A BUSHMAN'S SEVENTEEN YEARS OF NOTING BIRDS

PART E — NEW ZEALAND PIGEON, NORTH ISLAND KAKA, YELLOW-CROWNED PARAKEET AND KINGFISHER

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(Edited by H. R. McKenzie)

NEW ZEALAND PIGEON *(Hemiphaga novaeseelandiae novaeseelandiae)*

STATUS AND HABITS

Habitat

The New Zealand Pigeon is to be found in any kind of native bush but prefers the more heavily timbered country. It will often visit open country to feed on exotic flora but does not actually live there.

Flight

It can fly at great speed, with the flapping flight of other pigeons and can go very fast even when going through very thick bush. Soaring and aerial diving for pleasure are indulged in, especially in fine weather. On long flights it does not go as high as does the Kaka. In bad weather it keeps very low.

Perching

In fine cool weather the Pigeon likes to sit in the sun in a high tree, but in hot weather seeks shade.

Nesting

I have no detailed records of its breeding habits. It is, of course, well known that the clutch is of one egg and that raising of the young seldom fails.

Food

Its diet consists of berries, stone fruits, leaves, buds, flowers and shoots. It has been seen to swallow whole the flowers of Kowhai *(Sophora spp.)*. This pigeon, which drops seeds and stones, often far from where it has gathered them, is one of the most important agents in regeneration of the bush. When it moves from a patch of bush of mostly one fruiting tree species to another area of bush of a different tree species, seedlings of the first will come up in the second, even when the latter is almost entirely of one species. In time this will bring about radical changes of the forest flora.

Song

The Pigeon has no song other than a gentle "poo." For the most part the loud swishing of its wings indicates its presence.

Flocking

Flocks here are not large, say 12 or 14, and are getting smaller as the feeding grounds are being cleared away.

ANALYSIS OF MONTHLY CHARTS

(Brackets = total birds seen plus estimate of birds heard only).

Proportion seen to heard: 1 seen to 3 heard if the characteristic swishing wing noise is included.

TIHOI

The total of birds seen from May 1944 to April 1946 was 6047 (24,188).

Count days per month for 24 months averaged 21.62; days seen 19.79; days not seen 1.83.

Daily counts of birds ranged from 0 to 60, but there was one unusual record of 223.

Count days totalled 519 and the total birds seen 6047, giving an average of 11.65 (46.60) per count day.

Notes on Analysis

The monthly counts for 1944 and 1945 varied greatly, for instance 1944 having a peak of 1254 for July and 1945 only 80. The Pigeon ranges widely in search of local areas of heavy food crops. One species of tree may crop heavily only once in several years while others do so in different years in different places so the Pigeon has to cast around until the most abundant supply of food is found.

MINGINUI

The total of birds seen from part 1946 to part 1961 was 11,306 (45,224).

Count days per month for 170 months averaged 20.51; days seen 10.48; days not seen 10.03.

Daily counts of birds ranged from 0 to 120.

Count days totalled 3487 and the total birds seen 11,306, giving an average of 3.24 (12.96) per count day.

Notes on Analysis

From 1946 to 1961 at Minginui the New Zealand Pigeon showed a great seasonal variation in its numbers. Table 1 shows very high numbers seen per count day from February to May compared with the rest of the year. This would apply locally because of the heavy crop of fruit provided over this period by such food trees as Tawa *(Beilschmiedia tawa)*, Rimu *(Dacridium cupressinum)*, Maire (*Olea* spp.), Matai *(Podocarpus spicatus)*, Kahikatea *(Podocarpus dacrydioides)*, Miro *(Podocarpus ferrugineus)*, Makomako *(Aristotelia serrata)*, and Kotukutuku *(Fuchsia excorticata)*. Some of these bear fruit for the whole four months. Perhaps the Miro is the favourite. On 18 May 1945 I counted 19 pigeons feeding on one Miro tree. When the crop

in this area is finished the Pigeon scatters to the much greater areas of forest where it has to feed less sumptuously on Supplejack *(Rhipogonum scandens)*, Nikau *(Rhopalostylis sapida)*, other less palatable fruits and also leaves.

