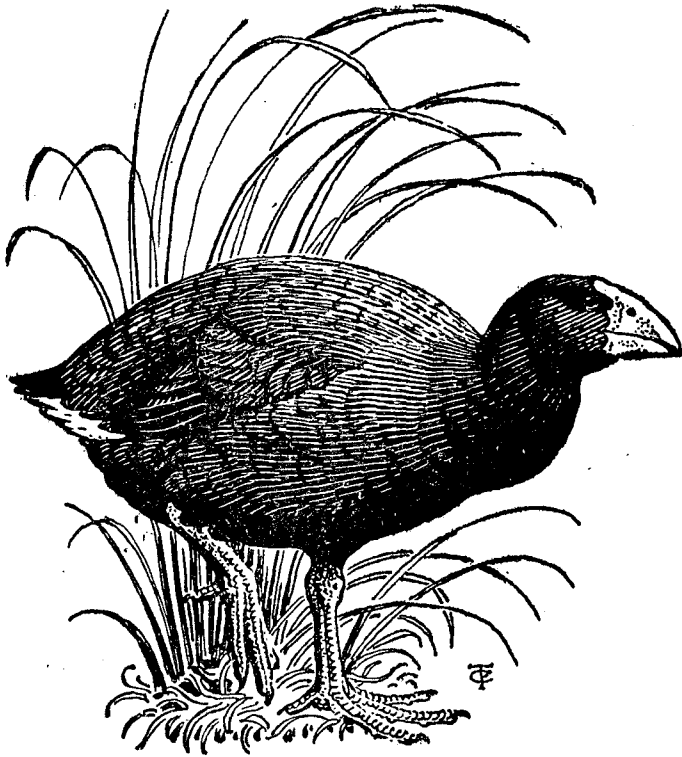


NOTORNIS



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NOTORNIS

In continuation of New Zealand Bird Notes

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NOTORNIS

VOLUME EIGHT, NUMBER FOUR

APRIL NINETEEN FIFTY-NINE

AUSTRALIAN COOTS NESTING IN OTAGO

By M. M. SMALL and M. F. SOPER

One of us (M.M.S.) first noticed two pairs of these Coots (*Fulica atra australis*) in the Arrowtown district on 12/10/'58. They were very confiding, allowing us to get a good look at them on numerous occasions, so that there was no doubt about identification. The birds were somewhat larger than a Black Teal, blue black in colour and the cream frontal shield made them unmistakable. Most of their time was spent swimming and diving in typical coot manner in deep water. We heard a variety of calls; the two commonest being a harsh "crark" and a noise very similar to someone chopping with an axe.

About the end of October it became obvious that both pairs were holding territories. We watched this for a while to make sure; then erected a hide in a suitable patch of open water. After a day in the hide the conclusion was reached that they were nesting, but that a boat was going to be needed. On 21/11/'58, using a boat, we saw one pair with two chicks (and almost certainly more but they were being hunted by a Harrier and were taking cover, so the full brood was not ascertained). The other pair had a nest with five eggs. Two "false nests" were found, empty; each at the base of a willow growing out of four feet of water. The nests were made of willow rootlets lined with dead raupo leaves and placed from 4 to 6 inches above the water line. The nest with eggs was similarly placed on a solid foundation deep in the tangle of willow, surrounded by chest-high water, composed of willow rootlets and lined with dead raupo leaves. The five eggs were creamy white, evenly and sparsely spotted with small and medium-sized black spots.

[For some years it has been suspected that a few Australian Coots were breeding in the south of New Zealand. This factual account of nesting is therefore all the more satisfying.—Ed.]

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THE LAST (?) OCCURRENCE OF NOTORNIS IN THE NORTH ISLAND

By W. J. PHILLIPPS

The following is submitted as an important and apparently factual occurrence of a strange bird taken in the Ruahines last century. The evidence pre-supposes that the Maoris who identified the bird as the Mohoau had seen similar birds before and were able to make a correct decision, perhaps a remote contingency. But, nevertheless, it seems desirable to place the matter on record in the hope that it will eventually assist in further investigation. Our informant states that the bird had blue feathers and resembled a Pukeko.

In the year 1919, the late Harold Hamilton and the writer were junior members of the staff of the Dominion Museum. At that time there were various rumours that the Takahe had been seen in the back country of Otago, and we discussed the matter many times and even tentatively planned an expedition to search for them. One story on which Harold Hamilton insisted was that about the year 1898, an actual specimen of *Notornis* had been secured in the Tararuas and taken to the home of Mr. Roderick McDonald of Horowhenua.

Interest in the presence of the Takahe in the Wellington Province was heightened by our association in March, 1920, when we excavated Takahe bones from a sinkhole near Martinborough. J. C. Yaldwyn (*Rec.Dom.Mus.*, Vol. 2, pt. 1., pp. 1-7, 1956), revisited the cave and summarized the results. He mentioned that "a number of Takahe bones including seven crania are present, representing a form considerably larger than the extant *N. mantelli*." This may seem to indicate the comparatively recent occurrence of the Takahe in this locality.

In the 1930's I was making an enquiry into carved Maori houses of the Wellington Province, and on one occasion asked Mr. Hone McMillan, late of Koputaroa, if he had ever heard of a strange bird being caught in the Tararuas and taken to the McDonald home at Horowhenua. Hone McMillan was a dignified and careful student, highly respected in the neighbourhood. His answer was quiet and deliberate. He had heard the story and said that some said that the bird was a Takahe; but he had never seen it.

Recently (February 1959) through the courtesy of Mr. Hammond Murray of Lake Papaitonga, Ohau, I have been enabled to meet Mr. Hector McDonald, son of Mr. Roderick A. McDonald who dictated the subject matter of "Te Hekeinga, early days in Horowhenua" to E. O'Donnell, 1929. As a young man Hector McDonald was present when the bird arrived at the McDonald homestead. There was great excitement at the time, particularly among the older Maori population who identified the bird as the rarely seen Mohoau. This was in the autumn of the year 1894. The skin and feathers were kept at the homestead for many years.

Hector McDonald has told us that the following elders of the Ngati Muaupoko tribe came to see the bird or to make their speeches to it: Noa te Whata, Hoani Puihi, Wairama and Rangi Mairehau. The Mohoau had been secured by a surveyor, Morgan Carkeek. He had been working in the north Ruahine ranges, and the bird (or its skin) was brought through with other equipment on pack horses.

Mr. Morgan Carkeek was the grandson of Stephen Carkeek who in 1840 was lent by New South Wales to the New Zealand authorities as a Customs Official at Bay of Islands, and employed in some of the first surveys of that locality. A son of Mr. Morgan Carkeek, Mr. Riki-hana Carkeek, still lives at Otaki. He had heard his father mention the incident and the excitement it occasioned.

Reverting to Hector McDonald's story, it seems that Unaika, described as a rangatira woman of Ngati Ruakawa, told Mr. Roderick McDonald that the correct name for Aramoho was Ara Mohoau, the track of the Mohoau. Mr. Hector McDonald worked for some years at Tokaanu and found that Tokaanu Maoris knew of the Mohoau. As recently as 1910, it was common to use the term in application to one who had been away overlong in the bush country. He was a 'Mohoau,' unshaven and unkempt. Mr. R. Carkeek confirmed this usage of the word.

WINTER NESTING OF PIED STILTS IN SOUTH AUCKLAND

I. ARDMORE, 1954

Nesting which took place on my farm at Ardmore in 1954 was much earlier than usual. The first two nests hatched on 24/8/'54, broods of four and three being produced. At this date there were six other nests with eggs. A total of seventeen chicks was reared for the season.

The date of the laying of the first egg can be determined within a very few days. Allowing the average incubation period of 25 days (See A. F. Stokes, *Stilts Nesting at Ardmore*, "New Zealand Bird Notes," III, 108) gives July 30th as about the beginning of incubation. In the event of daily laying the first eggs would most likely have been laid on July 27th, incubation starting on the 30th, the day the last egg was laid. The date of the first egg could be earlier (a) if, as often happens, the bird took five days to complete the clutch, (b) if incubation started later than the day the last egg was laid, (c) if hatching took place a day or two later than the average.

— A. F. STOKES

Prior to 1954, when A. F. Stokes recorded eggs in late July, the earliest local nests with eggs of the Pied Stilt (*Himantopus h. leucocephalus*) have been found in August. At Miranda a first egg of a clutch of four found on 24/8/'47 could not have been laid later than 21/8/'47 and another clutch of four on 26/8/'51 could not have been started later than 23/8/'51. At Clevedon Mr. R. R. Clow reported a clutch of four on 19/8/'49, the first egg of which could not have been laid later than 16/8/'49. These nests were all lost so there was no hatching date to help to determine the actual date of laying. In the literature up to 1955 which we have searched we have found no earlier dates than these. 1956 has produced remarkably early winter records from several places, indicating that the season was quite abnormal. Possibly the very wet winter, with only short spells of cold weather, made food plentiful and induced early breeding.

2. MIRANDA, 1956

On 12/7/'56 a party of O.S.N.Z. members doing a routine check of the birds of the Miranda coast found at the fresh pools a nesting colony of Pied Stilts. The colony was new so the first egg was probably not laid much earlier than 9/7/'56. It was found on 28/7/'56 that every nest had been flooded and no further breeding attempt had then been made.

Three strongly flying young of the season seen at the pools on 9/9/'56 (R. B. Sibson) would have come from eggs laid at the beginning of July, allowing a minimum of four days for laying twenty-five for incubation and forty to forty-two for hatching to flying, the latter being estimated at the winter rate proved elsewhere for 1956. Since these three young birds were most likely bred inland and then brought to the coast by their parents, as is quite usual with the species, they would when seen have been flying for one or two weeks or even more. This would put the probable date of the first egg back to the middle of June.

