

ART. XXX.—*On the Birds of New Zealand.* By T. H. POTTS, F.L.S.

(PART IV.)

[*Read before the Philosophical Institute of Canterbury, 4th December, 1873.*]

LIST OF BIRDS DESCRIBED IN THIS PAPER.

NOTE.—The species are numbered in conformity with the lists given in Parts I., II., and III., in *Trans. N.Z. Inst.*, II., Art. viii.; III., Art. xi.; and V., Art. xx.

No.		No.	
1.	<i>Falco novæ-zealandiæ.</i>	58.	<i>Chrysococyx lucidus.</i>
A. 1.	„ <i>ferox.</i>	59.	<i>Carpophaga novæ-zealandiæ.</i>
3.	<i>Athene novæ-zealandiæ.</i>	A. 65.	<i>Charadrius obscurus.</i>
8.	<i>Neomorpha gouldi.</i>	B. 65.	<i>Anarhynchus frontalis.</i>
18.	<i>Acanthisitta chloris.</i>	C. 65.	<i>Thinornis novæ-zealandiæ.</i>
19.	<i>Orthonyx ochrocephala.</i>	85.	<i>Ortygometra affinis.</i>
B. 19.	{ <i>Certhiparus albicilla.</i>	86.	„ <i>tabuensis.</i>
	{ <i>Orthonyx albicillus.</i>	A. 89.	<i>Ocydromus fuscus.</i>
23.	<i>Gerygone.</i>	B. 89.	<i>Gallinago pusilla.</i>
29.	<i>Petroica macrocephala.</i>	102.	<i>Eudyptes.</i>
36.	<i>Keropia crassirostris.</i>	A. 108.	<i>Ossifraga alba.</i>
37–8.	<i>Rhipidura.</i>	123.	<i>Diomedea melanophrys.</i>
40.	<i>Glaucopis cinerea.</i>	124.	<i>Lestris catarractes.</i>
47–50.	<i>Platycercus.</i>	126.	<i>Larus dominicanus.</i>
51.	<i>Nestor meridionalis.</i>	B. 131.	<i>Sterna alba.</i>
57.	<i>Eudynamis tahitiensis.</i>		

IN offering another small budget of notes on native birds, the writer has to express his regret that they are but fragmentary. Unfortunately notes on birds in their wild state are necessarily less complete than those which can be gathered from the fluttering prisoners in the condemned cell of an aviary.

The writer having been laid under contribution by Dr. Buller, in his “History of the Birds of New Zealand,” is compelled to refer to some mistakes as to matters of fact in the “History,” or else he might be thought to concur therein; as to theories, they are the property of anyone to shape according to fancy.

No. 1.—*FALCO NOVÆ-ZEALANDIÆ, Gml.*

Quail-hawk.

Those ornithologists who have written on the fauna of New Zealand have held conflicting opinions on the *Falconidæ*. Attempts have been made to prove that one species only inhabits these islands; on the other hand, evidence has been offered that the fauna includes at least two species. The question involved—of much interest to those who care for the natural history of this country—has its chief difficulty in the absence of such marked or distinctive

characteristics of form and colour as would enable the ornithologist to recognize at once a specific difference. Messrs. Finsch, Gurney, Hutton, and Buller, have given their opinions, *pro* and *con.*, but outside the value of the evidence that may be got from the critical examination of specimens, there remains for consideration the weight that may be attached to certain peculiarities that can be learnt from the birds themselves. Are these peculiarities sufficiently marked to justify a separation of our *Falconidæ* into two species?

The three writers just named, as far as we are aware, do not touch on these birds in their living state. Dr. Buller's evidence must be sifted to ascertain its value; he deals with the living bird, and, at present, inclines towards the maintenance of two species. In *Trans. N.Z. Inst.*, Vol. I., p. 106 (1868), he writes:—"In a paper forwarded to the Philosophical Institute of Canterbury, in June, 1864, and again in the *Essay*, I stated my belief that on a further acquaintance with the species it would be found necessary to expunge *Hieracidea brunnea* from our list of species, and to regard it as *H. novæ-zealandiæ* in an immature state. * * * *
Since the publication of the *Essay* I have been able to determine satisfactorily this disputed point.

