

THE BIRDS OF THE MOTUNAU RIVER MOUTH.

By D. E. Crockett, Christchurch.

The Motunau River enters the sea at the northern extremity of Pegasus Bay after flowing through a gorge a hundred feet deep in places. At the mouth a small alluvial marine plain has been formed, part of this being covered at high tide. The vegetative covering of the district is predominantly tussock grassland, with clumps of exotic conifers, in the form of wind-breaks and shelter belts, spread sporadically across the plateau. Native bush occurs in ravines in the cliffs north and south of the river mouth.

During January, 1953, I spent two weeks at the river mouth with Mr. W. V. Jacobs, of Christchurch. Again, in January, 1954, I spent two weeks at the mouth, this time in the company of Mr. Sydney J. Wright, of Crossgates, Yorkshire, England, and Messrs. L. Jago and Chris Holmes, of Christchurch. These persons, I would like to thank for their help and co-operation in the field.

EUDYPTULA sp.—An abandoned nest containing the skeletons of two *Eudyptula* penguins was discovered under a large beach boulder on the north side of the river mouth. No other signs of breeding were noted.

BROAD-BILLED PRION (*Pachyptila vittata vittata*).—One corpse of this species was brought to me for identification by Michael Grooms on January 16, 1953.

PIED SHAG (*Phalacrocorax varius varius*).—When I first visited the Motunau River mouth in January, 1952, I observed no pied shags about the mouth, but in January 1953 five birds were present roosting in the trees on the northern bank of the river. However, when the roost was re-visited on January 20 1954 it was found that it contained two nests each with two fully-fledged young. Twenty unemployed birds also used this clump of pines as a roost during the night and also when the sea was too rough for them to feed. During the day these birds could be observed drying themselves on beaches north and south of the mouth, or fishing at sea singly or in a flock with white-fronted terns. E. F. Stead, in his "Life Histories of New Zealand Birds," states, on page 14, "That there were two large colonies of pied shags at Motunau that have since been destroyed." Apparently the birds are re-establishing themselves here and we hope with the presence of sympathetic residents at the mouth, the colony will grow to its old status.

SPOTTED SHAG (*Phalacrocorax (Stictocarbo) punctatus punctatus*). Ten observed roosting on a rock in the sea on the northern side of the river mouth in January 1953. Only two juveniles were seen on this rock during January 1954. One juvenile found dead on the 22/1/54 by Peter Groomes was sent to the Canterbury Museum.

BLUE HERON (*Egretta sacra sacra*).—A pair was observed in a dead tree half a mile up the river on numerous occasions during our stay in January 1954. The local residents say that the birds nest in the district but we were unable to locate any nests. Solitary birds were observed practically every day north and south of the river mouth.

PARADISE DUCK (*Tadorna variegata*).—One female, in the company of an adult black-backed gull, was noted half a mile up the river on January 21 1954.

GREY DUCK (*Anas superciliosa superciliosa*).—Four noted on a tarn two miles from river mouth on January 21 1953.

BLACK SWAN (*Cygnus atratus*).—Seven flew northwards over the river mouth on the morning of January 16 1953. On the evening of January 14 1954 six were observed flying southwards. While walking along a beach one and a half miles south of the Motunau River mouth in January 1954, one was observed half a mile offshore.

AUSTRALASIAN HARRIER (*Circus approximans gouldi*).—A pair observed on numerous occasions soaring above the plateau. On 18/1/54 these birds were observed tearing a rabbit to pieces in a swamp on the

northern bank of the river. On January 17 1954 we observed one flying towards Motunau Island, where it later landed. One was seen returning to the mainland on January 19 1954.

SOUTH ISLAND PIED OYSTERCATCHER (*Haematopus ostralegus finschi*).—During our stay in January 1953 and 1954 groups of oystercatchers were observed flying northwards every night. The largest numbers observed at one time were two flocks of thirteen each, but usually they were in sixes or singly. The river mouth appears to be on a "flight line" of these oystercatchers.

BLACK-BACKED GULL (*Larus dominicanus*).—Two pairs, each with two juveniles, in the first year plumage, were resident at the river mouth. Every evening numbers were noted flying across the river mouth en route to Motunau Island where they roost. When the local fishermen return from a fishing trip a flock of up to a hundred birds congregate to feed on the refuse, 50% of these birds were usually immature in various stages of plumage.

SMALL GULLS (*Larus novae-hollandiae scopulinus* and *Larus bulleri*). A mixed flock of thirty birds frequented the river mouth, feeding on refuse and kitchen scraps. They were very tame and cheeky.

BLACK-FRONTED TERN (*Chlidonias hybrida albostratus*).—Two noted fishing one mile up the river on January 17 1954.

WHITE-FRONTED TERN (*Sterna striata*).—A flock was present on the shingle spit at the river mouth, the numbers varying from 100 to 350, depending upon the weather and state of sea. This flock included 20 juveniles. On January 13 and 15 1954 large numbers of terns, gulls, petrels and shags were noted feeding offshore.

