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A HISTORY AND ACCOUNT OF THE BIRDS OF THE HUNUA RANGES

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ABSTRACT

The history of ornithological activity in the Hunua Ranges, south-east of Auckland, is outlined. An account is given of both native and introduced birds from 1888 to 1978.

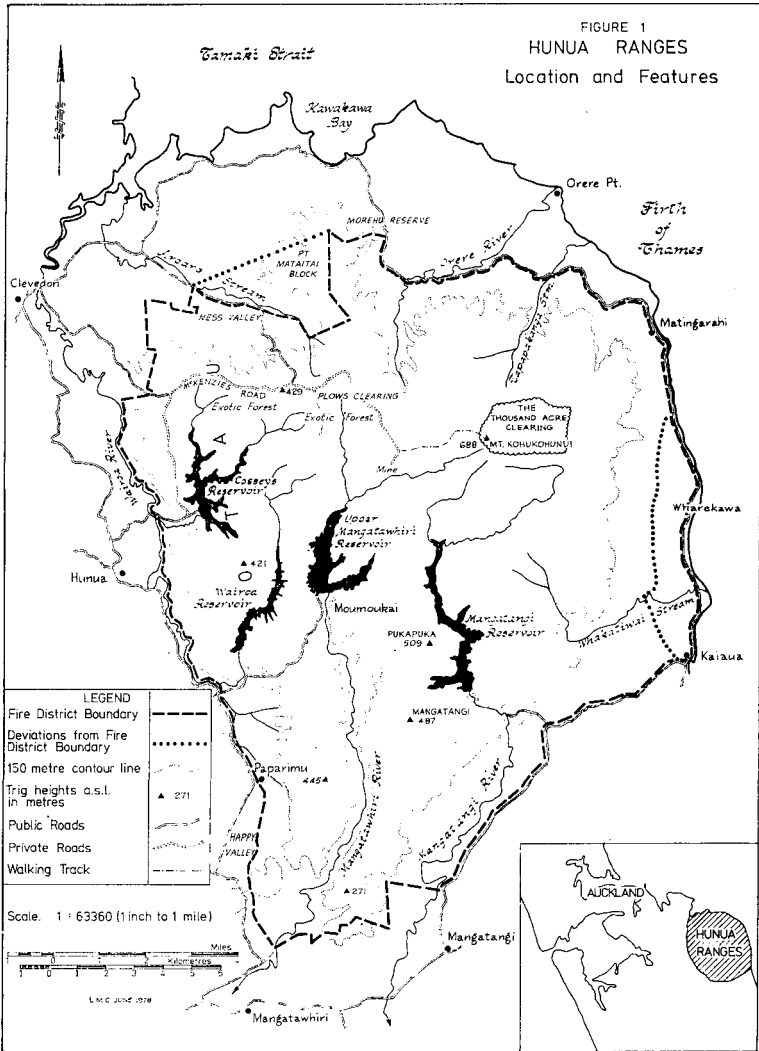
INTRODUCTION

Geography

The Hunua Ranges are bounded, for the most part, by the Hunua Rural Fire District, which is administered by the Auckland Regional Authority (Fig. 1). Deviations from the fire district are shown by dotted lines. The dotted line on the north includes a partly forested area, part of the Mataitai Block and the northern watershed of Ness Valley, while that on the east includes the foothills of the ranges, whether grassed or not and excludes the flat country and the shore, the birds of which do not normally go inland to the hills. This is a smaller area than that covered by Mead (1930) and Barton (1972; 1978) and is similar to that covered by St. Paul & McKenzie (1974).

The boundaries enclose the high Hunua Ranges which are a group of deeply dissected up-faulted blocks of Mesozoic greywacke and argillites (Schofield 1967). The upland area is separated from the adjoining lowlands in the south and west by well defined scarps (Mead 1930). To the north the hills dip gradually towards the Papakura-Clevedon lowlands and in the east more steeply to the Firth of Thames.

The highest point is Mt Kohukohunui (688 m) and the streams which drain the area radiate from it. Main streams are the Mangatawhiri and Mangatangi, which drain south to the Waikato River, and



the Wairoa flowing north to Tamaki Strait. The eastern side has several shorter and steeper streams discharging into the Firth of Thames. Rainfall varies from 1200 mm in the lower parts to over 2400 mm on the highest ground.