"In December last, during a visit to the Taupo district, I was fortunate enough to discover a nest of this hawk, containing three young ones. The parent birds were beautiful specimens of *H. novæ-zealandiæ*. * * *
One of them shortly afterwards died, but the others (which are still alive in my aviary) developed in due time into perfect examples of the so-called *H. brunnea*. It will be seen, therefore, that this form is the young of *H. novæ-zealandiæ*, and not the female, as suggested by Herr Finsch." In striking contrast to this statement, we find his notice of the *Falconidæ* in his "History of the Birds of New Zealand;" at page 9, the story of the inmates of the nest found in the Taupo district is given as a portion of the history of *H. brunnea*. Now, will this fresh view of these nestlings induce us to rely that Dr. Buller has "been able to determine satisfactorily this disputed point"?

In the introduction to the "Birds of New Zealand," page xv., may be found this passage:—"Thus Dr. Haast writes to me (under date of March 10, 1872), concerning the specific distinctness of the Sparrow-hawk and the Quail-hawk. I may tell you that on my last journey into the interior I got two of the former (*i.e.* the small species). They were male and female, and I secured them at the nest, where they had young ones. The female was a little bigger and lighter than the male bird. Both birds were *full-grown*, and showed at a glance the impossibility of their ever developing into the large and perfectly distinct Quail-hawk." This reads like strong evidence in favour of the two-species theory, but there must be some mistake in this statement.

These two birds were shot by Mr. W. P. Phillips, then manager of the writer's cattle-station on the Upper Rangitata, whilst they were assailing the poultry close to the house. Mr. Phillips, who killed them, preserved their skins, and presented them to Dr. Haast, who did not know of a Falcon's nest, and made a guess at the sexes of these specimens. From the station journal it was ascertained they were killed on February 10th. These two Falcons are in the type collection of the Canterbury Museum, and, in the opinion of the writer, are birds in their first season. In support of the maintenance of the two-species theory, the following information is submitted. In November, 1868, two nests were found on the Lake Coleridge Ranges. The young were captured when quite small by one of Mr. Oakden's shepherds, and both families presented to the Canterbury Acclimatization Society. Mr. Oakden stated to the writer that the birds from the one nest were readily distinguishable from those of the other nest, even from the first; in size there was a marked difference, perhaps of about one-third, this contrast of size being maintained up to the time when some of the birds were shipped for export to England. The writer has seen numbers of both species, and has a series of many specimens that have been collected in the course of some twenty years. In life, besides the marked difference in size and in robustness of frame, the Sparrow-hawk (*Falco ferox*) looks flatter about the head and carries the wings more prominently forward, this carriage giving the bird a less rounded appearance than is observable in the larger species. The smaller Falcon is more savage and resolute, swifter in flight than its congener, and will soon rid a pigeon-house of its inmates.

Last December some very robust specimens of *Falco novæ-zealandiæ* were observed by the writer about the sounds of the south-west coast of this island. Those birds were observed on some occasions to pursue sea-gulls. Two females, shot in Preservation Inlet, measured as under:—

	Total length.	Wing.	Tail.	Tarsus.	Spread of wings from tip to tip.
No. 1 ...	18 inches	11 inches	7·8 inches	2·9 inches	32 inches
No. 2 ...	18 „	11·5 „	8·5 „	3·2 „	35·4 „

Their habitat, rocks and cliffs towering above the sea. From the crop of one specimen was taken the remains of a very large rat, one hind leg of which had been swallowed whole. These very robust specimens of our larger Falcon could not well be identified with the same species as the light, dashing little Sparrow-hawk (*F. ferox*).

If the cabinet ornithologist will not permit the fauna to possess two species, *Falco ferox* = *F. brunnea* must be the young state of *Falco novæ-zealandiæ*; in this case we must try to believe that the greatest boldness and audacity in attacking, the greatest activity and swiftness of wing in pursuing, is exhibited by the Quail-hawk before it has reached its adult state; neither

may we have regard to the difference of size which specimens of either sex very often present.

Near the Ashburton one of the writer's sons, Geoffrey Potts, saw a large weka (*Ocydromus*) successfully attacked by a Quail-hawk. Noticing the swoop of the Falcon, he rode up in time to pick up the weka at its last gasp; the fatal stroke had been dealt on the head and neck, from which a few feathers only had been displaced.

This hawk displays much dexterity in cutting off a single bird from a flock, whether of pigeons, kakas, or parroquets. The pursuit of each species seems to require the bird to call in aid some special method of attack; the chase after the noisy, screaming kaka, so often turning in its laboured flight to ward off the impending stroke, differing from that after the silent, strong-winged pigeon, as much, perhaps, as either varies from the pursuit of the parroquet. Perhaps the Quail-hawk shows nicety of calculation of the requisite force of its stroke, combined with the greatest neatness of execution, in surprising a king-fisher whilst perched on a telegraph wire.

