Last week (February, 1949) while blackberrying at Otatara, in the vicinity of Invercargill (4 to 5 miles distant) I followed a grass track into a swampy place near the estuary, when the twang of what I thought to be a fern bird made me twice-alive. I hav seen and heard the fern bird on several occasions while at Stewart Island, on tracks near the Freshwater River, so when I saw the bird sliding through manuka scrub and rush in a mouse-like manner and uttering its constant cry, I was delighted. So near to the town! Before I left the swamp I had seen three of these birds and found a disused nest. The nest was not a recent one. Two of the birds appeared to be a pair, as it was clear that one uttered a single note which the other caught up and answered. The feeling of this double note was as if it came from one bird. Very curious it was; and as the one bird was within a yard of me some of the time and many times slid very much closer, I had an unimpeded view. The other bird was over the other side of a ditch, seeking food low down among rush, under scrubby manuka. About 100 yards along the track and nearer the estuary, I heard again the metallic twang and saw another bird, the third. In January a friend of mine saw one at her camp at Golden Bay, Stewart Island.—(Mrs.) Olga Sansom, Invercargill.

SUB-FOSSIL BIRD REMAINS FROM LAKE GRASSMERE.

By Elliot Dawson, Christchurch.

Although the society is concerned mainly with living birds, a few notes regarding bones of birds, some of which are now extinct, found in sand dunes near Lake Grassmere, may be of interest to members.

In certain parts of the sand dunes near the south end of Grassmere Spit, Marlborough, are found deposits of bird bones and Maori middens. The middens are scattered over a wide area of loose wind-blown sand. The wind has blown away large hollows, leaving miniature plateaux and valleys in the midden areas, in which are found moa bones, egg shell and other bird remains. Thus we can see that the bird bones from this area may be refuse from the midden, or, as in the case of several other sites, merely natural accumulations of bones. If the latter case is correct, how are we to explain this large conglomeration of material? Judging by various geological evidence, there is every likelihood that this site was once a swamp area, like Pyramid Valley, which in time dried out and became covered by sand dunes.

Some of the bones have definitely been blown out from the midden layer but there are only two species from there about which I have any definite proof: Spotted shag (**Stictocarbo punctatus punctatus**) and blue penguin (**Eudyptula minor**). Many of the others, such as **Gallirallus, Megadyptes, Anas, Hemiphaga,** several petrels, etc., probably are also midden debris but I lack sufficient proof.

We can therefore see that this site presents a most interesting problem in many ways. A list of species I have collected and identified from there appears below. I have to thank Mr. R. S. Duff, Director of the Canterbury Museum, for information and assistance, and also Drs. R. A. Falla and W. R. B. Oliver.

Kiwi (**Apteryx australis and A. oweni**); yellow-eyed penguin (**Megadyptes antipodes**); blue penguin (**Eudyptula minor**); mutton bird (**Puffinus griseus**); about four other species of petrels (**Procellariiformes**); Marlborough shag (**Leucocarbo carunculatus carunculatus**); spotted shag (**stictocarbo punctatus punctatus**); grey duck (**Anas poicilorhyncha**); paradise duck (**Tadorna variegata**); brown duck (**Anas aucklandica chlorotis**); two or three other species of ducks (**Anas**); extinct swan (**Chenopis sumnerensis**); harrier (**Circus approximans**); extinct eagle (**Harpagornis moorei**); extinct crow (**Corvus moriorum**); wekas (**Gallirallus sp.** and **G. australis**); rail (**Rallus sp.**); extinct coot (**Fulica prisca**); black-backed gull (**Larus dominicanus**); red-billed gull (**Larus novaehollandiae**); pigeon (**Hemiphaga novaeseelandia**); kaka (**Nestor meridionalis**); kakapo (**Strigops habroptilus**); at least three Passeri-

formes and at least two waders (**Charadriiformes**) yet to be identified; and various other odd species also.

We see that perhaps the most interesting inclusions in the above list are the extinct eagle, crow, coot and swan and also the kakapo and yellow-eyed penguin.

BIRD LIFE ON AN ESTUARY.

By (Mrs.) N. F. Stidolph, Masterton.

To the bird lover living inland the shore—and particularly the river-mouth—abounds with interest. An Easter visit to the Ohau River mouth was none the less exciting for its lack of migrants. Numbers of dotterels (**Charadrius bicinctus**) were feeding on the mudflats in more or less nondescript plumage, several stilts (**Himantopus himantopus**) paddled up and down in the shallow water and many more slept on the sunny strip of sand on the edge of the spit. There also five oyster-catchers (**Haematopus reischeki**) careered up and down the spit making absurd noises and showing off. Two of them bathed near to where I was sitting but a piping call from the rest of the party was too exciting for them and they left the water in a hurry.

Across the spit, near the ocean, black-backed gulls (**Larus dominicanus**) in plenty soared high in the air and dived with harsh cries after their falling shells. Gannets (**Moris serrator**) skimmed the water in a graceful line and odd shags (**Phalacrocorax carbo**), black and grotesque, flew between the shore and the hills. In the water close by three small gulls (**Larus novaehollandiae**) floated with the current and fed continuously on the surface.

Every few minutes dotterels arrived to join those already sprinting about on the mudflat. They were very aggressive. Two, which were feeding round the edge of the water nearest me were particularly so. They fed with their eyes on each other and kept away from the rest of the flock and never more than a few feet from where they were when I arrived and I was there nearly two hours. These two, intent on each other and their food, had some difficulty in pulling out of the mud what appeared to be a worm. It was long and pink and very tempting to a kingfisher (**Halcyon sanctus**) which suddenly flashed into their midst—so blue against the brown mud—snatched the worm and swallowed it. He hopped about on the mud with his funny short legs but the dotterels joined forces and attacked him. The whole flock joined in and he had some difficulty in beating his way through them. They drove him quite a distance upstream and finally left him on a log very agitated, flicking his tail. They all returned to the mudflat and went about their feeding as usual but with a peculiar little peeping such as a number of chickens make when disturbed.

The kingfisher hopped about the bank catching what appeared to be small crabs, but it was rather far away for me to be sure. My attention was drawn from him by the two dotterels he had robbed. They flew back to their little bit of mud and water, but in doing so I think they collided, for they attacked each other viciously and fell into the water—out of which one managed to fly while the other appeared to be unable to take off and had to swim. When I looked back the kingfisher had gone.

My attention was now drawn to the calling of silver-eyes (**Zosterops lateralis**) in the lupins on the sandhills and I decided to leave the mud for a few minutes to investigate. Before I could get there, however, I saw what to me was a novel sight—silver-eyes rising from the scrub, circling round in the air with more and more joining in, rising higher and higher still in circles until I could hear them but no longer see them. They didn't come down again at that place. When I had to leave the beach the dotterels were still running ceaselessly on the ever widening stretch of mud.

(The date of these observations was April 5, 1947.)