ROCK PIGEON (*Columba livia*).—Eight birds noted during our stay in January 1954. These birds roosted in a cliff on the northern side of the river mouth.

NEW ZEALAND KINGFISHER (*Halcyon sancta vagans*).—Two pairs present at the river mouth January 1954.

SKYLARK (*Alauda arvensis*).—Approximately ten birds present on the tussock grassland plateau during our stay in 1954.

SOUTH ISLAND FANTAIL (*Rhipidura fuliginosa fuliginosa*).—Two birds of the pied variety noted in a gully north of the Motunau River mouth on 17/1/54.

BLACKBIRD (*Turdus merula*).—Three or four pairs noticed in exotic conifers around the mouth on various occasions. On January 14 1954 one commenced singing at 4.32 a.m.

BELLBIRD (*Anthornis melanura melanura*).—Two birds seen and others heard in a gully north of the Motunau River mouth on January 17 1954.

WHITE-EYE (*Zosterops lateralis*).—Two seen in bush on cliffs south of the river mouth January 16 1954.

GREENFINCH (*Chloris chloris*).—Three observed in exotic conifers on the north bank of the river on January 14 1954.

GOLDFINCH (*Carduelis carduelis britannica*).—A flock of approximately 20 birds, including several juveniles, was noted at various points about the river mouth during January 1953 and 1954 feeding on thistles and other seeds.

CHAFFINCH (*Fringilla coelebs gengleri*).—Three birds noted in exotic conifers on the north bank of the river on January 16 1954.

YELLOWHAMMER (*Emberiza citrinella citrinella*).—Approximately twenty birds, either single or in small loose flocks, were noted on the tussock uplands during our stay in January 1954.

HOUSE SPARROW (*Passer domesticus*).—Twelve to fifteen birds may be seen at any time picking up scraps around the baches at the

Motunau River mouth. All day, house sparrows may be seen flying into holes in a cliff on the north bank of the river with food for young birds.

STARLING (*Sturnus vulgaris*).—A small flock of six birds was noticed about the river mouth in January 1953 and 1954. These birds roosted in the cliffs on the north bank of the river.

WHITE-BACKED MAGPIE (*Gymnorhina hypoleuca*).—Two pairs each with a single juvenile, frequented the river mouth during our stay in January 1954. In January 1953 three miles up the Motunau River a flock of three hundred white-backed magpies was noted in a paddock of gorse, in the evening they roosted in pine trees nearby. It is unusual to see such large flocks of magpies in Canterbury.

NESTING OF SOUTHERN BLACK-BACKED GULLS.

By A. R. Harris, Dunedin.

For several years I have watched a small group of southern black-backed gulls (*Larus dominicanus*) gradually building up a nesting colony on four small tidal islands or reefs at Te Anawaewae Peninsula, Portobello, Otago Harbour. The colony has grown since 1940 from one nest to six in 1952 and five in 1953. One nest is on a low-lying rock 40 yards from the shore and this frequently results in the loss of the nest when fresh winds at high tide drive the seas right over the top. Three "islands" are islands only half the time, i.e., approachable from land towards low tide twice daily.

The breeding place is 700 yards from a weekend dwelling, 1,000 yards from a biological station, and well off the beaten track except to occasional picnickers who frequently are Guides and Boy Scouts and of a non-destructive nature. The birds have become accustomed to my coming and going without causing them unnecessary molestation. An Otago Harbour Board by-law prohibits the discharge of firearms on the harbour; this unwittingly provides another protection.

During the non-breeding period pairs of birds have territorial ambitions over sections of the harbour and small bays and drive off intruders which they quickly recognise, but during periods of plentitude of food such as whalefeed or eyed ova, they tolerate large flocks of their own types. They also tolerate red-billed gulls, blue herons, shags, Caspian terns and grey ducks without demur.

During the breeding season they take up station and drive off all-comers. The nesting birds both contribute to the building and collection of nesting material for a short period before the female lays. Eggs are laid over a period of three to five days—the period of incubation is 28 days and eggs hatch at intervals over two days. The normal clutch for old birds is three eggs and for younger birds two eggs. I have never recorded an infertile egg and if there is no interference a full clutch is assured. The young leave the nest early and take shelter behind anything offering near the nest. They are fed regularly by both parents on disgorged food such as whalefeed, small fish, crabs or fragments of fish offal. If seriously disturbed, the young take to the water even at the age of two days and swim about 40 or 50 yards into the wind and are then shepherded by the adults and skilfully brought back to the nesting site and conceal themselves in rocky crevices until danger passes, and they resume their nesting or hatching areas. At three weeks they often accompany their parents swimming and at four or five weeks they are able to fly short distances, up to a chain at first. By this time they are as large as their parents and crane for food. At about five months the young are treated as "reared," but the batch keep together quite a deal.

Although the plumage of both sexes is the same at maturity, the males can be recognised fairly surely by their thicker necks and the male usually calls "kaloo, kaloo," while the female calls "kla, kla, kla, kla," much the same as a hen. This year there were five nests, thirteen eggs laid and twelve chicks reared. Nesting cards are submitted accordingly.