Much of the land above 150 m (Fig. 1) is clothed in native forest and shrubland and of this some 17 000 ha lie within the Auckland

Regional Authority water supply reserves. The predominant forest type is classed as tawa-podocarp, which probably comprises 75% of the total forest (Barton 1972). To the south and along the eastern side of the ranges are found several areas of kauri-beech forest. Barton (1972) described the various forest types in some detail.

A significant portion of the original forest within the ranges and around the fringes was cleared for farming in the 1880-1920 period (Barton 1972). Much of the land became uneconomic for farming and was bought for water catchment. It has reverted to some regrowth forest and much shrubland. Ness Valley, however, has largely stayed as farmland.

Silvester (1964) mentioned the important role that native birds played in aiding dispersal of tree and shrub seeds in the regeneration patterns of the Thousand Acre Clearing. The same has occurred elsewhere on other areas of former farmland.

Some 1500 ha of the regrowth shrublands in the north and north-western parts of the water supply reserve, consisting of Plows' Clearing, the eastern side of McKenzie Road and towards Cossey's Reservoir, have now been converted to exotic forest, mainly *Pinus radiata*.

Timber was removed without great harm to the present forest as it was done by means of winch and wire rope, or by bullock teams, before the day of the bulldozer. However, as indicated by Barton (1972), the bush is now mostly of poor quality, having suffered first from grazing of cattle, then pigs, goats and possum, so that its ornithological value has been greatly reduced.

Ornithological History

The Maori and his predecessors are known to have taken North Island Kiwi, Grey Duck, Brown Teal, New Zealand Pigeon, Tui, North Island Kaka, parakeets, North Island Weka and small passerines, and the European took ducks, New Zealand Pigeon and Kaka. The European brought predatory rats, cats, polecat ferrets, stoats and weasels, together with avian diseases with the birds he introduced. These factors, together with poor bush quality and habitat changes, have reduced most of the native bird life to small remnants, while some have been exterminated.

The Hunuas were apparently not visited by any of the early ornithologists except Reischek (1952) who merely wrote "Except for a few short excursions, as those of September 1888 and of January 1889 to 'Papakuru,' south-east of Auckland and to 'Hunu' my work in New Zealand was finished."

The earliest documented information so far known of the Hunuas was provided by two young brothers, Hugh S. Munro and

George C. Munro of Clevedon, who in the late 1880s made comprehensive private collections of the local birds. They supplied considerable material to the Auckland Institute and Museum, where it is still held. George C. Munro moved to Hawaii at the age of 20 years. He either took his private collection with him or had it sent later. He sold it to a Miss Alexander who donated it to the Bernice P. Bishop Museum, Honolulu, Hawaii. He collected Hawaiian birds and these, together with a large quantity of material he bought from Hugh S. Munro's collection, he presented to this museum. He returned to New Zealand at one time for five years and farmed in Northland, where he collected further items for the Bernice P. Bishop Museum. Specimens listed by the Museum and still held there are recorded as having been received between 1926 and 1936. The museum has no record of any of this material having been sent elsewhere. Some of the purchase by G. C. Munro from H. S. Munro was a small lot of the Moa remains found at Clevedon (Wairoa South) in 1912.

When Hugh S. Munro died, much of the remainder of his private collection was donated to the Auckland War Memorial Museum but some is still held by members of his family. Almost all of the New Zealand collecting by the two brothers was done in the Wairoa South (now Clevedon) district, mostly on the then forested Otau hills, which are now included in the "Hunua Ranges."

It is likely that some Munro material is in the American Museum of Natural History, New York, under the name of the English collector, H. Palmer, in the collection bought from the British Lord Rothschild. When in New Zealand for a period up to 1890, Palmer must have acquired considerable material from the Munros but labelled it as collected by himself. In December 1890 Palmer persuaded G. C. Munro to assist him in a Rothschild-sponsored collecting venture to Hawaii. Some new species were obtained and Lord Rothschild in his *Air Fauna of Laysan* and elsewhere named these for his collector, but did not mention Munro. Obviously Munro, with his capabilities, must have made some of the new discoveries but Rothschild was not to know this. Sir Robert Falla kindly provided me with notes, made in January 1960, of a conversation with George C. Munro at Honolulu, which indicate that Palmer had used only his own name in his records, so that any Munro material cannot now be identified by the staff of the American Museum of Natural History. It seems that none of Palmer's items went to the Bernice P. Bishop Museum of Hawaii.

