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FIELD IDENTIFICATION AND SEX DETERMINATION OF THE ROYAL ALBATROSS

By KAJ WESTERSKOV

The two large albatrosses, the Royal Albatross (Diomedea epomophora) and the Wandering Albatross (Diomedea exulans) can be distinguished from the other members of the genus Diomedea by the white back of the former two, while the smaller mollymawks have a black back. For field identification of the albatrosses and mollymawks of New Zealand waters, Moreland's guide (1957) is of much help and is recommended.

WANDERING AND ROYAL ALBATROSS

Royal Albatrosses are distinguished from Wandering Albatrosses by their bigger and more rounded, protruding nose-tubes and black evelids (the Wanderer has a greenish-purple, or even white, bluish or pink eyelid). Adult female Wanderers and juvenile Wanderers of both sexes can easily be distinguished from the Royals by the dark plumages of the former (cf. plate 2). Adult Wanderers can look deceivingly like the Royal, but some specimens (very old birds?) have much more white on the wings than the Royals, especially males of the subspecies chionoptera. The dark and mottled large albatrosses are always Wanderers, but the very white birds with black wings and white olecranal patch are not necessarily Royals.

As first pointed out by Buller (1891: 231) the Royal differs "in having a broad black line along the cutting edge of the upper mandible" (see plate 3). In the Wanderer the cutting edge of the upper mandible is clear horn colour. In the hand it is thus always easy without any difficulty to distinguish between the Royal and the Wandering Albatrosses. At sea it is quite different, but even there the combination of plumage characteristics, behaviour and present-known ranges makes it possible to narrow down the identification appreciably:

(1) Royal Albatrosses are found only in the New Zealand area (along the coasts of both main islands and south to the Auckland Islands and Campbell Island and Chatham Islands). east across the South Pacific and north along both the Pacific and Atlantic coasts of South America to about 30 degrees south latitude. The only known breeding places for the Royal Albatross are Chatham Islands. Taiaroa Heads (Otago), Campbell Island and Auckland Islands.

(2) Wandering Albatrosses share with the Royals most of the area described under (1) but are met, further, throughout the vast sea expanses of the southern hemisphere between 30 and 60 degrees south latitude. The Wanderer has been observed as far north as 25 degrees (following cold currents) and as far south as 68 degrees south latitude. (3) The Royal Albatross is most often seen near land, along the coasts, in big harbours, bays and straits. The Wandering Albatross is a truly pelagic bird, found beating the wind over its 30 million square miles of roaring seas, but is also seen near land.

(4) Any big albatross with brown on head, neck, breast or back is a Wanderer which often also has a brown tip to the tail.

(5) A white albatross with white head, neck, breast, back and tail, wings black with or without white olecranal patch could be a Royal, but could also be a male Wanderer (which varies appreciably in plumage coloration, not only according to subspecies but with age).

(6) Finally, based on studies and photography, of Wandering Albatrosses in the Indian Ocean, Tasman Sea and New Zealand waters and of Royal Albatrosses on Campbell Island, Taiaroa Heads and in New Zealand waters, a distinct difference in flying pattern has been demonstrated which enables the observer in many cases to distinguish between these two large albatrosses. This difference will appear from plate 5 $(a \cdot f)$. It will be seen that while in the soaring Wandering Albatross the wings are almost fully stretched, forming a near-perfect T, in the Royal Albatross the outer hands with the primaries are bent slightly backwards, making the silhouette more drooping, umbrella-like or reminding one more of the bent wings of a swallow.

DESCRIPTION AND SIZE

In its nestling down, immature (on nest), sub-adult (during the years before breeding), and adult plumages the Royal Albatross is pure white with black wings. The tail is white, sometimes with a few black spots. The wings are black with a splashed-out, white, olecranal patch, particularly noticeable in males and possibly increasing in extent with age. The smaller Northern Royal Albatross (sanfordi) has black wings without the white olecranal patch.

When two species of birds are almost identical in size, it is very difficult ______ if not impossible ______ categorically to settle the question and declare one or the other the biggest. Especially in very large birds, such as albatrosses, a wide range in measurements will result from not only appreciable individual variation, but also from variation in age, sex, subspecies (which maybe are not yet finally worked out) and possible cline. And the human factor involved in such views will manifest itself in a leaning towards the personal favourite. Thus Rankin (1951: 142), who studied the Wandering Albatross in South Georgia, called it "the greatest of all sea-fowl" while Buller (1891: 231), haroy about his new species, says: "Diomedea regia is appreciably larger than the common species, with a far more powerful bill."

Not many Royal Albatrosses have been measured in the flesh, most measurements published having been made from dried museum skins. I, therefore, welcomed the opportunity of measuring and weighing the ten specimens of nesting adult albatrosses which we collected for the Denver Museum of Natural History on Campbell Island in 1958. This material is presented in Table J. Sex was determined by examination of the gonads and the sexed specimens were compared during and after the skinning for possible clues to sexual dimorphism in plumage and size.

Westerskov

Table 1 Measurements (in mm.) and weights of 10 freshly killed Royal Albatrosses, Campbell Island; all except No. 10 collected on St. Col Ridge, 14th January, 1958; No. 10 collected Lyall Ridge on 13th February, 1958. All specimens in the Denver Museum collection.

No.	Sex	Wing	Tαil	Tarsus	Culmen Length Depth		Middle toe	Toe nail	We lbs.	ight kg
051)	ð	701	214	138	185.0	65.8	189	27.4	18	8.2
06	ð	702	211	134	184.0	67.8	186	24.0	$20\frac{1}{4}$	9.2
08	ð	698	220	137	184.0	71.2	187	24.1	19 <u>‡</u>	8.9
10	ð	674	224	135	179.0	66.8	185	24.3	21	9.5
11	ð	707	218	137	188.0	69.3	192	24.1	191	8.9
03	Ŷ	647	210	123	163.0	62.3	165	20.7	14 1	6.6
04	Ŷ	686	196	125	174.0	64.0	180	21.8	17	7.7
09	₽	667	205	124	168.5	63.5	174	20.8	$16\frac{1}{2}$	7.5
121)	Ŷ	686	208	126	177.0	63.0	171	21.2	20	9.1
14	ę	679	207	126	170.5	62.5	180	22.4	16	7.3

 These two birds were a pair, the female arriving for nest relief while being observed, a fact probably accounting for the weight difference: the male having been sitting for maybe a week or more had lost weight and had an empty stomach, whereas the arriving female was heavier with a full stomach.

The measurements presented show the following extremes and means (in brackets):

Adult males: Wing 674-707 (696) mm.; tail 211-224 (217) mm.; tarsus 134-138 (136) mm.; length of culmen 179-188 (184) mm.; depth of culmen at base 65.8-71.2 (68.2) mm.; middle toe 185-192 (188) mm.; middle toe nail 24.0-27.4 (24.8) mm.; weight 18-21 (19.6) lbs., equal to 8.2-9.5 (8.9) kg.

Adult females: Wing 647-686 (673) mm.; tail 196-210 (205) mm.; tarsus 123-126 (124) mm.; length of culmen 163-177 (171) mm.; depth of culmen 62.3-64.0 (63.1) mm.; middle toe 165-180 (174) mm.; middle toe nail 20.7-21.8 (21.3) mm.; weight $14\frac{1}{2}$ -20 (16.8) lbs., equal to 6.6-9.1 (7.6) kg.

