

REVIEWS.

"The Emu," Vol. XLIV, Part 1. There are no New Zealand papers, but there is a very interesting one on the behaviour and breeding of the Grey Duck (known as the Black Duck in Australia, where it is also native). It shows what useful information may be obtained by the careful observation of birds which can be kept in captivity under more or less natural conditions. "The Black Duck in Captivity." By A. F. D'Ombraim.

"The Emu," Vol. XLIV, Part 2. "The Breeding of the Double-banded Dotterel," by R. H. D. Stidolph. This paper records three unusually large clutches of eggs found in the Wellington district, two with four and one with six eggs. The interesting point is that they were found in three successive years within a few yards of the same spot, suggesting that the birds return year after year to the same site. Other specially interesting papers are "Watching the Powerful Owl," by D. Fleay, and "Timor and the Colonisation of Australia by Birds," by E. Mayr.

"The Emu," Vol. XLIV, Part 3. This contains a paper on "The White Phase of the Reef Heron in New Zealand," by K. A. Wodzicki and J. R. Eyles, an occurrence which was noted in our last number. There is also one on "The Downy Plumage of the Australian Dabchick," by E. Mayr, which should be read by anyone who has access to the young of the New Zealand species, as information as to its pattern and variability are required. An interesting paper on "The Spotted and Satin Bower-birds," by N. Chaffer, should also be mentioned.

These numbers may be borrowed on request to the Hon. Secretary, together with stamps for postage.

B. J. M.

PRELIMINARY REPORT ON THE PRESENT POSITION OF THE AUSTRALIAN MAGPIES (*Gymnorhina hypoleuca* and *G. tibicen*) IN NEW ZEALAND.

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In December, 1942, at a meeting of the N.Z. Ornithological Society in Christchurch it was decided to ask members to co-operate in this investigation. In N.Z. Bird Notes, Vol. I, No. 2, April, 1943, a questionnaire was printed (see Appendix II) and was replied to by 35 members from various parts of New Zealand. Because of the small coverage thus obtained the writer, by courtesy of the Principals, was permitted to enlist the services of the students attending the four Teachers' Training Colleges. Nearly 1000 replies were received, representing practically the whole inhabited area of New Zealand. By courtesy of the Canterbury Education Board and its Chief Instructor in Agricul-

ture the schools of Canterbury were supplied with a copy of the questionnaire and 29 of them replied. Many other people believed to have useful information were also approached. I wish to record my sincere appreciation of the assistance rendered by all those observers, members and others, whose information made this report possible. I would like to apologise here to all those whose contributions I have been unable to acknowledge personally. The thanks of the Society are due to a member, who wishes to remain anonymous, who has generously offered to meet the cost of printing the map.

INTRODUCTION.

According to Thomson, "Naturalisation in New Zealand," the white-backed species (*Gymnorhina hypoleuca*) was introduced by Acclimatisation Societies as follows (he makes no mention of the black-backed species [*G. tibicen*]):—

Canterbury, 1864-1871—68 birds.

Otago, 1865-1869—111 birds.

Auckland, 1867—11 birds.

Wellington, 1874—260 birds.

He also states that Sir George Grey introduced a number to Kowai, probably prior to 1867, and that "a large number from Tasmania" were liberated at Glenmark, North Canterbury, in 1870.

PRESENT DISTRIBUTION.

The accompanying sketch map gives a rough idea of the present distribution as far as this survey has shown. It gives no indication as to relative abundance.

There follows a list of the districts where magpies have been reported to occur. (All records refer to the white-backed species.)

NORTH AUCKLAND.

Whangamumu: Two birds were seen in December, 1943, "possibly the descendants of pet birds at the former whaling station."

Houtu (21 miles west of Whangarei): "4 to 8 pairs present."

Owhiwa: "4 on a farm."

Maungakarama: "A few."

Whangarei: About 20 birds are known in the Ruakaka district.

Waipu and Mangapai: "For the past 50 or more years magpies have lived on an area about 8 miles square lying between the settlements of Waipu and Mangapai in Whangarei district. The nature of this area is undulating to steep with ridges rising to about 500 ft. above the sea. The land has been cleared of bush in patches and is used for running cattle and sheep. In the clearings scattered dead and living trees of the original forest are still standing, and it is in the tall dead trees that the magpies congregate for their corroborees and make their nests. They may be seen in companies of up to 5 or 7 on the grass apparently in search of grubs. The total number in this area might be roughly 50 and the population appears to remain about the

same. Occasionally a farmer sees 2 or 3 birds together for a day or so up to 10 or 20 miles away from the originally established magpie country, but they apparently return home after such explorations."

Cape Rodney: "Odd birds seen." Continuous presence in small numbers near Taheke. Plentiful on sheep farms with bush near Dargaville. Fairly common at Matakana, Rodney County.

Kaipara: Reports from near Arowhau Trig., Coates Landing and Tinopai on Hukatere Peninsula. Also found at Pahi Peninsula, South Head Peninsula, and Okohukura Peninsula.

Warkworth to Auckland: Occur at Warkworth, "generally distributed, but not at all numerous," Silverdale, Wellsford, Leigh, Woodcocks, Makarau, Kaukapakapa, and the upper Orewa Valley. "Plentiful and known since 1908 at least from Waimauku to Wellsford and north.