We have known the newly-settled Australian magpie (*Gymnorhina*) defend itself successfully by throwing itself on its back, striking out with beak and claws, and shrieking most wildly.

No. A. 1.—FALCO FEROX, *Peale*.

Sparrow-hawk.

We have the egg of this bird from the Paringa River, Westland.

A nest was found up the Ashburton Gorge, on the bare ground, sheltered by a snow-grass tussock. It contained one egg partially incubated. One of the old birds was knocked over with a stone, and the flesh of the broken wing was found to be infested with parasitic worms.

December 28.—Found young birds up the Lawrence River able to fly some hundred yards or so. They were most stoutly defended by the parent birds acting in concert. With almost ceaseless swoops and with noisy screams they tried to stay our intruding steps. The young had been fed on larks (*Anthus*).

The domestic pigeon affords a fine chase for this Falcon; every nerve and muscle is strained to the utmost in the flight, the efforts of the pigeon being directed to prevent the Hawk from getting the air of it, whilst the pursuer dashes on regardless of everything but the quarry. Although the pigeon often saves its life for a time by dropping into cover, yet in the end the Hawk almost always gets the wearied pigeon.

We have known the Sparrow-hawk in the month of June (winter) pursue its prey early in the morning by the light of the waning moon.

We have approached close to the bird after a chase, and have noticed that

it has a habit sometimes of resting on one foot, drawing up the other foot to the breast, then slowly stretching out the leg, like an athlete trying his muscle.

Sometimes, when the bird just alights, or when it is perched on some weak or slender bough, the tail is held almost horizontally; when at rest we have noticed that sometimes the tail is pressed against the perch.

The writer could multiply instances of the occurrence of *F. ferox*, and give more notes of the birds it preys on, but *cui bono*? There will still be found the same uncertainty in the minds of many as to the existence of one or two species, which doubts may last till the genus is improved from off the face of the earth.

Up the Waio River, South Westland, at breeding time, these birds have been known to chase cattle dogs to the shelter of the stockman's horse.

NO. 3.—*ATHENE NOVÆ-ZEALANDIÆ, Gml.*

More-pork.

Some instances have been noticed where this useful bird has at intervals taken up its abode amidst men's dwellings. During the past two years the parsonage garden at Kaiapoi has afforded shelter to this industrious mouse-catcher; in another place a small niche in an out-house was tenanted by a More-pork.

Here, beneath the verandahs, we have known it prey on the moths that have been fluttering on the outside of the windows, attracted by the strong light within doors.

We have the egg from the Westland Bush, taken from a hole in a tree—white, smooth, of a rounded rather than oval shape, measuring through the axis 1 inch and nearly 6 lines, with a breadth of 1 inch 3 lines; weight of a More-pork about $5\frac{1}{4}$ ounces.

It should be stated that castings described by Dr. Buller in his "History" (p. 20), as those of the owl, are castings of the kingfisher (*Halcyon vagans*), which were collected by the writer in Governor Bay, and placed by him in the Museum.

Near the Ohungua River nests have been found with two and three eggs therein.

NO. 8.—*NEOMORPHA GOULDI, Gray.*

Huia.

Mr. J. D. Enys has been kind enough to forward some notes taken during a visit to Akitio.

Two specimens, obtained July 3rd, 1873, weighed—Male, 353 grains; female, 306 grains.

Three specimens, killed September 9th :—

	Total length.	Spread of wing, from tip to tip.	Bill.
No. 1. Male ...	18 inches	17.5 inches	2.19 inches
No. 2 " ...	20 "	19.5 "	2.19 "
Female ...	19.75,,	20.5 "	3.69 "

No. 18.—ACANTHISITTA CHLORIS, *Sparrm.*

Creepers.

On a station near the Harper River, in this Province, a pair of these small birds made their nest in the skull of a horse. Average weight of these birds is about a quarter of an ounce, the turn of the scale in favour of the female.

No. 19.—ORTHONYX OCHROCEPHALA.

Yellow-head.

Average weight of specimens, $1\frac{1}{2}$ ounce.

No. B. 19.*—CERTHIPARUS ALBICILLA, *Less.*

ORTHONYX ALBICILLUS, *Gml.*

White-head.

The writer procured several specimens of this creeper at Pakuratahi, at the foot of the Rimutaka range, Wellington. Closer observation induces the belief that this species may be separated from *O. ochrocephala*, in order to place it near to *Certhiparus novæ-zealandiæ*.

