

On Some Old Petrel Records

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The bird collection in the Macleay Museum of the University of Sydney consists of around 9500 specimens and largely dates from 1874 to 1888, the period in which William John Macleay was actively collecting and acquiring bird specimens (Stanbury & Holland 1988, S.R.F. Norrington pers. comm.). This collection was curated from 1874 to 1912 by George Masters, but is now largely 'inactive' with only occasional additions being made. Despite many of its type specimens being transferred on permanent loan to the Australian Museum in 1969 (Longmore 1991), large numbers of type specimens and specimens of rare taxa still remain in the collection (Fisher & Longmore 1995, Fulton 2001, McAllan in prep.). In addition there are some well-documented collections of historical importance, in particular birds collected on the voyage of the *Chevert*, the first Australian scientific expedition to a foreign country.

The *Chevert* left Sydney Harbour with some fanfare on 18 May 1875 and travelled up the eastern coast of Australia to Cape York and then to the southern coast of what is now Papua New Guinea (Stanbury & Holland 1988). The Australian portion of the bird collection was written up by George Masters in 1876, but the correct collecting localities and identity of the seabird specimens from the southern part of this voyage have been masked through some mislabelling. Most collecting localities for these seabirds cannot be determined precisely. However, Macleay kept a diary of the *Chevert* expedition and this still survives in the Mitchell Library, State Library of New South Wales (copies also on file at the Macleay Museum). Although the expedition left on 18 May, Macleay did not begin his diary until 29 May, the day after the *Chevert* made the first landfall at the Percy Isles (21°45'S, 150°20'E). Macleay gave some notes on the birds collected and observed up to that point, some of which are of interest.

Black Petrel *Procellaria parkinsoni*

This species was not listed in Masters's account of the *Chevert* expedition (Masters 1876). He later exhibited the specimen at a meeting of the Linnean Society of New South Wales where he noted that it was the first record of the Black Petrel from Australia and that it was collected 'near Sydney Heads' (Masters 1878). The label on the relevant specimen, still in the Macleay Museum (B.4431), notes the locality as 'East Coast of NSW' and the collection date as 'May 1875'. Hindwood (1940) also referred to this specimen as being collected near Sydney Heads, evidently relying on Masters's account. Masters's locality was presumably based on what he knew of the early stages of the expedition. Macleay's diary tells us that during the first four days of the expedition the *Chevert* made little headway northwards due to light winds and a strong southerly current so that the vessel was 'very little north of Port Jackson, though considerably to the Eastward.'

Macleay did not mention the Black Petrel in his diary and only notes, 'Our ship for the first few days after leaving Sydney was attended as usual by a number of *Diomedea melanophrys* & an occasional *exulans* [= Black-browed and Wandering Albatrosses].' However, he goes on to say, 'One or two specimens of *Procellaria conspicillata* were also seen when about the latitude of Port Stephens

& many specimens of Petrels'. The reference to '*Procellaria conspicillata*' is likely to be the Black Petrel as no other specimens of petrels of the genus *Procellaria* are in the Macleay Museum. The major reference work for Australian birds at this time was John Gould's *Birds of Australia* (1840–1869) and Gould's *Handbook* (1865). These works include only two species of birds that are currently in the genus *Procellaria*: the Grey Petrel *P. cinerea* and the Spectacled Petrel *P. conspicillata*. Given that Macleay's specimen is the first record of the Black Petrel from Australia it is hardly surprising that Gould's works did not include an account of this species. Macleay was thus probably referring to the only similar species he could find listed in Gould (1865), the Spectacled Petrel *P. conspicillata*.

The Black Petrel specimen now in the Macleay Museum was evidently collected in May 1875 somewhere east of Port Stephens, and not near Sydney Heads. The last time this specimen was critically examined was by Hindwood (1940) and at this stage the similar Westland Petrel *P. westlandica* had not been described by Falla (1946). A later paper on records of *Procellaria* petrels from Australia refers to the specimen, but does not state whether it was examined (McGill 1959). The specimen is still in the Macleay Museum. It has an entirely dark brown plumage and a bill shape similar to specimens of this species in the Australian Museum. A check of the dimensions of the specimen concerned reveals that it is definitely a Black Petrel: it is labelled as a male and has an exposed culmen of 45.8 mm, tarsus length of 55.1 mm, wing chord of 342 mm and tail length of 101 mm—all within, or close to, the known measurements of this species (Marchant & Higgins 1990; see also Mathews 1917).

The date of May for the collection of this specimen is in itself unusual. Most records of the Black Petrel from New South Wales waters are from the months of October to December (N.S.W. Bird Atlas data). This coincides with the protracted arrival of birds at the breeding colonies in northern New Zealand after wintering in the eastern tropical Pacific (Imber 1987). It would seem that most Black Petrels in New South Wales waters 'overshoot' their destination of New Zealand. The May record, however, is in the period when the last birds leave the colonies in New Zealand.