Helensville: Up to 20 seen at times. "6 birds on our farm."

AUCKLAND.

Thinly distributed in the more open parts in the Waitakeres. "Usually 6-8 at Te Henga and at Te Arai between Pakiri and Mangawai," and also recorded at Piha, Titirangi, Swanson, Muriwai, Henderson, and Ruawai. "They are regularly seen at Anawhata, 10 miles north of Manukau Heads."

Clevedon: "A few pairs in the hills in the Mt. Loudon area and single birds seen recently at the head of the Ness Valley, Maraetai and Moumoukai."

Whitford and Tamaki: Two recent reports of single birds "which did not stay long."

Maungatawhiri via Pokeno: "Three birds on our farm; they arrived in 1940."

Te Pahu: 20 miles from Hamilton. "One bird was seen in 1937. It soon disappeared and none have been seen since."

Te Awamutu: One pair on a farm.

Main Trunk Line, Waiouru: "Seen in 1941." Taumarunui: Reported to have been seen about homesteads.

Ohakune: Present.

Raetihi: "The birds are now found throughout the district from National Park down to Wanganui and across to the Wanganui River. They occur in scattered colonies—there might be 10 to 20 birds on one farm and then no more seen for some miles." "I live on a farm 20 miles from Raetihi near the Wanganui River. The farm is hilly with much native bush. A pair arrived in 1937, possibly from Raetihi, and by 1943 there were 10 birds established." "Magpies inhabit the bush edge, small patches of bush and plantations. During the last 20 years they have spread as the bush has been cleared."

Taihape: "Plentiful round the town."

Mangaweka: "Numerous."

Rata: "Present." Ruahine and Rangiwahia, "numerous."

TARANAKI.

Reported present from Douglas, Wharehuia (near Stratford), Stratford, Midhirst, Auroa, "common on farms," Tokaora, Hawera,

Kaponga, Pihama, Manaia and Patea. "In flocks" and "large numbers on some farms."

New Plymouth: "In a bushed valley 10 miles from New Plymouth as many as 30 in a flock come each winter. They probably would increase, but are regularly shot to keep them down." Four birds were first noticed in June, 1938. "They do not breed here."

WANGANUI.

Waitotara River to Wanganui: "Seen conspicuously and regularly."

Wanganui: Common in city and surrounding country. There do not appear to be any areas where the birds do not occur.

Okoia: "Near the bush are increasing rapidly and have taken charge of the air."

Wangaehu Valley: "Very abundant."

Fordell: Have been shot by at least two farmers because of increase.

Turakina Valley: Numerous for at least the last 20 years.

Marton: Very common with up to 50 birds seen in flocks. "I counted 53 from the train between Marton and Wanganui."

Kiwieta (16 miles west of Feilding): "Wherever you go you can count from 12 to 20 birds in the immediate locality."

Feilding: "Nearly 200 birds were counted in one river valley in one day."

Bonny Glen: "In 2 square miles I counted about 200 birds in August, 1943."

Apiti: "I consider there are from 3-400 birds in this district."

MANAWATU.

Palmerston North and district: "Common and generally increasing." 10-12 birds on one farm are repeatedly reported.

Foxton: "Common and increasing rapidly."

Bulls: "Definitely increasing."

Glen Oroua: "There are nearly 100 birds on our farm of 100 acres."

Levin: They are common between Levin and Paekakariki, being absent only from inside the bush edge.

Ohau: Common.

Waikanae Estuary: "A frequent visitor."

Mana Island: We saw 7 different birds in one day in January, 1943.

Plimmerton: Up to 20 birds in one flock can be seen on the low hills.

EAST COAST OF NORTH ISLAND.

Coming from East Cape the first birds appear to occur at Ruatoria "about 50 in a valley."

Mata-Hia (near Ruatoria): "Single pairs have been arriving from the south as recently as 3 years ago."

Tolaga Bay: Here they are increasing. Thence to Gisborne they are reported as common. "Seldom appear in the town of Gisborne."

Whatatutu (30 miles inland from Gisborne): "Large numbers."

Ormond: Present.

Te Karaka: "30 birds in a radius of 3 miles."

Patutahi: "A few birds present."

Wairoa: "At least one pair of birds in the township. Last year they reared two young."

There are no further records until Tangoio, where the bird is well established. Guthrie Smith, in "Tutira," 1926, says: "Australian magpies were liberated in Hawke's Bay during the seventies. A brace appeared at Tutira in '85; they had moved inland from Tangoio, where prior to '82 a small colony had established itself. The migrant pair were accidentally destroyed. The Tangoio magpies were purposely shot three seasons later; their attacks on the sheep dogs had become so intolerable during the nesting season that the wretched collies dared not follow their owners, who, in their turn, were unable to muster the run without canine assistance. Since that date, from time to time solitary birds moving north have been noted on the station."

HAWKE'S BAY.

Tangoio: "About 30 birds on our farm. They frequent the bush edge."

Napier: Present.

Otupae Station (35 miles from Taihape on the Taihape-Napier road): Present and increasing.

Hastings: Common round the town and in the country.

Ormondville: "30 birds on our farm."

Waipukurau, Waipawa, Pukehou, Dannevirke: "Common."

Takapau: "Crowds of them." "In the whole of southern-Hawke's Bay they are one of the most conspicuous and abundant birds."