TABLE 1 — Monthly averages of birds seen per count day

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.94	5.87	12.94	9.24	6.43	2.21	1.22	0.82	0.79	0.50	0.63	0.51

The yearly numbers of Pigeon seen per count day at Minginui are shown in Table 2. They do not show any particular trend. My notes indicate that the irregularity is due to fluctuating food supply. For instance in 1954 there was a great abundance of Tawa and Rimu; in 1955 a very heavy crop of Kahikatea; in 1959 it was Miro and Matai. The lowest period for numbers was from 1950 to 1954 but this did not compare in severity with the 1952-53 drop of Whitehead, Pied Tit, North Island Robin and the disastrous falling off of the North Island Rifleman (St.Paul 1976).

TABLE 2 — Averages of birds seen per count day for the periods shown

1946	1.64	1954	0.40
1947	1.69	1955	3.75
1948	3.03	1956	1.97
1949	4.71	1957	4.83
1950	0.53	1958	4.46
1951	1.78	1959	14.18
1952	0.63	1960	7.24
1953	0.80	1961	1.10

WAIAU

The total of New Zealand Pigeon seen for parts of 47 months (from 1 to 24 days per month) was 2919 (11,676).

Count days per month averaged 5.00; days seen 4.89; days not seen 0.11.

Daily counts of birds ranged from 0 to 50.

Total count days were 234 and the total birds seen 2919, giving an average of 12.47 (49.88) per count day.

Notes on Analysis

This back country is mostly beech, but with heavy bush in the narrow valleys along the streams.

The Waiau rate of 12.47 seen per count day is far above the Minginui rate of 3.24 seen per count day. This, however, is misleading. My Waiau trips were nearly all in the period February to May, at the same time as Minginui had its highest counts, so that Waiau did not suffer the Minginui drag of lower counts from June to January, as shown in Table 1.

NORTH ISLAND KAKA *(Nestor meridionalis septentrionalis)*

STATUS AND HABITS

Habitat

The North Island Kaka is mainly a bird of the heavy bush. The podocarp forest is perhaps the first choice but the beech is favoured also, even to the highest tops in this area.

Flight

It flaps more evenly and slowly than the Pigeon and its massive head gives it the appearance of being out of balance. However, it cannot really be so as it makes long journeys with apparently little effort. When going a long distance it flies very high, often at about 1200 m, and is not likely to be noticed unless its occasional raucus screech is heard. Like the Pigeon it can fly very rapidly low down through the bush when disturbed.

Nesting

The usual site is a hollow tree. Often the entrance is a hole high up but the nest may be far down or at ground level inside the tree. One in a Matai tree which was being felled had the entrance 10.67 m up and the nest was 1.52 m below the entrance. A bird flew out after the tree hit the ground. Its two eggs were broken.

Food

The Kaka eats a wide range of native and exotic fruits, insects and their larvae, buds and shoots. It is particularly fond of opening cones of the Kauri *(Agathis australis)* for the seeds. Much use is made of the foot to hold such fruits as the Taraire *(Beilschmiedia tarairi)* while it peels off the flesh and skin with its heavily hooked bill. In over fifty years of observing the Kaka in North Auckland, the Hunua Ranges, Wanganui, Taupo, other places in the King Country and at Minginui I have seen it use only the right foot to hold fruits while eating them. This has recently been confirmed by Mrs Marie Perry (pers. comm.) who had one wintering in taraire trees by her house at Brookby, near Auckland, and also by R. B. St.Paul (pers. comm.) who recently photographed one on Little Barrier Island holding a date in its right foot while it ate it. However, Stidolph (1971: 110) stated of this bird on Kapiti Island " Kakas taking dates from the hand used the left foot." Also Wilkinson (1957: 67) showed a sketch by Nora Stidolph of one eating food held in the left foot. It appears, therefare, that the Kaka is not ambidextrous as a species but has a different habit in different places, the Kapiti Island ones perhaps being an exception. The seasonal feeding cycles of the Kaka have been broken up so much by the destruction of the bush that its future is not bright.

Song

It is known mostly by its grating call, which can be imitated by drawing a file across the sharp edge of a tin, but it has many

calls, some quite unusual for a parrot. A pleasing one is a chortling loud clear and musical whistle, made while it is on the wing and low down, sometimes throughout the night. Parties will often fly out over the bush at evening, making quite a din of harsh screeching.