From about 1908 J. W. (Joe) St. Paul took an interest in the birdlife of the area while being brought up and working on the bush farm of his father, Joe St. Paul sen., later farming on the Moumoukai plateau, always in sight or sound of the Kokako, Tui and other birds, as part of both his father's and his farm ran into the forest. The Auckland City Council made its first purchase of land for water catchment in 1926 and gradually added more, including the rough hilly farms of local settlers. Joe worked for the Council at times from

1928 to 1944, then became a ranger, retiring in 1963 but continuing to study the birds of the area, roving every part of the water reserves. He did not keep notes but amassed an extensive knowledge, much of which has appeared in *Nctornis*. His wife was a keenly interested helper. His brothers, Robert (Bob) and Ernest had similar interest and contributed substantially. Joe introduced R. B. Sibson and the writer to the North Island Kokako (*Callaeas cinerea wilsoni*) in 1941 and this led to prolonged study of this bird and all the others of the area by OSNZ members and their friends. G. M. Maning at his manganese mine in the bush and also officers of the Auckland Regional Authority Water Reserve have been of much assistance to local ornithologists in this period.

In the following species account, all references are personal communication, unless given otherwise. Much of the information is verbal and subjective, but this is the only information available apart from museum records and the small amount of published material.

After each species heading are summarised the Munro specimens and eggs whose whereabouts I have been able to trace. "Birds" = mounted specimens and/or study skins; "Auck. Mus." = the Auckland War Memorial Museum, New Zealand; "Bishop Mus." = the Bernice P. Bishop Museum, Honolulu, Hawaii; "Munros" = held privately by the New Zealand members of the family of H. S. Munro; "no specimens" = no Munro collection of the species has been found.

NATIVE BIRDS OF THE BUSH

NORTH ISLAND KIWI *Apteryx australis mantelli*

Auck. Mus. 5 birds, 3 eggs. Bishop Mus. 4 birds, 1 egg. Munros 3 eggs.

This species was once very plentiful in the area and in contiguous forest and scrub. In the Mataitai Block of bush which then adjoined the Hunua Ranges, the Munro brothers and a friend, John Luke, caught so many in one day that, not having time to kill and skin them before dark, they built a pen of tree-fern trunks to hold them. All escaped in the night. J. W. St.Paul recollects that as children they used to catch them to play with and states that dogs played havoc with them. Pig-hunters of recent years cannot recollect their dogs catching kiwi but this could be due to scarcity of the birds. Dogs in general show great antipathy to the species. The fading out of the Kiwi could have been accentuated by an epidemic or whatever agency wiped out the Weka (*Gallirallus ausiralis*) in most of the North Island.

In the present century birds were seen by J. W. St.Paul in 1914, R. St.Paul in 1917, Mrs Alex. McKenzie in July 1955 and J. Bockman in September 1965 (one on a bush track in the Tapapakanga Valley in the north-east). Borings, calls and footmarks have been noted at odd times by J. W. St.Paul and D. L. Harding. In 1976 Ranger T. Marrett reported a call from near Cossey's Reservoir. Fore-

man D. L. Harding reported that a young kiwi was seen on 16 March 1978 in the valley of the headwaters of the Wairoa River in the Otau area. It was disturbed at the edge of a patch of bush where a huge roller was flattening scrub and fern that was to be burned in preparation for the planting of pine (*Pinus radiata*).

NEW ZEALAND FALCON *Falco novaeseelandiae*

Auck. Mus. 1 bird. Munros 1 bird.

J. W. St. Paul reports that, many years ago, he shot one that was chasing a pigeon. I have myself seen only one, on 8 April 1942, which was sitting on a post at the eastern edge of Plows' Clearing. Mrs Beth Brown, 1970, found a feather of this species on the road into the bush from Plows' Clearing. It was identified at the Auckland Institute and Museum.

NEW ZEALAND PIGEON *Hemiphaga novaeseelandiae*

Auck. Mus. 1 bird. Munros 1 bird.

Numerous in the nineteenth century and quite plentiful up to the first quarter of the twentieth, it is now much reduced owing to loss of habitat and illegal shooting.

NORTH ISLAND KAKA *Nestor meridionalis septentrionalis*

Auck. Mus. 1 bird, 1 egg. Bishop Mus. 3 birds. Munros 1 bird.

Once plentiful and breeding, it is now only a casual visitor. There are populations within range on Great Barrier, Little Barrier, Waiheke and Ponui Islands, the Waitakere and Coromandel Ranges.

