

sometimes get stung and die. Furthermore, the bees occupy the breeding resorts of *Psittacidae*. Settlers and Natives told me they found kaka eggs, and young parakeets, in the honey-comb of wild bees on the mainland.

On Hauturu Island there are no bees: the chief, Tenetahi, would not allow them to be landed, as he wished to protect the birds. There is one drawback—viz., wild pigs and cats, which are very destructive. The former root all the ground-birds out, and devour them; the latter watch night and day for their prey. But these two pests a good marksman with well-trained dogs could soon put a stop to. If the members of this Institute are in favour of obtaining Hauturu Island for preserving and protecting the Native birds, from my knowledge, and after many years studying the habits of New Zealand birds, I could not recommend a more favourable place. It would be of great benefit to science and agriculture to have such a means of preventing the extinction of these remarkable birds, which, as they multiplied, could easily be transferred to the mainland for the purpose of checking the insect pests; and if my aid in the project is of any use, I will be most happy to procure (*gratis*) live specimens of both sexes of *Apteryx* (kiwi) and *Stringops* (kakapo), if the Committee will provide me with cages and arrange for the transport, before or when I am again on the West Coast, about December next. The insectivorous birds and honey-eaters could be fed during transport on mashed potatoes, and common biscuits soaked in water, with sugar, and a few meal-worms or ant-eggs. As I expect to be away on another expedition, I have asked Professor Thomas if he would kindly read this paper for me; and if members wish to ask any questions in reference to these observations, I will be most happy to reply.

The above is written from my personal observations and facts.

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ART. XXII.—*Notes on Ornithology.*

BY A. REISCHEK, F.L.S.

[Read before the Auckland Institute, 18th October, 1886.]

PETROICA TOI-TOI—Pie-tit (*Miro-miro*).

This beautiful little bird is a native of the North Island, but on the mainland is becoming scarce. I found a few pairs in the Tangahuaia Ranges in 1879, in the Tokatea and Waitakerei Ranges in 1880, and in Pirongia, Rangitoto and Mokau Ranges in 1882. They are more plentiful, however, on certain islands

in the Hauraki Gulf. When I visited Morotiri Island in 1880, and also Taranga Island in 1883, they were rather rare. On Hauturu Island, in October, 1880, I found this bird very common, but on my second trip in 1882 they seemed to have diminished.

The sexes differ considerably in plumage: the male bird has upper part black, a white spot on the top of the bill, a white bar across the wings; throat, breast, and abdomen white: the female, upper part greyish-brown, white spot on top of the bill, yellowish-white bar on the wings, and greyish-white on the throat, breast, and abdomen. The young birds are spotted. The pair build the nest together, of moss, spider-webs, and rotten wood, lining the inside with the down of seeds taken from the various flowers. The nest is always flattened in the fork of a tree. I never found it more than 8 or 10 feet above the ground, and in very thick scrub. The female lays in October from 3 to 4 eggs, and male and female breed and rear the young together twice a year. In the beginning of December the young birds are full-grown, and the parents leave them. On Hauturu Island, in 1880, I found a nest containing two white-brownish speckled eggs. About the end of December, 1882, I found a nest with 4 eggs, near our whare. In 14 days the young birds came out of the shells. Every morning and evening, while the female was sitting, the male came and serenaded her. The song consists of six notes, as "ti, oly, oly, ho," which he always repeats twice. One male came several successive mornings near my whare, I threw him some bread crumbs, which he picked up; a week after he brought a female and three young ones, feeding them in front of the whare. After a time the male got so bold that he actually came to the door and called for food. They stayed about the whare till I left it. Through its boldness, I think, this bird is becoming scarce. They prefer clearings, where they hop about on low branches with the wings slightly drooped, the tail always erect, and uttering a sweet whistle of one note, as "see;" the male sometimes five notes. The female is of a most retiring disposition, and is not so often seen as the male. Their food consists of insects and larvæ. On the morning of the 10th December, 1883, (after a severe thunderstorm and rain in the night,) I went up the ranges, and in a very thick gully I heard a twitter; on approaching, I perceived a pair of *Petroica toi-toi* hopping about very excitedly; after watching them for a time, I went closer and looked into the nest, where I saw three eggs covered with water. On my taking away the nest, the birds did not show any anxiety for their loss. They are very useful in destroying insects, with which the New Zealand forests swarm. I often saw them carrying insects over an inch long to their nests.

*PETROICA LONGIPES*, Less.—Wood Robin (*Tototowai*).

This species is confined to the North Island, where it was formerly plentiful, but is now only to be found in a few localities, and is very rare, and will soon become extinct like so many other New Zealand birds. Dr. Buller told me that he could not get a pair even at a high price.

On the north-western slope of Hauturu Island, in October, 1880, I shot one female. In November, 1882, I went to the centre of the island, where I saw several pairs. It prefers secluded gullies, near creeks, and hops about on the ground or in low scrub. The male sings very early in the morning, and late in the evening. Only on one occasion have I observed this bird singing on the top of a high tree, which it did for a quarter of an hour. The song is very sweet and powerful, and, when undisturbed, the bird is very tame. When I was digging out various specimens of *Procellaria*, this robin always came round and picked up the worms and other insects from under my hoe. On one occasion, when I was sitting on a stump watching a long-tailed cuckoo devouring a large *weta*, with my gun across my knees, one of these robins came and perched on the barrel. Often when at lunch, one or a pair came and picked up the crumbs at my feet. If I threw a piece of biscuit or meat, it was taken away a short distance and eaten, and the recipient returned for more. At the commencement of the breeding season, which begins in October, the female lays from 3 to 4 eggs; each pair occupies a certain limit, and if interfered with by others, the weaker is obliged to retreat. Their food consists of insects and their larvæ. I never met this bird on my southern expeditions, and the only pair on the mainland were those I saw on the Tohua Ranges. Early in December, 1883, during my stay on Hauturu Island, the Natives found a nest with four young birds (*Petroica longipes*), but when I reached the spot the birds had flown. The nest, which had evidently but recently been disturbed, was built of moss, grass, etc., and in the niche of a tree. This bird reminds me very much, in its movements and habits, of the European robin (*Rubicula sylvestris*), and I felt it an act of vandalism to shoot some for specimens. They are very useful birds, and deserve every protection.

