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## SHORT NOTE

## Southern Crested Grebes on a lowland coastal lake in winter

During the week of 18-24 July 1987, 52 lakes, ponds and lagoons throughout Canterbury were surveyed as part of the annual census of Southern Crested Grebes (*Podiceps cristatus australis*) and New Zealand Scaup (*Aythya novaeseelandiae*). One hundred and seventy-six Crested Grebes were found, the highest number recorded in Canterbury since our counts began in 1981 (unpubl. data) and only 17 short of the total count from a South Island-wide survey in 1980 (Sagar 1981). The most notable feature of the 1987 count was the discovery of 20 Crested Grebes on Lake Forsyth, a lowland coastal lake near Christchurch. An additional grebe was seen on nearby Lake Ellesmere at Kaituna Lagoon on the same day. Only Lake Alexandrina had more grebes (59 birds).

Lake Forsyth (680 ha) is a coastal lagoon adjacent to Lake Ellesmere. It is long and narrow and surrounded by steep hills which are part of Banks Peninsula. The waters are highly eutrophic, often being discoloured with high concentrations of algae.

The Crested Grebes were scattered over the whole lake but two concentrations of 10 and 6 birds were seen feeding in loose flocks. All birds were in full breeding plumage. "Head shaking" (pair maintenance display), aggressive displays and chases were observed. A large number of Black Shags (*Phalacrocorax carbo*) and Little Shags (*P. brevirostris*) was also present on the lake, indicating that a rich source of fish, an important food for Crested Grebes, was probably present.

The grebes were counted each week for six weeks and their numbers declined steadily until none was left on 31 August (K. Harrison). The weekly counts were: 24 July, 20 birds (CO'D, P. McClelland); 30 July, 19 (P. Reese); 8 August, 15 (CO'D, P. Dilks); 14 August, 11 (K. Hughey); 19 August, 8 (PMcC, A. Grant); 26 August, 3 (PMcC).

This is the first time that a large group of Crested Grebes has been recorded on the east coast of the South Island. Single grebes and pairs have been found on Lake Ellesmere, Lake Forsyth, the Avon-Heathcote Estuary and Brooklands Lagoon, but only during severe winters in the high country when most lakes have frozen over. However, winter 1987 was very mild, and no lakes were frozen during the July survey. It appears that the Forsyth grebes may have come from the Alexandrina lakes, some 190 km from Banks Peninsula. Counts on all other lake systems produced about the same number of grebes as were recorded in previous years when lake conditions were similar. Only the Alexandrina count (59) was much lower than the 1986-1987 summer high of 100 birds (R. Nilsson, pers. comm.) The 20 grebes at Lake Forsyth would largely account for most of the 30+ grebes absent from Lake Alexandrina. The occurrence of birds on Lake Forsyth is the first case of "mass" movement to the coast, a behaviour which is common in the nominate race, *P. cristatus cristatus*, of Europe (Cramp & Simmons 1977) and occurs in *P. c. australis* within Australia (Frith 1969). Such movements were not recorded in New Zealand by Sagar & O'Donnell (1982), who suggested that, apart from stragglers, grebes did not undertake long-distance movements from their favoured alpine and subalpine lakes.

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