RED-CROWNED PARAKEET *Cyanoramphus novaezelandiae*

Auck. Mus. 1 bird. Bishop Mus. 1 bird. Munros 1 bird.

The Munro brothers collected several in the late 1880s so that it evidently was resident then in the Hunua Ranges.

Three birds were definitely identified on 12 December 1974 in the bush east of Plows' Clearing by an experienced party consisting of Mrs Beth Brown, T. E. Lovegrove, S. M. Towle and G. Arnold. These birds were not seen again. Recently there have been reports of sightings in the eastern, central and southern parts of the area. The presence of the Eastern Rosella makes these reports somewhat doubtful, though odd visiting birds could have occurred. The St. Paul brothers and numerous other watchers have seen none in the 1908-1978 period.

YELLOW-CROWNED PARAKEET *Cyanoramphus auriceps*

No specimens.

Not known to have been a permanent resident of this forest, but a party was known to the St. Paul brothers for about a year in 1922. One was shot for identification and proved to be Yellow-crowned. None has been reported since so it may be presumed that this was a visiting party, probably from the ranges east of Thames.

LONG-TAILED CUCKOO *Eudynamis taitensis*

Auck. Mus. 1 bird. Bishop Mus. 1 bird. Munros 1 bird.

It is quite rarely seen or heard as it passes through on migration. The absence of the Whitehead (*Mohoua albicilla*), the usual host of this parasitic bird, could account for its not breeding here.

MOREPORK *Ninox novaeseelandiae*

Auck. Mus. 3 birds. Bishop Mus. 2 birds. Munros 1 bird.

Loss of habitat has reduced the species but it persists in moderate numbers, often heard but seldom seen.

PIED TIT *Petroica macrocephala toitoi*

Auck. Mus. 3 birds. Bishop Mus. 1 bird. Munros 3 birds.

J. W. St.Paul has known the Pied Tit in the area for over 70 years and states that its numbers fluctuate fairly frequently. Since 1941 notes have been taken for the 4 km foot-track to the Kohukohunui Summit where it has gone as low as four or five seen or heard over a period of a few years and up to 12 or so for other similar periods. Barton (1972) considered the Pied Tit rare. From 1971 it increased up to 1978, T. G. Lovegrove counting 31 on 6 August 1977. It is notable that a similar upsurge has occurred at the same time in the Waitakere and Coromandel Ranges.

BELLBIRD *Anthornis melanura*

No specimens.

The Bellbird has a peculiar history in the area. The Munro brothers, who scoured the Hunua Ranges in the 1880s, did not see it. An aged Maori, Henare Turei, told me that he had seen one once, long ago. This would presumably be at or near Kawakawa Bay. It did not stay. He had been familiar with the species when on a bush-felling job in the King Country.

Hugh S. Munro, when over seventy, expressed a wish that he might see a Bellbird before he died. I made a mental note and later, with my two young sons, took him on a motor camping tour. He saw his first Bellbird in the Mamaku Bush, Rotorua, but the climax came when, on advice from the late Norman Potts of Opotiki, we made camp in the Waioeka Valley and enjoyed the most glorious dawn chorus I had ever experienced.

The first dated sighting known to me for the Hunua Ranges was of one seen by J. W. St.Paul on 10 October 1942. He had heard it at times for about six months before that date. In November 1942, two adults with two young were seen by E. St.Paul not far from the same place. Shortly afterwards some were seen and heard near Kawakawa Bay by Mrs R. Cashmore and others. In 1948 a few reached Clevedon but in a few years faded back to the Hunua Ranges, where it has remained in reduced numbers. R. St.Paul has suggested that

it may have crossed the Hauraki Plains from the ranges behind Thames while feeding on flax (*Phormium tenax*) bloom.

TUI *Prothemadera novaeseelandiae*

Auck. Mus. 4 birds, 2 eggs. Bishop Mus. 3 birds. Munros 2 birds.

J. W. St. Paul is of the opinion that the Tui was once the most numerous bird in the bush of the Hunua Ranges. About 500 would come each year from the bush to the flowering kowhai (*Sophora tetraptera*) along the streams flowing into Kawakawa Bay, but on 19 September 1976 a large party of ornithologists doing a survey found only 95. The decrease was gradual but has greatly accelerated in recent years, apparently because of the spread of the Myna (*Acridotheres tristis*) throughout the bush. The Tui may become rare eventually in the Hunuas.

NORTH ISLAND KOKAKO *Callaeas cinerea wilsoni*

Auck. Mus. 2 birds, 1 egg. Bishop Mus. 2 birds.