Irides grey, darkest in the female; ovary not in a forward state; circumference of thigh after skinning, three inches; muscles supporting the back of the head and neck very prominent. In one of the male specimens at least half the under tail-coverts was tipped with white.

Eye-witnesses informed Mr. Enys that the male tears the surface of rotten logs; the female extracts the insects, which are shared between them. At any rate the male gets his share of his mate's labours.

In life the wattle looks concave. Mr. Enys was reminded of the crow (*Glaucopis*) in some of their movements; sometimes four to six were found in company.

One of the males killed on September 9th had not moulted; the tail was dirty and scrubbed, giving it a rusty look, which may account for the so-called Red-tailed Huia.

No. 23.—GERYGONE.

Dr. Buller's idea that the *Gerygone sylvestris* is *G. frontata* is not concurred in by the writer. The new bird bears much more resemblance to *G. flaviventris*.

No. 29.—PETROICA MACROCEPHALA, *Gml.*

Yellow-breasted Tit.

The Yellow-breasted Tit often shows a seeming want of care in choosing

* No. 27 in Vol. II.

its nesting place. A site is selected which perhaps may be admirably adapted for concealing the nest, yet oftentimes the foundation is laid where the structure is liable to be blown out by gusty winds or cast over, so that its contents are destroyed; several instances of such mischances have we seen. The beautifully-made home is probably entirely the work of the hen. We have never seen the cock actually place the materials, yet he does his share of labour in carefully feeding his mate, not only during the resting-time of incubation, but also whilst the nest is being built; he carries the insects he has collected to the close neighbourhood of the busy hen, and calls her to the feast. The hen commences sitting before her full number of eggs is laid, and when she leaves—not when she is driven from—her charge, feathers are carefully arranged above the eggs or young. Compared with some species, the young birds are fed for rather a long time in the nest.

A pair this season built in the roof of a bed-room in Christchurch, but did not succeed in rearing any young ones.

The male weighs not quite half an ounce, being slightly heavier than the female.

NOTE.—January 11th, 1873. Nest on moss-covered stump, Milford Sound.

No. 36.—*KEROPIA CRASSIROSTRIS*, *Gml.*

The average weight of Thrushes of either sex may be called $3\frac{1}{2}$ ounces.

No. 37-8.—*RHIPIDURA*.

Flycatchers.

August 28th and 29th.—At Ohinitahi, this spring, the writer had two *union* nests under observation almost from the foundation of the structures being fixed. In one case the black parent bird (*R. fuliginosa*) was distinguished with the white spot over each ear; in the second instance the dark bird had not any white spot. As these nests were being built simultaneously, season had nothing to do with the assumption of the white plumelets.

The weight of *R. flabellifera* does not exceed a quarter of an ounce.

No. 40.—*GLAUCOPIS CINEREA*, *Gml.*

Kokako.

Orange-wattled Crow, or Wattle-bird.

The representatives of the *Corvidæ* are to be met with on either side of Cook Strait. The Middle Island species is the Orange-wattled Crow (*G. cinerea*). It is being driven away by the approach of the colonist, for as the coast-line of a large portion of New Zealand exhibited signs, or echoed the sounds of the work of the settler in his encroachments on the tangled wilderness of nature, the Kokako retired to the higher and more remote bushes of

the interior. To give an instance: Banks Peninsula, so often cited by Dr. Finsch, where the Crow once abounded, is now divided into sheep runs or dotted with dairy farms; the once silent woods now resound with the blows of the felling-axe or the harsh grating of the saw-mill. It is not a matter for surprise that the Wattle-bird is no longer to be found in its old haunts; it seeks shelter amongst the higher parts of the bushy gullies—a refuge at once precarious and temporary. It may be thought that the bird has attained a secluded habitat, but the condition of the forest is rapidly changing under the effects of clearings and constantly-recurring bush fires. There is not much doubt that the climate of the district has become modified; at a certain period of the year weeks of drought prevail. The Kokako loving a moist temperature will probably soon entirely forsake its ancient places of resort. These remarks on Banks Peninsula, as an habitat for arboreals, are more or less applicable to a very large extent of country on the eastern side of the Southern Alps.

Under favourable conditions the Kokako may be found on the outskirts of the bush, in the open glades that fringe some of the larger rivers. The gentle, confident manners, the rich, flute-like notes, the peculiar mode of progression even, cannot fail to draw the attention of the observer, albeit he may not be imbued with enthusiasm for gazing on the life that stirs in our woods. The ardent naturalist, who has the chance of knowing this bird, must learn to love it.