— H. R. MCKENZIE

3. CLEVEDON SOUTH, 1956

NEST No. 1. July 12th:—On this date I visited Miranda with a party of fellow bird watchers, and we found the stilts there were already nesting. On returning home I decided to investigate the stilts in a wet paddock just below my house. To my surprise and delight, I found a nest with four eggs. Any display at all was only shown by the male bird; the female quickly returned to the nest to resume her incubating duties. I visited the nest each day up to July 31st, on which day four chicks hatched. At 2.15 p.m. I noticed the hen bird making two trips from the nest carrying egg-shell away. At 3 p.m. there were two very alert chicks, quite dry; the third still damp and fourth, visible through a large crack in the shell, was still in the process of hatching, very much alive and anxious to see more of the world outside

August 1st. 11 a.m. no chicks in nest. Much more display was now being shown. Aug. 3rd and 4th. On these dates we had a very bad storm; high winds, heavy rain and very cold. How the chicks survived this is unknown to me as the paddock was well covered with surface water, but they were all present when the storm was over. A few days after the storm the chicks disappeared. As we had a large number of Pukeko in the same paddock I feel they must have at least been partly to blame because they, along with Harriers, had been frequently worrying the stilts.

NEST No. 2. Found July 18th with 3 eggs. August 11th two were hatched and the third addled. These chicks were taken away to an area beyond my reach.

NEST No. 3. July 31st. Nest with 4 eggs. August 23rd 4.45 p.m. one egg was chipped. August 24th 10.30 a.m. all eggs were chipped. I visited the nest again at 3 p.m. and all chicks were hatched. This brood also moved away, so unfortunately I have no record of the time between hatching and flying. This pair of Stilts was the fiercest I have known. I only needed to step outside my back door and they would come swooping down on me. The day the chicks were hatched one of the pair came as close as three feet from me and determinedly stood its ground, letting me know in no uncertain terms that my interest was not appreciated.

NEST No. 4. August 1st. A neighbour Mr. D. H. Hunt, a mile south-west of me, found a nest of 4 eggs. These were later destroyed by cattle.

NEST No. 5. (D.H. Hunt). August 1st Nest containing 1 egg. Four eggs seen six days later. August 29th 3 eggs chipped. One had rolled out of nest. August 30th 3 eggs hatched. Sept. 1st chicks taken by parents to another farm.

INCUBATION RECORD. No. 5 nest gives the only record of winter incubation. Allowing four or five days for completion of the clutch and beginning of incubation, the period would be 26 or 27 days. The records of A. F. Stokes are 23 to 27 days, with an average of 25 days in the normal breeding season. This case therefore does not indicate a longer incubation period for winter nesting. It was not however one of the earliest of the winter nests.

FIRST LAYING DATES. Allowing the minimum of 4 days for completion of clutch and 25 days for incubation, according to the average mentioned above: No 1 Nest, July 3rd. No. 2 Nest, July 14th. No. 3 Nest, July 27th. No. 4 Nest. Prior to Aug. 1. Nest destroyed. No. 5 Nest. Aug. 1st (29 days from first egg to hatching).

— (Mrs.) L. M. RENOUF

4. ARDMORE, 1956

The members of my family watched the birds each day but only prominent dates have been used for this account. The broods are numbered according to age, but the nests according to date found. The term "Nursery" describes a wet hollow containing most of the nests.

BROOD No. 1 (Nest not known.)

- Aug. 6 One large chick seen twenty yards from "Nursery." Age estimated by H.R.McK. to be not less than three weeks.
- Aug. 8 Another of same size seen with the one of Aug. 6. These were about twice the size of those of Brood No. 2.
- Aug. 17 Flapping wings and hopping. Up to date had been regularly seen in same area near a ditch.
- Aug. 19 Only one left. Out of usual area and being chased by an adult pair. Unable to fly. Parents not present. Perhaps the other chick had flown and the parents had gone away with it.
- Aug. 21 Seen near cowshed, alone, not flying.
- Aug. 23 Alone again, looking dazed and lost. No adults did anything to help it when we went near. Flapped but could not fly when chased.
- Aug. 25 Still not flying.
- Aug. 26 Flew about 150 yards when disturbed.
- Aug. 28, 29 Flew well in large circles and was not seen again.

BROOD No. 2, Nest No. 4, "Nursery"

- Aug. 1 Adult apparently brooding chick in grass about 50 yards from Nursery. A large piece of eggshell was nearby but no nest.
- Aug. 2 Adult brooding as before. One chick found, 1½ weeks old. By the area occupied from this date to flying these are thought to have come from a used empty nest found on July 31 in the Nursery (No. 4).
- Aug. 28 Two chicks often seen in above area up to date.
- Aug. 29 Upper wings dark. Stretching wings.
- Sept. 4 Nearly ready to fly.
- Sept. 8 Two seen. One flew when chased. The other could not.
- Sept. 10 Both flying.
- Sept. 14 Last seen. These chicks were of normal size when they flew.

BROOD No. 3, Nest No. 1, "Nursery"

- July 30 4 eggs.
- Aug. 2 Hatched. Two survived. (See Brood 5 for flying date.)

BROOD No. 4, Nest No. 6, "Nursery"

- Aug. 1 3 chicks, 1 egg.
- Aug. 2 Egg chipped.
- Aug. 3 Very bad storm. Bird on nest all day.

- Aug. 4 Storm continued. Nest not visited for fear of causing harm.
 Aug. 5 Nest empty. Mother and chicks returned to nest to roost for several nights from date. Other broods returned at night once or twice only. 3 chicks survived to fly. (See Brood 5 for flying date.)

BROOD No. 5. Nest No. 7, 30 yards N.W. of "Nursery"

- Aug. 1 1 chick and 1 egg in nest. Two other chicks must have been hidden in grass.
 Aug. 4 4 chicks seen. These kept apart from other broods. One lost in first eight days. Three finally flew.
 Sept. 11 6 chicks of Broods 3, 4 and 5 flew.
 Sept. 12 1 flew.
 Sept. 14 1 flew. (Total 8 survivors of the three broods.) The last one was thought to have been able to fly before the 14th. The chicks of Brood 5 were noted to stay small for a long time, then grow quickly from 26th to 29th in period of fine weather. The chicks of these broods were all much under-sized when they flew.

BROOD No. 6. Nest No. 2, "Nursery"

- July 31 2 eggs. Incubating.
 Aug. 3, 4 Storm. Bird still sat.
 Aug. 11 Not traced further.

BROOD No. 7. Nest No. 8, 55 yards West of "Nursery"

- Aug. 8 3 eggs.
 Aug. 26 Left nest with 2 chicks. Not seen further.

BROOD No. 8. Nest No. 9, "Nursery"

- Aug. 8 Bird sitting.
 Aug. 11 4 eggs seen.
 Aug. 28 Left nest.
 Sept. 2 2 chicks seen. Not traced further.

NEST No. 3, "Nursery"

- July 31 Thought robbed by hawk. Remains of 3 or 4 eggs.

NEST No. 5, "Bull-paddock"

- July 31 Pair seen at nest. Two Harriers settled near nest. Stilts chased one away and the other ate the two eggs.

NEST No. 10, "Bull-paddock"

- Sept. 1 The pair of Nest No. 5 (presumed to be the same) incubated 4 eggs from date to Sept. 27. The 3 chicks were almost certainly taken by pukeko.
 For the purposes of this article this nest cannot be classed as "winter."

SUMMARY

No incubation period was obtained.

Hatching to flying period:

Brood No. 3 — 2 chicks 40 days.

Brood No. 4 — 2 chicks 41 days. 1 chick not definite.

Brood No. 5 — 3 chicks 41 or 42 days.

This winter period is on the average 9 days longer than that given for the normal season by A. F. Stokes.

Another notable matter is that the 8 chicks of Broods 3, 4 and 5 were little more than three quarters of normal size when they flew, whereas the earlier ones were of full size.

First eggs laid:

Brood No. 1 — June 17 approx.

No. 6 — July 13.

No. 2 — June 23 approx.

No. 7 — July 29.

No. 3 — July 2.

No. 8 — July 31.

No. 4 — July 3

Nests No. 3 — July, date unknown

No. 5 — July 3.

No. 5 — July, date unknown

— (Miss) B. L. GOERTZ

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GENERAL SUMMARY

There is proof of seventeen nests having contained eggs at various times between the middle of June and the last day of July. The nests were divided between two districts and were in five separate groups.

The only record of laying to hatching did not indicate a more lengthy period than the normal one for the spring.

The survival of newly hatched chicks through a long severe winter storm was most surprising.

The hatching to flying period was on the average nine days longer than normal. The small size at the first flying of the last eight birds, from three different broods, has not been previously experienced by the observers.

— H.R.McK.

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**BIRDS OF CHATHAM ISLAND
AND PITT ISLAND**

By C. J. LINDSAY, W. J. PHILLIPPS and W. A. WATTERS

These notes were the result of a short stay at Chatham Islands by two of us (C.J.L. and W.J.P.) and a much longer stay (29th January to 26th May, 1957, by W.A.W.). Our general impression is that the bird population in the past twenty years has become depleted as farming has improved and cultivated areas increased to the detriment of bush clad areas

North of a line joining Waitangi and Owenga the areas of bush remaining are almost without exception in poor condition and without undergrowth. In one or two localities small areas have been fenced off from stock; the best example of this is on the property of Mr. A. Weisner, Kaingaroa, where an area of about 100 acres, partly bushed, partly in open grassy country, has been protected in this fashion.

Over the southern parts of both islands and especially on Pitt there are still areas of forest in good condition; nevertheless much of this bush is in danger of serious damage. Among the factors damaging to the bush are:— the presence in many localities of wild sheep, cattle and pigs; the killing of many trees, particularly the matipo, by wood-boring insects; the cutting of trees along the margin of the bush for firewood in some places; and the thinning of some of the coastal fringe of scrub and bush, particularly on the south of Pitt Island, by the heavy prevailing winds. This last-named factor must always have operated to some extent, but it seems that once areas of bush have been partly opened up by other causes (such as grazing), wind is an important factor in pushing back the boundaries of the bush.