Unfortunately no measurements of live or freshly killed specimens of *sanfordi* are available; I am attempting to obtain this information and such measurements will be published in due course. It is wellknown that museum specimens shrink as they dry and comparisons between fresh and dried specimens are therefore of little value except to show major differences. For what they are worth the mean measure-

ments (in mm.) for the 10 fresh specimens of *epomophora* are given below, together with Murphy's measurements (1936, vol. 1: 583) of dried museum specimens of *sanfordi* (5 males and 12 temales) from the Chatham Islands:

			Chathar	n Islands	Campbell Island			
			Males	Females	Males	Females		
Wing			 615	616	696	673		
Tail			 191	189	217	205		
Culmen			 163	161	184	171		
Tarsus		****	 117	114	136	124		
Middle '	Гое		 157	151	184	174		

The Campbell Island form is without doubt the bigger of the two known subspecies of the Royal Albatross, although the difference may not be so pronounced, as will appear from the figures given.

In addition to the difference in size the two subspecies of Royal Aibatross can be distinguished by the black wings of the northern and smaller subspecies (sanfordi) while the larger southern bird (epomophora) has a pronounced white splash on the wing, biggest in the male (cf. plate 7).

SEX DETERMINATION

Richdale (1950: 12) states: "In the Royal Albatross, the sexes are alike and morphologically indistinguishable with certainty in the neld." His observations refer to the subspecies *sanfordi* only, the bird breeding on Taiaroa Heads.

Sorensen (1950: 12), on the other hand, found it possible to distinguish between the sexes of *epomophora*, nesting on Campbell Island. In addition to "a decided difference in the size of males and females," Sorenson noted the white coloration on the wing in males. I his difference was earlier reported upon by Waite (1909, vol. 2: 573) who quoted Mr. G. R. Marriner (one of the Campbell Island party on the 1907 expedition) as follows: "The following sexual differences were noticed several times during copulation: In the female the dark coloration of the wing-coverts is denser and more pronounced..."

The sexual dimorphism in Southern Royal Albatrosses can be seen plainly in plate 7. The bigger splashing of white on the back and the wing-coverts of the male can be contrasted with the more black back and wings of the smaller female.

This secondary sexual characteristic is not fully reliable, however, for field identification purposes. I paid particular attention to this aspect while banding albatrosses on their nests and watching others during a stay on Campbell Island, January-February, 1958. For the casual observer, for example examining a bird washed up on a New Zealand beach, this sexing technique is unsatisfactory as there is appreciable overlap. Some males have fairly dark wings and some females show much white on their wings. Probably age comes into this matter, also.

As we were killing the specimens for the Denver Museum, I had a good opportunity of sexing by this external, plumage method, and then comparing the findings with the result of examination of the gonads. The first specimen we killed, on 13th January, I studied carefully while on its nest, and decided that it was a male, as there was appreciable white colouring on back and wings. All birds were tagged when killed. When I later dissected this specimen, gonadal examination showed it to be a female. Furthermore, when individual albatrosses were observed, it was sometimes impossible to decide whether the extent of white back and wing colouring indicated a male or a When a pair was seen together ____ which did not happen female. often at the time of year when we visited Campbell Island __ I could usually recognize male and female, based on size and plumage coloration; but of course, in most cases I did not have the opportunity of examining the gonads and verifying the external sex determination.

Body weight, in conjunction with plumage coloration, is a valuable criterion, but even weight can be deceiving. Thus, on one occasion we observed a bird walking up to its incubating mate; after greeting ceremony and intial billing were over, we approached the two albatrosses, sitting next to one another. They were both killed, and the female arriving for nest relief weighed 20 lbs. while the sitting bird — which might have been sitting for one or two weeks — and which turned out to be the male weighed only 18 lbs. The returning bird had a full stomach, while the sitting bird's stomach was empty.

While banding 79 Royal Albatrosses _____76 of which were banded on nests ____ I had a good opportunity to study birds held. Particularly, I wanted to record the sex of each banded bird; but I soon found this impossible on known distinguishing characters. I therefore examined carefully the specimens collected and compared the 5 males and 5 females. My findings as a result of this examination of birds in the flesh and of skinned specimens are as follows:

(1) Size. weight: unreliable as sex criterion as a female, newly arrived from the sea with full stomach, weighed 20 lbs., while its starved mate weighed only 18 lbs. Females averaged 17 lbs., males 194 lbs.

(2) Wing length: some overlap although wing of male usually about 20 mm. longer than in female; males 674-707 mm., females 647-686 mm.

(3) Length of culmen: bigger in male than female and overlap in measurements ______ if any _____ would be slight. Length of culmen in males 179-188 mm., in females 163-177 mm. For field identification on live birds this criterion is of little use as this measurement is difficult (and dangerous) to take.

(and dangerous) to take. (4) Depth of culmen at base: bigger in male (65.8-71.2 mm.) than in female (62.3-64.0 mm.), but difficult measurement on live bird in field.

(5) Middle toe: longer in male than female, but difficult measurement to take.

(6) Middle toe nail: This I found the best, most consistent and most easily taken measurement. In the 5 males the middle toe nail measured 24.0-27.4 (24.8) mm., in the 5 females 20.7-22.1 (21.3) mm. To test this criterion I examined carefully 8 albatrosses while banding them on Mt. Lyall on 13th February. Based on body size, length of culmen, plumage coloration and length of middle toe nail. 2 of these birds were males (with middle toe nails measuring 24.0 and 26.2

5

respectively), while 6 were females (with middle toe nails measuring 20.7, 21.5, 22.1, 22.8, 23.2 and 23.6, respectively). From this is seen that middle toe length above 24 mm. is characteristic of males, below 24 mm. of females. This applies to freshly killed and live birds only and has not been tested for dried museum specimens. The nail is best measured with a Vernier caliper.

Summarising this section, I can do no better than to quote my notebook entry for 13th February, 1958, after having paid special attention to distinguishing sex criteria in Royal Albatrosses: "By now I feel I am able to tell the sex of the majority of sitting birds by:

- 1) general body size, the male being the bigger.
- 2) bigger head and stronger, longer bill in male.
- 3) more white on wings in males, but unreliable criterion as females may have much white on wings also.
- 4) length of middle toe nail, below 24 mm. in females, above 24 mm. in males."

SUMMARY

Royal Albatrosses have black eyelids, white body plumage in all ages, longer bill and more rounded, protruding nose-tubes than the Wandering Albatross, which has pale greenish, bluish, pink or white eyelids. In flight, Royal Albatrosses often have the outer hands bent slightly backwards while Wanderers usually form a near-perfect cross.

The Southern Royal Albatross (Diomedea epomophora epomophora) of Campbell Island is the larger and characterised by its white wing-patch; the smaller northern form (Diomedea epomophora sanfordi) has pure black wings.

In the Southern Royal Albatross males have usually appreciably more white on the wings than females; they are also a little bigger, with longer bills; length of middle toe nail in females is less than 24 mm., in males 24 mm. or more.

