## SHORT NOTE

A review of the current range of Stewart Island shag (Leucocarbo chalconotus) and two records from Lake Ellesmere, Canterbury

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The Stewart Island shag (*Leucocarbo chalconotus*) has a restricted range comprising Stewart I, Foveaux Strait and the south-eastern coasts of the South I (Marchant & Higgins 1990; Lalas 1993). With the exception of Oliver (1955) who stated that the Stewart Island shag occurred at Dusky Sound, most authorities (Falla et al. 1978; Powlesland et al. 1993; Heather & Robertson 1996; Taylor 2000; Robertson et al. 2007) agree that its western distribution limit is Te Waewae Bay in Southland. On the eastern side of the South I, the historical northern distribution limit of Stewart Island Shag seems to have been in the vicinity of Otago Peninsula (Falla et al. 1978). However, in recent decades the species has become more abundant along the North Otago coast with a northward spread of roosting sites (Lalas & Perriman 2009). In this study, I report on the northern distribution of Stewart Island Shag along coastal Otago and Canterbury and describe a range extension for this species to Banks Peninsula.

I surveyed the North Otago and South Canterbury coasts regularly between 1996 and 2007. During this period, the northern-most breeding

colony that I observed was located at Maukiekie I, off Moeraki Peninsula (45°21'S, 170°51'E). However, I also observed more northerly roosting sites of Stewart Island shags at Cape Wanbrow (45°07'S, 170°58'E), Oamaru Harbour breakwater (45°06'S, 170°58'E) and the Waitaki River-mouth (44°55'S, 171°09'E). The growth of the Maukiekie I colony and the trend for increasing numbers roosting on the North Otago coast has been well documented by Lalas & Perriman (2009). The Waitaki River marks the regional boundary between Otago and Canterbury. The main roosting site used by Stewart Island Shags in this location was on the northern (Canterbury) side, on a narrow shingle spit dividing the river-mouth lagoon from the sea. Counts at this roost included a total of 30 shags on 22 April 2007 and 13 shags on 16 Jun 2007. Stewart Island shags were also observed in small numbers along the South Canterbury coastline from the Waitaki Rivermouth northwards to Lake Ki-Wainono (44° 40'S, 171°09′E).

On 26 May 2009, I found and photographed a lone Stewart Island Shag roosting on an old railway embankment at Ataahua Point (43°46′S, 172°38′E) on the eastern shoreline of Lake Ellesmere (Te Waihora), ~5.9 km from sea. (Fig. 1). This bird was

resting, but was sufficiently alert to vigorously evade capture and was able to fly short distances. It was left alone and seen later the same day by P. Crutchley (pers. comm.). Next day the bird had gone and a search of the immediate area indicated that it had probably flown away rather than perished. Identification of the bird as a juvenile bronze phase Stewart Island Shag was confirmed from photographs by L. Esler and P. Schweigman (pers. comm.) and subsequently accepted by the OSNZ Records Appraisal Committee (UBR 2011/15). Wind patterns in the week preceding this sighting had been predominantly southerly (20 May, 24 May, 22 May) or south-westerly (19 May, 23 May, 25 May), with an 80 km/hr strong south-westerly gale on 23 May (CCC weather station data, Port Hills, Christchurch). This suggests the shag may have been blown further north of its previous range by strong winds.

On 13 Dec 2010, I observed a juvenile bronze phase Stewart Island Shag flying along the surf line at Kaitorete Spit (43°50′S, 172°36′E), ~6.8 km from the location of the 1st sighting. This record was accepted by the OSNZ Records Appraisal Committee (UBR 2011/16). Although of identical plumage, there is no way of knowing if these 2 sightings of Stewart Island shag involved the same or different individuals. As with the 1st sighting, the 2nd followed a week of predominately southerly wind flows (CCC weather station data, Port Hills, Christchurch) and again its presence could possibly be due to strong winds.

These are the 1st confirmed records of Stewart Island Shag north of the southern-most parts of South Canterbury and represents a range extension (at least in terms of vagrancy) of 155 km from the Lake Ki-Wainono area to the southern side of Banks Peninsula. Although occasional beachwrecked Stewart Island shags have been found in South Canterbury (Powlesland et al. 1993), the most northerly confirmed beach-wreck prior to my 2009 observations was a bronze phase Stewart Island shag found dead on the ocean beach at Lake Ki-Wainono on 6 Feb 1991 (P. Langlands, pers. comm.). Further north, at Godley Head (43°35'S, 172°48'E) on Banks Peninsula, a vagrant Leucocarbo shag was observed by S. Petch and T. Hanley on 15 Dec 2003 and the record (UBR 15/04) was accepted by the OSNZ Rare Birds Committee (Anon. 2005; P. Scofield, pers. comm.). This bird was not conclusively identified to species, but was thought more likely a king shag (Leucocarbo carunculatus) than a Stewart Island shag (S. Petch, pers. comm.).