It appears that over the past twenty years populations of Black Swan and Grey Duck have remained more or less constant, while Pukeko have increased in numbers. Domestic geese have emerged as a wild species. Introduced passerine birds were not common, the Starling being the only exception. It is natural that with newer and more efficient farming techniques the scattered forest areas will decrease, this apart altogether from the considerations already mentioned. Populations of birds dependent wholly or in part on forest areas are certain to decrease still further; but the recent preservation of bush areas to protect Moriori tree carvings may assist in maintaining certain bird populations. Also it is to be hoped that a considerable area of bush on the southern block of the island, notably that around Pipitarawai hill, will be protected as a refuge for the Chatham Island Pigeon.

INDIGENOUS BIRDS

- BLUE PENGUIN.** Several live birds were recorded; one at Waihere Bay, Pitt Island (5/2/57) and others off Manakau Point. Corpses were seen, sometimes abundantly, on most beaches, and residents report that these penguins are well distributed and common.
- WANDERING ALBATROSS.** Many birds were seen following H.M.-N.Z.S. "Endeavour" on the first two days of the passage between Waitangi and Wellington (26 and 27/5/57).
- BLACK-BROWED MOLLYMAWK.** Several mollymawks were seen on 27/5/57 from the "Endeavour," probably of this species.
- BULLER'S MOLLYMAWK.** These birds were observed during crossings of Pitt Strait on 31/1/57, 7/2/57, 24/2/57, 4/3/57 and 30/3/57.
- GIANT PETREL.** Solitary birds were commonly observed from the cliffs in many parts of both islands. Small numbers were also seen during launch crossings of Pitt Strait.
- CAPE PIGEON.** Large numbers of Cape Pigeons followed the "Endeavour" on the first two days (26 and 27/5/57) of the trip from Waitangi to Wellington.
- BROAD-BILLED PRION.** On 30/3/57 many light-coloured petrels, probably of this species, were seen flying in the Pitt Strait area between Owenga and Pitt Island. One freshly killed bird was recorded on Mangere Island (30/3/57), and another at Whenuatura, Pitt Island.
- SOOTY SHEARWATER.** Many birds were seen, often in large flocks, during crossings of Pitt Strait. Nesting birds were recorded on the

steep north eastern side of Mangere Island on 30/3/57. R. A. Hunt stated that years ago there were numerous mutton-birds breeding on all high points of the Chathams, in particular on Maunganui Hill and also at Teraki Bay on the point. A few yet lay eggs on cliffs at Mairangi and on odd places all around the cliffs on the south side of the island. South East Island is now the main breeding ground as well as Little Mangere. Neilson Brothers have been leasing S.E. Island and Large Mangere. South East Island is now a reserve and the sheep there were due to be removed during 1957. They collect muttonbirds annually and give some to friends, but organised muttonbirding has ceased. T. Hough reported 500 muttonbirds taken each year at Matarakau Point in 1890, while now barely twelve breed there.

WHITE-FACED STORM PETREL. Two of this species seen in Pitt Strait; evidence of destruction by cats, Whenuataru, Pitt Island.

[**AUSTRALIAN PELICAN?** In the year 1936 a large white web-footed bird flew low over Pitt Island. It was very tired and was being pursued by several gulls. It landed on a small lagoon. This was watched by Mr. R. A. Hunt and Mr. Bob Tiwai, who were crutching sheep near at hand. It flew away next day, spiralling upwards as it ascended; but returned several times and then disappeared. It was larger than a Black Swan.]

BLACK SHAG. These were often observed in flocks of up to 25 or 30 birds on Te Whanga Lagoon, and, in small numbers, on many of the small lakes in the northern part of the island. None was recorded on Pitt Island.

CHATHAM ISLAND SHAG. Both Chatham and Pitt Island Shags were recorded in small numbers many times along much of the coast of both islands, and in Pitt Strait. Colonies of the Chatham Island Shag were noted at Rabbit Island, off Pitt Island (about 15); on cliffs between Manakau Point and Cape Fournier; Okawa Point (about 30); and Matarakau Point (60). On a few occasions small numbers were seen resting with Black Shags on rocks in Te Whanga Lagoon.

PITT ISLAND SHAG. Colonies were recorded on Pitt Island on the north side of Kahuitara Point; Rabbit Island (15-20); and Glory Bay. On the main island they were seen at Cape Pattison (50); Okawa Point (12) and Kaingaroa Bay (about 12). A few birds were always to be seen near the wharf at Waitangi.

WHITE HERON. This is a rare visitor to the Chathams. Mr. T. H. Lanauze reported seeing a specimen on Te Whanga in 1922. Three birds were reported by Mr. Ivan Doak of Waitangi; one being shot at Te Awainanga May-June, 1956, one shot Lake Huro and one seen June, 1951.

GREY DUCK. Although obviously much reduced from earlier years, this duck is well distributed, though often only in small numbers, on all suitable water on the main island. There is probably not a large population on Te Whanga lagoon. During the shooting season there is evidently a marked dispersal to lagoons and lakes in the outlying parts of the main island, though these can probably support only a limited number of birds. Large flocks were

recorded a few times, e.g., up to 300 on Lake Huro, 7/3/57. About 20 birds were recorded on Pitt Island, on the small lake at the mouth of Tupungi Creek.

HARRIER. Harriers are evenly distributed, and were recorded at most localities visited on both islands.

WEKA. (*G. a. hectori*). Weka re-introduced from Canterbury by Jim Fougere were recorded abundantly in most parts of the main island, and particularly in the central and northern areas. Some were seen in the dense, tangled bush around Pipitarawai hill, in the southern block of the island; a few birds have even found their way to the southern shore down the very steep bushclad slope immediately south of Oropuke hill, and may be seen searching for food along the rock platform at the base of the precipitous cliffs. T. H. Lanauze tells us that many islanders go "wekaing" in May or June and take one hundred at a time in good condition — many are very fat. Waitangi West is a favourite place. They are all over the island. Weka pick at dead stock; eat maggots; pick out young plants in the garden; kill chickens and young ducks. Weka have also developed a habit of poking their long bills into hen and duck eggs and running off with them.

PUKEKO. Pukeko were recorded in many localities on the main island, and their harsh cries were often heard from suitable swampy areas, e.g., along the east side of Te Whanga lagoon. On Pitt Island the lower part of the Tupungi Creek valley supports a small colony; in this area the birds may be seen grazing over the hillsides well away from the stream. Mr. G. Preece reports a Pukeko on the Star Keys about 1951. T. H. Lanauze estimates the number around Lake Huro at 100.

OYSTERCATCHER (*H. chathamensis*). These birds were recorded at the following localities: mouth of Tupungi Creek, Pitt Island; Moutapu Point, Pitt Island; Glory Bay, Pitt Island; Mangere Island; and on the main island from Wharekauri; Cape Pattison; and on the south coast near The Pinnacles. Only a single pair of birds was normally present at each locality. Locally the oystercatcher is known as red-bill.

BANDED DOTTEREL. These were seen in suitable places on the main island, although they were not recorded as a characteristic bird of the open swampy "clears," as was reported by Fleming (1937). In nearly every case where noticed, they were present on grassy or swampy flats close to the sea or beside Te Whanga lagoon. On 10/4/57 many birds were observed flocking on the grassy flats along the north-east shore of Te Whanga lagoon, near Te Hapupu.

BAR-TAILED GODWIT. Godwits were seen at two localities on the north and east shores of Te Whanga lagoon; 5 birds near the outlet of the lagoon (Te Awapatiki) on 21/2/57; on 12/4/57, 37 birds were feeding with two Knots along the north shore of the lagoon. Much of the swampy or grassy flats forming the north and east shore of the lagoon appears to be very suitable ground for wading birds such as the godwit, and it is almost certain that

continued search during the spring and summer would provide many further records of this and other waders.

TURNSTONE. Turnstones were recorded three times; this is apparently the first record of this species from the Chathams. On 20-22/3/57, 55 were observed feeding along the beach immediately north of Waitangi West Station. Later, on 4/4/57, about 150 were seen feeding with Black-backed Gulls in shallow water on the north-east shore of Te Whanga lagoon, near Te Hapupu. On the following day two small flocks (12 and 8) of Turnstones were seen on the beach (Hanson Bay) immediately west of Okawa Point. (This record was made solely by W.A.W.).

KNOT. Two birds were seen feeding with a small flock of Bar-tailed Godwits on the north shore of Te Whanga lagoon, on 12/4/57.

SOUTHERN SKUA. Specimen seen ashore at Tupungi Lake, Pitt Island, 1/2/57.

BLACK-BACKED GULL. Observed along all parts of the coast-line; it seems to thrive best near settlement.

RED-BILLED GULL. Evenly distributed around the coast.

WHITE-FRONTED TERN. This tern was recorded around the coasts of both islands, and was more abundant around the rugged south-east shore of the main island. A flock of 20 to 25 was seen on the north end of Pitt Island.

CHATHAM ISLAND PIGEON. During a four-month stay in the islands one of us (W.A.W.) saw this bird on one occasion only, namely on 22/5/57, when several were seen in the thick bush around Pipitarawai hill. They were recorded, however, by other members of the party on the south-east side of Pitt Island. To judge from reports, this pigeon is still found in suitable forested parts of the southern block of the main island (i.e., south of a line joining Waitangi and Owenga) and on the southern half of Pitt Island, 3/2/57 C.J.L. saw five specimens. There is little doubt that they have almost completely disappeared from the central and northern parts of the main island. Most of the bush in these parts is in poor condition, but it is probable that occasionally a few birds may visit isolated patches of bush or the station plantations along the north coast. The areas of bush just south of the outlet of the lagoon, where Fleming recorded the pigeon in 1937, are now in very poor condition and almost completely devoid of undergrowth.

