection beyond square tail.

Other species with which you think it might be confused and how these were eliminated?

White-bellied Storm-petrel *Fregetta grallaria* (WBSP): The shorter legs, bulkier body, thicker neck and sharp demarcation between the black upper breast and throat and white lower breast all immediately distinguish WBSP from the Wollongong bird. The deeper chest, larger head, steep forehead and shorter broader wings further distinguish this species from the Wollongong bird without even considering plumage. WBSP can exhibit rather variable plumages, ranging from typical pale forms through variably streaked individuals to full dark morph birds. The intermediate 'streaked' birds would come closest to the Wollongong bird in terms of plumage but this streaking is generally broader or 'smudgier' than observed on NZSP. STEPHENSON et al. (2008) considered that the intermediate and dark morph individuals of *F. g. grallaria* (Lord Howe and Kermadec Islands) are "not streaked but show gradual darkening of the plumage in the axillaries and flanks" thus the smudgy rather than streaked plumage. Furthermore, many WBSP in fresh plumage also show pale, silvery edges to the scapulars and upperwing coverts; a feature that is not known for NZSP and not seen on the Wollongong bird. Images: [White-bellied Storm-petrel](#) link on www.adarman.com/Birds/Stormpetrels.

Black-bellied Storm-Petrel *Fregetta tropica* (BBSP): As for WBSP, the relatively long narrow appearance of the wings during direct flight, lack of bulk through the body, neck, and head and extremely long foot projection together rule out BBSP on structural grounds alone. The flight style being similar to Wilson's Storm-petrel is further tentative evidence against this bird being identified as a BBSP. The Wollongong bird was not observed hitting the sea surface with its chest as both species of *Fregetta* are often seen to do.

Relying solely on plumage this bird is very different to any BBSP images or illustrations that we can find in published literature or on the web. Indeed, STEPHENSON et al. (2008) studied BBSP skins in several museum collections and stated that 'no bird showed patterning remotely similar to the streaking seen in NZSP'. However, as for WBSP, BBSP is clearly a very variable species. The width or even presence of a black line down the centre of the belly is very variable and some BBSP may show some streaking on the flanks but this is likely coarser/smudgier as for WBSP. Dark streaking also appears to be commonest on BBSP with the broadest black ventral lines. The mottled white to dark undertail coverts and dark thigh patches of the Wollongong bird are also more typical for NZSP than BBSP.

For BBSP images click on the [2010 August 21 Southport Pelagic](http://www.adarman.com/Pelagics) link on <http://www.adarman.com/Pelagics>.

White-bellied form of Wilson's Storm-Petrel *Oceanites oceanicus* (e.g. Puerto Montt): The nominate subspecies of Wilson's Storm-petrel can largely be ruled out by the white belly and prominent dark streaking on the white underparts of the Wollongong bird. There were large numbers of nominate Wilson's Storm-petrels present with the Wollongong storm-petrel and although the behaviour and size were similar, upon inspection of the photographs the Wollongong storm-petrel appeared longer-winged. There are occasionally reports of nominate Wilson's Storm-petrels with white belly patches and the Chilean subspecies, *O. o. chilensis*, has a pale underwing panel and a lightly mottled lower belly. However, the combination of white belly and upper breast, dark streaking, very long black legs and feet easily distinguish the Wollongong storm-petrel from all subspecies of Wilson's Storm-petrel.

Recent photos of unidentified Storm-petrels from Puerto Montt, Chile (DOWDALL et al., 2009; HARRISON 2011) bear many structural and plumage similarities to *O. o. chilensis* but differ primarily in having a white vent and lower belly and prominent white upperwing and underwing panels. The broad whitish diagonal carpal bars on the upperwing, the white underparts only extending to the lower belly and vent and the lack of dark streaking on these white underparts immediately distinguish these birds from the Wollongong storm-petrel.

Elliot's Storm-petrel *Oceanites gracilis*: Elliot's Storm-petrel can be ruled out for many of the same reasons as Wilson's Storm-petrel. The small size, smudgy rather than streaked underparts, more pronounced dark thigh patches, yellowish patches on the foot webbing, and often better defined pale crescent on the upperwing median-secondary coverts all help to distinguish Elliot's Storm-petrel from the Wollongong bird.