In the earlier spring months we have watched it out on the open glade cropping various species of *Graminiae*, *Gnaphalia*, *Polypodia*; often has its soft note attracted us to the bush where it has been feeding on the leaves of *Melicytus*, *Carpodetus*, etc. As summer advances, ripening the clustering drupes and berries, the fruits of the *Fuchsia* and the *Coriaria* afford an abundant supply of a favourite food. We have found it engaged, seemingly in a search for insects, prying amongst the hoary filaments of the drooping grey-beard moss that decks the branches of so many trees in some of the gloomy alpine valleys. The long tarsi carry the body well above the damp mosses when collecting its food on the ground; its mode of progression, by a series of leaps or bounds, may also tend to keep its plumage clear of humid plants. When really alarmed it leaps with great rapidity, covering a wide space of ground with each effort. Like the *Keropia*, it seeks safety amidst the low undergrowth of the forest.

The sexes appear to be united in close companionship. We have noticed a pair on some favourite fruit-bearing tree caressing each other with their beaks. A pair kept in confinement lived thus imprisoned for about two years, but when one died its mate only survived some few days.

In December, 1869, Donald H. Potts, one of the writer's sons, found a

nest on the outstretched limb of a broad-leaf tree (*Griselinia littoralis*), a few feet above a creek. This was on the Havelock River.

In January last, whilst exploring the bush that fringes Milford Sound, the writer was so fortunate as to discover five nests, at heights varying from ten to seventeen feet above the ground. The first specimen we found placed on the extended limb of a totara (*Podocarpus*) that overhung a deep, ferny gully. The nest had been reared on the remains of an old structure, and the foundation, which was quite two feet across, made of sticks and sprays firmly interlaced, supported a basin-shaped nest formed of twigs and moss (*Sphagnum*), smoothly lined with leaves of soft grass. From wall to wall outside the measurement was found to be 16 inches; diameter of the cavity 8 inches, with a depth of 3·5 inches.

The parent bird on the nest allowing a very close approach, was found to be covering two nestlings as yet unable to see. They were partially clothed with slate-coloured down, which, on the cranium, stood up like a broad crest, or rather crown; the neck and under-parts were quite bare; beaks flesh-colour, with a greenish tinge about the point of the upper mandible; rictal membranes pale greenish, changing to blue; wattles rosy pink, like an infant's hand; legs and feet slatish anteriorly, dull flesh colour behind; claws dull white. They differed somewhat in size; both were very plump, being abundantly fed with the berries of the tutu (*Coriaria*). The old bird suffered a close examination of its home and its inmates without uttering any alarm cry or showing any signs of defending its young, thus differing much from the habit of *Keropia*; yet there was not that exhibition of utter helplessness which some birds—as for instance *Hymenolaimus*—manifest under similar circumstances. The other nests were found in damp situations (one with a broken egg) in a small patch of bush at Freshwater Basin, close by the Lady Bowen Waterfall. From observation we found that the young are left at intervals during the day for a considerable time.

A friend sent two eggs from a nest found near the Paringa River, Westland. They are of a warm stone colour, with purplish and brown spots; ovo-conical; in length 1 inch 7 lines; in breadth 1 inch 1 line. They bear much resemblance to the eggs of some species of *Terns* in colour and marks. We are inclined to believe that eggs of this bird are often destroyed by the long-tailed cuckoo (*Eudynamis tahitiensis*).

The weight of the female Crow is $10\frac{1}{4}$ ounces, whilst that of the male is found to average from $9\frac{1}{2}$ to 10 ounces.

The writer found that in the Wairarapa the *Glaucopsis wilsoni* is sometimes familiarly known as “the blue-gills.”

It is said that *G. cinerea* has been found in the North Island.

No. 47-50.—PLATYCERCUS.

We have a beautiful specimen of the nest of *P. novæ-zealandiæ*, cup-shaped, built entirely of feathers, moss, and down from the tree-fern (*Dicksonia squarrosa*). A correspondent has communicated the following abnormal conditions of plumage in specimens of this genus:—" *P. novæ-zealandiæ*.—Plumage yellow; also a specimen with blue plumage, forehead and top of head dirty white, without any mark or spot on each side the rump. *P. auriceps*.—A specimen with yellow plumage."

No. 51.—NESTOR MERIDIONALIS, *Gml.*

Kaka.

Some eggs of this Parrot in the collection of the writer differ from the usual type, their surfaces being very coarsely granulated. The nest contained five eggs, and was taken from the bush near Invercargill, South Otago.