RED-FRONTED PARAKEET. Parrakeets were heard and seen several times on the southern part of Pitt Island, and in the thick bush on the southern block of the main island. It is probable that the parrakeet is still well distributed and not uncommon over much of the south half of Pitt Island and in several forested localities in the south block of Chatham Island. Parrakeets were heard in thin coastal bush on the north-east side of Mangere Island, on 30/3/57. On 11/3/57, Mrs. D. W. R. Heatley recorded two at the Residency, Waitangi, and later Mr. Hawkey, head of a visiting survey party, reported at least a dozen in the bush along the south coast.

- FANTAIL.** The fantail was seen very commonly, in all areas of bush visited on both islands, and in addition was nearly always found around plantations of introduced trees.
- CHATHAM ISLAND TIT.** Tits were recorded on the main island, and were frequently seen and heard over the south part of Pitt Island, and on Mangere Island.
- CHATHAM ISLAND FERNBIRD.** This species has been considered extinct for over 50 years. Mrs. G. Preece, of Pitt Island, reports seeing this bird on the south of Pitt Island about 1950-51.
- CHATHAM ISLAND WARBLER.** The warbler was recorded only occasionally. It was not definitely seen over the north half of Chatham Island. Single records were made of birds in small areas of bush along the south-west side of Te Whanga lagoon and on the south-east corner of Lake Huro. Fair numbers were seen in the thick forest around Pipitarawai hill, and along the rugged south-west coastal part of the main island. Warblers were commonly seen over the southern half of Pitt Island.
- PIPIT.** On the main island pipits are undoubtedly the most common of the indigenous birds, and they were constantly to be seen in all areas of open country and along roads and tracks. They are also present on Pitt Island, but were recorded there much less frequently than on the main island.
- CHATHAM ISLAND BELLBIRD.** One of our party was informed that a bellbird was seen near North Head, Pitt Island, three years previously. The informant, who is familiar with bellbirds in New Zealand, is completely reliable, and there would appear to be no sound reason for disregarding this report. This record must necessarily be treated with great caution in view of the fact that the bird was last reported about 1906. Much of the bush on the southern third of Pitt Island is still in good condition, and densely clothes numerous small gullies which are difficult of access and may still shelter small numbers of this species. Mrs. G. Preece, of Pitt Island, reports seeing and hearing a bellbird on the southern part of the Island about 1952.
- TUI.** Tui were heard on the southern half of Pitt Island, and at a number of places on the southern block of Chatham Island, namely Pipitarawai hill; Tuku Stream; east of The Horns. No Tui were recorded from the central and northern blocks of the main island.
- WAXEYE.** Waxeyes were commonly observed throughout both islands.



INTRODUCED BIRDS

- BLACK SWAN (126).** Four or five Black Swans were brought to Chatham Island by Mr. Walter Hood, Owenga. This was in 1890. Numbers increased greatly until now there are many thousands. On Chatham Island in the year 1915, much rain fell and there was considerable flooding. Also for some reason the outlet of the lake was not open. Black Swan could not reach to the bottom of the lake to get food; so they invaded every small lagoon,

creek and stream on the island, eating large quantities of watercress, etc. Thousands invaded Pitt Island. Many died or were killed; but their numbers seem to have been restored. During this period Te One suffered from large numbers of swans fouling paddocks and farms. A second occurrence of this was in 1924 when again there was too much water in the lake. The eggs are largely used for food by the inhabitants. When the eggs are taken, the general belief is that the swans shift their location and lay elsewhere. During 1957 (February) swans were said to be in better condition than in most years. Mr. A. H. K. Ousey, Manager of Wharekauri Station, stated that in a good laying season 30 to 40 thousand swan eggs are taken for food. In the past he has kept records and found this to be a correct estimate. Among the inhabitants there is an unwritten law that swans are never shot in the laying season.

PLEASANT. Walter Hood, Owenga, was the first to introduce pleasants. He built a special house and bred young ones, and later released the lot, but in a year or two they disappeared. Pleasants were also introduced by Mrs. Cranstone from an Acclimatization Society on the mainland about 1927. Some four or five were to be seen on Pitt Island; but did not appear to survive long.

CALIFORNIAN QUAIL. Small flocks of less than a dozen birds in each, were seen at Glory Bay, Pitt Island, on 28/2/57, and near the wireless station at Waitangi, on 21/5/57. Californian Quail were first introduced by Frederick Hunt. Their numbers are said to be now reduced by the weka.

SKYLARK. Recorded on both islands; birds were often surprised in the grassy verges at the sides of roads on Chatham Island. The Skylark is much less abundant than the pipit. Skylarks were in Pitt Island before 1893. In this year Capt. Rommell reported a Skylark's landing on his vessel and remaining there until it flew ashore at the Chathams.

THRUSH. The Songthrush appears to be not uncommon at Wharekauri; but scarce in most other places. It is reputed to sing very late, sometimes after dark in midsummer. Two were seen on Pitt Island, 3/2/57.

BLACKBIRD. Solitary birds, or pairs, were heard and seen in most parts of both islands. They were most commonly recorded in areas of open country still having small remaining patches of bush, e.g., the Te Roto district of Chatham Island.

HEDGE SPARROW. This bird was apparently rare. One record was made on Pitt Island, 3/2/57, and one near Te One on 11th February.

GOLDFINCH. Small flocks of goldfinches were recorded a number of times at various points on Chatham Island. According to R. A. Hunt, Goldfinches came to the Chathams on the S.S. OHAU in the year 1894. These birds had flown out to sea to escape bush fires in the North Island. They were reputed to be very tired, and came in a mass on to the boat. When the boat reached the Chathams many flew ashore; others were too weak and died. Later on they arrived at Pitt Island.

- LESSER REDPOLL. Redpolls were seen in small flocks at a number of places on Chatham Island, e.g. above the Te Awatapu slip, on the south coast; and in open country between Tuku Stream and The Horns, at the south-west part of the island.
- CHAFFINCH. The Chaffinch was recorded on 4/5/57, when a solitary bird was seen flying at the mouth of Takatika Creek, on the north coast of Chatham Island. Another was seen on Pitt Island at the north end near the Hunt homestead 2/2/57.
- YELLOWHAMMER. A single bird was seen at Waipaua, Pitt Island, on 1/3/57. None was seen on Chatham Island.
- HOUSE SPARROW. Small numbers seen around homesteads and at Waitangi. Sparrows were first introduced to Pitt Island by Frederick Hunt. Walter Hood introduced these sparrows to the main island, intending to introduce Skylarks!
- STARLING. This is the most common land bird. It is widely distributed in both islands. Flocks of 500 were often seen. On Mr. A. Weisner's station, Kaingaroa, in an introduced Pinus plantation, up to 4,000 roosting birds were recorded on 8/4/57.
- GEESE. On Lake Marakapia on the west coast of the main island a flock of twenty to thirty geese (*Anser anser*) exist in a wild state. Residents state that the birds are increasing.



THE SUPPOSED OCCURRENCE OF KAKAPO, KAKA AND KEA IN THE CHATHAM ISLANDS

By ELLIOT W. DAWSON

In the course of the preparation of a work on the extinct birds of the Chatham Islands, comments have been noted on the former existence there of Kakapo, Kaka, and Kea, and the purpose of the present account is to offer a review of some of these reports. The osteological aspect of identification, variation, and distribution of Kaka and Kea amongst bird remains from Quaternary deposits at the Chathams will be considered on another occasion.

THE KAKAPO (*Strigops habroptilus*)

Some years ago attention was drawn to the identification, among bird bones in collections of the Dominion Museum, Wellington, of a tibiotarsus of a Kakapo, reputed to have been collected in the Chatham Islands (Dawson, 1952: 259), and now forming part of the Travers collection. At the time no further comment was offered on the finding of such a relic of the flightless ground-parrot which might be considered evidence of its former existence on this isolated group of islands, some 500 miles to the east of New Zealand.

G. R. Williams (1956: 39), in his excellent and timely review of the past and present status of the Kakapo, has made a brief investigation into the evidence for the former existence of this bird at the Chathams, and from this he concluded: "In my opinion judgment



[Photograph by P. Morrison

XIII. Squab of NATIVE PIGEON in nest on Kapiti.



[Photograph by D. Galey

XIV. N.I. FERNBIRD at L. Whakamaru. The Fernbirds of N.Z. are closely related to the Grassbirds (*Megalurus*) of Australia and S.E. Asia.



[Photograph by D. Galey

XV. N.I. FERNBIRD on nest among raupo at L. Whakamaru, Waikato.



[Photograph by F. C. Kinsky

XVI. GIANT PETREL. When the whaling season opens in May, many Nelliies gather in Tory Channel. Ringing has proved that some may come from as far away as the Falkland Islands Dependencies.

should be reserved until more information is obtained." While making it clear, at this stage, that I agree with Williams' sentiments, I feel that an expansion of some of the evidence for and against the former existence of the Kakapo on the Chathams might prove of interest.

The earliest record of the supposed former occurrence of this parrot is, doubtless, that given by H. H. Travers, who spent eight months on the Chathams, in a letter to his father, dated May 18, 1864, which was reprinted on a number of occasions (Travers, 1866, 1867, 1868; Newton, 1866). Travers stated (1866: 358): "There are, at present, but few land birds either on this or on Pell's Island. Formerly, the white crane (*Herodas flavirostris*), the bittern (*Botaurus melanotus*), an apterix, said by the Maoris to have been identical with a New Zealand species, and also, according to their accounts, a smaller species of the same bird, the Weka (*Ocydromus Australis*), and the Kakapo (*Rhigops habroptelus*), were found on both islands, but have become extinct since their invasion by the New Zealanders [*sic.*]. As Skinner (1932: 136) has already noted, this account is "full of typographical errors, even the author's initials being wrongly given." Travers' comments were reprinted in other journals, generally without typographical errors, and they seem to be the basis for subsequent statements that the Kakapo did once inhabit the Chathams.