The Hunua Ranges are one of the last refuges of this bird. Formerly known as the Blue-wattled Crow, it was plentiful before the bush was cleared away or spoiled by browsing mammals. The denser bush of the valleys in the ranges and of the Clevedon flats was the first to be felled and so the Kokako was forced back to the higher, less suitable habitat that would formerly have carried a lesser population than the richer lowlands.

From 1943 to 1953 only seven nests were found, mostly old but two were occupied. A further occupied nest was found in 1962 but intensive searches then and later have been fruitless (St. Paul & McKenzie 1974). The remaining birds may be too old to breed.

NATIVE BIRDS OF BOTH BUSH AND OPEN

AUSTRALASIAN HARRIER *Circus approximans gouldi*

Auck. Mus. 4 birds, 2 eggs. Bishop Mus. 1 bird. Munros 2 eggs.

This bird ranges over the whole area, mostly over open and rough country, though it patrols forest also. Barton (1978) recalls that it was very plentiful in the area when the rabbit population was at its height but dwindled when the rabbit was almost exterminated by poisoning. It nests in small swamps and occasionally in fern.

SHINING CUCKOO *Chalcites lucidus*

Auck. Mus. 2 birds. Bishop Mus. 3 birds.

Regular wherever there are trees or shrubs. Present from September to February or March.

KINGFISHER *Halcyon sancta vagans*

Auck. Mus. 2 birds, 3 eggs. Bishop Mus. 2 birds. Munros 1 bird.

Scattered rather sparsely. In the breeding season some resort

to the decayed trees in the bush to nest and return to the coast and lowlands to winter. Others nest in steep road cuttings and riverbanks in the area.

GREY WARBLER *Gerygone igata*

Auck. Mus. 2 birds, 4 eggs. Bishop Mus. 1 bird. Munros 3 birds.

NORTH ISLAND FANTAIL *Rhipidura fuliginosa placabilis*

Auck. Mus. 3 birds (one of black phase), 2 eggs. Bishop Mus. 2 birds. Munros 3 birds.

SILVEREYE *Zosterops lateralis*

Auck. Mus. 2 birds, 2 eggs. Bishop Mus. 2 birds. Munros 2 birds.

These three species occur in moderate numbers throughout, the Silvereye often in sizeable flocks in autumn and winter.

NATIVE BIRDS OF WATER AND SWAMP

NEW ZEALAND DABCHICK *Podiceps rufopectus*

Auck. Mus. 1 bird. Bishop Mus. 4 birds.

In recent years, the Dabchick has colonised and breeds on the farm dams in the upper farm lands about Wharekawa and Kaiaua. It has so far not been reported on the Auckland Regional Authority water supply reservoirs, which are probably too deep and steep-sided.

BLACK SHAG *Phalacrocorax carbo novaehollandiae*

Auck. Mus. 2 eggs. Bishop Mus. 2 birds.

PIED SHAG *P. varius*

Auck. Mus. 2 birds, 2 eggs. Bishop Mus. 4 birds.

LITTLE BLACK SHAG *P. sulcirostris*

No specimens.

LITTLE SHAG *P. melanoleucos brevirostris*

Auck. Mus. 2 eggs. Bishop Mus. 7 birds.

All of these shags occur sparingly about the area. The Black Shag has a small nesting colony at Cossey's Reservoir and it and the Little Shag occur about reservoirs, streams and dams. The Pied and Little Black Shags are seldom seen except at a tree roost at a farm dam at Wharekawa (J. W. Wootton).

CASPIAN TERN *Hydroprogne caspia*

Auck. Mus. 1 bird. Bishop Mus. 2 birds.

Odd birds sometimes cruise over the reservoirs.

AUSTRALIAN BITTERN *Botaurus stellaris poiciloptilus*

Bishop Mus. 1 bird.

Seen occasionally in small swamps. It has bred at Wharekawa (J. W. Wootton).

BLACK SWAN *Cygnus atratus*

No specimens.

An occasional visitor to reservoirs and dams (P. Andrews).

PARADISE DUCK *Tadorna variegata*

No specimens.

A few lived for a time in upper Ness Valley (K. V. Kelly). A pair has attempted to breed at Wharekawa (J. W. Wootton). A pair has visited the Upper Mangatawhiri Reservoir (P. Andrews).

GREY DUCK *Anas platyrhynchos*

Auck. Mus. 1 bird, 1 egg.