A form of *Nestor* not yet described has been found near Cass River, in this Province. The dead bird was found in bad condition; it had the tail feathers beautifully coloured with vermilion, without bars, the shafts much produced into hair-like points; the wing-feathers with inner webs of delicate vermilion toning down to yellowish.

Kakas, male and female, weigh from 1lb. 2ozs. to 1lb. 5ozs.

No. 57.—EUDYNAMIS TAHITIENSIS, *Gml.*

Long-tailed Cuckoo.

In December, 1872, two instances came under the writer's notice of this bird being reared in gardens in Christchurch; somewhat later Donald Potts saw one being fed in the Irishman scrub (*Discaria toumatou*), close to the River Potts; in each of these cases the foster-parents were grey warblers (*Gerygone flaviventris*). The writer differs entirely from Dr. Buller in attributing compassionate philornithic feelings to the foster-parent; he looks on the *Gerygone* as a dupe simply. In the paper on the crow (*Glaucopsis*), page 154, "History of the Birds of New Zealand," we may again find something like a belief on the part of Dr. Buller that a philornithic spirit prompts the yellow-head to feed and tend the offspring of the crow.

Through the "Ibis" the writer tried to obtain some information about the egg of *Eudynamis*, but without success; he was referred to the two eggs labelled koekoe, from the Buller collection. This bird abounds on the west coast of this island, and the Maoris say "it comes with the mosquitos." Crane-flies form a favourite portion of its food supply. The Long-tailed Cuckoo weighs $4\frac{3}{4}$ ounces.

No. 58.—CHRYSOCOCCYX LUCIDUS, *Gml.*

Whistler.

Having long since taken much interest in bird notes, many observations have

been made on those of the Whistler; yet repeated attempts have failed to discover any guide why the number of its notes should so greatly vary; whether the bird's call is affected by the state of the atmosphere, temperature, the force of the wind, or the quarter whence it blows.

At all hours it may be heard in its season, but at night the call seems most sustained, both as regards the distinct notes or whistles, and the remarkable song or flourish with which it often ends the performance.

SOME NOTES, TAKEN FROM OCTOBER 25TH TO NOVEMBER 10TH.

Lowest and Highest Number of Notes.

11.30 p.m. to 1 a.m.	3.45 a.m.	4.45 a.m.	6.45 a.m.
14 to 34	18 to 41	15 to 24	13 to 25
11.45 a.m. to 0.20 p.m.	4.30 p.m.	6 p.m.	9 p.m.
3 to 42	11 to 35	12 to 44	18 to 68
	10.5 p.m.	11 p.m.	
	17 to 64	25 to 107	

The notes do not include the terminal song or flourish.

October 8, 1872.—Whistler heard for the first time.

October 6, 1873.—Just heard the Whistler's call; this is early, as the spring is a late one. Their route on arrival seems to be from W. to E., or N.W. to S.E.

In the early morning the call of the Cuckoo is certainly more plaintive in tone than at other times. This call is delivered without that evident labour which accompanies the outpourings of some species of birds. Whilst performing it sits rather low on its perch, the head is slightly raised, the bill pointing rather upwards, the head is slowly moved from side to side.

November 4.—Female Whistler killed by dashing against the plate-glass windows; irides liver brown, inclining to reddish brown; tarsus and toes slaty blackish, beneath dirty flesh; ovaries not in an advanced state.

November 11.—Another female Whistler suffered a similar fate.

November 12.—Whistlers feeding on the moths that are busy about the ngaio trees (*Myoporum laetum*); in picking off the moths the gape is opened very wide. Whilst feeding a few low, brief notes are uttered.

Have seen this Cuckoo hotly pursued by the black fantail (*R. fuliginosa*). When alarmed its call sounds like "peewau, peewau."

No. 59.—CARPOPHAGA NOVÆ-ZEALANDIÆ, *Gml.*

Pigeon.

Perhaps few birds show more art in the construction of their homes than does the Pigeon in the arrangement of the slender twigs which form the well-poised platform on which it rears its young. The slight fabric, which at first glance appears of a rude, careless make, has its materials so nicely adjusted as to bear with safety the weight of its heavy builders. It may be said to resemble somewhat the hollow of the human hand. In the slight depression

of the platform the egg, or young, lies undisturbed by the swaying caused by the passing wind.

Last January, in Milford Sound, the writer obtained several nests, in one of which was a young one a few days old.