Otto Finsch (1867: 245) has used the account given by Travers in this way: "Wie aus den neuesten Nachrichten von Travers . . . hervorgeht, bewohnte *Stringops* fruher auch die ostlich von Neu-Seeland gelegenen Warekauri-oder Chatam-Inseln, wo er erst sit Invasion der Maoris (1832 oder 1835) ausgerottet worden ist . . ." and, further on, he noted " . . . fand sich aber fruher auch auf den Chatam-Inseln." And again, "bewohnte fruher auch die Chatam-Inseln" (Finsch, 1867b: 324). Hutton (1871: 18), in his 'Catalogue,' recorded *Stringops*. Gray . . . New Zealand and Chatham Islands . . . *Stringops habroptilus*. Gray. Both Islands and Chatham Islands?" However, W. T. L. Travers noted later (1873: 213):

"of birds mentioned in Capt. Hutton's 'Catalogue of the Birds of New Zealand' as belonging to the Chatham Islands . . . my son has now reason for believing that the weka (*Ocydromus australis*), the kakapo (*Stringops habroptilus*), and the kiwi (*Apteryx australis*), which were all inserted in the catalogue in question on the authority of a former notice of the fauna of the Islands, published in the fourth volume of the Linnæan Society's Journal—Botany—were erroneously assigned to them." Hutton (1872: 245), at the same time, remarked that: "Mr. Travers never saw a specimen of this bird; but from the descriptions of others he can hardly doubt but it once existed on these islands; at the same time he remarks that there is no country in the Chatham Islands at all similar to the haunts its loves to frequent in New Zealand."

Finsch (1874: 178) has incorporated Hutton's comments in a later paper in his series: "Von Travers nicht auf der Chatam-Inseln gefunden, wo die Art indess fruher bestimmt existirt hat."

Others, concerned with monographing the parrots or cataloguing their distribution, have apparently used these earlier comments as a basis for their work, as, for example, does Wallace (1876: 454, 483) in his treatment of 'The Geographical Distribution of Animals' where he has said of the Chathams fauna: "The natives further declare, that both the *Stringops* and *Apteryx* once inhabited the islands, but were exterminated about the year 1835." Similarly, Reichenow (1881: 15) stated in his 'Conspectus': "Vorkommen: Neuseelandische Subregion (Westseite der Alpen des sudlichen Neu-Seeland, Chatam Inseln)." In this way the "legend" of the Kakapo on the Chathams persisted, although some

writers either denied its former presence for one reason or another or, generally, omitted any mention of the bird (e.g., Dendy, 1902: 11). Buller (1882: 33), in his 'Manual,' noted: "*Stringops habroptilus*. Gray. Both Islands, and Chatham Islands." He does not appear to have supported the Kakapo "legend" in 'History of the Birds of New Zealand' (1872-3; 1888), or in its 'Supplement' (1905).

H. O. Forbes, whose explorations in New Zealand are currently being studied (Dawson, 1958), has offered some comments of interest on the supposed former existence of the Kakapo on the Chathams:

"Mr. Alexander Shand . . . told me that the Kakapo (according to the Morioris) was very abundant in the islands prior to 1836. He himself in the early days had seen their burrows often. I had observed, while collecting, several Psittacine bones, and on learning this fact I felt sure that those I had picked up . . . must belong to *Stringops*. On my arrival here, however, I find so far that there are no Kakapo bones in the collections, the Psittacine bones being the heads and beaks of *Nestor notabilis*, the Kca." (Forbes, 1892*b*: 580).

Later, Forbes again remarked on this topic:

"Mr. A. Shand, a gentleman who was born in Wharekauri, and a good observer and Tapu, an aged Moriori, informed me that the Kakapo, *Stringops habroptilus*, occupied, in the early days of the Settlement, various parts of Wharekauri in considerable numbers, and both remember their burrows, though the former cannot recall having seen the birds. I did not, however, succeed in finding any of their remains, nor has my correspondent, Mr. Hawkins, been more successful." (Forbes, 1893*c*: 544).

In his 'Catalogue of Parrots,' compiled after he became Director of the Liverpool Public Museums, Forbes (1897: 22) noted: "*Stringops*, in former times, lived also in the Chatham Islands." Oliver (1930) made no mention of this "myth," but, in his second edition (1955: 553), he remarked of *Stringops*: "Said at one time to have been common in the Chatham Islands."

During the 'Chatham Islands 1954 Expedition' (Dawson, 1955), watch was kept, while examining deposits of subfossil bird bones in Petre Bay, Kaingaroa, Okawa, and Owenga, for bones of *Stringops*, particularly the characteristic metatarsi, but, like Henry O. Forbes, the only "Psittacine bones" which I found belonged to a species of *Nestor*.

Shand (1894: 80), discussing Moriori traditions, has provided an account of the appearance and habits of what he has called the "mehonui, a species of the New Zealand kakapo (*Stringops habroptilus*) larger than a goose" which, he said, was "usually captured on its sleeping-place or nest, where six or eight might be found huddled together, as the Morioris declare, like pigs in a bed." Shand recorded also that this bird "had a powerful strident call, which could be heard at a great distance. Its neck was said to have been about as long as a man's arm." Taylor White (1897: 166) has analysed Shand's remarks on the mehonui and the other traditional birds of the Moriori in the light of some of Forbes' comments (1893*d*: 682) and in accordance with known Maori traditions and etymology. He concluded, among other things, that "the mehonui could not be related to the parrots, but was probably allied to the *Notornis*" and that it was possibly the large rail of the Chatham Islands, known only from bones described by H. O. Forbes as belonging to the genus *Aphanapteryx* of the Mascarene islands, but which were later recognised as the distinct genus *Diaphorapteryx*.

In a similar way, it is interesting to see possible correlations between the former presence of birds now known only from bones in the Chathams deposits and the "zoomorphic glyphs" with their "swan . . .

duck . . . pigeon . . . skua . . . penguin . . . hawk forms" listed recently by Miss C. Jefferson (1955) in her study of the Moriori bark carvings on trees in the Chatham Islands. Perhaps such dendroglyphs hold the key to the Kakapo myth.

Judging by his later comments the elder Travers seems to have forgotten all about his own contribution to this topic some ten years before. He has said:

"I do not know upon what authority Dr. Buller . . . has given the Chatham Islands as a habitat of *Stringops habroptilus* . . . He probably follows Mr. Wallace in making the statement, but without giving the reasons assigned for it by that writer. Mr. Wallace says (speaking of the Chatham Islands) 'that the Natives—I presume the Morioris—declare that both the *Stringops* and *Apteryx* once inhabited the islands, but were exterminated about the year 1835.'" (Travers, 1883: 182).

Travers pointed out that "the Morioris had no knowledge whatever of either *Stringops* or *Apteryx*" and that "the date fixed for their extirpation is singular" in regard to the coincidence of the Maori invasion of the same date. He concluded:

"Until the statement referred to had appeared in Mr. Wallace's work, my son, who was the first to collect systematically the fauna and flora of the Chatham Islands, and who spent upwards of a year there for that purpose, and who was diligent in his enquiries, had never heard it even suggested that either *Stringops* or *Apteryx* had existed there. . . . At all events I am not disposed to accept statements as to the occurrence either of *Stringops* or *Apteryx* in this habitat until something more satisfactory than the alleged 'declaration of the Natives' is brought forward in support of it."

Whether or not the existence of the bone in the Travers Collection in Wellington is "something more satisfactory" is a matter for conjecture. It seems rather ironical to have to state that the only piece of material evidence of the former presence of the Kakapo in the Chathams should exist in Travers' own collection, and it appears that Travers' own writings were the source of Wallace's information according to his list of references (1867: 467). The authenticity of this bone is still very much open to doubt if the conclusions reached by W. T. L. Travers (1873, 1883) are sound, and particularly so since at least two subsequent investigators, both examining several thousand subfossil bird bones at the Chathams, failed to find any trace of *Stringops*. As well as the extensive Rothschild collection, and the Forbes collection now in the British Museum (Natural History), the large Kinsey and Fougere collections of the Canterbury Museum, and the more recent collections made for the Museum by Miss C. Jefferson and by Mr. J. R. Eyles, have so far revealed no Kakapo remains. Williams (1956: 39) has sided with Travers' conclusions of 1872 and has dismissed the bone in the Travers Collection somewhat axiomatically: "Carelessness in labelling specimens was a notoriously common fault among naturalists last century."

While expressing my belief that this habit of carelessness is by no means confined to naturalists of an earlier time, I feel that two other points are worth bearing in mind. In the first place, there is similar documentary evidence for the former presence of the Weka (*Gallirallus australis*) on the Chathams. The present Weka population is said to be descended from birds introduced from Canterbury in 1905, but the former presence of a *Gallirallus* of some kind is fully supported by the finding of subfossil bones there both by H. O. Forbes and by the 1954 expedition. There also exists a skin of *Gallirallus*, part of Temminck's own collection, reputed to have been collected on the Chathams some time before 1823, which I have recently had the privilege of examining in the Rijksmuseum van Natuurlijke Historie at Leide. This skin, of course, may be of a status similar to the Travers bone, but the subfossil bones indicate that, although Travers found no evidence of the birds

in 1864, an early population of Wekas existed at the Chathams, and is doubtful whether this could be dismissed as being solely the result of introductions by the Maori invaders of 1835.

In the second place, it may be mentioned that, since evidence for the former presence of the New Zealand Falcon (*Falco novaeseelandiae*) in the Chatham Islands consists of only five bones (Scarlett, 1955; Dawson, 1957) sorted out from many hundreds from subfossil deposits, the possibility that the Travers bone is, in fact, an authentic record from the Chathams cannot be entirely ruled out, however unlikely it might appear at first sight.