Norsewood: "They arrived since 1930 and have increased greatly during the last few years."

WAIRARAPA.

Wangachu Valley: "29 birds on our farm."

Eketahuna: "About 100 birds in our valley."

Pahiatua: "Always some birds."

Masterton: "First seen here about 1910." "In the last 20 years there has been a distinct increase. A pair arrived on our farm of 600 acres in 1933. They breed each year, but the parents chase the young away. There are now only two pairs."

Carterton: Birds present in small numbers. On a farm 16 miles east of the town there are "50 on a 3000-acre sheep farm."

Martinborough: "They are to be seen on the bush in the Haurangi Mountains." "I counted 200 in about a square mile." "They are increasing quite noticeably."

Featherston and Pirinoa (25 miles away): There have been large numbers for many years.

Castle Point County: Present.

Wairarapa Lake: "Numerous and have been so for the last 20 years."

WELLINGTON.

The birds seem to be generally established in the suburbs, e.g., Karori, Island Bay, Otari, Morningside and Newtown Park. "They may be seen on Victoria College, Kelburn." Between Karori and Porirua via Ohariu I saw over 100 birds.

Upper Hutt: Numerous. Nest in Maidstone Park.

Gollan's and Hutt Valleys: "In a 2 hours' walk you may see 3-4 pairs."

Makara and Wainui Valleys: "A pair would be seen every mile."

Day's Bay Reserve: "Up to 2 pairs pay periodical visits, but do not breed here."

Wainui-o-mata: Large numbers are to be seen at all seasons. In the last 12 months the number of birds in Wellington and the vicinity has generally increased.

WESTLAND.

The bird appears to be absent from Westland. "In February, 1941, six birds were caught at Waikari, North Canterbury, and liberated in the upper Arahura Valley to try to rid the farms of grassgrubs. Three days later a few magpie feathers were found. No other sign of the birds has been seen."

NELSON.

1943-44: 2 seen and heard around the town. 1944-45: 2 seen regularly, obviously wild, as they were flying about quite freely. Report of a pair seen in the Aniseed Valley, Nelson.

MARLBOROUGH.

No birds appear to occur until just north of Kaikoura, where they are common and increasing.

CANTERBURY.

Molesworth Station: Seen in January, 1943.

Clarence Accommodation House: 6 birds seen in January, 1944.

Greta Valley, Motunau: There are records of the birds since 1876. 120 were counted in a 5-acre paddock in 1943.

Ethelton: "We live 6 miles up the Hurunui River, an isolated spot with several plantations. Until 1939 the magpies were left alone, when there were about 300 on our farm. During the nesting season they pulled our front door-mat to pieces, stripped canvas off a deck chair, chased the hens if they moved from cover, and dived at our heads as we went to the vegetable garden. In the winter of 1939 we shot 150; the next winter 250. Trapping was done in the summer, but no count was made. Lack of ammunition since then has resulted in a regular increase in numbers each year."

Cheviot: "40 years ago my father strictly protected the first pair that nested in our plantation, and he remained a champion of the magpie

all his life. By about 1920 there were at least 100 pairs in the homestead plantation. This was general throughout the district, each group of trees having its colony." "There are always 20-30 in the trees round our house."

Rotherham: "I counted 50 in one paddock in August, 1943."

Culverden: "They are definitely increasing. We saw several hundreds in ploughed paddocks in May, 1943."

Glenn Wye: "The birds are found up the Waiau River towards Lewis Pass."

Waipara: "Up to 15 birds have been reported in paddocks."

Loburn: "There are 40 birds on our farm of 250 acres."

Lake Sumner: A few pairs were seen in January, 1943.

Halkett: Common. As many as 50 birds seen in flocks.

Annat: A survey showed over 200 birds in the 8 square miles round the school.

Springfield: The winter flock of 30 birds in 1942 had increased to 45 in 1943.

Kowai Bush: "We counted over 100 on one farm, and 85 were seen from the train in four miles."

West Coast line: "Magpies were first seen at Mount White homestead in 1924. There are now hundreds." They were first seen at Craigieburn homestead in 1929 and at Cass in 1931. At Cass there are now flocks of up to 40 birds. There are several hundreds of birds between Craigieburn and Cora Lynn. By 1939 they were quite numerous at Cora Lynn.

Christchurch: Magpies are common on the outskirts of the suburbs, and in the last few years have established themselves in small numbers of breeding birds in the city itself. They have nested and reared young in Hagley Park for the last five years.

Banks Peninsula: The birds are to be found at various places round Lyttelton Harbour as far as Purau Valley.

Okains Bay: First recorded in 1939; there are now 20 birds in the valley.

Akaroa: "3-4 birds are to be seen at odd times on our farm near Akaroa Lighthouse. They do not breed there."

Wainui: There are usually 5 or 6 birds to be seen on the south coast farms near Land's End. Increase is prevented by shooting.

Hornby: "There are 5 birds within half a mile of the school."

Brookside: Over 100 have been counted on a farm of 200 acres.

Upper Rakaia River: Magpies are common up the main river at least as far as Lake River, the outlet to Lake Heron. They have been known on Glenthorne Station, between the Harper and Wilberforce Rivers, since 1930 at least and are now found up the Wilberforce as far as Moa Stream, a few miles from the main divide. They are common on Mt. Algidus Station between the Wilberforce and Mathias Rivers.