January 9.—Nest near the Cle dau River, in a sapling miro (*Podocarpus*), about 18 feet above the ground ; it contained one young bird sparsely covered with brownish yellow down, which was longest over the neck and breast ; abdomen bare ; bill dull flesh, inclining to slaty ; round the eye bare ; yellowish spot on upper mandible ; legs, feet, and claws leaden to flesh colour. On the nest, with the young bird, there yet remained some fragments of egg-shell and pieces of dung. The spaces and openings of the latticed nest befit the dirty habits of the Pigeon ; as the excrement dries, probably most of it disappears through the nest.

The writer has a beautiful specimen of the nest from Little River Bush, Banks Peninsula ; it was built on a totara (*Podocarpus totara*), on a branch covered with *Loranthus micranthus*, and contained one fresh egg (April 14th). The egg, of pure and glossy whiteness, is of a perfect oval form, measuring in length 1 inch 10 lines, with a breadth of 1 inch 4 lines.

A Pigeon weighs 1lb. 10oz. ; sometimes this is rather exceeded.

In July and August this bird feeds on the *Polypodium australe*.

No. A. 65.—*CHARADRIUS OBSCURUS*, *Gml.*

Plover.

In October last Donald Potts found a nest which contained four eggs ; three of these were those of the Plover, the fourth being that of the common tern, *S. antarctica*.

No. B. 65.—*ANARHYNCHUS FRONTALIS*, *Quoy.*

Crook-bill.

In the "Ibis," January, 1873, also in Dr. Buller's book, page 219, appear statements that the pectoral band is less conspicuous on the left than on the right side of the Crook-bill. The fact is, that the shape of the pectoral band is not very regular, and that the black feathers may be found to be most conspicuous either on the left or right side in different individuals, as any one can ascertain who looks through a series of specimens when he may not have the opportunity of noticing living birds.

No. C. 65.—*THINORNIS NOVÆ-ZEALANDIÆ*, *Gray.*

Masked Plover.

Tuturautu.

In the summer months this gay-looking Plover affects sandy beaches of the sea-shore. Near to the outfall of a river seems a favourite place of resort ; there *débris* carried down the stream, and cast on the bank by the opposing

tides, affords shelter to numerous insects on which the Masked Plover delights to feed.

To those who are acquainted with our *Charadriæ*, the *Thinornis* must seem to have much in its ways that is common to *C. biconctus*, as, for instance, there is a marked similarity in the style of flight, in the notes, and calls; the clicking alarm-cry whilst on the wing is common to both birds.

The Masked Plover is said to be rare. In the Catalogue of the New Zealand exhibits in the Vienna Exhibition, 1873, this bird is marked "very rare." It is not unlikely that the idea of its reputed rarity has arisen rather from the lack of close observation than from the scarcity of the species.

Wary, active, and bold, it watches every movement of the intruder on its feeding-ground with attention; it evinces uneasiness by flying in wide circuits at no great height. On alighting it often runs a few yards, covering the ground with rapidity.

Advantage is taken of any high ground for a look-out. When employed in watching the head is frequently moved up and down; when all appears quiet the search for food is resumed amongst the drift-wood, sticks, and sundried Algæ, that mark the limits of the highest tide.

Tuturautu, the name given to it by the natives, is expressive of the call-note; perhaps an idea of its sound could scarcely be better rendered. The alarm-cry is like "click, click," repeated rather fast three or four times; after a brief pause the warning is again sounded.

The male has a bright orange coloured bill which sets off its handsome plumage to advantage; the female has its colours distributed in much the same way as her mate, but these are far less conspicuous in tone. Dull, smudgy brown, in unobtrusive tints, lends security to the brooding bird.

NOTE.—December 31. Watched three pairs near the mouth of the Waikawa River, Otago. A single pair was first seen, but their alarm-note brought the other couples from some distance along shore; these latter, after a brief but wary inspection, departed. From the screen formed by the crest of a sand-dune the birds were watched; they were most probably breeding. At the slightest change of position on the part of the observer both Plovers left off their food search, and made a restless circuit that brought the intruder into full view; both birds showed boldness, the female alighting within three yards' distance of the writer, near enough for the colour of the irides to be distinguished. It is probable that the female has been described under the name of *T. rossi*.

No. 85.—ORTYGOMETRA AFFINIS, *Gray*.

Weights one and a quarter ounces.

No. 86.—ORTYGOMETRA TABUENSIS, *Gml.*

We have the egg of this widely-distributed Rail from a salt-marsh near

Invercargill. It is rather a long oval in shape ; measures one inch nearly four lines through the axis, the breadth being about ten lines ; colour olivaceous brown.