Once widespread, it has recently had to give way somewhat to the Mallard but is still in some numbers in the reservoirs, in dams and streams.

BANDED RAIL *Rallus philippensis assimilis*

Auck. Mus. 4 birds, 3 eggs. Bishop Mus. 4 birds. Munros 1 bird.

Once plentiful in the valleys but now rare. Cats are its worst enemy.

SPOTLESS CRAKE *Porzana tabuensis plumbea*

Auck. Mus. 1 bird. Bishop Mus. 1 bird. Munros 1 bird.

Relatively plentiful wherever there is dense growth of a swampy or semi-swampy nature. It is more often heard than seen.

PUKEKO *Porphyrio porphyrio melanotus*

Auck. Mus. 2 birds, 1 egg. Bishop Mus. 1 bird.

The first report known to me was made in 1940 by Mrs May Insley in Ness Valley. J. W. St. Paul first saw it in Moumoukai Valley in 1944. It is now fairly common about the lower fringes of the area.

NORTH ISLAND FERNBIRD *Bowdleria punctata vealeae*

Auck. Mus. 4 birds, 1 egg. Bishop Mus. 6 birds. Munros 2 birds.

The draining of swamp and near-swamp country has sadly reduced this bird but it persists in the gullies from Wharekawa to Kaiawa and in some odd little pockets elsewhere.

NATIVE BIRDS OF OPEN COUNTRY

WHITE-FACED HERON *Ardea novaehollandiae*

No specimens.

BANDED DOTTEREL *Charadrius bicinctus*

Bishop Mus. 4 birds.

PIED STILT *Himantopus leucocephalus*

Auck. Mus. 1 bird.

SOUTHERN BLACK-BACKED GULL *Larus dominicanus*

Auck. Mus. 2 birds, 1 egg.

RED-BILLED GULL *L. novaehollandiae scopulinus*
Auck. Mus. 1 bird. Bishop Mus. 4 birds.

WELCOME SWALLOW *Hirundo tahitica neoxena*
No specimens.

None of these six species would have been present when the whole area was in bush and scrub.

NEW ZEALAND PIPIT *Anthus novaeseelandiae*
Auck. Mus. 2 birds, 4 eggs. Bishop Mus. 4 birds.

In the early days, this engaging little bird would have lived on landslips and rocky bare places in the bush. Clearance of bush from shingly creek-beds, roads and cuttings increased its habitat, later lost with the advent of motor traffic. It is now found mostly about Plows' Clearing and the less used roads of the pine plantation. It occurs also on the upper areas of farms in Ness Valley and Wharekawa.

INTRODUCED BIRDS COMMON TO BOTH BUSH AND OPEN

EASTERN ROSELLA *Platycircus eximius*
No specimens.

Originally a cage escape in New Zealand, the Rosella has become plentiful in parts of the area, small flocks occurring mostly about or near the bush edge but seen throughout. The first reported was in Moumoukai Valley in July 1943 by E. St.Paul. It is not welcome as it tends to prevent regeneration of native forest by destroying the seeds of some tree species, such as rimu (*Dacrydium cupressinum*).

SONG THRUSH *Turdus philomelus*
Auck. Mus. 3 birds. Bishop Mus. 1 bird.

Plentiful in the open, it penetrates the bush where there are roads or open spaces.

BLACKBIRD *Turdus merula*
Auck. Mus. 2 eggs. Bishop Mus. 1 bird.

Plentiful and approachable in the open, it is not uncommon in deep bush, where it is wild and timid.

CHAFFINCH *Fringilla coelebs*
Auck. Mus. 5 eggs. Bishop Mus. 1 bird.

Mostly a bird of the open but found also throughout the bush.

STARLING *Sturnus vulgaris*
No specimens.

Common in the open, often in large flocks. It uses the dead trees of the bush for nesting.

INDIAN MYNA *Acridotheres tristis*
No specimens.

Numerous in the open but has recently invaded the native forest where it is known to take the eggs of New Zealand Pigeon and Tui.

INTRODUCED BIRDS OF THE OPEN

BROWN QUAIL *Synoicus ypsilophorus*

Auck. Mus. 2 eggs. Bishop Mus. 3 birds.

Prefers semi-swamp growth. Seen in forest occasionally.

CALIFORNIAN QUAIL *Lophortyx californica*

No specimens.

Found in dry places with little cover.