Mt. Hutt: "We can usually find up to 70 birds on our 250 acre farm."

Methven: The birds are common and definitely increasing rapidly.
Lyndhurst: "We first saw them about 30 years ago. 50 live permanently on a 300-acre farm."

Lynnford: Very common. In the winter of 1943 over 500 were seen feeding in one flock in a paddock badly infested with grass grub.

Peel Forest: "There are thousands in this district. One count gave 156 birds in a six-acre paddock."

Geraldine to Timaru: Common. "There have been 100 at once on our farm of 30 acres at Hilton." Similar reports are frequent.

Pleasant Point: A careful survey showed at least one pair to each 20 acres.

Raincliff: Several hundreds may be seen in the pines.

Totara Valley: 100 birds counted on 150 acres.

Te Ngawai Valley, Albury: "There are from 6-10 birds on each of the 12 farms in this valley."

Kimbell: "From 1937 to 1940, 30-35 birds lived in one acre of pines at the school. They were resident all the year."

Burke's Pass: Common. (No reports of the birds being seen in the Mackenzie Country have been received.)

St. Andrews: Flocks of up to 50 may be seen on the feeding grounds in the Esk Valley.

Bluecliff: Before 1918 the birds were not known nearer than Holme Station or Gordon's Valley, seven miles away. They are now very common and increasing.

Waihao Downs: "There are from 50-100 in this district."

Waimate: "They appeared from the north about 1900. There are 100 birds on my farm of 750 acres, and they are steadily increasing."

Hakataramea: The birds arrived only a few years ago, but there are now at least 100 in the valley.

OTAGO.

Kurow: "They arrived several years ago."

Lindis Pass: Four birds have been seen on the Lower Lindis flats and four in the upper Waitaki Valley.

Oamaru: "Established in plantations in the town."

Hilderthorpe: Flocks of up to 20 birds are regularly seen.

Duntroon: "They can be seen on the hills in this district."

Herbert: "There are regularly from 3 to 6 birds on our farm. On a hill about half a mile away there may be seen up to 30 birds. They are increasing slowly; more rapidly in recent years. They were first seen between 10 and 15 years ago. Our farm is 750 ft. above sea level and five miles from the coast."

Waianakarua: "Definitely increasing."

Hampden and Moeraki: Magpies were first reported in 1918 and 1919, but there are no reports as to continuous residence since then.

Palmerston: "They have increased rapidly during the last few years, and are now quite common."

Waikouaiti: The birds nest in the pine plantations on the race-course.

Merton: "They were first seen in 1938. There are now 8 birds in this district, increase being at the rate of one per annum."

Maungatua: "Up to 100 birds were seen in 1942."

(In connection with this southern movement into Otago it may be mentioned that when the magpies were first introduced into Otago they began to build near Dunedin and as far south as Inchclutha, but gradually disappeared completely.)

BREEDING HABITS.

The nesting period seems to run from August to November, with September and October given as the commonest months. Attempts at copulation are recorded from Wellington as early as July 5. The first egg reported was on August 17 at Waddington, Canterbury, but a nestling was reported from Halkett, Canterbury, in the second week of June, 1941. Where pines are available they are chosen in preference to other trees for the nesting site. *Macrocarpa* and gums of all kinds are also favoured. Where bush occurs on the farms, trees such as *Tawa* are popular. In North Auckland tall forest trees, alive or dead, left on bushburn country are also used. From Tolaga Bay and Porangahau come reports of nests in cabbage trees. Gorse and hawthorn hedges are mentioned as sites in Canterbury.

In the Methven district the following were reported as being used: Wire (plain and barbed), string, twigs of pine, gorse and silver birch, tape, a handkerchief, wool, sacking, twine, cardboard, a match-box, pine needles, yarrow, rotten wood, horsehair, straw, grass, feathers, cottonwool, rubber, matagauri. Additional materials mentioned from other places are boxthorn twigs, cabbage tree leaves, bluegum bark, potato tops, rope and horsehair. Old spoons, glass and pieces of china are frequently reported. At Wigram aerodrome in 1941 a nest was constructed entirely of ends of wire.

A nest at Halkett is described as follows:—"A foundation of coarse twine, twigs of gorse and pine and some twitch rhizomes, lined with sheep's wool, an inner felted lining of horse cover, scrim, bark fibres and horsehair.

An empty nest at Kimbell made of matagauri, twine, rushes, and wool weighed 18oz, had a diameter of 12 inches and a height of $7\frac{1}{2}$ inches. The cup was seven inches across and three inches deep.

An analysis of a nest at Rokeby, near Rakaia, gave the following results:—Three pieces of wire (one of them barbed), 12 sticks, 12 pieces of sacking one to two inches square, several pieces of unravelled binder twine, raw wool and ends of wool yarn, 18 pieces of binder twine and string up to two feet long, eucalyptus bark, 150 pieces of dried sorrel up to two feet three inches long.

"At Rokeby I believe the birds mate for life. A pair once mated seem to remain in the same locality, and having selected a feeding ground allow no intrusion of other magpies. In the case of three pairs which had to rebuild owing to nest destruction, the first and second

nests were made of identical materials and built in similar positions, but the three individual nests showed wide variation in site and construction."