*ANTHORNIS MELANURA*.—Bell-bird (*Korimako*).

This bird is very common in the South Island of New Zealand, also on several small islands on the east coast. At Whangarei Heads, in the North Island, I saw one specimen which was blown in a gale from Morotiri Island, and was in such a state of exhaustion that it could hardly move, and died in a few moments. On skinning, I found it very thin, the crop being quite empty. I searched all the northern forests from

the Mokau to the Bay of Islands, and across from one coast to the other, but never again observed it. I attribute its disappearance to cats, rats, bees, and bush-fires. The first time I saw this bird in the South Island was in the forests on Banks Peninsula, in 1877, and again in the same year on my trip to the west coast, where I found it common. In the North Island I could not discover it on the mainland, but on visiting Morotiri Island, April, 1880; Hauturu Island, October, 1880; and Taranga Island in November, 1880, I found them plentiful. In December, 1880, on my second visit to Morotiri Island, I found that the birds had materially decreased in number. On my second trip to Hauturu Island in October, 1882, at the centre of the island, I found the bird at home, morning and evening. I had a concert near my nikau whare, from 10 to 20 birds of both sexes sitting on the trees and singing in chorus together. The morning and evening song differs from that during the day, the morning and evening notes consisting of three distinct sounds resembling the chimes of bells, from which I suppose the bird derived its name. The song during the day is more of a warbling sound. One gives the signal to begin, with a snap of the bill, and all the birds join in the chime, keeping perfect time together until the leader, with another snap, gives the signal for a rest. After a few minutes rest, the chiming song is repeated.

In September, male and female begin to build the nest, of small branches and moss, lined with feathers, in thick branches of trees from 20 to 50 feet above the ground; and I have also found nests in hollow trees. In October the female lays from 4 to 5 white eggs with light-red spots, which they hatch together, and both parents feed the young brood. When leaving the nest, the male looks after his family till they are able to take care of themselves. At the approach of danger I have seen a male knocking a young bird from a branch when it would not listen to his call.

This bird is very bold and tame; it lives on insects, berries, and honey from trees and flowers, especially the flax blossoms (*Phormium tenax*), which in some places grows in great abundance, and has a quantity of honey in the calyx, into which the Bell-bird inserts his bushy tongue to suck out the honey. On the Little Barrier, on the 10th December, 1883, I found three nests under a bunch of tussock (a parasite growing on a tree), completely sheltered from wind and rain, 20 feet above the ground. In each nest there were 4 birds; I took one nest, to ascertain if the bird could be kept in confinement. After having them in my care for several days, during which I fed them on soaked biscuit mixed with honey, and cooked potatoes, they got on well; but, through the carelessness of my assistant, they escaped.

I made a stay at the West Coast Sounds in the South Island, in 1884, where the Bell-bird is not so common, the specimens which I procured in Dusky Sound being considerably larger, darker, and softer in plumage than those of the North Island. Male and female differ in size and plumage, the latter being smaller and duller. I feel sorry that these birds have also disappeared, in some localities, as they brighten the melancholy stillness of New Zealand forests by their powerful song, and are very useful in destroying numerous insects.

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ART. XXIII.—*Ornithological Notes.*

By A. REISCHER, F.L.S.

[Read before the Auckland Institute, 20th September, 1886.]

CREADION CARUNCULATUS.—Saddleback (*Tieke*).

This bird derives its popular name from a peculiarity in the distribution of its two strangely contrasted colours, uniform black, back and shoulders ferruginous, the shoulders of the wings forming a saddle. In structure it resembles the starling (*Sturnidæ*); it has also the wedge bill. In December, 1877, on my expedition in the South Island, I found this bird on the chain of high ranges along the left bank of the Teremakau River, but it was rather scarce. I have seen it frequently near Lake Brunner and on Greenstone Hill, also on Mount Alexander, and in April, 1879, on Mount Alcidus, Rakaia Fork.

During my researches in the North Island, in 1880, I found this bird on Hauturu Island, but rare, and again in October, 1882, when I went to the centre of the island, but it was still scarcer. On my visit to Taranga Island, in November, 1880, I was greatly pleased to find the saddleback in abundance; and on a later trip, in February, 1883, it was still more numerous. On my first trip, in 1880, to this island, I found a saddleback's nest about 10 feet from the ground in a manuka tree; this nest was made of moss, twigs, and fine grass, with one white brownish-spotted egg in it. In February, 1883, on exploring in a north-easterly direction, I heard a peculiar whistle, which differed from that of any other New Zealand bird. On going closer I perceived five birds, and, concealing myself, in order to watch them, to my surprise I saw male, female, and three young *Creadion carunculatus*. The female was feeding the young birds, which had just left the nest. I first shot the parents; the young, which had never moved from the branch, I gave to Dr. Buller, F.R.S., with a description, and