Black-bellied Storm-Petrel *Fregetta tropica*

In the Macleay Museum there are two specimens of the Black-bellied Storm-Petrel collected on the *Chevert* expedition and labelled 'East Coast of New South Wales, May 1875' (specimens B.4446 and B.4447). There are another two mounted specimens (B.4448 and B.4449) that are believed to have been collected at the same time. This locality has thus been quoted for the four specimens first in Mathews (1917) and again by Alexander (1922), Kinghorn & Cayley (1922), Mathews (1933) and Hindwood (1940). However, at least some of these specimens were probably not collected in New South Wales waters.

Macleay's diary notes,

The *Fregetta melanogaster* [= *F. tropica*] of which Mr Masters secured 4 specimens, was abundant as far north as Break Sea Spit and an occasional specimen of *Fregetta grallaria* [= White-bellied Storm-Petrel] was seen but on coming within the Barrier Reef their place seemed to be completely taken by *Oceanites* ____ [= *oceanicus*, Wilson's Storm-Petrel] of these Masters secured 10 specimens.

Breaksea Spit is at the northern end of Fraser Island in Queensland at 24°38'S, 153°17'E. The ambiguity of the collecting locality was referred to by Hindwood & McGill (1958, p.108), although they did not directly suggest that the specimens could have been collected in Queensland waters.

Comben *et al.* (2001) could find only two published records of Black-bellied Storm-Petrels for south-eastern Queensland before 1973. These included a specimen in The Natural History Museum [formerly British Museum (Natural History)] supposedly collected from 'the coast of Queensland' (Saunders & Salvin 1896) and a mounted specimen formerly in the Queensland Museum labelled 'S.E. Queensland' (Alexander 1922), although the dates of collection of these specimens were not determined.

Just as with the Black Petrel, Mathews (1917) considered the specimens of the Black-bellied Storm-Petrel in the Macleay Museum to be the first definite records for this species in Australia. However, Gould (1865) noted that he had observed them 'almost daily' as he crossed the Indian Ocean in September 1838 and again 'met with it in great abundance between the eastern coast of Australia and New Zealand' in 'March 1840' [= April 1840; Gould left Sydney on 9 April 1840, see Hindwood (1938)]. Indeed, Kinghorn & Cayley (1922) pointed out that one of the specimens collected by Gould was acquired by Museum Victoria and was collected from west of Tasmania at 43°18'S, 140°52'E. This locality is some 10 km inside the current Australian Exclusive Economic Zone.

The reports of 'abundant' Black-bellied Storm-Petrels by both Gould in April 1840 and Macleay in May 1875 indicate that they were observing the northern migration. The nearest breeding place of this species to eastern Australian waters is the Auckland and Antipodes Islands which are south and south-east, respectively, of New Zealand (Marchant & Higgins 1990, OSNZ 1990). Marchant & Higgins (1990) noted that the northern migration takes place through the western Tasman Sea in May and June with the return migration in September, but the New Zealand Checklist (OSNZ 1990) suggested that most of the birds on the New Zealand breeding islands migrate east of New Zealand, presumably on the basis of records noted in Lovegrove (1978). Lovegrove's records from directly north of New Zealand in May 1977 ranged from 22°45'S, 177°02'E to 29°09'S, 174°37'E. He noted that the birds seen at the last locality departed from his yacht for the north-west. Yet there are few records of Black-bellied Storm-Petrels from near Fiji, with the exhaustive review of Jenkins (1986) referring only to Lovegrove's records which were actually outside Jenkins's definition of Fijian waters. The wintering grounds for this species in the western Pacific are not definitely known, but were believed to be in the Coral Sea by Marchant & Higgins (1990).

That the Tasman Sea is the usual migration route for at least part of the New Zealand breeding population of Black-bellied Storm-Petrels is confirmed by records in Comben *et al.* (2001) and the N.S.W. Bird Atlassers database. Comben *et al.* (2001) recorded the species only from the months of May to November. In New South Wales waters, records for this species come from the months of April to December (N.S.W. Bird Atlas data, see Table 1), with a single record on 28 February 1990 of a beachcast bird at Lake Cathie (31°35'S, 152°55'E) (Australian Museum specimen O.62106).

Most of this migration evidently takes place well out at sea, for example the bulk of the September and October records for New South Wales and those listed for 'other pelagic trips' in Comben *et al.* (2001) refer to birds observed by Captain N.G. Cheshire from the RV *Franklin* at, or near, the seamounts running north to south off the eastern Australian coast between 155° and 157° East longitude (N.G. Cheshire pers. comm.). In both cases Gould and Macleay were also well offshore when they observed the northern migration of Black-bellied Storm-Petrels.