THE KAKA (*Nestor meridionalis*) and the KEA (*Nestor notabilis*)

It is remarkable that no tradition appears to exist of the former presence of any parrot of the Kaka variety in the Chatham Islands. The Kakapo legend may indeed be no more than a myth, but, in the case of the Kaka, many bones of large and small forms of *Nestor* have been collected and show that considerable numbers of these birds must, at some time, have lived on the Chathams. The abundance of their remains, and their presence in subfossil deposits, probably afford adequate evidence to show that they do not owe their presence to any sort of human introduction.

Oliver (1955: 542) has remarked, in his discussion of the Kea, common in the mountains of the South Island: "In pre-European times in the North Island and on the Chatham Islands." A recent reviewer (C.A.F., 1956: 152) of Oliver's second edition asked: "Who is the authority for Kea bones in North and Chatham Islands?" As far as the Chathams is concerned, the credit appears due to Henry O. Forbes, for what seems to be the first mention of the possibility of the former occurrence of the Kea on the Chathams is to be found in his list of February 25, 1892 (Forbes 1892: 189). Later (1892a; 1892d; 1893c), he seems to have regarded the *Nestor* bones as belonging to both Kea and Kaka. In his '*List of the Birds inhabiting the Chatham Islands*' (1893c: 544), Forbes remarked: "*Nestor notabilis*, Gould. Portions of the skeleton sufficient to identify the occurrence of this species have been found . . . *Nestor meridionalis*, Gm. The same remark applies here."

Nestor bones from the Chathams in the Forbes collection in the British Museum (Natural History), together with bones in the Canterbury Museum collections, and others examined during the 1954 expedition, show that representatives of both large and small forms, similar to those already discussed by Dawson (1952), were present on the Chathams. As mentioned before, many of the upper mandibles of the Chathams *Nestor* are more than usually elongated, and are, in fact, reminiscent of the condition in *Nestor notabilis*, although remains appear indistinguishable from the present-day *N. meridionalis*. Considering size differences and present-day ecological differences between Kea and Kaka, it appears unlikely that the Kea, as we now recognise it, ever inhabited the Chathams. The Chatham Island *Nestor* is probably the result of an evolutionary change from a widely distributed form, resembling, in size the present-day Kaka of the North Island (*Nestor meridionalis septentrionalis*), along similar lines of rapid genetic spread in small populations as previously proposed to account for the existence of the large present-day Kaka of the South Island.

REFERENCES

- BULLER, W. L., 1882: "Manual of the Birds of New Zealand." Col. Mus. & Geol. Surv., Wellington xii + 1 — 107 pp.
- DAWSON, E. W., 1952: "Subfossil Nestor (Psittacidae) from New Zealand." *Emu*, 52 (4): 259 — 272.
- 1955: "The Birds of the Chatham Islands 1954 Expedition." *Notornis*, 6 (3): 78-82.
- 1957: "Falcon in Chatham Islands." *Notornis*, 7 (4): 113.
- 1958: "Re-discoveries of the New Zealand subfossil birds named by H. O. Forbes." *Ibis*, 100 (2).
- DENDY, A., 1902: "The Chatham Islands: a study in biology." *Mem. Manchr. lit. phil. Soc.*, 46 (12): 1-29.
- FLEMING, C. A., 1956: "Oliver's New Zealand Birds." *Emu*, 56 (2): 150-152.
- FINSCH, O., 1867a: "Die Papageien, Monographisch Bearbeit." Brill, Leiden. 1: xii + 1-561 pp.
- 1867b: Walther Buller's "Versuch über die Ornithologie Neu-Seelands," übersetzt und mit kritischen Anmerkungen versehen." *J.f. Orn.*, (89) 15 (5): 305-347.
- 1874: "Zusätze und Berichtigungen zur Revision der Vogel Neuseelands." *J. f. Orn.*, (126) 21 (2): 167-224.
- FORBES, H. O., 1892a: "Interview with H. O. Forbes: Mr. Forbes' discovery." *The Christchurch Press*, 49 (8132): 5-6.
- 1892b: "Aphanapteryx in the New Zealand region." *Nature*, 45 (1173): 580-581.
- 1892c: "Preliminary notice of additions to the extinct avifauna of New Zealand." *Trans. N.Z. Inst.*, 24: 185-189.
- 1892d: "Aphanapteryx and other remains in the Chatham Islands." *Nature*, 46 (1185): 252-253.
- 1893a: "The Chatham Islands and their story." *The Fortnightly Review*, 53 (317): 669-690.
- 1893b: "The Chatham Islands: their relation to a former southern continent." *Koy. geogr. Soc. Suppl. Pap.*, 3 (4): 607-637.
- 1893c: "A list of birds inhabiting the Chatham Islands." *Ibis*, (6) 5 (20): 521-546.
- 1897: "Catalogue of Parrots (Psittaci) in the Derby Museum." *Bull. Lpool Mus.*, 1 (1): 5-22.
- HUTTON, F. W., 1871: "Catalogue of the birds of New Zealand, with diagnoses of the species." *Geol. Surv. N.Z.*, Wellington. Publ. 17: x + 1-85 pp.
- 1872: "Notes on some birds from the Chatham Islands, collected by H. H. Travers, Esq.; with description of two new species." *Ibis*, (3) 2 (7): 243-250.
- JEFERSON, C., 1955: "The dendroglyphs of the Chatham Islands." *J. Polynes. Soc.*, 64 (4): 367-441.
- NEWTON, A., 1866: "Notices of recent ornithological publications" *Ibis* (2) 1 (5): 113-115.
- OLIVER, W. R. B., 1930: "New Zealand Birds." Fine Arts, Wellington. viii + 1-541 pp.
- 1955: "New Zealand Birds." Reeds, Wellington. 661 pp.
- REICHENOW, A., 1881-2: "Conspectus Psittacorum Systematisch Uebersicht aller bekannten Papageienarten." *J. f. Orn.*, 29 (153-6): 1-234.
- SCARLETT, R. J., 1955: "Falcon in Chatham Islands." *Notornis*, 6 (3): 57.
- SHAND, A., 1894: "The Moriori people of the Chatham Islands: their traditions and history." *J. Polynes. Soc.*, 3 (1): 76-92.
- SKINNER, H. D., 1923: "The Morioris of Chatham Islands." *Mem. B.P. Bishop Mus.*, 9 (1): 1-140.
- TRAVERS, H. H., 1866a: "On the destruction of the aborigines of Chatham Island." *Trans. Ethnol. Soc. Lond.*, n.s. 4: 352-360.
- 1866b: "Die Warkauri-oder Chatham-Inseln im südlicher Grossen Ocean." *Petermanns Mitt.*, 1866 (2): 61-66.
- 1867: "Notes on the Chatham Islands (lat. 40deg. 30min S., long 175deg. W.)" *J. Linn. Soc. (Bot.)*, 9 (35): 135-144.
- TRAVERS, W. T. L., 1873: "On the birds of the Chatham Islands, by H. H. Travers, with introductory remarks on the avi-fauna and flora of the islands in their relation to New Zealand." *Trans. N.Z. Inst.*, 5: 212-222.
- 1883: "Remarks on the distribution within the New Zealand Zoological Sub-region of the birds of the orders Accipitres, Passeres, Scansores, Gallinae, Struthiones, and Grallae." *Trans. N.Z. Inst.*, 15: 178-187.
- WALLACE, A. R., 1876: "The Geographical Distribution of Animals." MacMillan, London I: xxiv + 1-503 pp.
- WHITE, T., 1897: "On the Poua and other extinct birds of the Chatham Islands." *Trans. N.Z. Inst.*, 29: 162-168.
- WILLIAMS, G. R., 1956: "The Kakapo (*Strigops habroptilus*, Gray) A review and re-appraisal of a near-extinct species." *Notornis*, 7 (2): 29-56.

CENSUS OF BROWN TEAL ON WAIPU RIVER SYSTEM

JULY 19-20, 1958

By BRIAN D. BELL

A census of Brown Teal (*A. chlorotis*) was carried out by an enthusiastic team of ornithologists from South Auckland, Auckland and Northland in co-operation with the writer on the week-end of July 19-20. The complete river system was covered from the town (Waipu) up for a distance of at least five miles radius. The weather for the week-end was favourable, except for two heavy hail or rain showers on the Saturday afternoon. However, as the week-end was preceded by heavy rain, this could have had some bearing on the numbers seen.

The Waipu River empties its waters into the sea 25 miles south of Whangarei and rises in the bush and scrub covered hills behind the Waipu District. In the town the river, which is tidal to his point, divides into four streams, which further inland split up more. These streams run through dairy-farming land and are well known as one of the remaining strongholds of the Brown Teal. Only the lowland from the town inland was covered by this census and no attempt was made to probe the upper reaches of the streams running back into the hinterland.

The vegetative cover along the banks varied considerably, and some parties were less fortunate than others in striking large areas of gorse along the creek banks. Some parts still retained a bush fringe (predominantly totara and kahikatea) while others had a choking growth of willow. There were sections of open stream where the pastures came right down to the creek, but even in these spots cover was available from *Mariscus* sedge, *Arum* lily, etc. In limited areas there were fringes of swamp and many of these were very wet as a result of the heavy rains. The streams themselves are not very wide, and except in the lower reaches would not be much greater than a half chain, but over the whole they are very deep except where choked with willow. The flow was on the whole steady but could not be classed as swift.

The party was split into pairs, and each pair was allotted a section of stream, which when considering the winding course would amount to about 8 to 10 miles. The pairs worked with one on each bank. A special effort was made to count all the teal and determine their sex. Enquiries were made from local people met on the way and an eye was kept on shooting signs. The number of Grey Duck was also recorded.