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NOTES ON THE SONG OF THE KOKAKO (Callaeas cinerea wilsoni)

By G. M. MANING

In order to discover whether there was any definite variation in songs and calls throughout the year special observations were made during the period 24/1/55 to 31/8/56. This was carried out in a small clearing in fairly thick bush surrounding the manganese mine fourteen miles east of Clevedon at an altitude of about 1,300 feet, on the right bank of the Mangatawhiri head-waters. The mine is surrounded by sharp steep ridges and deep gullies. This is a high rainfall locality. The bush could hardly be more mixed in regard to both the large and small trees but tawa would be the most plentiful species. Fortunately it is an Auckland City Council water catchment area and the undergrowth has greatly benefited from the exclusion of browsing animals.

Kokako are present about the mine all the time. Nearly all of the calls were from a fairly sheltered steep slope to the immediate northwest, which gets the sun for the greater part of the day. At times songs could be heard far and near. In the first eight months, birds were sighted on twenty-three occasions. About half of the sightings were close, from ten to twenty feet; and were made when the birds were not singing. Every day for a fine week in September, 1955, a pair was seen at ten feet or less from the mine living-quarters in thick second growth of konini, mahoe and a tangle of vines. There was no result from a search for a nest then or later. Their flight is erratic and not graceful and at a distance this helps in identification, as does their practice of making long hops between branches when seen near at hand. On one occasion when a Tui was observed apparently trying to imitate the singing of a Kokako on a nearby tree the Kokako soon gave up the contest. They have become indifferent to the noise of heavy blasting and working machinery.

The song and calls can be only roughly described:

(1) Full song; two long rich organ notes followed closely by three short-clipped whistled "pips" or "pipes," audible up to about one mile. The two organ notes are quite often given alone and the "pips" more rarely so.

(2) Mewing call; a low musical call which can be heard at a few chains only and apparently used for keeping in touch.

(3) Double call; a fairly short bell-like note immediately followed by a short abrupt note, like a sharp "kik" or "ick." This is not uncommon and seems to be used as a call to bring the mate from a distance. This feature has been observed by J. W. St. Paul.

(4) Alarm or curiosity call; this sounds like "Pt-pt-pt-pt" or "Took-took-took," audible only at close range.

(5) The "cowbell" call; It has been frequently stated in the press by old bushmen further south that this bird gives a bell-like call similar to a cowbell. This was made the basis of their claim that it is the "true bellbird." This call has not been heard about the mine in the last fifteen years. J. W. St. Paul has heard it only up to about 1914 from 1905. He has lived in the area and been among the birds from then up to the present and states that the call was never common here. It seems that it has gone out of use locally.

(6) Fragmentary calls; short pieces of the above calls are often used.

It was quite expected that the recorded period would reveal a change in the predominance of one or more of the calls at different parts of the year. The amount of song and call varied but the proportion of one to the other did not alter to any appreciable extent. The recordings at the mine showed that the full song was heard somewhat more frequently than calls. This ratio has not, I believe, been found elsewhere. The difference could be accounted for through calls being more frequent than song during the quiet part of the day, when the working of the mine precludes listening and through the quieter calls not being heard at other times owing to the steep gullies.

It seems strange that the record revealed considerable vocal activity from 24/1/55 to 30/9/55 but in the corresponding period 1/1/56 to 28/8/56 there was very little indeed. From 30/9/55 to 31/12/55 was also very quiet. From 28/8/56 up to January, 1960, the volume has never come anywhere near regaining the tempo of 1955, not even in springtime. This is not due to a decrease in the number of birds. At odd times over this latter period numerous songs have been heard, near and far, at the same time, proving that, though more quiet, Kokako are still present in the same strength. J. W. St. Paul also is quite sure that there are not fewer birds.

The Kokako is not one of the earliest songsters. The records show that in summer song starts from 6 to 7 a.m., after the sun is up and in winter from 7 to 8 a.m. None was recorded before full daylight. Little is heard after 9 a.m. Work in the mine prevents listening during the day but J. W. St. Paul, H. R. McKenzie and others agree that from about 9 a.m. to 4 or 5 p.m. is the most silent part of the day. Evening song is seldom of the volume of the morning. It is noteworthy that calls were loudest just before or just after rain, especially short heavy heat showers, irrespective of the time of day. Even this feature, however, is not constant. Warm, still weather is favourable, as against windy cloudy conditions.

SUMMARY

Neither volume nor frequency of song has been found to be seasonal. The same applies to the calls.

The proportion of full song to the various calls does not appreciably alter at any time of the year.

The effect of the general run of the weather may be a factor but needs further study. Fitzgerald

COMMUNAL DISPLAY AND COURTSHIP FEEDING IN THE SHINING CUCKOO

By M. FITZGERALD

Between mid-November and early January of 1958 and 1959, I observed communal display in the Shining Cuckoo (*Chalcites lucidus*) at Ngatapa, 15 miles west of Gisborne. In communal display the Shining Cuckoos gathered together, calling and flying from place to place.

place. These observations were made on 19th December, 1958, 19th, 26th and 30th November, 1959, 3rd, 10th and 11th December, 1959 and 9th January, 1960, covering much the same period of time as those dates given in earlier descriptions in Notornis. Watson and Bull (Notornis: V, 226) record it on 13th December, 1949, and again on 7th January, 1950. Gudopp (Notornis: V, p. 253) records it on 14th December, 1953, and McKenzie (N.Z. Bird Notes: 1, p. 76) observed it "several times in December, 1943, and early January, 1944."

Thus communal display has been observed for a period of just over seven weeks between mid-November and early January.

It has been observed at almost all hours of daylight, my records being limited to three between 10.30 and 11.15 a.m. and seven between 2.30 and 5.55 p.m. However, Watson and Bull (Notornis V, 226) record it at 6.30 a.m. and 1.15 p.m. and Gudopp (Notornis V, 253) at "about noon."

Display lasts for varying lengths of time; on 11th December, 1959, it apparently lasted one hour 50 minutes, when I observed it at 2.30 p.m. and again at 3 o'clock, 3.30, 4.20 and 4.30 p.m. On 19th December, 1958, I observed display for about ten minutes but generally it lasted less than five minutes. Watson and Bull observed it for an hour, from 6.30 to 7.30 a.m., but other records are of short duration. It may be repeated at different times of the day, as on 26th November, 1959, when it was seen at 11 a.m. and again at 5.30 p.m.

The number of birds involved varied, my highest counts being four with one or two more possibly present but in some the numbers were smaller and in one case only two were present. Watson and Bull on 13th December, 1949, counted five, Gudopp records six, and McKenzie "up to ten birds."

The dominant feature of communal display in the Shining Cuckoo is the call, a drawn out downward slur (very similar to, if not the same as the last notes of the common call), which may be quite frequently repeated and at the height of display the calls from all birds may be nearly continuous. On three occasions in December, I also heard them utter another note, a rather musical chatter, less frequently uttered and not as loud as the downward slur.

During display the Shining Cuckoos gathered together in the trees, often high up and difficult to observe, calling and flying from branch to branch. While remaining still they sat very erect but most of the time they appeared very restless or agitated, moving frequently and on several occasions moved from one tree to another, up to 20 or 30 yards apart.

No feeding was noted during it, but one bird was seen preening during display.