PHEASANT *Phasianus colchicus*

Auck. Mus. 3 birds. Bishop Mus. 1 bird.

Along roads in new pine plantings.

HEDGESPARROW *Prunella modularis*

No specimens.

About edges of scrub growth.

WHITE COCKATOO *Cacatua galarita*

No specimens.

An occasional visitor to the Kaiua-Wharekawa area and has not been known to breed there. It is not popular as it damages crops.

SKYLARK *Alauda arvensis*

No specimens.

A bird of pastures and unsealed roads, it was once very plentiful but its numbers have been drastically reduced by the advent of the hedgehog and the White-backed Magpie.

YELLOWHAMMER *Emberiza citrinella*

Auck. Mus. 2 eggs. Bishop Mus. 2 birds.

GREENFINCH *Carduelis chloris*

Auck. Mus. 3 eggs.

GOLDFINCH *Carduelis carduelis*

Auck. Mus. 2 eggs. Bishop Mus. 1 bird.

REDPOLL *Acanthis flammea*

No specimens.

HOUSE SPARROW *Passer domesticus*

Auck. Mus. 3 eggs.

The last five are all birds of the open and scrub, sometimes frequenting forest edges. All flock in autumn and winter, especially when food is abundant in a restricted area.

WHITE-BACKED MAGPIE *Gymnorhina tibicen hypoleuca*

No specimens.

A few about farm pastures. It robs other birds' nests, particularly those of the Skylark.

ROOK *Corvus frugilegus*

No specimens.

An occasional visitor to the Kaiua-Wharekawa area. It breeds in some numbers at Miranda, outside the Hunuas area.

BIRDS NOW EXTINCT IN THE AREA

BROWN TEAL *Anas aucklandica chlorotis*

Auck. Mus. 4 birds, 3 eggs. Bishop Mus. 1 bird.

Formerly plentiful throughout in and about the streams and swamps, it had disappeared by the early 1920s.

NORTH ISLAND WEKA *Gallirallus greyi*

Auck. Mus. 6 birds, 5 eggs.

The weka was plentiful throughout, mostly in scrub and swampy country, but had gone completely by about 1913. J. W. St. Paul blames dogs, loss of habitat and possibly an introduced virus.

KAKAPO *Strigops habroptilus*

No specimens.

The late Alex. Ashby, when at Orere, told me that in about 1912, when pigeon shooting in the Tapapakanga basin, he saw a large green parrot on a sloping tree trunk less than 1 m from the ground. His gun was empty and before he could load it the bird planed down from the tree trunk and disappeared into thick cover in a gully. A long search was fruitless. He would of course have been looking for it in the trees whereas it would most likely have gone into a burrow.

Sometime prior to 1943, I had a letter from George C. Munro, Honolulu, stating that he had some recollection of the late S. A. Browne, North Road, Clevedon, having claimed to have seen a Kakapo in the range near the upper part of the Wairoa (Clevedon) estuary. The location was approximately NZMS 1, Map N43, 553463. Towards the seaward end of this range, near Umupuia ("Duders' Beach") approximately NZMS 1, Map N43, 565525, Rev. R. J. Fenton recalls some of his fellow boy scouts seeing, in 1949, a green parrot scuttling away through under-scrub. It did not fly. In 1944 an elderly Maori named Henare Turei told me that he had heard older Maoris talking about its being in that range, which is only 18 km from Tapapakanga.

MOA spp. (Dinornithiformes)

Auck. Mus., skeletal material of 40 or more birds. Bishop Mus., a small quantity of same.

Apparently no moa remains have been recorded in the Hunua Ranges. However there is evidence that moas must have lived there at some time. A cache of bones of five species and other material, found in a wet hole in a swampy patch at Clevedon, was only 7 km from the Otau part of the ranges.

The collection in the Auckland War Memorial Museum presented by H. S. Munro represented 40 or more birds of four or possibly five species, all taken from one wet hole in a marshy spot, located at Clevedon, 7 km from the edge of the area herein designated as "The Hunua Ranges." It obviously consisted of remains from a single feast. The bird must have been very plentiful for the Maoris (or Morioris) to be able to herd so many to one spot.

On the very hard soil of the top of the ridge running from Papakura to the Wairoa Gorge, I have seen moa crop-stones (as identified by H. S. Munro, to whom they were common). They were about 3.5 km from the Wairoa River gorge. It is therefore evident that, since this bird was a common resident nearby, it must have been present in the Hunua Ranges. The Wairoa River would have been no barrier as a child could easily ford it. There are no caves in the Hunua Ranges where bones could be preserved.