Number of eggs: Two, three, and sometimes four eggs are reported, with two cases of five eggs. One observer at Springfield says that "the first nesting season the birds lay only two eggs. There are usually three in subsequent years." He says that the first nest is smaller.

At Swannanoa, Canterbury, a bird laid four eggs; these were removed and she laid four more; these also were removed, whereupon she laid another three.

"The eggs vary in size from blackbirds' to those of a bantam hen. They vary in colour, but mainly have a bluey-green background. Eggs from three different nests at Rokeby had the following colourings:— (a) Olive green streaks and blotches on a light green background. (b) Sparse dark blood-coloured blots and diffused purple tinges toning into a greenish-blue background. (c) A dozen brown spots on a light greenish-blue background."

Number of young: In only two cases have more than three young been reported; that was one of four at Bluecliffs, South Canterbury, and a possible one from Masterton. The commonest number seems to be two, though one and three are frequently mentioned.

Number of broods: Where a nest or eggs are destroyed the birds may nest again. There were two records of two broods in the same season: At Medbury, Canterbury, the parents were seen feeding young at the end of a warm September. The same pair nested again and reared the young.

At Rokeby: "On August 23 there was one egg, on the 26th two and 29th three, the last a little smaller than the others. On September 16 the first egg hatched, the second on the 18th. On the 21st feathers appeared on the top of the head, the neck being still bare and lined, the colour of dried raw meat. The beak was then off-white in colour. On the 25th the bigger bird was showing black and white feathers. The parents both brought food. By September 30 the heads of both young had a close pile of black feathers, the under parts were bare and the wings were becoming feathered with black and white. The female carried away the dried droppings in her beak and deposited them in a special place in the paddock. On successive nights, October 2 and 3, a chick was taken by vermin.

On October 4 a new nest was commenced and eggs were laid on the 17th, 19th, and 21st. Eggs hatched on the 8th and 9th November, the third egg being removed. On November 25 one chick was blown from the nest; the other took its first flight on December 12."

At Bluecliffs, South Canterbury: "We observed a pair of birds from the time four eggs were laid in the nest in a pine tree. Four young hatched. Later we took the nest down and handled the young birds. We replaced the nest in a lower position on the same tree. A



APPROXIMATE DISTRIBUTION OF MAGPIE IN NEW ZEALAND.

few days later two birds fell from the nest and died. The other two were successfully reared. When a month old they came to be fed by the parents at a gate. At first they perched on the lowest rail for this process, but at about weekly intervals they used the successive rails, then the gatepost, a macrocarpa hedge and finally a tree." Families remain together for several months. The story of what was believed to be a family comes from Masterton: "From December magpies were noted each day in this garden. I believe all the records since that date to be those of a family which nested not far from here. Often only four or five birds were recorded, but there is little doubt that six was the full party. They stayed together until July 13, when all departed except two. These nested and by October 13 had young ready to leave the nest."

FEEDING HABITS.

(See also Section: "Magpies and Other Birds.")

There are numerous reports that magpies eat grass grubs in the open fields, both in grass and cultivated. The largest congregations of birds have been reported from Canterbury on grass grub infested areas. At Hakataramea "they eat both grass grub and Porina caterpillar." Many reports state that the birds feed on dead cattle, sheep, rabbits, and lambs. Others say that in these cases the birds are feeding on maggots. Worms are frequently mentioned in the diet, but two observers say that the birds will not eat worms in captivity. Magpies appear to be fond of "scrap meat" such as can be found near dog kennels, fowlyards, and abattoirs on the farms. At Hakataramea they peck at rabbit carcasses hung up in the trees for dog food; at Waimate they peck at sheep carcasses on the gallows; at Medbury the house mutton or dog-tucker would be well pecked in the morning. Several reports describe them as turning over manure pads for insect food. At Herbert "carcasses of mutton hanging on the gallows for dogmeat never fail to attract them. Sometimes they follow the plough picking grass grubs from newly-turned soil. I have observed them feeding on grassland among sheep." At Springfield "they will stand in front of the hive and catch the returning bees." At Omihi, Canterbury, "during the past summer the magpies have been seen eating the bees as they alight laden with honey. The adult birds and their young stand by the hive. As the bees fly downwards to alight and turn into the hive the magpie jumps, catches the bee and feeds it to the young." Other articles of diet mentioned were:—Woodville: "They stole trout and other foods from the camp"; Te Karaka: "They eat tawa berries in large quantities and get so drunk that they are easy to catch." Johnsonville: "They steal the wheat and mixed mash from the hens." Springfield: "They will eat mice and lizards." Pleasant Point: "They pick the heads off poisoned sparrows." Omihi: "They catch moths in the early evening."

An authority in Canterbury considers that the opinion that the magpie is an enemy of the grass grub is unwarranted; "rather do they encourage the grass grub by driving away the other birds which are the real enemy." No evidence has so far been obtained in confirmation of this opinion.

MAGPIES AND OTHER BIRDS.

The majority of correspondents mention the attacks of magpies on the harrier hawk. Other reports of attacks on birds are:—

Whangarei: Disabling of a tui by six magpies.

Okoia: "They regularly chase tuis and pigeons."

Raetihi: "If the magpies settle in a small patch of bush or a plantation they drive away the tuis and other native birds. Tuis, however, will drive away an odd magpie from the nest. I have seen a pair of magpies attack a cock pheasant, jumping at it from about a yard away, one on each side."