Watson and Bull suggest that courtship feeding may occur during communal display, but on no occasion did I see one Shining Cuckoo feed another. The clearest descriptions of courtship feeding in this species are found in the Classified Summ .Notes, of Notornis IV, 52 and VI, 103, and the description of this behaviour differs markedly from that in communal display. The observations occurred earlier than recorded for communal display, occurring on 17th October, 1939, and 2nd November, 1953, respectively and in neither were there more than two birds. There is no mention of the downward slur or chattering note, but in one of the observations on 2nd November, 1953, the male was described as giving the usual call with the female making quiet cheepings. Also the posture appears to be different, in the description of courtship feeding on 17th October, 1939, the male was described as "hunting for food, tail erect and vibrating with excitement."

These observations indicate that courtship feeding and communal display are separate and distinct forms of behaviour but further observation is required before we can determine their significance in the life of the Shining Cuckoo.

SHORT NOTES

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A ROOSTING COLONY OF MYNAS NEAR ARDMORE COLLEGE

On 10/9/59 an observation was made of the roosting of the Mynas (A. tristis) near Ardmore College. With only one observer the count could not be accurate, but the behaviour of the birds after arrival at the roosting area was the main centre of interest.

The evening was almost cloudless, with no wind, but in spite of this the incoming groups flew low, gaining height to fly over the hedge when necessary.

6 p.m. — All quiet with a group of 20 Mynas and 20 Starlings perching in the *elaeagnus* hedge. 30 Mynas on the grass between the latter hedge and a stand of *lawsoniana*.

6.5 10 birds arrived from Clevedon direction and flew to the *elaeagnus*. 20 birds from the Papakura direction perched in a hawthorn hedge on the Ardmore College side of the road. Very little song at this stage.

6.10 __ Small parties arriving continually from Clevedon direction, landing in the *elaeagnus* hedge. Some of the earlier arrivals flew to the paddock. Many in the paddock flew to the *lawsoniana* hedge and began to sing, as did the birds in the *elaeagnus*. Beginning to get dark.

90 birds now on the ground with others flying backwards and forwards to the hedges. 60 birds in the hawthorn hedge, all arrivals from the Papakura direction. Singing in the *elaeagnus* hedge died away to the odd twitter.

6.13 ___ Starlings flew from the *elaeagnus* hedge in a southerly direction, 30 Mynas from the paddock taking their place as they flew. Groups of 2 and 3 arriving from Clevedon at intervals of about 30 seconds.

6.15 - 80 birds left the hawthorn hedge at the passing of a car, and flew to the *elaeagnus*. 7 birds from Clevedon direction arrived. A considerable fluttering developed in both hedges as the birds moved out to the tips of branches and started singing.

No increase in numbers in the *lawsoniana* hedge. 7 birds arrived in the hawthorn hedge from the Papakura direction.

6.20 — All birds in the paddock moved to the *elaeagnus* hedge with one bird flying from the latter to the *lawsonianas*. Now 10 birds in the hawthorn hedge.

6.21 _____ 30 birds in two parties of 15 arrived from Clevedon direction, the leader singing.

6.22 <u>10</u> arrivals from Clevedon. Considerable fluttering in the *elaeagnus*. Estimated 200 birds in the *lawsonianas*. Getting darker with visibility three miles. 6.23 <u>Birds</u> have moved deeper into the foliage and the volume

6.23 _____ Birds have moved deeper into the foliage and the volume of song is decreasing in the *lawsoniana* hedge. Loud chorus in the *elaeagnus*.

6.26 ______ Sudden silence in the lawsoniana hedge for a second or two, and then only the odd call heard. Visibility 2 miles. Lawsoniana birds invisible with only about 12 visible in the elaeagnus.

6.30 __ All birds singing again.

6.31 <u>Lawsoniana</u> birds stopped singing. Visibility 1 mile. Odd call heard from the latter roost but the *elaeagnus* birds continued unabated.

6.32 __ Same, except for odd pauses in elaeagnus group.

6.33 _____ Similar. Visibility $\frac{1}{2}$ mile. Elaeagnus group quietening down and only the odd Myna and one Thrush audible in the lawsonianas.

6.37 __ Sudden pause in the song of the *elaeagnus* roost, with only a dozen birds taking up the song. Another pause and fewer still resumed singing.

6.38 _ A few birds at the Clevedon end of the elaeagnus hedge singing.

6.40 ____ Visibility 100 yards. Intermittent chorus with frequent interruptions.

6.41 __Sudden silence for 10 seconds, one bird called, 20 seconds silence, and then a small chorus.

6.44 __ Final silence, except for the Thrushes and Blackbirds.

J. A. PEART

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MORE RECORDS OF WELCOME SWALLOWS

In March, 1959, I first noticed a bird which I took to be a Welcome Swallow (*H. neoxena*) about two miles from Matata in the Bay of Plenty. Work was being done to make an improved habitat for wildfowl and the Swallow was hawking insects over about an acre of shallow open water in a very large area of swamps. It eventually alighted on a stump and allowed me to approach to about 20 feet before it again flew. On subsequent visits a single Swallow was seen by myself and others, including Mr. K. H. Miers, over this pool. In November, 1959, I observed three of these birds over the swamp near Seccombe's Canal, which is only about half a mile from the place of the original sighting.

A. G. HALL

On 17/5/60, with my wife and son, I casually visited Ngawha Springs, near Kaikohe. Here at 450 feet above sea level is a small lake, Tuwhakino, about an acre in extent. It is an old blowhole among rather barren gumlands, where cinnabar was once mined. Springs bubble along one side of the lake and up the little valley; and there is a smell of sulphur in the air. Here we were able to watch two Welcome Swallows. Much of their time was spent flitting or skimming over the water, but occasionally they flew low over a grassy slope recently broken in from gumland. Sometimes they flew together in playful chases. Their favourite perches were the tops of two stakes near the middle of the lake. They also alighted frequently and rested on the mud at the edge. One of the Swallows was an adult with long tail-streamers and much red on face and throat; the other, less brightly marked and with a shorter tail, appeared to be a young bird of this season. From time to time a passing House Sparrow would vainly try to chivvy them.

Mr. J. P. Baker, the manager of the Spa Hotel, informed me that he had first noticed Welcome Swallows over Lake Tuwhakino about four months ago; sometimes there were three, sometimes none; they would be missing for a few days and then return. He was hoping they would eat the sandflies which were only too prevalent around the lake.

Ngawha Springs is about ten miles distant from Kawakawa where Welcome Swallows bred successfully last summer (Notornis VIII, 262). These Swallows are evidently hardy enough to survive the colder months in the 'winterless north'; and it appears that a resident stock is becoming established. Other suitable waters where they are likely to occur near Kaikohe are Lakes Owhareiti and Omapere.

R. B. SIBSON

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ANTING BY STARLINGS AT ROTORUA

On 28/1/60 my wife and I had an opportunity of watching Starlings (Sturnus vulgaris) indulging in this strange practice. Looking out of the window on to the back lawn, we noticed a family party, consisting of two adults and three youngsters all in varying stages of moult, diligently "working" a small patch of newly-mown lawn. At first, we thought that they were feeding on the grass-grub, which has been prevalent this summer, when I suddenly realised that we were at last actually eye-witnesses of "anting," something which we had never seen before. The modus operandi was as follows: The Starlings would pick up not one, but several ants, raise a wing, push the bill laden with ants under the wing, pressing the bill and wing hard against the body, then quickly withdraw the bill, to repeat the operation on the other wing. Having done this, the birds would then fluff their feathers, assume a crouching stance and what appeared to be a most rapturous expression, before resuming the hunt for more victims. This behaviour was watched from a window at a distance of twenty feet for at least ten minutes. How long the Starlings had been doing this, or how long it would have continued I cannot say, as a neighbour's cat terminated the proceedings by flushing the operators. On examination of the lawn I found a colony of the small red ant of an individual length of eight millimetres.