No. A. 89.—*OCYDROMUS FUSCUS*, *Du Bus*.

Kelp-hen, Blackwood-hen.

It abounds in the many inlets and sounds of the south-west coast of this island. The only place where we noticed that it seemed shy was in Milford Sound. As soon as the tide begins to recede these dusky Rails come out on the shore to feed amongst the kelp. In January last we procured, without difficulty, a number of specimens of either sex, both in the young and adult state.

In the living state we observed that the bill was pink at the base, pale brown towards the tip ; irides chestnut red ; legs and feet red ; claws brown.

The young have the legs as red as the adult bird ; irides dull yellowish ; bill dark colour.

No. B. 89.—*GALLINAGO PUSILLA*.

A specimen of the Snipe has been recently obtained on The Snares.

No. 102.—*EUDYPTES*.

Mr. Morton has informed the writer of the occurrence of a Black Penguin corresponding in size with *Eudyptes pachyrhynchus*. It was captured on The Snares.

No. A. 108.—*OSSIFRAGA ALBA*.

White Nelly.

Off Centre Island, Foveaux Straits, a fine specimen of the White Nelly was captured by Mr. Enys, on January 3rd. It was feeding on the refuse from the vessel in company with several specimens of the Common Nelly.

Plumage white, mottled very sparingly throughout with single brownish grey feathers ; bill pale greenish ; sutures flesh colour, yellow at the tip ; legs and feet slate grey. Entire length 34 inches. Spread of wings across the body 77·5 inches ; wing, from flexure, 20 inches 6 lines ; tarsus 3 inches 6 lines ; middle toe and claw 5 inches 4 lines ; outer toe 5 inches ; spread of web 7 inches ; bill 3 inches ; lower mandible 3 inches ; beak 1 inch ; gape to centre of eye 1 inch ; height of beak 1 inch.

The day before the wind had been blowing hard from the south. On the 15th January, in Cook Strait, we observed another specimen, it had been blowing a furious gale on the day before.

No. 123.—*DIOMEDEA MELANOPHRYS*, *Boie*.

Molly-mawk.

An egg of this sea-fowl, from the Auckland Isles, is white, with a few small rusty marks ; ovoi-conical in form. It measures four inches four lines in length, with a breadth of two inches ten lines.

No. 124.—LESTRIS CATARRACTES, Q. and G.

An egg of this species, brought by Mr. H. Travers from the Chatham Isles, is ovoi-conical in form; the colour is olivaceous brown, blotched and dotted with dark brown; it measures nearly 3 inches in length, with a breadth of 2 inches 1 line.

No. 126.—LARUS DOMINICANUS, Licht.

Large Gull.

In certain localities the habits of our Large Gull seem so peculiar as to deserve some notice. About the sounds it is apparently far less gregarious than it is usually found to be on our eastern shores. Has the custom of flocking together been abandoned, or is it yet unacquired? Fish is as abundant on the western side as it is here, so that any difficulty in the food supply does not seem to be the cause of different habits. It breeds solitarily on little islets, stumps, or roots of stranded trees. The nests are large, substantial structures, showing a degree of labour and care in their construction which is not matched by the birds on our side of the island. Some found by the writer, in Milford Sound, were large nests formed of a vast variety of materials, and so solidly built that they were brought away without the least damage. The young keep to the nest for some time, lying on the broad walls basking in the sun; from the castings we found they were fed on young mussels, etc. These Gulls prey on the young of other birds, such as those of the teal for instance, which are swallowed at a gulp.

No. B. 131.—STERNA ALBA, Potts.

The White Tern seen by the writer on the Ashburton, and described by him in Trans. N.Z. Inst., Vol. III., is quietly placed by Dr. Buller with *S. nereis*, to which he gives the name of the Little White Tern.

This fine White Tern was seen on the Waitangi River by the Hon. G. Buckley, and others. Last month (November 20) a pair were seen flying up and down the course of that great river.

It is satisfactory to be able to record a second notice of the occurrence of this bird in the breeding season.

ART. XXXI.—*Note on the Occurrence of Dermestes lardarius and Phoracantha recurva in Canterbury, New Zealand.* By C. M. WAKEFIELD.

[Read before the Philosophical Institute of Canterbury, 2nd April, 1873.]

ON the 12th of last February I captured a specimen of *Dermestes* in a box of insects lately received from Australia by Dr. Haast for the Christchurch Museum. Upon comparing it with a specimen of *D. lardarius* taken at