Near Raetihi: "They chase both the harrier and the bush hawk, and for this reason are rather welcomed round the houses."

Wanganui: "Bellbirds, tuis and white-eyes are numerous and finches very numerous where magpies are common. This suggests that they are not an appreciable menace to small birds." . . . "They killed a canary which had escaped from a cage."

Woodville district: "They caused disturbance in dotterel and stilt colonies, but no attacks on the birds or eggs were seen."

Masterton: "They keep the harriers and bush hawks away from the farm." "I have seen one with a sparrow in its bill. I have seen them chase but not kill pipits, skylarks, yellowhammer, and harrier."

Wellington district: "I have observed them chase young black-backed gulls and adults; also harriers, skylarks, pipits, blackbirds. Fear has been shown by thrushes and yellowhammers. Blackbirds have been killed and eaten. Nests of warblers and fantails were believed to have been destroyed by magpies."

Island Bay: "I have seen them kill and eat sparrows."

Wellington-Paekakariki: "I have frequently observed magpies attacking pipits."

Otaki: Magpies are reported to have killed a fantail and to attack pigeons on the bush edge.

Wainui-o-mata: "During the last seven years they have displaced the tuis which previously frequented the garden."

Wellington: "I have on three occasions seen magpies with nestlings in their beaks." "On numerous occasions I have seen them pursue and catch native and imported birds."

Ashhurst: "Magpies have become a serious menace to my bird sanctuary. Two pairs of chaffinches nested in the same tree near my house. When the young were half-fledged, magpies attacked the parent birds and killed the young. They chase the fantails and have driven the bellbirds away from the garden. A few tuis remain and appear to hold their own."

Kaikoura: Several reports of magpies chasing small birds.

Ethelton: "They have chased away the native pigeons, bellbirds, and kingfishers. I have watched them kill and eat a sparrow."

Annat: "We have seen them kill and eat small birds."

Springfield: "I have seen them tear the top of a sparrow's nest to take the nestlings. These nestlings were fed to the young."

Kowai Bush: Magpies have been seen to kill white-eyes and warblers. They annoy kakas, which annually spend the winter there.

Methven: "We think they are harmful to the smaller native birds. We have seen them attack thrushes, blackbirds, and goldfinches."

Greendale: "They have forced sparrows to nest in woodheaps and skylarks to nest in wheatfields because of their attacks on the nestlings." "At Rokeby they attack small birds only during the nesting season. During the week following the heavy snow of July-August, 1943, I saw magpies apparently eating dead small birds."

Flemington (near Ashburton): "Three magpies attacked a pair of pukeko feeding in a wheat crop in August."

Tripp School (near Geraldine): "We saw a magpie viciously attack a full-grown thrush and try to lift it from the ground. We rescued the bird, but it died from head injuries."

Peel Forest: "We saw a yellowhammer, a grey warbler and a sparrow killed by magpies."

Waimate: "I saw one kill a thrush." "They attack bellbirds, pigeons, redbilled gulls and introduced small birds."

Waihao Downs: "They have been seen to take young starlings."

Palmerston: "They kill and eat young sparrows."

In the upper Rakaia Valley runholders say that magpies definitely keep keas away from the lower levels.

ATTACKS ON POULTRY.

There are numerous reports of attacks on adult hens, the method usually being a "dive bombing" on flocks of birds feeding in the open. Chickens running in the open are often killed and sometimes fed to the young.

ATTACKS ON SHEEP.

Carterton (16 miles east): "They 'worry' sheep with young lambs."

Kaikoura: "Twelve lambs were killed about 1918."

Glynn Wye (Upper Waiau): In July, 1943, during the heavy snow, the eyes of hoggets caught in the snow were gouged out by magpies.

Brookside: "They are said to pick the eyes of cast sheep and lambs."

Darfield: "When a ewe is down the magpie will attempt to take the eye out."

Waimate: "In 1939 four lambs were killed by being pecked through the skull between the ears."

ATTACKS ON OTHER ANIMALS.

Four cases are reported of attacks on sheep dogs.

Gisborne district: "A shepherd's horse lost an eye as the result of a 'swoop' attack by a magpie."

ATTACKS ON HUMAN BEINGS.

Sixty per cent. of the replies mentioned the swooping attacks of magpies, but in most cases no injury resulted. The reports of injuries were as follows:—

Helensville: "We used to tease them by calling out and imitating other birds. As they swooped we would bend down and the birds would fly close over our backs."

Hawera: A child of three had scratches round the eyes.

Wanganui: Boys playing cricket were attacked and pecked on the forehead. "The police shot birds at Queen's Park because of attacks on children."

Glen Oroua: A schoolboy had the back of his neck badly cut.

Waikanae: A child going to school had his face marked.

Paraparaumu: A man while cycling received a cut on the face.

South Featherston: Children wore tin billies on their heads while going to school because of attacks by magpies.

Khandallah: In September, 1932, a pair nested in a pine tree and had two young. The parents were so troublesome to school children that they had to be destroyed. The four birds are now in the Dominion Museum.

Medbury: "My son, aged 6, had a piece taken out of his head, but older boys had been tormenting the birds. Boys will stand in a paddock with a stick in hand and call the magpies, which will then swoop on them."