M. J. S. BLACK

GREENSHANK NEAR INVERCARGILL

On 10/3/56, a grey morning of light, misty rain, we found a Greenshank (*T. nebularia*) resting on the Awarua shellbank slightly

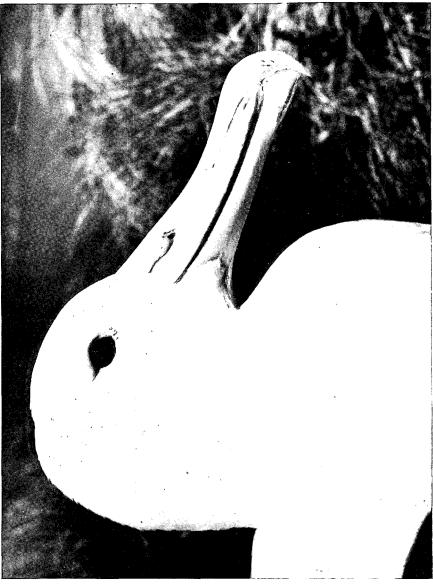


[Photo by Kaj Westerskov

I — Female Royal Albatross of type form (Diomedea epomophora epomophora) on nest, Campbell Island.



[Photo by Kaj Westerskov II — Female Wandering Albatross, distinguished by mottled plumage, near nest, Campbell Island.



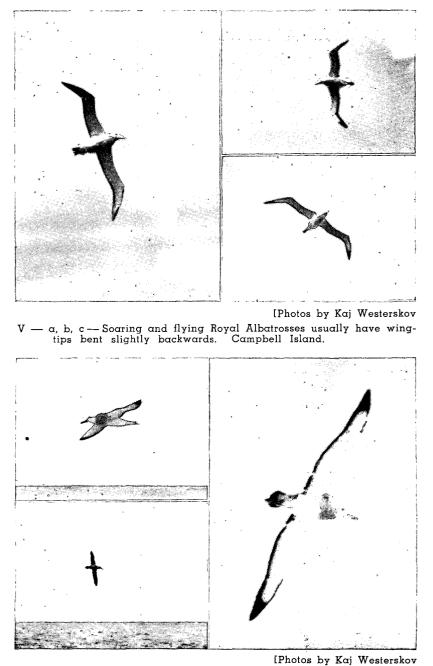
[Photo by Kaj Westerskov

III — Head of Royal Albatross showing distinguishing features; protruding nose-tubes, black eyelid and black line along cutting edge of upper mandible. Campbell Island.



'IPhoto by Kaj Westerskov

IV — Royal Albatrosses rarely have any black on head — as in this bird of the northern subspecies, photographed at Taiaroa Heads.



V — d, e, f — Soaring and flying Wandering Albatrosses usually have wings fully stretched. Indian Ocean.



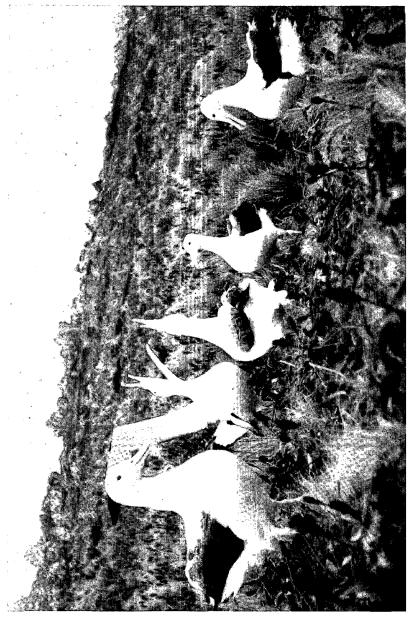
[Photo by Kaj Westerskov

VI — The Northern Royal Albatross (Diomedea epomophora sanfordi) has all-black wings with no white olecranal patch. (cf. Plate VII.) Taiaroa Heads.



[Photo by Kaj Westerskov

VII — Pair of Southern Royal Albatrosses, female on nest; male, with much more white on wings, has come in to take over incubation. Campbell Island.



[Photo by Kaj Westerskov

VIII — Young Royal Albatrosses in a gam — the term used for a school of whales — now also used for a group of not-yet-breeding albatrosses sham-displaying and fighting, as a forerunner for the actual courtship display. Campbell Island. apart from a mixed flock of waders, mainly Bar-tailed Godwits. Compared with the latter, it was noticeably smaller, slimmer and predominantly grey above, white beneath, including forehead, face and chin.

In flight, the diagnostic white inverted V of tail, rump and back was conspicuous and the feet projected beyond the tail. Its call, uttered frequently both in flight and while feeding, was a clear strident "choo,' descending in pitch. Some references seem to imply that this "choo" is made in rapid sequences of three, but this was seldom so, two or four being usual.

When feeding, either solitarily or among Pied Stilts, the bird ran gracefully through the water, its bill and neck stretched forward, lifting its feet daintily above the surface.

The bird was again seen on 15th and 31st March, in sunny conditions. It was again in the company of Pied Stilts and all diagnostic features, including the greenish legs, were confirmed.

This at 46¹/₂°S. appears to be the southernmost Greenshank recorded in New Zealand, perhaps in the world.

B. D. HEATHER R. M. ROYDS

WHITE-WINGED BLACK TERN AT INVERCARGILL

During a visit to Invercargill in March, 1956, a White-winged Black Tern (C. leucopterus) was found to be present at Lake Hawkins. The bird was assuming breeding plumage. Field notes, sketches and colour photographs show that its body, head and upper wing were as illustrated by Fleming (Notornis VI, 71) and that its underwing was heavily mottled with black.

The bird was not seen to associate with the Black-fronted Terns (C. albostriatus) which were frequent visitors to Lake Hawkins. was present at least from March 13th to 25th. On March 18th it was seen by B. A. Ellis.

B. D. HEATHER

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WEKAS IN NORTHLAND

The North Island Weka (G. australis greyi) was formerly abundant in Northland, but of recent years no definite sightings have been recorded. During a period of work in this district during the winter of 1959, I made the following observations:

Two Wekas were flushed by my dog on the bush edge behind Waima on 4/7/59. Another indefinite sighting of a Weka was made on the banks of the Waihoihoi Stream, Waipu, on 8/8/59; and after enquiries were made, a local farmer, Mr. McLeod Finlayson, reported he had heard recently two Wekas, the first for a number of years.

Two other areas where this species has been reported present recently, but as yet not confirmed, are Onerahi (between Okaihau and Rangiahau) and near Waiotira.

R. T. ADAMS

(Some reported sightings of Wekas in northern New Zealand, especially near mangroves, cannot be accepted, the birds concerned obviously being Banded Rails (R. philippensis). However, the older residents near Waipu and Whangarei knew the Weka well and clearly remember its distinctive call.__Ed.)