Tim Halliday (1978) p. 122, says "It is not easy to reconstruct the history of New Zealand's birds, chiefly because there is a dearth of fossils. This is probably due to the fact that most of New Zealand has long been covered by forests which create acidic soils in which corpses decompose very quickly. There are many more fossil remains of the birds that have lived around the archipelago's coasts." This would apply to the Hunua Ranges, which were totally covered in bush, as was the Clevedon area where the remains were found.

BIRDS OF WHICH NO EVIDENCE HAS BEEN FOUND

North Island Rifleman *Acanthisitta chloris granti*, North Island Bush Wren *Xenicus longipes stokesi*, Whitehead *Mohoua albicilla*, North Island Robin *Petroica (Miro) australis longipes*, North Island Saddleback *Philesturnus carunculatus carunculatus*, Huia *Heteralocha acutirostris*, North Island Thrush *Turnagra capensis tanagra* and Moa spp..

None of these were found when the Munro brothers assiduously collected birds in the late 1880s when the bush was of much greater extent and in much better order than now, so should have been suitable for all of these species.

J. W. St.Paul lived in the area from 1901, started to note birds about 1908 and retired from work there in 1963 but was continuing study of the birds in 1979. His brother Robert was brought up there and whenever he came home in later years he roved that bush, hunting and birding. Ernest St.Paul spent all his early and working life there. They saw none of these birds. I can offer no explanation for the apparent absence of these species from the early part of European settlement to the present.

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LITERATURE CITED

- BARTON, I. L. 1972. On the vegetation of the Hunua Ranges, Auckland. NZ Jour. Bot. 10: 8-26.
 BARTON, I. L. 1975. Auckland's south eastern bulwark, a history of the Hunua Ranges. I. L. Barton, Hunua, Auckland.
 HALLIDAY, TIM. 1976. Vanishing birds. their natural history and conservation. Auckland: Hutchinson of New Zealand.
 MEAD, A. D. 1930. Physiography and geology of uplands west of Firth of Thames. NZ Jour. Sci. Tech. 11: 310-318.
 ST PAUL, J. W.; MCKENZIE, H. R. 1974. The Kōkako (*Callaeas cinerea wilsoni*) in the Hunua Ranges. Notornis 21: 205-218.
 REISCHEK, A. 1952. Yesterdays in Maoriland. New Zealand in the eighties. Whitcombe & Tombs.
 SCHOFIELD, J. C. 1967. Sheet 3 Auckland (Ed. 1) Geol. map of NZ, 250 000. Wellington: DSIR.
 SILVESTER, W. B. 1964. Forest regeneration problems in the Hunua Ranges, Auckland. Proc. NZ Ecol. Soc. 11: 1-5.

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SHORT NOTE

PUZZLING BEHAVIOUR OF HARRIERS

During the Christmas break of 1977, my husband and I spent several days on a farm in Hawkes Bay. We noticed Harriers (*Circus approximans*) repeatedly flying low over three acres of remnant bush in cleared farmland. They flew over to an exposed ridge and watched the surrounding country. I taped the call which was a high-pitched, explosive whistle. They were much harassed by Starlings and Magpies.

In this bush under a Tawa tree (*Beilschmiedia tawa*) we found droppings and pellets and, on looking up, saw in the foliage two very large, bulky structures made of twigs, one 12 m and one 15 m from the ground which in our judgement could only be nests. We watched them for hours, concentrating on the upper one which seemed newer, although the lower was still intact. Eventually a flock of Silvereyes (*Zosterops lateralis*) hunting insects in the foliage came abreast of the upper nest and a Harrier's head appeared briefly which, by its dark colour, may have been a well-fledged juvenile. After that short glimpse no more was seen of the bird in the nest, although at dusk a Harrier circled down in that direction. We have pictures of the two nests and the Harrier in the upper one.

If these structures were indeed nests (and it is hard to know what else they could have been), this raises three questions.

1. As most records state that Harriers enlarge their nests each year, why were there two nests in this tree, both apparently intact?
2. As there was an island in a large swamp nearby, why should the Harriers choose to nest in the Tawa?
3. The Australian Spotted Harrier (*Circus assimilis*) nests in trees. Was *Circus approximans* nesting in the Tawa because of unusual circumstances or does it nest in trees more than is realised? Geoff Moon (pers. comm.) has seen a nest at 2.5 m.

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