Cheviot, Amberley, Lincoln: Bald heads were cut by magpies, which made their attacks on men approaching the nests.

"At Rokeby a pair attacked the school children, but always confined their attacks to three particular children, and several times made their heads bleed. This season the pair at my home have repeatedly attacked me, but did not do so before I interfered with their nest. I wear an old blue hat when climbing to their nest, and now I have only to appear in it to be attacked. Without the hat they often ignore me."

Lyndhurst: "A boy was attacked and had blood drawn through his cap."

Springfield: "I have not known first year nesters attack anyone. I have robbed their nests with impunity. Old birds will attack, diving usually 12 inches above the head, but occasionally striking lower and causing a gash."

Temuka: A girl was injured in the eye, but the sight was saved.

Pleasant Point: In 1940 a boy lost an eye as the result of an attack. Another boy lost skin off a finger and hair from his head. Another boy had an arm lacerated.

Herbert: A pet magpie attacked an adult, picking savagely at her head. Subsequently it severely injured a baby and had to be destroyed.

MAGPIES AND ELECTRIC POWER SUPPLY.

In "The Natural History of Canterbury," in 1927, Mr E. F. Stead said: "Of all our birds the magpies seem to have been the most affected by the electric transmission lines, for I have had numerous reports of

dead magpies being found at the foot of power poles, the birds in some way having 'shorted' the lines."

Waipara, Canterbury: "The numbers of birds appears to be about stationary, largely owing to the numbers which are killed by electrocution."

Manawatu: "Magpies are a real source of trouble to electric power board employees. In the mating season one bird will sit on one wire of an 11,000 volt line, the mate will sit opposite. When their beaks touch there is a flash and a roar, and the power is cut off at the sub-station. Two dead magpies fall to the ground. In the meantime at the dairy factories all the motors stop, and if pasteurising is in progress all the cream on the cooler and in the pipe lines flood the trough and the cream runs over the floor."

For protection against broken wires over post and telegraph lines, supply authorities erect earth guards. The magpies sit on these and peck the 11,000 volt lines. The magpie is electrocuted, and another interruption of power occurs. Not long after a power board built its lines 16 dead magpies were picked up due to this cause alone. The copper wire was so badly damaged with power arcs that it had to be replaced.

In the nesting season a favourite spot for a nest is on the insulated wires which lead out of the transformers. Sooner or later a short circuit develops and blows the transformer fuse.

The cost to the power boards for the interruptions caused by magpies is considerable.

TAME MAGPIES.

Although it is illegal to keep a magpie in captivity without a permit from the Department of Internal Affairs, many birds are kept without this formality. Some are kept in glasshouses and gardens to assist with the control of insect pests and do good work if they can be persuaded to leave seedlings alone. Four cases were reported of magpies following gardeners and pulling up seedlings as fast as they were planted. One bird regularly followed a lady round the garden picking flowers as she picked them for the vases.

At Sumner, Canterbury, a cat with four kittens adopted a young magpie. The bird was cleaned in its turn with the kittens and always slept as one of the family.

Tame birds were reported to "talk," cluck like a hen, bark like a dog, imitate the chime of a clock, cry like a baby, and whistle tunes. A favourite tune seems to be "There Is Nae Luck Aboot the Hoose." Birds in captivity were reported to eat insects of all kinds, mice, lizards, slaters, grass grubs, meat, peanuts, and chocolate cake. One bird ate all kinds of odds and ends "from curiosity," including tacks. A pet bird in Christchurch built a nest every year using only string.

At Medbury "we have had magpies nest, lay eggs, and sit in captivity." One bird was known to be at least 18 years old when it died.

At Waipu the MacKenzie family have frequently tamed magpies. The last bird was named Johnnie. "This bird was regarded as a member of the household, so much so that when an acquaintance rang

their telephone to inquire as to the health of the family Johnnie's name would be included, and this wonderful bird acted the part well. At meal times Johnnie would be at the table and eat everything the others ate. The bird was happier when in the company of men, and when the men of the house and any visitors sat on the grass engaged in discussion, Johnnie would be in the centre of the group talking in his own language. After tea he would retire to a cage in the kitchen and attract attention until someone threw an old coat over the cage, when he would go to sleep. At daybreak Johnnie's routine consisted of imitating cocks crowing, hens clucking and cackling, whistling for the dogs, barking like a dog, and the mimicry in every case was perfect. His chief amusement after breakfast was to play with a half-grown cat. His favourite trick was to drag a small straw mat from the hearth and place it over the prostrate cat; he would next drive his sharp, strong beak through the mat and give pussy a good nip. This would lead to a rough-and-tumble sham fight, in which bird and cat rolled over each other like two kittens. About two years ago the roof was painted and Johnnie climbed the ladder to superintend the job. He was later found dead, presumably poisoned through eating paint to please the painter."

SONG.

"At Rokeby there is an endless variety of song, but the notes usually defy piano interpretation. In a few cases I found a tune with the intervals like our own music. . . . The whining of the young, the frightened squawk and the two-note shriek do not require any movement of the throat. The chick makes a whining sound and once it flies it can also squawk. The whining is almost invariably associated with food, the squawk with alarm. The adolescent (nine months onwards) gives a long, drawn-out 'cork' and the parent uses it, too. The 'cork' note is lower than the squawk." (This correspondent has recorded in "sound track" many songs and calls of both male and female birds.)