Table 1

Monthly records of Black-bellied Storm-Petrels from the waters off New South Wales east to 160° E and off south-eastern Queensland. New South Wales records are based on records in the N.S.W. Bird Atlasers database and are records of one or more birds; south-eastern Queensland records are based on those given in Comben *et al.* (2001) and indicate the number of individuals seen. The unlocated records of Gould and Macleay are not included.

Month	J	F	M	A	M	J	J	A	S	O	N	D
SE Qld					1	1	5	2	47	26	1	
N.S.W.		1		1	3	7	1		20	20	4	1

The Spectacled Petrel in Australia

Macleay's reference to *Procellaria conspicillata* deserves some comment. The Spectacled Petrel is usually considered conspecific with the White-chinned Petrel *P. aequinoctialis* (e.g. Marchant & Higgins 1990) but has recently been shown to be a separate species (Ryan 1998, also Bourne & Casement 1993). There has never been any confirmed specimen or sighting of the Spectacled Petrel from Australasian waters (Southern 1951, Condon 1975, T. Palliser & N.G. Cheshire pers. comms) and so the status of early reports from Australia needs clarification.

When John Gould described *Procellaria conspicillata* he merely noted that it was 'very abundant in the Atlantic and Pacific' (Gould 1844). Specimens of this taxon that came from Gould and are now in the Academy of Natural Sciences in Philadelphia and The Natural History Museum have the vague locality 'Australian Seas' (Alexander 1921, Southern 1951). An additional two specimens were received from Gould by the Museum in Melbourne during April 1860 (specimens R.12172 and R.12173). Both have the equally vague location of 'Southern Oceans' written on original tags in the handwriting of Edwin Prince, Gould's secretary (pers. obs.). Four years after Gould's description of the taxon, Gould (1848) noted that

it was most plentiful between the twenty-fifth and fiftieth degrees south latitude. I observed it to be very abundant about the islands of St. Paul and Amsterdam and thence to Tasmania; I also noticed it in considerable numbers off the Falkland Islands in the Atlantic, and in the neighbourhood of Tristan d'Acunha.

Gould repeated this account in his *Handbook* (1865). It is thus evident that at least some of Gould's published records of this species are incorrect. In the 1844 paper there is no mention of the Indian Ocean as being within the Spectacled Petrel's range, but the Pacific Ocean is included, although it is not mentioned in later accounts.

Apart from the fact that the Falkland Islands are actually farther south than 50° South, Gould's 1848 account differs from the present known distribution of the species. The Spectacled Petrel now breeds only on Inaccessible Island in the Tristan da Cunha group of the South Atlantic Ocean and ranges at sea almost exclusively within the South Atlantic between 25° and 40° South (Ryan 1998). It has been suggested that Gould's observations may indicate that there was once a population of the Spectacled Petrel breeding on St Paul and/or Amsterdam Islands in the South Indian Ocean (Southern 1951, Bourne & David 1995) and that his observations 'off Australia' were correct (BirdLife International 2001).

However, it has long been considered by Australian workers that Gould's observations near Tasmania were in error (e.g. Mathews & Iredale 1921). By way of confirming that Gould made an error, I have examined the drafts to his *Birds of*

Australia now held in the Cambridge University Library, where he notes under the name '*Procellaria Perspicillata*' (a name that Gould used for the species in 1846), 'Plentiful between St Pauls and the Cape' and 'very abundant between the Falkland Islands'. There is no mention of Spectacled Petrels being seen near Tasmania, nor indeed near Tristan da Cunha.

This does not directly resolve the question as to whether this, or a similar species, bred on St Paul and Amsterdam Islands and in the Falklands, as bones of an unidentified *Procellaria* have been recorded from Amsterdam Island (Bourne & David 1995). This finding could suggest that Gould's 1848 account was correct and that he did record the species in these islands. However, Gould did not list the White-chinned Petrel in the drafts to his *Birds of Australia*, his finished folio volumes (1840–1869), nor the *Handbook* (1865), yet he referred to the White-chinned Petrel as being found at the Cape of Good Hope and Australia in his 1844 paper. Furthermore, Southern (1951) and Bourne & David (1995) noted that only White-chinned Petrels have been recorded at sea near the Falkland, St Paul and Amsterdam Islands from the 1840s onwards. It is more likely that Gould observed only White-chinned Petrels off these islands and near Australia, and later confused his accounts when writing his drafts to the *Birds of Australia*. An examination of the *Procellaria* bones from Amsterdam Island may resolve the problem if there are any osteological differences between the taxa.

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