Flocking

Besides flocking for the evening flights it will often feed in flocks where there is an abundance of food. I have seen about 16 on one fruiting Matai tree. High-flying flocks of any size are not common.

ANALYSIS OF MONTHLY CHARTS

(Brackets = total birds seen plus estimate of birds heard only)

Proportion seen to heard: 1 seen to 10 heard.

TIHOI

The toal of birds seen from May 1944 to April 1946 was 849 (9339).

Count days per month for 24 months averaged 21.62; days seen 12.79; days not seen 8.83.

Daily counts of birds ranged from 0 to 16.

Count days totalled 519 and the total birds seen 849 giving an average of 1.64 (18.04) per count day.

Notes on Analysis

From May to December 1944 numbers were much higher than for the rest of the Tihoi period, January 1945 to April 1946. No cause for this is evident.

MINGINUI

The total of birds seen from part 1946 to part 1961 was 7440 (81,840).

Count days per month for 170 months averaged 20.51; days seen 10.52; days not seen 9.99.

Daily counts of birds seen ranged from 0 to 15.

Count days totalled 3487 and the total birds seen 7440, giving an average of 2.13 (23.43) per count day.

Notes on Analysis

The monthly figures per year as shown in Table 1 are fairly stable but need some explanation. In winter, perhaps because of berry crops being low some birds scatter out to more open country, taking up residence in isolated small patches of trees, not always native, for some weeks. H. R. McKenzie (pers. comm.) has fifteen records of such occurrences from 1941 to 1976 in and near Clevedon. These records were March 1 Kaka, April 2, May 2, June 3, July 3, and August 4. In two cases in 1976 a single and a pair stayed into October. These records could perhaps explain the lower winter counts as shown in Table 1. Such wintering birds would almost certainly return to breed in the large areas of bush.

TABLE 1 — Monthly averages of birds seen per count day

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
3.08	2.01	2.01	2.45	2.80	1.58	1.59	1.97	2.17	2.18	2.52	2.61

The yearly numbers of Kaka seen per count day at Minginui are shown in Table 2. After 1946 the counts were low from 1947 to 1954. From 1955 to 1961 they were steady at a considerably higher rate. Though puzzling this is encouraging.

TABLE 2 — Averages of birds seen per count day for the years shown

1946	2.35	1954	1.21
1947	1.21	1955	4.58
1948	0.86	1956	2.08
1949	1.31	1957	5.12
1950	0.29	1958	4.44
1951	0.74	1959	4.68
1952	0.43	1960	3.73
1953	0.26	1961	3.86

WAIAU

The total of North Island Kaka seen for parts of 47 months (from 1 to 24 days per month) was 819 (9009).

Count days per month averaged 4.98; days seen 3.74; days not seen 1.24.

Daily counts of birds seen ranged from 0 to 25.

Total count days were 234 and the total birds seen 819, giving an average of 3.50 (38.50) per count day.

Notes on Analysis

In the Waiau area the Kaka has not followed the varied pattern of the Pigeon. The Kaka spends much time in the beech forest where it finds food by digging into dead trees so a fairly even proportion of its numbers stays there throughout the year, whereas the Pigeon has to go elsewhere when the main berry crop is exhausted.

YELLOW-CROWNED PARAKEET *(Cyanoramphus auriceps auriceps)*

STATUS AND HABITS

Habitat

This is truly a bird of the forest and is rarely seen elsewhere. It particularly favours the two main species of Totara *(Podocarpus totara)* and *(Podocarpus hallii)* and the beech *(Nothofagus spp.)* but will often be found in any kind of mixed bush. It uses the undergrowth more than does the Kaka. In all of this higher and rugged country it is moderately plentiful while the Red-crowned *(Cyanoramphus novaezelandiae novaezelandiae)* is completely absent in my experience.

Flight

Parakeets speed through the tops of the trees or just above

them, often in small close parties or pairs, flying straight for a while, then twisting suddenly and gracefully in unison.

Breeding

Like others of the parrot family it is a hole nester, using a hollow tree or branch where it is satisfied to use a very restricted space. It is pleasing to see the cock bird call the hen off the nest, caress her and take her away to feed, then escort her back to the nest tree. He often feeds her while she is sitting.