The following notes refer to birds at Herbert:—

September 10: I was awakened at 6 a.m. by the singing of a magpie perched in a nearby bluegum. Long phrases, wide pitch, chortling, bubbling song. Sang for 13 minutes, song sustained throughout. At 6.13 other birds began—blackbird, thrushes, bellbirds, starlings, in that order. At 6.20 magpie's song began to decline, rests, shorter phrases, longer rests, then spasmodically with intervals of 5 to 10 minutes. (Weather fine, calm, overcast.)

September 15: Magpie began at 5.45 a.m. Only bird calling until 6.5, when blackbird commenced.

September 24: Again heard before any other birds.

September 25: Awakened by magpie at 5.30 a.m. Song well sustained for 5 minutes, when other birds called in the same order as September 10. Ceased abruptly at 5.40.

September 27: Heard magpie begin song at 5.15 a.m. Well sustained for 7 minutes, then ceased (may have shifted to a perch out of my hearing). Other birds awakened at 5.27.

TRAIN COUNTS.

Two correspondents furnished notes on train counts, as set out below:—

Levin.

11/2/43—Wellington to Levin; coast side, 28 birds. Weather cold, rain, calm. 8.30-11.30 a.m.

13/3/43—Wellington to Levin; inland side, 31 birds. Weather fine, warm, calm. 3.5 p.m. (To Paekakariki 10, Otaki 30, Levin 31.)

5/4/43—Wellington to Levin; inland side, 53 birds. Weather fine, warm, calm. 3.5 p.m.

7/4/43—Levin to Wellington; coast side, 57 birds. Weather overcast, mild, calm. 8.30-11 a.m.

27/1/44—Levin to Wellington; inland side, 30 birds. Weather fine, calm, sunny.

Dunedin.

"Observations made while travelling by car and train since 1939 show a gradual extension south, the region where I expect to meet them now extends down to the Waianakarua River between Herbert and Hampden." Counts made from the train between Dunedin and Oamaru on the east side:—31/8/42, 1; 3/12/42, 1; 12/12/42, 4; 18/5/43, 6 (including 2 at Hampden); 28/5/43, 2; 30/7/43, 4 (1 at Hillgrove and 3 at Hampden); 2/8/43, 0; 27/8/43, 0; 30/8/43, 3; 7/10/43, 0; 10/10/43, 0; 18/12/43, 7.

Counts made from the train, north side between Oamaru and Duntroon between 4 and 6 p.m., except 11/12/43 and 18/12/43, which were 9-11 a.m.:—18/5/43, 0; 30/7/43, 0; 27/8/43, 24; 7/10/43, 2; 8/12/43, 11; 11/12/43, 17; 16/12/43, 0; 18/12/43, 15.

Counts made from the train between Oamaru and Christchurch:—

	12/12/42. 30/7/43.	
Oamaru-Timaru	- - - 12	8
Timaru-Temuka	- - - 13	1
Temuka-Rangitata	- - - 22	27
Rangitata-Ashburton	- - - 24	c. 44
Ashburton-Rakaia	- - - 14	8
Rakaia-Burnham	- - - 6	c. 42
Burnham-Christchurch	- - - 4	c. 4
Total	- - - 95	c. 134

GENERAL.

It is obvious from the information summarised that the magpie is increasing in numbers in many districts and is also extending its range. At the same time as it receives commendation for its destruction of insect pests, there is much evidence of attack on and injury to human beings. There is grave suspicion that it is a menace to native birds in certain areas.

Further information is required on these as well as the other points mentioned in the questionnaire, and while sincerely thanking all those who have supplied the material which has made this report possible, the compiler would appeal to all members to look on this as a preliminary report only, to continue to make and record their observations, and to send them in for publication.

The compiler considers that there is already good and sufficient evidence that the bird should be removed from the schedule of absolutely protected birds. Large numbers are now killed without any attempt to have the law enforced. Such practice, even if justifiable by danger to humans and damage to native birds, tends inevitably to engender disrespect for the law regarding other birds where there can be no question of its validity.

APPENDIX.

I. It is mentioned on page 1 that all records refer to the white-backed species.

Only two records which may be considered as authentic have been received regarding the black-backed species. These both state that the bird is found in small numbers in the Cheviot district. A report has been received of a black-backed magpie seen last spring and summer in the Kaikoura district apparently mated with a female of the white-backed species. No other information is available.

II. Details of questionnaire:—

- (1) Are magpies found in your district? If so, what kind—white-backed or black-backed or both?
- (2) Can you give an estimate of the number of birds in any stated area, e.g., river valley, township, farm, etc.
- (3) Do you consider the numbers are increasing, decreasing, or stationary?
- (4) What is the usual habitat of the birds, e.g., bush edge, pine plantation, park, school grounds, etc.
- (5) Have you any information as to when the birds arrived, or were introduced?
- (6) What do you know of the nesting habits, e.g., date, number of broods, site, materials used, number of eggs, number of young reared?
- (7) Have you any information as to the feeding habits?
- (8) Do you consider that the magpies have any harmful effects on other birds in your district?
- (9) Have you any records of attacks by magpies on human beings?
- (10) Have you any other information not specifically asked for?