Vol. IX

TWENTIETH ANNUAL REPORT FOR THE YEAR 1959-60

OFFICE BEARERS FOR THE YEAR

President: Mr. P. C. BULL

N.I.V.P.: Dr. R. A. FALLA Secretary: Mr. G. R. WILLIAMS Editor: Mr. R. B. SIBSON Members of Council: Mr. E. G. TURBOTT, Mr. J. C. DAVENPORT Mr. A. BLACKBURN

As required by the Constitution, three members of Council retire at this Annual General Meeting. These are: Mr. P. C. Bull, Mr. H. R. McKenzie and Mr. G. R. Williams. All were eligible for re-election, but Mr Bull did not wish to stand again. Nominations were called for to fill the vacancies and, as no others than the following were received, they are declared elected:

> President: Mr. A. BLACKBURN Treasurer: Mr. H. R. MCKENZIE Secretary: Mr. G. R. WILLIAMS

All members of the Society, I am sure, are sorry to see Mr. Bull retiring from Council after six years of splendid service, three of which have been as President. I should like to thank him sincerely on behalf of our Society. We are most sorry to see him go. At the same time, we heartily welcome our President-elect, Mr. Blackburn.

Society and Council business was carried on by four Council circulars this year: Among the subjects dealt with were the proposed Field Guide to New Zealand Birds, a proposed periodical listing in Notornis of all papers at present appearing on New Zealand birds, the arranging of the Society's participation in this Science Congress, matters concerning the Nest Record, Banding, Regional Organisers and Beach Patrol Schemes, annual subscriptions, field study week-ends and so on. Most of these topics will be dealt with as this meeting proceeds.

As you will hear from the Treasurer's report, there has been an increase in members this year, well above the average for the previous five years. At this very moment our total membership has probably passed 800 for the first time ____ a creditable achievement on what is, I suppose, officially our twentieth birthday.

The Society is indebted to the organisers of the Labour Day Field Week-end at Auckland for making it the success it was ornithologically, socially and financially, and thanks Mr. T. A. Voss for the donation of Vol. II of Scott & Delacour's "Waterfowl of the World" to the O.S.N.Z. Library. Mr. K. Cairns, the Regional Organiser for Wairarapa, deserves special commendation for his organisation of a very successful Bird Study course at Masterton in February and the Society is indebted to all those who took a part in ensuring its success.

Finally, it gave pleasure to the Society to learn that Dr. R. A. Falla had received the Decoration of C.M.G. in the 1959 Queen's Birthday Honours List.

G. R. WILLIAMS, Secretary

ANNUAL REPORT

TREASURER'S REPORT, 1959-60

The membership of the Society is now 793, being Hon. Life 1, Life 65, Endowment 365, Ordinary 361 and Juniors paying 5/-, 11. Most juniors are paying 10/- and are included with Ordinary members at present. Of the total, 31 are overdue and 14 are resigning as at 31/3/60. 74 new members joined and 5 were reinstated. 70 died, resigned or were written off. The real gain in membership however was 20, owing to defaulters for two years being included last year and only for one year this year.

The year has been moderately successful financially. Careful consideration however will have to be given to the provision annually of sufficient funds, if the schemes for the interest and enjoyment of members are to be continued and further developed and our journal maintained at a high standard.

The magazine of the Society, "Notornis," has been further enlarged and improved at relatively favourable figures. The printers helped in this by voluntarily lowering their charge. The Society owes much to those who have supplied the photographs, all of which have been donated.

The Banding Scheme has had the benefit of a subsidy of over \pounds 80, not shown in the books, from the Wildlife Branch of the Internal Affairs Dept., for the purchase of all metal bands used. We are very grateful for this substantial assistance.

The Society is grateful to those who gave donations during the year and to those who voluntarily raised their subscriptions. Others, usually husband and wife, greatly assist financially by paying two subscriptions and taking only one copy of "Notornis." Some further results from the Presidential Appeal have come in. Those who contributed to this appeal by donations and increases in Life, Ordinary and Junior subscriptions have provided a good foundation, which has benefited all.

The Christmas Card Scheme has had a further good year and will be reported by Mr. B. S. Chambers.

The profit from the Labour Day Field Week-end for 1959 at Auckland, $f_{32/2/11}$, is mainly car expenses handed back as donations to the Society by the car owners. Hearty thanks are tendered to the donors.

The cost per member of printing and supplying "Notornis" was $12/2\frac{1}{2}$. Other expenses were 1/10. The Internal Affairs Dept. grant per member for banding amounted to 2/-. It may therefore be said that members received direct benefits amounting to $16/0\frac{1}{2}$.

Our thanks are again proffered to Messrs. Chambers, Worth and Chambers of Auckland for auditing the books free of charge.

H. R. McKENZIE, Hon. Treasurer

CARD COMMITTEE REPORT

Once again I am able to report on a very successful financial year. Last year we sold more cards than ever before even though we were supplying retail stores. Although we had increased sales, it was felt that some of the stocks we were carrying were in excess of what we can sell. These have been valued at a more realistic figure, yet we are still left with a net profit similar to that of the previous year. We are grateful to the Forest & Bird Protection Society for permitting us to circularise their members, and in appreciation we donated $\pounds 20$ to them, as was the case last year.

I take pleasure in thanking Mrs. Avis Acres for the painting of the designs for the cards. They were appreciated by all who saw them. The packing and posting of the orders was carried out by Miss McIntyre, Mr. Sibson and his family and other helpers. This task takes considerable time and patience and the efforts of these members was greatly appreciated.

In conclusion, I thank the members of this Card Committee for their assistance during the year and also the members of the Society who helped make the venture worthwhile.

B. S. CHAMBERS, Convener

NEST RECORDS SCHEME

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With the growth of the Society's nest record data information about limits of New Zealand nesting seasons is more exact than hitherto, at least for a number of species. Available data, however, is still insufficient for defining suspected variations in different parts of the country of clutch sizes, peak laying, hatching and fledging dates respectively, together with hatching and fledging success. While contributors to date have been responsible for improving our former inadequate understanding of nesting seasons' limits, very many more records are wanted still from all over the country. Contributions from Northland, Westland and Southland would be of particular value. This is a field in which almost anyone can help. Our past contributors show nest data can be obtained without much difficulty, irrespective of age, busy occupations or physical handicaps, in town gardens or rural habitats.

During the year two applications were approved by Council to study nest data of kingfisher and fringillids respectively. Council, at Organiser's suggestion, considered setting up a committee for examining future applications to borrow records and to give guidance if required, in analysis. At its direction suitable inquiry was made overseas about records' possible analysis by punch-card machine. Several new species were added this year to the collection which now totals about two thousand one hundred records.

Continued thanks are due to Dr. R. A. Falla for permission to house this collection at Dominion Museum.

Contributors for the year follow as under:

Misses M. R. Trower, B. L. Goertz, J. McColl, P. Davys, Mesdames A. Secker, C. D. Leahy, J. West. Messrs. B. D. Bell, C. N. Challies, N. Ewing, H. L. Secker, P. Hyman, A. Blackburn, A. Wright, R. W. S. Cavanagh, T. Hartley-Smith, J. R. Jackson, D. Merton, H. R. McKenzie, R. St. Paul, Dr. M. F. Soper (over 100), W. R. Silcock, W. T. Parham, K Miers, N. B. MacKenzie, P. Morrison (over 50), S. R. Kennington, E. W. Crack, S. S. McDonnell, B. Enting.

