

noted. At Jackson's Bay many white-fronted terns (*Sterna striata*) and red-billed gulls (*Larus novaehollandiae*) were seen. Moreporks were again heard at night.

Jackson's Bay, Dec. 31, 1946, to Big Bay, Jan. 7, 1947.—Riflemen, again numerous; fantails and bellbirds, numerous; grey warblers, tomtits and grey ducks, a few; paradise ducks, seen but in fewer numbers, one egg found; shining cuckoo, occasional calls; long-tailed cuckoo, frequently heard; pied and black oystercatchers, coast to Martin's Bay, about 10 pairs of each, also two birds believed to be hybrids, were black with white under wings and tail, three oystercatcher's eggs were found. blue or reef heron (*Demigretta sacra*), about 4; black shags, 2; black-backed gulls (*Larus dominicanus*), with young.

Big Bay to Martin's Bay, Jan. 8-9.—Gulls, black-backed; oystercatchers, a few black and pied; paradise ducks and tomtits, several; bellbirds, many; moreporks, calls at night; black swans (*Cygnus atratus*), approximately 200 in one locality.

Martin's Bay to Hollyford, Jan. 10-15.—Tuis, plentiful; bellbirds, in numbers but less noticeable than the tuis; paradise and grey ducks, noted but not numerous; grey warblers, a few; parrakeets, again all identified were yellow-fronted; long-tailed cuckoo, calls heard repeatedly all the way; riflemen and pigeons, very plentiful; yellowheads (*Mohoua o. ochrocephala*) seen in small numbers in several localities; kakas, not seen until near Marion on Jan. 14, were not seen at all at Deadman's on the previous day; two years ago, kakas were common at Deadman's, but at time trampers with rifles were shooting them.

BIRDS OF KAINGAROA FOREST.

By H. R. Kyder, Kaingaroa.

During the course of my work in the Forestry Service, I have gathered the following notes on birds in the Kaingaroa Forest area:—

Black Shag (*Phalacrocorax carbo*).—Parties of two, three and odd birds noticed along the Rangitaiki River, 15/12/47.

Bittern (*Botaurus poiciloptilus*).—An odd one to be seen and heard at night in the swamps at Waireka, near the main Te Whaiti-Rotorua Road.

Grey Duck (*Anas poecilorhyncha*).—Flock of 23 counted on a lagoon in the plantation near Hangowahine Lookout. Several birds were seen along the banks of the Rangitaiki River.

Bush Hawk (*Falco novaeseelandiae*).—Odd ones to be seen throughout the forest. One made a din whenever we went near a tree on which it was perched. An examination revealed a nest in which were four eggs. I noticed with interest that beside the nest on the ground were the remains of the previous year's nest, still in good shape, giving one the impression that the birds return to nest in the same place each year.

Harrier (*Circus approximans*).—Large numbers are to be seen in the forest. No doubt this can be explained by the large number of deer and pig carcasses left lying about by the deer cullers and private hunters during the winter months.

Californian Quail (*Lophortyx californicus*).—Flocks of as many as 30 can be seen practically anywhere in the forest.

Pukeko (*Porphyrio porphyrio*).—Odd birds and occasional parties of from five to six to be seen along the Rangitaiki River.

Pigeon (*Hemiphaga novaeseelandiae*).—Odd birds about the edge of the native bush on the foothills of the Urewera Country, along the eastern boundary of the exotic plantation.

Shining cuckoo (*Chalcites lucidus*).—First of season seen and heard October 2, 1947, at Waireka. At this time it is to be seen along the eastern boundary of the forest near Te Awa.

Long-tailed Cuckoo (*Eudynamis taitensis*).—First seen at Te Awa on December 15, 1947. Two were seen and heard giving their long drawn-

out whistle on January 9, 1948, along the Wheao River on the eastern boundary.

Morepork (*Ninox novaeseelandiae*).—Odd birds are to be heard calling from the *P. radiata* trees around the Kaingaroa village.

Kingfisher (*Halcyon sanctus*).—Two seen sitting on a branch over a small stream at Murupara.

Pipit (*Anthus novaeseelandiae*).—Plentiful throughout the forest, and to be seen anywhere in parties of two to six.

Fern Bird (*Bowdleria punctata*).—Odd birds and occasionally two are to be seen and heard around the Pekepeke Lookout. The compartments here were originally planted in *P. radiata*, but through failure in growth and the heavy fern which resulted, it makes an ideal place for this bird.

Grey Warbler (*Pseudogerygone igata*).—Quite numerous and can be found anywhere in the forest, sometimes in parties of five and six.

Pied Tit (*Petroica macrocephala toitoi*).—It can be seen frequently in pairs and three's. One hen was found sitting on a nest containing five chicks.

Robin (*Miro australis*).—From observations I have made, I feel inclined to say this bird is on the increase in certain compartments within a radius of five miles around Kaingaroa. Generally speaking, it is to be found only in the Oregon compartments, but I have found it in *P. muricata* compartments as well. In some Oregon compartments around Kaingaroa it is to be heard early in the morning singing quite lustily.

Fantail (*Rhipidura fuliginosa*).—Occasionally two's and three's can be seen together and odd ones all over the forest.

Whitehead (*Mohoua ochrocephala albicilla*).—Found in large numbers, as many as 20 or 30 together.