On the Saturday the Waionehu Stream (South River), Ahuroa River, Pohenui Stream (North River), Mill Brook and Finlayson Brook were covered by seven pairs. The census began at 10 a.m. and all parties were collected at 4 p.m. A preliminary survey was made on the Waihoihoi Stream by two pairs, but the figures are not included in the day's tally, as a more intensive survey was to be done on this the following day. 36 Brown Teal were seen during the day, including 13 drakes, 10 ducks and 13, sex dot determined. Over the same area 146 Grey Duck were seen.

On the Sunday a concentrated effort was made on the Waihoihoi Stream by five parties between 10.30 a.m. and 1 p.m. Also two dams on the Government (Lands and Survey) Development Block east of the Waihoihoi and a lagoon on Mr. Ryan's property adjacent to the Waihoihoi were inspected. There was one pair of teal on the Lands and Survey dams and one drake on Ryan's lagoon. Grey Duck tallies for these two areas were 45 and 8 respectively. The number of teal seen on the Waihoihoi was 19 (7 drakes, 10 ducks, 2 undetermined) and the Grey Duck tally for this same area was 60. This gave the total number of Brown Teal seen on the Waipu System as 58, and Grey Duck as approximately 260, although it is likely that some of the Grey Duck were counted twice as they move about more.

For purposes of comparison, a summary of census results from earlier visits is given for the Waihoihoi Stream from the Waipu township to the Glenmohr Road Bridge. These were made by Messrs L. C. Bell and F. L. Newcombe of Internal Affairs Department. On these occasions an effort was made to work as stealthily as possible and this could prove a better method of seeing birds as they readily conceal themselves when approached. In each case the first figure given is for Brown Teal and the second for Grey Duck. 23/1/52, 65, 23; 8/9/53, 45, 28; 14/6/54, (Waipu to Simpkins Rd.), 52, 15; 4/4/56, 40, 36; 30/10/56, 52, c.40 adults and 40+ ducklings.

Summaries of each section in the 1958 census are as follows: Pohenui Stream (upper), 3, 15; Pohenui Stream (lower), 3, 18; Ahuroa River (upper), 11, 12; Ahuroa River (lower), 2, 24; Mill Brook, 1, c. 48; Finlayson Brook, 14, 15; Waionehu Stream, 2, 14; Lands and Survey Development Dams, 2, 45+; Ryan's Lagoon, 2, 8+; Waihoihoi Stream (Simpkins Rd. to Glenmohr Bridge), 0, 5; Waihoihoi Stream (MacFinlayson's to Waipu township), 7, 17; Waihoihoi Stream (MacFinlayson's up to meet Glenmohr Party), 5, 6; Waihoihoi Stream (Glenmohr Bridge down), 7, 32.

From the observations made it appears that the Brown Teal have developed a preference for a willow association on the stream, but what is more significant is the high populations noted wherever shooting was not allowed either by the owner or by regulations. Factors which could have influenced the number seen were the possibility that nesting had already started and some teal had shifted off the main streams and the high water level could have scattered the population. The greatest value of the census was that it established the presence of Brown Teal over the whole of the lower Waipu River System, whereas previously it was known only from the Waihoihoi Stream and suspected from the others. Also it was an excellent example of what can be achieved by an organized team of observers.

ACKNOWLEDGEMENTS:

My thanks are due to Mrs. Ruby Watson, Mr. and Mrs. J. Somers and Mr. and Mrs. McLeod Finlayson of Waipu, who took us into their homes for the week-end. To Messrs. H. R. and G. K. McKenzie who assisted with the organization and to the following who assisted in the census either actively or by providing the very necessary transport.

Mr. and Mrs. J. Prickett, Mr. and Mrs. Richard McKenzie, Mr. and Mrs. and Dorothy McQueen, Mr. and Mrs. W. W. Renouf, Mr. and Mrs. B. D. Heather, Messrs. G. J. H. Moon, A. G. Gorbey, F. P. Hudson, J. B. Murray, V. Rutherford, M. Hull, D. Graham and P. Howard.

FOCUS ON NEW ZEALAND BIRDS

By G. J. H. MOON, A.R.P.S. — *Cameo Press, 1957*

This is a book which all N.Z. bird-lovers will wish to have on their shelves beside the volumes of Guthrie-Smith, Stead, Buddle and Turbott. The author is an expert naturalist in the good old-fashioned sense. He watches and photographs birds for the fun of the thing — or the love of the game — and because they are a challenge to his skill.

By profession a vet., he has a wide clientele of farmer-friends, who quickly tell him of strange birds appear on their land and often find the nests which later he is able to photograph. Though most of the birds whose portraits appear in this book occur in the vicinity of Warkworth, the author has visited Little Barrier to obtain pictures of Red-fronted Parakeet and Whitehead; and the Firth of Thames and Manukau Harbour in search of waders.

The book contains many remarkable pictures. Especially noteworthy are series on Kingfisher, Morepork and Reef Heron which illustrate how superbly by using modern apparatus, the master craftsman may "stop" a Kingfisher's wings or overcome the darkness of the night and the gloom of a sea-cave. It goes without saying that when a vagrant Royal Spoonbill wintered near the author's home, it soon fell a victim to his hunting with the camera.

This book is much more, however, than a portrait gallery. The author has an eye for the significance of behaviour and feeding, and his notes contain many original observations. Pictures of the Silvereye show the young being fed on caterpillars, spiders and berries. Moreporks are shown bringing a variety of insects to the nest. The notes on the feeding of young Reef Herons are most informative. It is much to be hoped that the author will soon give us a second volume containing portraits of more birds, together with the intimate notes such as can be obtained only from a hide.

Geoff Moon, as Edgar Stead before him, has been unlucky in his publisher, whose workmanship, both in the reproduction of the plates and in the binding, falls far behind the technical excellence of the author.

— R.B.S.



SHORT NOTES

SHOVELERS DIVING FOR FOOD

The Shovelers of New Zealand (*A. rhynhotis variegata*) belong naturally to the group of dabbling ducks, which seek their food from the surface or from the bottom in shallow water, without completely submerging; and to witness some of these diving for food in from four to six feet of water was a new experience. Most ducks can dive; but the dabblers do so usually, either in play during courtship, or to escape from danger. At best these dives are shallow and of brief duration. But off Hamurana on the north shore of Lake Rotorua I have with others watched Shovelers behaving like Scaup (*Aythya novaeseelandiae*).

In January, 1958, Mr. W. J. Broun and I were watching Black Swans (*C. atratus*) feeding well off shore. To reach bottom they had to employ the familiar "tip up" method, immersing neck and upper breast to do so. Among the swans were some half-dozen Shovelers diving, obviously for food, because with the aid of binoculars we could plainly see the action of swallowing, as the birds emerged from the dive. The swans appeared to be feeding on subaqueous vegetation and naturally we supposed that the ducks were also. The duration of submergence we calculated to be about ten seconds, although not timed by watch.

Again in May, 1958, in the same area Mr. H. R. McKenzie and I watched a similar performance. This time an isolated group of Shovelers were diving continuously, in what we estimated would be from six to eight feet of water. On this occasion I timed the dives, using the "sweep" or second hand of the watch, whilst my companion kept the telescope on the divers. The duration of seven recorded dives was: 7, 8, 8, 9, 9, 9, 10 seconds; an average of $8\frac{1}{2}$ seconds.

M. S. BLACK



FEEDING HABITS OF THE BLACK-BILLED GULL

Introduction:

This investigation was carried out in Southland between 15th October and 10th December, 1957, by a Technical Field Officer of the Marine Department. The Technical Field Service, to which the Officer belongs, undertakes investigations in freshwater fisheries and is sponsored by the Council of South Island Acclimatisation Societies. This study, which was requested by the Southland Acclimatisation Society, was made to find out whether Black-billed Gulls eat trout during the breeding season.

Findings:

(a) Nesting Habits

During the summer months the Black-billed Gull nests in large numbers in certain river beds. The birds nest in colonies of about 50-100, or in colonies up to several thousand birds. The nesting sites are usually on an island or on high shingle bars away from floods. Five colonies were found on the Aparima River between Wrey's bush and the Jacob River bridge, and two on the Oreti River between Rocky Point and the railroad bridge near Lumsden.

Two colonies on the Aparima River were selected for detailed study. The small colony, (A) on a shingle bar, consisted of about 500 nests, each of which contained up to three eggs. The larger colony (B), situated on a well consolidated shingle island, covered about 10,000 sq. yards and contained about 3000 nests.

On 22nd October, fourteen chicks were seen at colony A and none at B, and by 8th November the numbers of chicks had increased to 81 at A and 47 at B. After this date the number of chicks increased rapidly, but a severe flood in the Aparima completely destroyed colony A on 18th November, 1957. No re-nesting attempts were seen at the site of this colony. 200 chicks were killed by the same flood at colony B. When observations ceased on 22nd November, 750 chicks were counted

at colony B. On this date several fully fledged chicks were seen and two were observed flying with adult birds.

(b) Feeding Habits

Observations on feeding gulls were made with the aid of binoculars. Also 20 gulls were shot and an examination of stomach and crop contents made. As far as possible, birds shot were those which had been observed feeding on the river margins but in some cases birds were shot at random from flocks returning from the feeding areas.

Feeding, especially after rain, appeared to take place mainly in areas away from the river, e.g. cultivated areas. Prior to the severe flood (18/11/57), birds were observed feeding on the river margins. 25% of the birds shot contained food taken from the river bed consisting of Caddis Larvae (*Olinga* spp and *Pycnocentria* spp) and one creeper (*Archichauliode* spp). The remaining 75% contained vegetable material, earthworms, grassgrubs and wire worms.

No birds were seen to take fish nor were any fish remains found in any stomach. Gulls were seen to dip down to the surface of the water and to snap at flying insects. This usually took place during a hatch of mayflies. However, no birds seen feeding in this manner were shot. The flocks of gulls range at least six miles from the colony to feed, and probably they feed in the paddocks. It was not always possible to note where the gull were feeding.

The adult birds disgorge food to the chicks and worms were fed to all chicks which were observed being fed.