Food

The Yellow-crowned Parakeet takes many kinds of berry food, also buds, grass seeds, grubs and insects. In passing food to the young a large amount of saliva is imparted. Commonly it emits a high-pitched chatter. A. Blackburn (pers. comm.) advises that to attract the bird this chatter can be imitated by vigorously shaking a half empty box of matches. If a watcher hears a sadly plaintive call, " weep-weep-weep," it will be known that a nest is near.

Flocking

It is not usual to see here flocks of more than eight or so. Frequently, at any time of year, there will be only two. Solitary ones are not common.

ANALYSIS OF MONTHLY CHARTS

(Brackets = total birds seen plus estimate of birds heard only)
Proportion seen to heard: 1 seen to 20 heard and not seen.

TIHOI

The total of birds seen from May 1944 to April 1946 was 546 (11,466).

Count days per month for 24 months averaged 21.62; days seen 9.80; days not seen 11.82.

Daily counts of birds ranged from 0 to 12.

Count days totalled 519 and the total birds seen 546, giving an average of 1.05 (22.05) per count day.

Notes on Analysis

For some unknown reason the numbers were considerably higher for the period May 1944 to July 1945 than were those from August 1945 to April 1946. No seasonal movement was apparent, nor do I think it would be likely.

MINGINUI

The total of birds seen from part 1946 to part 1961 was 6202 (130,242).

Count days per month for 170 months averaged 20.50; days seen 12.63; days not seen 7.87.

Daily counts of birds ranged from 0 to 12, but were mostly in smaller numbers than 12.

Count days totalled 3487 and the total birds seen 6202, giving an average of 1.78 (37.38) per count day.

Notes on Analysis

Table 1 shows a very even rate per month, the exceptions being a "low" for May and a "high" for November. It appears to show that there is no appreciable seasonal movement.

TABLE 1 — Monthly averages of birds seen per count day

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.72	1.91	1.88	1.71	1.15	1.71	1.62	1.51	1.97	1.52	2.34	1.89

The yearly numbers per count day at Minginui are shown in Table 2. It is to be noted that the years 1950 to 1954 were low in comparison with the others and that the period includes the 1952-53 low-count years of the insectivorous birds. This parakeet does not depend greatly on insect food so it seems that there should be some other reason than a possible shortage of insects to account for the temporary drop in its numbers and also the numbers of the other species which were low in 1952-53.

TABLE 2

1946	2.64	1954	0.80
1947	2.14	1955	2.66
1948	2.89	1956	2.43
1949	3.81	1957	2.36
1950	1.21	1958	3.79
1951	0.49	1959	2.77
1952	0.14	1960	0.97
1953	0.01	1961	2.17

WAIAU

The total of Yellow-crowned Parakeet seen for parts of 47 months (from 1 to 24 days per month) was 319 (6699).

Count days per month averaged 4.98; days seen 3.38; days not seen 1.60.

Daily counts of birds ranged from 0 to 12.

Total count days were 234 and the total birds seen 319, giving an average of 1.32 (27.72) per count day.

Notes on Analysis

Contrary to what might have been expected the Yellow-crowned Parakeet was considerably lower in numbers than the Kaka, not only in the Waiau area but also at Tihoi and Minginui.

KINGFISHER *(Halcyon sancta vagans)*

STATUS AND HABITS

Habitat

In the breeding season here the Kingfisher frequents the heavy bush as well as the open areas along the rivers. In winter it is

extremely rare, or entirely absent. This indicates that in spring many make an annual movement from the coast and lowlands and after breeding return there to winter.

Flight

Its flight is very direct, rapid and darting, with a jerk now and then. The annual movements to and from the bush and the coast and lowlands must be made in short bursts as it does not seem to fly high or in flocks.

Nesting

A shortage of nest sites in the lowlands could well have brought about the partial movement to the high inland bush country. Here the nest tunnel is made in dead trees, there being little opportunity of finding clay banks such as are used so much in the lowlands. Breeding birds are very aggressive. I observed one pair screeching and making passes at a stoat which was robbing a nest.