'Striped' Storm-petrel *Thalassidroma lineata*: See STEPHENSON et al. (2008) for a fuller discussion on the taxonomic uncertainties that have confused the identity of five museum specimens that have been variably labelled as *Thalassidroma lineata* or *Fregatta lineata* or *Pealea lineata*. In summary, three of these specimens would appear to represent the type specimens of New Zealand Storm-petrel whilst the remaining two birds are a streaked White-bellied Storm-petrel collected off Huapu I. (Marquesas Is.) in 1922 and a streaked Black-bellied Storm-petrel collected from Upolu, Samoa in 1839. However, there is still considerable debate as to the true identity of the latter specimen but hopefully DNA analyses will help to solve this taxonomic riddle. Intriguingly, Murphy & Snyder (1952) note in their discussion of the 'Pealea phenomenon' (the development of variably streaked individuals in certain storm-petrel populations) is that Peale (1848) recorded *T. lineata* frequently in the torrid zone during the trip to Upolu and that natives on the island 'represented' that the bird bred high up in the mountains. However, there must be some doubt as to the identification of the birds Peale observed at sea and the gestured identifications made by the islanders due to the lack of quality binoculars or any cameras and problems in communication, respectively. Murphy and Snyder (1952) said as much by noting that 'both statements fit well with the distribution and habits of another petrel with which "Pealea" might readily be confused in the field, namely, *Nesofregatta albigularis*'.

It is very difficult to make comparisons between the Wollongong and Upolu birds; comparing digital images of live birds to old museum specimens is never easy. However, there are certain apparent differences between these birds, namely the streaking is much coarser and smudgier on the Upolu bird and appears to be evenly distributed across the pale underparts and the bill looks to be considerably larger too.

Polynesian Storm-petrel *Nesofregatta fuliginosa* (PSP) (some authors retain *albigularis* as the specific epithet): PSP is another polymorphic species that may show dark streaking on a white lower belly and breast. However, PSP is the largest species of storm-petrel and would differ from the Wollongong bird in being very obviously larger than Wilson's Storm-petrels. Furthermore, it has a moderately forked tail and all but some dark morph birds show an obvious pale carpal bar formed by white greater coverts on the upperwing (ONLEY & SCHOFIELD 2007). The intermediate 'streaked' morph birds typically still show a white throat and dark breast band and the rump becomes increasingly dark from the centre outwards (ONLEY & SCHOFIELD 2007) thus further distinguishing it from NZSP.

Grey-backed Storm-Petrel *Garrodia nereis* (GBSP): Also GBSP can show dark streaks on its white flanks. However, GBSP is very small with short rounded wings. Its back and rump are grey. The white of the underwings should extend further onto the primary bases.

Was the description written from notes and/or sketches made (tick box):

during the observation or; shortly after the observation or; from memory?

Please indicate supportive evidence available.

Was the bird: photographed, taped or video taped? If yes to any of these, by whom? RS, BW

What experience have you had with the species in question?

NH has extensive experience with storm-petrels having been pelagic trip leader on many trips off of California, New Jersey/New York and Delaware/Maryland and having participated on many pelagic trips off of North Carolina, Galapagos, New South Wales and Queensland. NH has been an active member in the Rare Birds Committees of Hessen, Germany, Schleswig-Holstein, Germany, and New Jersey, USA. Although NH has only seen NZSP once before (29 March, 2010 off of Ulladulla, NSW – if accepted by BARC), he spontaneously identified the bird and obviously knew that it was a rare bird in the area.

RS has extensive experience with storm-petrels from many pelagic trips off of New Jersey/New York, Delaware/Maryland, North Carolina, New South Wales and Queensland. RS has only seen NZSP once before (29 March, 2010 off of Ulladulla, NSW – if accepted by BARC).

LS has extensive experience with storm-petrels as he is a professional ornithologist who has spent much of his life on the Tasman Sea and the Southern Ocean. LS has only seen NZSP once before (29 March, 2010 off of Ulladulla, NSW – if accepted by BARC).

BW has extensive experience with storm-petrels from many pelagic trips in the Tasman Sea and the Southern Ocean.

MC has extensive experience with storm-petrels from many pelagic trips off of New South Wales and Queensland. MC has only seen NZSP once before (28 March, 2010 off of Port Stephens, NSW – if accepted by BARC).

RH has extensive experience with storm-petrels from many pelagic trips off of New Jersey/New York, Delaware/Maryland, North Carolina, California, Oregon/Washington, New South Wales and Queensland. RH has only seen NZSP once before (29 March, 2010 off of Ulladulla, NSW – if accepted by BARC).

In the meantime, RS and NH have had the opportunity to observe NZSPs at the Hauraki Gulf pelagic, North Island, New Zealand (December 2010). These birds appeared to be very similar to the one reported here.

Signature:



Date: 16 April, 2011