Conclusion:

The results show that the Black-billed Gulls did not take trout or fish during the nesting season, and little feeding was done in the river. However, the severe flood of 18th-19th November may have reduced the availability of larvae of aquatic insects on which some gulls would feed.

Marine Dept.

R. BOUD

B. T. CUNNINGHAM



EARLY BREEDING OF THE MOREPORK IN 1958

The late Dr. W. R. B. Oliver, in his recent book, New Zealand Birds, in describing the breeding habits of the Morepork (*Ninox novaeseelandia*) followed the late Edgar Stead (The Life Histories of New Zealand Birds) in respect of the egg-laying period. They write: "laying season extends from October to November" without reference to any particular area or latitude. A slight variation might well be expected in response to latitude.

On 2/9/'58, when going down the road in Khandallah, Wellington, after 8 p.m. my attention was attracted by the "weezie" call of a Morepork. On looking up, I saw one sitting on a power pole and another hawking insects around the light and the neighbouring trees. The perched one was in full light and was clearly visible. The plumage was that of a young bird with clear roundish white spots on the breast. It kept up calling at short intervals. From time to time the one that was hawking insects would return to the power pole and deliver a moth or

other insect to the one on the pole and fly off again to resume its hawking. The recipient always received the insect in its bill and then transferred it to a foot and "billed" it for a while before eating it. The darker plumage of the older bird could easily be contrasted with that of the young one it was feeding as it sat alongside. I watched these proceedings for close on half an hour. The following night the two birds were again at the same pole and repeated the behaviour of the previous night. They were not seen again.

The colour and behaviour of the two birds were unmistakably of parent and young — not courtship. As the parent was still feeding its young, it seems evident that the latter had only recently left the nest. Allowing six to seven weeks for incubation and nestling stages, this would indicate that the eggs were probably laid about the middle of July — two months earlier than the recorded time. Could this earlier breeding have been occasioned by the mild winter of 1958?

C. McCANN



SPINE-TAILED SWIFT OVER STEPHEN ISLAND

When I was on the summit of Stephen Island, Cook Strait, about 1.45 p.m. on 19/11/58, in the company of D. Merton, a very fast-flying bird was noted circling the top. At first glance the bird appeared very dark, with swept-back wings. It continued to circle high above the island for about thirty minutes before disappearing. The flight was very fast, consisting of long periods of gliding and soaring with short periods of very rapid wing-beat. Occasionally, the bird swooped lower, and the rush of wind through the feathers could be heard.

The bird was estimated to be about the size of a Black-fronted Tern or slightly smaller; the plumage generally appeared black or very dark brown with the face, throat and under tail coverts white. The back was a fawn shade. The bill was short, and also the tail, which was held fan-shaped in flight, but was not forked as in terns or swallows. After consulting Oliver (1956) it was decided that the bird was a Spine-tailed Swift (*Chaetura caudacuta*).

The bird was observed under ideal conditions, but its speed made it difficult to determine the exact colouration. The weather was fine, and the temperature warm. There was a light breeze from the south.

— BRIAN D. BELL



ALBINO BLACK-BACKED GULL IN BAY OF PLENTY

Since late in May, 1958, an albino Black-backed Gull (*L. dominicanus*) has been seen about the beach at Mt. Maunganui and has been fed by Mr. A. Watson and others. The description of the bird is as follows:—Beak, dark at the tip, fading to cream; eye, dark; tarsus, greyish; feet, stone colour to fawn. Generally the bird is a milk white colour, except for delicate fawn markings; an oblique line of fawn crosses the breast; there are fawn marks on mantle and lesser wing coverts and a band of fawn is visible near the end of the tail when it is spread. The bird appears to be immature.

R. V. McLINTOCK

TWO NOTES ON ROBIN BEHAVIOUR

Although there is no red in the plumage of our so-called Robin (*Petroica australis*), it is easy to understand, if one lives in daily contact with these confiding birds, why the early settlers instinctively transferred the name of the familiar English garden bird to the toutouwai of the N.Z. forest. Sometimes when I am splitting posts at Minginui I have three or four Robins near me, and once I had five together. They get almost underfoot and great care is needed to avoid dropping posts on them. One October when a pair had a nest thirty feet up in a small tawa, I wasted a lot of time cutting out grubs and white ants for them to take to the young. If I went near the nest they would take the food and hide it in the top of a punga or on a heap of moss on a branch until I moved away. In November a very tame large male sometimes brought a young one and fed it on small pieces of bread from my lunch.

R. ST. PAUL

★

At the end of January, 1957, Robins were quite common up the valley of the D'Urville river. On one occasion one was sitting about 8 feet away from me, when a hare happened to pass close by. The Robin immediately flew at the hare and chased it away through the beech trees. The hare seemed most alarmed.

M. BREEN

★

A SURVIVING COLONY OF FERNBIRDS AT ROTORUA

On 6/7/'58 I visited the duneland between Lake Rotorua and the swamp north of Kawaha Point. I had not gone more than five yards when I flushed a small, dark brown bird which flew for a few yards and landed again in a clump of sedge. Although I had never seen a Fernbird (*Bowdleria punctata*) before, I knew at once that this was one. I worked my way further into the swamp and in a matter of minutes surprised another. It was quite easily followed because the bird rustled the dry sedge leaves as it made its way through them. It was not long, however, before it took wing, flying about twenty yards before it landed. I did not follow it but watched its rather laboured flight with the ragged tail drooping. Its rapidly beating wings made a whirring sound rather like that of a sparrow, but quite distinct.

Some way in front of me was a small patch of raupo and, thinking that this might be a likely place for more Fernbirds, I made my way between the sedge clumps towards it and located two more birds, probably a pair. One flew on to a raupo stem and watched me whilst it made its curious, bell-like "u-ttick" calls. I now saw almost every detail of its plumage. The back and wings were a medium brown, streaked with dark brown or black, chest and under parts grey streaked with dark brown. The slightly curved bill was black and the legs a dark colour. In size it was larger than a sparrow, about seven inches in length.

I had heard that a Fernbird will inhabit scrub as well as swamp and as an extensive area of scrub bordered the swamp I wondered whether it would produce Fernbirds too. Sure enough, after fighting my way through blackberry and bracken, I heard two, and later saw one

bird in the manuka scrub. As I retraced my steps I heard more of these little birds, until I was well away from the swamp.

The swamp, consisting of nigger-head interspersed with patches of manuka scrub and raupo, is quite extensive, being approximately half a mile long with an average width of 150-200 yards. It lies between the scrub-covered foreshore of the lake and the pasture-land and as it is below lake-level, the possibility of its ever being drained is remote. It is probably the last remaining stronghold of the Fernbird in the Rotorua area. The original population of the species has doubtless been augmented by refugees from the marshy areas nearer to Rotorua which have been drained in past years. Perhaps this habitat, or at least part of it, could be set aside as a refuge for these birds, thus ensuring their survival.

MARK R. ROBERTS

★

SUPPRESSION OF THE SPECIFIC NAME *NECTRIS MUNDA*
KUHLE, 1820

In Opinion 497, published on 17th December, 1957, the International Commission on Zoological Nomenclature has ruled that the specific name *munda* Kuhl, 1820, as published in the combinations *Proc [ellaria] munda* and *Nectris munda*, is suppressed under the Plenary Powers for purposes of the Law of Priority, but not for those of the Law of Homonymy; and has placed these names on the *Official Index of Rejected and Invalid Specific Names in Zoology*.

This decision, made in response to an application lodged in 1952 by W. B. Alexander, R. A. Falla, C. A. Fleming, R. C. Murphy and D. L. Serventy, removes from consideration in nomenclature a name first given by Banks on Cook's first voyage to a small southern petrel. Kuhl's description was considered indeterminable by most reviewers, but Fleming and Serventy (*Emu* 43, p. 122-123; *Emu* 52, p. 17-23) maintained that it applied to a race of the Allied Shearwater, generally known as *Puffinus assimilis* Gould, 1838.

C. A. FLEMING

★

TUIS IN AN AUCKLAND GARDEN

The so-called 'climbing aloe' (*Aloe ciliaris*) provides nectar for Tuis; and I have also seen them obtaining nectar from lachenalias, standing on the ground to do so. They also visit bomaria, swinging on the thin stems to feed. On October 3rd I watched a Tui looking intently on the ground while perched on a tree tomato. Hopping slowly down the branches, it landed on the ground three times to pick something up, raising its beak with a jerk or two each time. On examining the ground afterwards, I found wood planings nearly rotted, but could not see any insects among them.

One season an unused Tui's nest was blown out of our basket-willow. The fronds of asparagus fern had been used to form a base and were effective in holding the manuka twigs in place. These were at least two inches deep and the nest was ten inches wide, being lined with brown scales from the stems of black punga fronds. The local Tuis build each year high up in the macrocarpa trees, collecting twigs from a nearby manuka. Often when feeding their young, they search

the lower side of the pine branches; and they also seem successfully to collect food from eucalyptus leaves. The Australian bottlebrush (*Callistemon*) provides nectar and waratahs are often visited by them; but I have never seen them in our abutilons, perhaps because when they are in flower, other more attractive sources of food are available. The yellow kowhais are of course a favourite food tree. This spring, two Eastern Rosellas (*P. eximius*) joined the Tuis in the kowhais at nectar time.

A. PRICKETT

[Silvereyes (*Z. lateralis*) have also been observed on the ground, systematically visiting winter-flowering lachenalias beside a garden path in search of nectar. Ed.]



NOTICES

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NOTICES

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Other publications available are: *Checklist of New Zealand Birds, 1953* (10/6); *The Takahe* (5/-); *Gannet Census* (5/-); *Measurements of Birds* (6d.); *Identification of Albatrosses* (1/-); *Reports and Bulletins, 1939-1942*, with Index (12/-), Index alone (1/6). These precede Vol. 1 of *N.Z. Bird Notes* and record the first three years of the Society's work.

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