Food

In large areas of solid bush, where it cannot get to the ground, the Kingfisher when breeding feeds itself and its young on insects caught in the tree canopy. Mice, lizards, small birds and their young are sometimes taken. Where streams here come out into the open the feeding is carried out as in the lowlands. Fish is by no means the main diet of the New Zealand Kingfisher.

Calls

It shouts its breeding call, a harsh " Kek-kek-kek " or " Krp-krp-krp " and has also a seemingly meditative churring note. When attacking it gives a harsh scream.

ANALYSIS OF MONTHLY CHARTS

(Brackets = total birds seen plus estimate of birds heard only).
Proportion seen to heard: 2 seen to 1 heard and not seen.

TIHOI

The Kingfisher was so scarce at Tihoi and Arataki and its occurrence so erratic that an analysis is not practicable.

The 1944-45 breeding season had for September 0; October 1 seen five times; December a 1 and a 2; January and February 0. 1945-46 had for September and October 0; November 13 records of from 2 to 4 birds; December a 1 and a 4; January and February 0.

There were no records in the winter months.

MINGINUI

The following summaries for Minginui and Waiau are not made according to calendar years but to the breeding seasons of the Kingfisher in these parts.

The annual arrival dates in September vary from 11th to 21st, the average being the 15th. The departures vary from February 8th

to 27th, the average being the 21st. This makes a stay of approximately 5¼ months per season. For the rest of the year there were none left at all or else only one or two. These overstayers are not being taken into account.

The total of birds seen for the 15 seasons, i.e., 1946-47 to 1960-61 was 6246 (9369).

Count days per month for the 78.75 months of the 15 seasons averaged 22.68; days seen 18.54; days not seen 4.14.

Daily counts of birds ranged from 0 to 12.

Count days totalled 1786 and the total birds seen 6246, giving an average of 3.50 (5.25) per count day.

Notes on Analysis

The Kingfisher is one of the birds I have counted in both bush and open. The estimate of 2 seen to 1 heard may seem odd but it is a bird which perches prominently, is conspicuous in flight and does not call very much.

Table 1 shows the average of birds seen per count day for each of the 78.75 months of the 15 seasons, mid-September 1946 to the end of the third week of February 1961.

TABLE 1 — Monthly averages of birds seen per count day

Sep	Oct	Nov	Dec	Jan	Feb
4.29	3.94	3.61	3.70	3.12	2.43
			(4.35)	(3.74)	

The figures for December and January need to be modified as shown in brackets in Table 1. They had incomplete records owing to my being away for the Christmas holidays for an average of 10 days in December and 6 in January, so that the December average should be at least one third more, i.e., 1.23, making the total 4.35 and January one fifth more, i.e., 0.62, making the total 3.74. It would appear that some, perhaps unsuccessful breeders, start to move out in January.

The range of fluctuation in the fifteen seasons is shown in Table 2.

TABLE 2 — Averages of birds seen per count day for the seasons shown.

1946-47	1.51	1954-55	2.75
1947-48	2.38	1955-56	3.90
1948-49	2.74	1956-57	2.50
1949-50	2.80	1957-58	3.01
1950-51	3.42	1958-59	2.31
1951-52	3.65	1959-60	3.18
1952-53	3.99	1960-61	2.84
1953-54	3.73		

It cannot be proved from these observations whether Tihoi, with its poor showing for the seasons 1944-1945 and 1945-46, was

just having a bad period at the time, or whether it did not ever have better seasons. Minginui had a low count for 1946-47, but consistently higher ones regularly from then on to 1960-61, the end of the counting period, so it could have been lower before 1946-47. It is to be noted that the Kingfisher at Minginui did not have the drop suffered by some of the more insectivorous birds in 1952-53 and 1953-54.

WAIAU

The total of birds seen for the 15 seasons, i.e., 1946-47 to 1960-61 was 136 (204).

Count days per month for parts of 16 months of the 15 seasons averaged 4.44; days seen 1.56; days not seen 2.88.

Daily counts of birds ranged from 0 to 10.

Count days totalled 71 and the total birds seen 136, giving an average of 1.9 (2.85) per count day.

Notes on Analysis

The low rate of 1.9 seen per count day I consider was due to the beech at Waiau being less suitable for nesting than the trees of the podocarp forest.

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