NOTES ON TWO RARE PETRELS

(H. caerulea and Pt. brevirostris.)

By J. C. Davenport and R. B. Sibson.

The Checklist following Dell (2) allows twenty-one records of the blue petrel (**H. caerulea**) in New Zealand. Additional records are one from near Dargaville in 1950 and two from Muriwai in 1953. During the winter of 1954 the Auckland west coast has been more effectively patrolled than ever before, and one result has been that between the Waikato estuary and Muriwai the remains of fourteen blue petrels have been found.

Visiting Muriwai on 27/6/54, S. found the beach strewn with prions, **P. salvini** predominating, and among them were two blue petrels freshly ashore. On the same day S. C. Rutherfurd found the first of the Awhitu specimens. The weather had not been of the kind usually associated with big "wrecks" of petrels, and to find so many prions ashore was very surprising. On June 23, a high pressure system covered the Tasman. On the 24th a cold front was developing south of Tasmania and on the 25th, pushed by another "high" which covered the whole of the south Tasman, this cold front had moved gently north-eastwards. On the 26th it reached Auckland. There were no strong winds and fair weather continued to the south. The second Awhitu specimen found by V. M. Rutherfurd on July 4th, probably came ashore at this time.

The second "wreck" occurred about July 10. On the 9th a strong southerly air stream was moving up the Tasman and on the morning of the 10th gusts of 100 m.p.h. were registered at Wellington, and violent squalls laid a carpet of sleet over the exposed slopes of the Bethells sand-hills. Subsequently, R. S. Hill brought in three blue petrels from the coast west of Waiuku; A. C. Coutts found a skeleton at Piha, and D. and H. G. Warburton recovered three fragmentary specimens from Muriwai.

All the petrels, including light-mantled sooty and grey-headed albatross, white-headed petrel, blue petrel, and prions of four species, which were examined, were thin and without reserves of fat. It would appear that there had been a prolonged period of food scarcity, which so weakened them that even the mildly unfavourable weather of June 24-26 was too much for their powers of resistance, as they were steadily driven up the Tasman Sea towards the Auckland west coast. On July 10th the force of the wind was such that it must have brought disaster to any pelagic bird already suffering from starvation and now threatened by the long lee-shore of northern New Zealand.

There was evidently a third "wreck" of blue petrels about the end of August or early in September. Two were brought in from Piha and Muriwai by A. C. Coutts and R. S. Colegrove; and Miss N. Macdonald recovered a third on September 19th from the Waikato rivermouth.

The following measurements were obtained:—

	Average.	Extremes.
Wing	216 (8)	210—222 m.m.
Tarsus	32.7 (6)	31.5—34.8 m.m.
Culmen	26.5 (10)	25.6—27.6 m.m.

Only three specimens were sexed. All were males. Two, which were worth preserving, were made into study-skins and have been deposited in the Auckland War Museum.

The Kerguelen petrel (**Pt. brevirostris**) is on the New Zealand list on the strength of three specimens wrecked on the Wellington coast in July, 1934. Two of these were discussed by Oliver (Emu 34, p. 158). Suspicions that this rare petrel might again be in New Zealand waters were raised when R. S. Hill brought in the battered head of a medium-sized pterodroma, which he had found ashore west of Waiuku on the evening of July 10th, the day of the big southerly gale.

At first glance it resembled the head of a mottled petrel (**Pt. inexpectata**), but the sombre feathering and the narrowness of the bill seemed to rule out this species, which in any case is seldom cast ashore on the Auckland coast in midwinter. A few days later a good skin was received from V. M. Rutherfurd, who had found it on July 11, and S. C. Rutherfurd sent in another head. On July 18th, D. A. Urquhart recovered from Maioro the remains of two brown petrels which he described as being "like small **macropteras**". He estimated that they had been ashore about a week. Thus five Kerguelen petrels are known to have been blown on to the Awhitu peninsula on or about July 10th. Subsequently, D. found a dried corpse at Muriwai.

But that is not the end of the story. Kerguelen petrels evidently remained in New Zealand waters for some weeks till past mid-August, and two more were found by two schoolboys, A. C. Coutts and R. S. Colegrove, who spent much of their holiday combing all the beaches between Manukau Heads and Muriwai. On August 28th they found one at Maori Bay, just south of Muriwai. It had been picked clean by gulls but had obviously not been long ashore. On September 5th they found another at Whatipu. It was wrecked probably about a fortnight earlier.

Thus we have been able to examine the remains of eight specimens, and the following measurements have been obtained. For purposes of comparison, Oliver's and Serventy's measurements of a Wellington and a Marion Island specimen are placed alongside.