Total Accessions now are:

Stewart Island Kiwi (1) Great Spotted Kiwi (1) Yellow-eyed Penguin (6) Little Blue Penguin (14) White-flippered Penguin (7) Fiordland Crested Penguin (1) Little Grebe (1) Fairy Prion (4) Fluttering Shearwater (6) Fleshy-footed Shearwater (1) Shearwater (1) Grey-faced Petrel (8) Diving Petrel (4) Ga Allied Gannet (4) Black Shag (13) Pied Shag (9) Little Black Shag (1) Little Pied Shart Sharg (13) Field Sharg (5) Elittle Diack Sharg (1) Elittle Field Sharg (4) King Sharg (6) Spotted Sharg (3) Reef Heron (10) White-faced Heron (5) Bittern (2) Canada Goose (10) Mute Swan (3) Black Swan (13) Paradise Duck (4) Grey Teal (9) Brown Duck (2) Grey Duck (16) Mallard (28) Shoveler (4) Black Teal (6) Harrier (38) Bush Hawk (2) Pheasant (4) Californian Quail (5) North Island Weka (3) Pukeko (44) Coot (2) Black Oystercatcher (11) Variable Oystercatcher (5) Pied Oystercatcher (22) Spur-winged Plover (3) Banded Dotterel (65) N.Z. Dotterel (18) Pied Stilt (64) Black Stilt (1) Black-backed Gull (50) Red-billed Gull (19) Black-billed Gull (16) Black-fronted Tern (13) Caspian Tern (6) Fairy Tern (2) White-fronted Tern (31) Bush Rock Dove (46) Kaka (2) Kea (9) Pigeon (3) Red-fronted Parrakeet (2) Shining Cuckoo (2) Morepork (1) Little Owl (6) Kingfisher (14) Rifleman (14) Rock Wren (1) Skylark (56) Fantail (39) Pied Tit (9) Yellow-breasted Tit (9) Northern Northern Robin (10) Southern Robin (10) Brown Creeper (1) Whitehead (4) Yellowhead (7) Grey Warbler (27) Songthrush (364) Blackbird (294) Hedge-sparrow (56) Pipit (15) Bellbird (8) Tui (5) White-eye (45) Greenfinch (37) Goldfinch (144) Lesser Rédpoll (21) Chaffinch (45) Yellow-hammer (17) House-sparrow (58) Starling (66) Myna (8) White-backed Magpie (8).

H. L. SECKER, Organiser

ANNUAL REPORT OF THE LIBRARY, 1959-60

During the year, 50 items (chiefly separates) have been added to the library. 35 periodicals are now received regularly on exchange, in addition to various serial publications which appear only at irregular intervals.

21 items have been borrowed by members.

A start has been made on the binding of periodicals. To date, Auk, Bird-Banding, Emu, Ibis, Ostrich and Wilson Bulletin have been bound, and the work is continuing.

After being housed for many years in a very small, inadequate room, the library has been moved to new quarters. It now has ample accommodation in the New Zealand Room of the new Auckland Museum Library building.

ENID A. EVANS, Hon. Librarian

Current Assets Current Liabilities Last Last Year Year Cash at Bank of New Zealand Sundry Creditors 139 6 164 5 11 111 400 Cash at P.O.S.B. 418 13 7 Subscriptions in Advance 66 43 3 Sundry Debtors 46 2 30 8 Provision for Vol. 8 Index 27 Estimated Recovery of 12 n q 12 Subscriptions in Arrears 0 0 166 232 7 2 641 2 445 Stocks on Hand ----Reserve Account ----28 Printing & Stationery 44 0 0 Life Subscriptions Back numbers of "Notornis" Endowments 400 and other publications 372 96 ព Ω 451 Additions 1959/60 0 5 0 96 479 416 Plant at Cost Less Depreciation: 400 (Invested in Stocks) 405 0 0 Addressograph at cost 724 General Reserve 1/4/59 803 8 2 less depreciation 8 16 8 17 3 79 Add 1960 Surplus 57 16 5 28 Library, purchases to date 32 5 Investment Fund -803 861 4 7 400 0 400 A.E.P.B. 5% stock 0 1369 £1498 11 £1498 11 9 9 1369

BALANCE SHEET AS AT 31st MARCH, 1960

NOTORNIS

INCOME AND EXPENDITURE ACCOUNT FOR YEAR ENDED 31/3/60

Last Year	Expenditure			Last Year	Income				INCO
350	Printing "Notornis"	400 17	0	500	Subscriptions	528 11 9			ME
59	Postages	58 7	2		Add Arrears estimated to pro-				8
35	Printing and Stationery	52 13	37	9	duce	1200			- -
30	General Expenses	35 I	. 9				540	11	9 2
38	Banding Scheme, Less Donations, £4	5 15	5 0	-	Donations, General		26	1	-0 - 7
-	Surplus Back Numbers "Notornis" written off as values deemed to be unrealisable	52 4	. 0	24	Auckland Field Week-end Surplus Profit on Sale of Back Numbers		32	3	11 0
6	Depreciation	88	2	41	of "Notornis" etc.		33	18	11 🔓
79	Excess of Income over Expenditure	57 16	5 5	23	Interest		38	7	6 ត
597		£671 3	1	597			£671	3	1 2

We report to the members of the Ornithological Society of New Zealand Incorporated that we have examined the books, accounts and vouchers of the Society for the year ended 31st March, 1960, and certify that the above balance sheet is properly drawn up to show the true financial position of the Society at that date. We have accepted the values placed by your Treasurer on "stocks on hand."

11th May, 1960

CHAMBERS, WORTH & CHAMBERS, Auditors

CARD COMMITTEE

PROF	IT AND LOSS ACCOUNT FOR	R YEAR	END	ED	31st	M	ARCH,	19	960
Last Year									
	If we take total sales and dedu								
424	of these sales we are le Gross Profit of	ii with	α				401	1	6
	From this we deduct our over	nead —						-	Ū
124	Advertising			159	12	10			
9	Depreciation of Blocks	····		5		0			
20 9	Donation General Expenses	••••	••••	20	0	0			
13	Printing and Stationery			5 11	13 5	0 0			
39	Postages			17	-	6			
13	Packing Expenses			5	12	6			
26	Sundry Services	·····		25	0	0			
253							249	7	10
	This leaves us a Trading Pro	ofit of					151	13	8
	Add Donations Received			2	10	0			
	Interest Received		••••	12	8	7		• •	_
							14	18	7
171	Giving a Net Profit of						£166	12	3
	BALANCE SHEET AS	AT 31st	MAR	СН,	196	0			
	We have								
338	Cash at Bank	••••		635		7			
305 40	Stocks valued at Printing Blocks valued at		••••	116 40	13 0	4 0			
	Timing blocks valued at	••••	••••	-10	U	0			
683							791	19	11
683 80	Less what we owe others	••••					791 42		11 2
	Less what we owe others Leaving us our Accumulated 1 Balance 1/4/59			602	17	10			
	Leaving us our Accumulated 1	Funds —		602 166	-	10 3			
	Leaving us our Accumulated 1 Balance 1/4/59	Funds —		166	12	3			
	Leaving us our Accumulated 1 Balance 1/4/59	Funds —			12				

We report to the members of the Ornithological Society of New Zealand Incorporated that we have examined the books, accounts and vouchers of the Card Committee for the year ended 31st March, 1960, and certify that the above balance sheet is properly drawn up to show the true financial position of the Society at that date. We have accepted the values placed by your Convener on "stocks on hand."