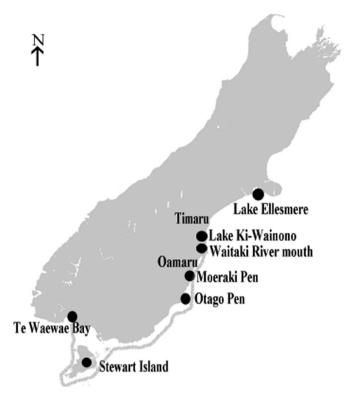
Lalas (1993) wrote that Stewart Island Shags occasionally reach Timaru, and this is the authority on which Taylor (2000), reported that "the species is found between Timaru and Foveaux Strait" (G.A. Taylor, *pers. comm.*). However, Lalas did not



Fig 1. Juvenile bronze phase Stewart Island shag, Lake Ellesmere, 29 May 2009.

personally observe Stewart Island Shags at Timaru (pers. comm.) and there were no confirmed records published in classified summarised notes, reports of the OSNZ Rare Birds Committee or elsewhere. I found that the breakwaters at Timaru Harbour (44°23′S, 171°16′E) support roosts of spotted shags (Stictocarbo punctatus) with small numbers of black shag (Phalacrocorax carbo), little shag (P. melanoleucos) and pied shag (P. varius). Like the Oamaru breakwater, Timaru Harbour would seem an ideal roosting site for Stewart Island shags, however the occurrence of this species at Timaru is unconfirmed.

In recent years, the numbers of Stewart Island shags in North Otago have increased markedly (Lalas & Perriman 2009) with the Oamaru Harbour roost now regularly supporting 200-300 birds overnight (C. Lalas, pers. comm.). A further expansion of feeding areas and roosting sites northwards would seem likely. Based on previous records and



**Fig 2.** Known breeding range of Stewart Island shag along the southeastern coast of the South Island. The location of northern roost sites and new records are given by the black dots. Total breeding range indicated by line enclosing the coast from Te Waewae Bay to Lake Ki-Wainono.

the current observation, the known range of the Stewart Island shag is given in Fig. 2. My records of Stewart Island shags at Lake Ellesmere should make observers alert to the possibility of encountering this species anywhere in coastal South and Mid Canterbury as far north as Banks Peninsula.

## **ACKNOWLEDGEMENTS**

Many thanks to Nick Allen, Phil Crutchley, Lloyd Esler, Chris Lalas, Peter Langlands, Sheila Petch, Peter Schweigman, Paul Scofield and Graeme Taylor for information used in this paper and to Julie Flanagan for assistance with graphics. Special thanks to Lloyd Esler, Phil Crutchley, Sheila Petch and Kay Holder for reviewing earlier drafts of this paper.

## LITERATURE CITED

Anon. 2005. Report of rare birds committee, 9 February 2005. Southern Bird 21: 5.

Bull, P.C.; Gaze, P.D.; Robertson, C.J.R. 1985. The atlas of bird distribution in New Zealand. Wellington: Ornithological Society of New Zealand.

Falla, R.A.; Sibson, R.B.; Turbott, E.G. 1978. The new guide to the birds of New Zealand and outlying islands. Auckland and London: Collins.

Heather, B.D.; Robertson, H.A. 1996. The field guide to the birds of New Zealand. Auckland: Viking.

Hutton, F.W.; Drummond, J. 1923. The animals of New Zealand: An account of the Dominion's air-breathing vertebrates (4th edition revised). Auckland: Whitcombe & Tombs. Lalas, C. 1993. Status and monitoring of marine shags in Otago Conservancy, with recommendations on research news. Conservation Advisory Science Notes No. 13. Wellington: Department of Conservation.

Lalas, C.; Perriman, L. 2009. Nest counts of Stewart Island shags/mapua (Leucocarbo chalconotus) in Otago. Department of Conservation Research & Development Series 314. Wellington: Department of Conservation.

Marchant, S.; Higgins, P.J. 1990. Handbook of Australian, New Zealand and Antarctic birds. Melbourne: Oxford University Press.

Moon, G. 1992. The Reed field guide to New Zealand birds. Auckland: Reed.

Oliver, W.R.B. 1955. New Zealand birds. Wellington: A.H. & A.W. Reed.

Powlesland, R.G.; Powlesland, M.H.; Pickard, C.R. 1993. Seabirds found dead on New Zealand beaches in 1990, and a review of *Phalacrocorax*, *Leucocarbo*, and *Stictocarbo* species recoveries, 1943 to 1990. *Notornis* 40: 27-43.

Robertson, C.J.R.; Hyvonen, P.; Fraser, M.J.; Pickard, C.R. Atlas of bird distribution in New Zealand 1999-2004. Ornithological Society of New Zealand.

Taylor, G.A. 2000. Action plan for seabird conservation in New Zealand, part A: threatened seabirds. Threatened Species Occasional Publication No.16. Wellington: Department of Conservation.

Turbott, E.G. (Convener). 1990. Checklist of the birds of New Zealand and the Ross Dependency, Antarctica. Third Edition. OSNZ/Random Century.

**Keywords** Stewart Island shag; range extension; breeding range; *Leucocarbo chalconotus*