	Extremes.	Average	Oliver.	Serventy.
Wing	245—258 m.m.	253 (4)	255	260
Tail	100—111 m.m.	106 (4)	108	106
Tarsus	35.4—37 m.m.	36 (4)	38	38
Culmen	25.8—26.6 m.m.	26.2 (8)	26.5	27.4
Width of Bill	9.5—10.2 m.m.	9.8 (8)	—	10.9

The most recent contribution to the literature of **Pt. brevirostris** is that of Rand (Ibis 96) who found difficulty in identifying certain dark petrels which he studied on Marion. His main arguments are that: (a) **brevirostris** of Marion is a bigger bird than **lugens** of Kerguelen; (b) **brevirostris** may be a winter-breeder; (c) the dusky summer-breeding petrels of Marion are not **brevirostris** but a dark phase of the soft-plumaged petrel (**Pt. mollis**). By way of comment we would diffidently suggest:— (a) Rand's diagnosis is based on too few specimens. If **lugens** and **brevirostris** are conspecific, the high-latitude Kerguelen **lugens** might be expected to be a more robust bird than the lower-latitude **brevirostris** of Marion. (b) Both Alexander and Murphy state that **brevirostris** is a summer-breeder and its occurrence in Western Australia and New Zealand between June and August indicates that this is so, unless these birds, wrecked so far from their breeding islands, are wandering non-breeding juveniles. (c) Elliott (Bull. B.O.C., 74) has recently described a dark form of **mollis** from Tristan da Cunha. If there is a similar dark **mollis** breeding at Marion, it may explain the dark petrels which Falla observed in company with **mollis** in the South Indian Ocean and which he tentatively identified as **brevirostris.**

In 1937 Falla (3) suggested that **brevirostris** might prove to be a dark phase of **mollis,** but Murphy (4) regards this as unlikely and holds rather that the texture and pattern of the mottled petrel (**Pt. inexpectata**) except in the wing lining, suggest kinship with **brevirosris.** Against this are the proportions of the bill and the skull. Viewed from the side, the crania of these two petrels are not unlike, but from above they have quite different outlines. The broadening of the bill of **inexpectata** gives it an appearance of strength which is lacking in **brevirostris.** The average width of the culmen of five **inexpectata** was 11.7 m.m. as compared with 9.8 m.m. of eight **brevirostris.** There is a corresponding and very obvious difference in the width of the palatine bones.

Rand's measurements of the width of the culmen of **lugens** and **brevirostris**, 5 m.m. and 7 m.m. respectively, seem unusually small and are difficult to understand. Unfortunately, he has omitted one measurement which might be significant, namely, that of the width of the culmen of **mollis**, both normal and suspected dark phase. However, this measurement for two specimens of **mollis** from Marion is given by Serventy (1) as 11.5 and 11.6 m.m. Somewhat anomalously, Murphy (4) while including **brevirostris** and **inexpectata**, omits **mollis** from his paper on the "Larger Petrels of the genus Pterodroma." From a study of the measurements it would seem that the skulls of **mollis** and **inexpectata** are strongly alike, while that of **brevirostris** is diagnostically slender. Skulls of **brevirostris** and **inexpectata** which we have examined, are quite distinct and easily separable.

There are good grounds for believing that the specimens of **brevirostris** recently recovered from the Auckland west coast came from Marion or adjacent islands. The measurements of our eight birds, the width of the bill being excepted, agree closely with Rand's measurements of Marion **brevirostris**; and his statement that "the nostrils are raised, bulbous and have a visible septum" fits such of our specimens as have these features intact. According to Mathews and Rand, **lugens** of Kerguelen has a smaller bill, with the nostrils flattened, partly closed and the septum hidden. Other significant evidence is that when these so-called Kerguelen petrels were wrecked, **P. salvini** which are not known to breed at Kerguelen, but which according to Crawford (1) breed at Marion "literally by the million," were being driven ashore literally in thousands on the west coast of northern New Zealand.

In the light of recent discoveries, it may well be that Marion should be designated the type-locality of **brevirostris**. Judging from its label, the original specimen came from South African waters which, as petrels fly, are not far from Marion. Later a deceptively similar petrel was found breeding at Kerguelen which was consequently designated the type-locality.

One thing that does emerge from a perusal of the literature of the medium-sized pterodromas of the South Indian Oceans is that their life-histories are comparatively unknown and their taxonomy needs revision.

BIBLIOGRAPHY.

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WHITE HERON (**Egretta alba**) AT NEW PLYMOUTH.—This bird was first seen at 3.45 p.m. on the afternoon of May 18, 1953. It was originally flying in a westerly direction but when almost directly overhead it changed and flew toward the north-east. It was later reported as having been seen at Pukekura Park. However, seven days later, on 25th May, at 9.55 a.m., it was seen flying south-west at on approximate altitude of 1000 feet. Nevertheless, it was again reported on the following day as having returned to Pukekura Park. The main lake at this tourist centre had been partly drained, leaving a small pond which teemed with carp and goldfish of all sizes. The heron was often seen in the next fortnight feeding on insects and fish which it caught in the mud and shallow water at the verge of the pond. It would allow observers to approach to within ten feet before it took fright and flew a short distance down the pond. It was in the area for about three weeks but when the lake was refilled it left and no further records of its whereabouts were available.—David Medway, New Plymouth.