White-eye (*Zosterops lateralis*).—During the winter this bird is seen in flocks of varying numbers ranging from two's and three's to as many as 60, feeding on grubs on the branches of the trees. During the summer months it becomes very scarce, although on December 29, 1947, a nest was found containing three chicks and two unhatched eggs.

Tui (*Prothemadera novaeseelandiae*).—Quite a number of tuis are to be found around the Pekepeka Lookout and as far down the Rangitaiki River as the Te Awa Camp. No doubt this can be explained by the number of fuchsia trees and native flowering shrubs growing in that area, and its closeness to the native forest.

Bellbird (*Anthornis melanura*).—Quite plentiful; a number to be seen and heard in the gum trees growing around the village of Kaingaroa.

Greenfinch (*Chloris chloris*).—About the end of February this bird is found in *P. radiata* compartments feeding on the seed of the trees.

Chaffinch (*Fringilla coelebs*).—Plentiful all the year, particularly during March, April and May, when it is quite common to see flocks of 400 to 500.

Redpoll (*Carduelis cabaret*).—During the summer months few of these birds are to be seen, but they come back in March, April and May, and can be seen in large numbers feeding in the firebreaks and in planted areas that have failed.

Goldfinch (*C. carduelis*).—Appears to depart during the summer, but returns late in February, when it can be seen eating the seeds on the dried thistle heads, dandelion seed and various grass seeds.

House Sparrow (*Passer domesticus*).—Large numbers are to be seen around the houses at Kaingaroa although their absence is noticeable in the forest itself.

Thrush (*Turdus ericetorum*).—A number to be seen in the paddocks adjoining the village, around the houses, and throughout the forest.

Blackbirds (*T. mérule*).—Plentiful everywhere in this area, and to be found at all times of the year.

Yellowhammer (*Emberiza citrinella*).—Occasional birds are seen around the camps where horses are still used, feeding on the chaff, etc.; otherwise it is very rare.

Hedge Sparrow (*Prunella modularis*).—A few to be seen in Kaingaroa. A nest was found on November 15, 1947 in the hedge surrounding my house. The nest contained three young chicks.

Skylark (*Alauda arvensis*).—A number to be found in all the surrounding paddocks in Kaingaroa and around the outlying camps, etc.

FOOD OF A MOREPORK.

By J. M. Cunningham, Masterton.

On March 20, 1944, the shrubbery at 39 Renall Street, Masterton, echoed all day with the alarm notes of many kinds of birds, the most vociferous of which were, of course, blackbirds (*Turdus merula*). The cause of the disturbance was not long in doubt: a morepork (*Ninox novaeseelandiae*) had taken up residence in the lower fork of a cabbage tree (*Cordyline australis*) and from then on until June, 1945, could be seen from below without difficulty at any time of day. The situation was such that sunlight often fell on the roosting bird. During the winter months, the bird, which left the roost about 5 p.m. (dusk) settled again a few minutes before 7 a.m., and immediately the other birds, just stirring at that time, discovered its presence, they collected round, scolding constantly. They soon grew tired of this, however, and the bird was never seen to be actually mobbed as has been described, or driven away by the blackbirds, thrushes (*Turdus ericetorum*), greenfinches (*Chloris chloris*), chaffinches (*Fringilla coelebs*), fantails (*Rhipidura fuliginosa*), silvereyes (*Zosterops lateralis*), and warblers (*Pseudogerygone igata*) which appeared so disturbed. Later on, little notice was taken of it when roosting, though I have frequently seen a morepork being pursued by a blackbird after the roost was left at dusk. The bird did not seem to resent minor interference, peering down if the tree was touched, though it would fly to another part of the shrubbery if disturbed too much. It usually returned to the roost within a few minutes. Occasionally it roosted in an oak tree (*quercus*), and other roosts favoured by this and other birds were in pine trees (*Pinus insignis*), laurels (*Prunus laurocerasus*), Portugal laurels (*P. lustitanica*) and Lawsonianas (*Cupressus lawsoniana*). On some occasions two birds roosted together, their bodies touching.

The situation of the roost made it easy to catch the pellets which the bird ejected each day, and a number was collected in different months and sent to Professor B. J. Marples, who very kindly examined them. I am greatly indebted to him for the time he spent in identifying the constitution of these pellets.

Unfortunately the ejection of the pellet was never witnessed, but it usually took place some time between 12 and 5 p.m. (during the winter months), and as it was nearly always wet when found it seems likely that it was ejected about 3.30 to 4.30 p.m., or later, on most occasions. This time of ejection is in contrast to that for the little owl (*Athene noctua*) (Report of the Little Owl Food Inquiry, 1936-7, A. Hibbert-Ware, Brit. Birds, Vol. XXXI, Nos. 6, 7, 8) which appears to be after the night's feeding and before the bird becomes inert before daylight. The size of the pellet varied from the size of a pea to about 3 cm. long and 1 cm. thick, but the size did not seem to have any effect on the time of ejection.

Professor Marples states that a conspicuous feature was the presence in the pellets of a large number of coiled chitinous tubes often ending in an enlargement. Dr. J. T. Salmon, of the Dominion Museum, kindly confirmed that these were the remains of the vasa deferentia of moths.