11/5/60 CHAMBERS, WORTH & CHAMBERS, Auditors

REPORT ON BEACH CONTROL SCHEME

Following discussion at the Society's last Annual General Meeting, Council decided to revive the Beach Patrol Scheme (See "Notornis" 8: 268). One thousand Specimen Record and five hundred Beach Patrol Cards have been printed at a total cost of $\pounds 17/5/11$, and a sheet of instructions has been prepared. So far 7 members have requested supplies of cards.

A preliminary analysis is being made of the results obtained before the previous supply of cards became exhausted, and it is proposed to submit a summary of this analysis for publication in "Notornis" later this year, and thereafter to publish annual progress reports. The existing collection of cards contains details of 2,557 birds, the numerically more important species being Pachyptila salvini (540), Pachyptila turtur (547), Puffinus griseus (280), Pachyptila vittata (194), Puffinus gavia (102), and Eudyptula minor (102). Thirty-one members contributed to the scheme; most of the 287 recorded patrols were made during the period 1951-54. The Organiser's thanks are due to Mr. B. W. Boesen, who has put in a great deal of time checking and tabulating the card collection.

P. C. BULL, Organiser

REVIEWS

A Treasury of New Zealand Bird Song (An album of three 45 extended-play records), by Kenneth and Jean Bigwood. Published by A. H. and A. W. Reed. 45/-.

Thanks to Mr. and Mrs. Bigwood, bird-lovers may now sit quietly at home and hear the voices of eighteen native birds, including such rarities as Takahe and Kotuku — which can hardly be classed as songsters — and of twelve introduced birds, most of which are real singers. An imaginative commentary, with quotations from many sources and, surprisingly enough, notes on the edible qualities of some of the vocalists, is contributed by Gordon Williams, who has also written the text of an accompanying booklet. Thirty portraits are evidence enough of the photographic skill of Kenneth Bigwood.

Most of the recordings were made in the South Island and the tone quality is generally excellent. When the Keas are calling, the listener, by closing his eyes, may easily imagine that he is up near the snow-line in the Southern Alps; or when the Kakas are giving tongue, that he is back in the unravaged forest. It was a sound principle to put the calls of Kea and Kaka side by side, as the jutaposition clearly brings out how different the calls of these two closely-related parrots are. This principle might well be carried further. Their voices confirm that the Pied and Yellow-breasted Tits are very close sub-species. But what of Whitehead and Yellowhead? Perhaps in due course it will be possible to hear in close succession the calls of these two puzzling birds; and also those of the North Island and South Island Robins, of Redfronted and Yellow-crowned Parakeets, and — don't say it is too ambitious — of Cook's and Pycroft's Petrels. The Bigwoods are now in a position to prove local differences in the singing of the Bellbird. Perhaps the most exciting of the sounds so far recorded are those of the Takahe. What effective off-stage noises they would be for a film of Conan Doyle's 'Lost World'! The ebullient outpourings of the Weka, too, should be included. These have been most admirably recorded. But why have the weird nocturnal noises of the Pukeko been omitted? The recordings of Pied Stilt and Banded Dotterel are disappointing and do not do justice to the variety of calls made by these two plovers.

Some of the comments may cause the critical listener to raise a doubting eyebrow. When Guthrie-Smith wrote about the Riro-riro's 'faint sweet trill that heralds fuller spring,' it may have sounded highly poetic; but it is nonsense to those who live in the north where the Riro-riro may be heard singing strongly both in the sticky noonday heat of February and in the cooler days when the autumn rains come. Faint? When conditions are favourable, it is audible at more than a quarter of a mile. How many Robins in the South Island now live where they can 'eat crabs from the seashore'?

It was a wise decision to include the songs of a dozen of the introduced birds; for among them are some of the best songsters in the world; and over large tracts of New Zealand now, it is their singing which dominates the dawn and dusk choruses. The recordings will be most helpful to those who claim that they cannot distinguish between the songs of Blackbird and Thrush; even if the recording has perhaps lost something of the Blackbird's fluty mellowness. Especially pleasing is the warbling of a Hedge-Sparrow against a background of chiming Bellbirds. The timbre of the finches comes through splendidly. Henceforward there can be no excuse for not recognising the distinctive trill of the Redpoll; a surprisingly common sound in some parts of New Zealand. After hearing these records, some will realise for the first time that the gay colouring of the Goldfinch is matched by the vibrant charm of its singing.

The Bigwoods have made a spectacular start in a new field of ornithology in New Zealand; but it is only a start; and much more remains to be done. Kokako, Brown Creeper, Rock Wren, Saddlebacks on Hen Island, Stitchbirds on Little Barrier all offer a challenge. Also waiting to be 'taped' are the sounds of the nesting colonies of our many sea-birds; the excited babel of islands where shearwaters and petrels come in at dusk; the feeding chatter of godwits and knots and the music of the tidal flats. The field, in fact, is almost inexhaustible.

The instructional value of these recordings is inestimable. They should be a stimulus to naturalists and others to travel with their ears open. The publishers are to be congratulated on their enterprise in making possible an original contribution to the 'literature' of New Zealand ornithology. RBS.

*

Checklist of Birds of the World, Volume IX, Edited by E. Mayr and J. C. Greenway, Museum of Comparative Zoology, Cambridge, Mass.

With the publication of Volume IX, the monumental Checklist of Birds of the World, which was initiated in the Museum of Comparative Zoology at Cambridge, Massachusetts, to replace Sharpe's obsolescent Handlist (1900-1910), moves one stage nearer completion. When the editor, J. L. Peters, died in 1952, only seven volumes of the planned fifteen had appeared. The task of completing the remaining volumes is now being shared and the advice of ornithologists of international reputation is being sought.

Volume IX is concerned with passerine families. For these there is no universally recognised sequence, so the editors have followed a sequence recommended by a special committee of the Eleventh International Ornithological Congress. Accounts of sixteen families and sub-families are included, among which are larks, swallows and martins, wagtails and pipits, cuckoo-shrikes, bulbuls, shrikes, waxwings dippers, wrens (but not the wrens of New Zealand), mocking birds and their allies.

Where the contents of this volume touch New Zealand there are some mild surprises for the critical reader. The Australian Welcome Swallow is made a subspecies of *tahitica*. The Tree-martin is placed in the genus *Petrochelidon*, and Gould's name *Hylochelidon* is suppressed. Now that New Zealand and Richard's Pipits are united, lustre has accrued to the specific name *novae-seelandiae*, of which 27 races are given, ranging from the mountains of Africa to Western Siberia, the Himalayas and Australasia. Both Australia and New Zealand are allowed five subspecies each. According to this list the typical *novaeseelandiae* is confined to the South Island; and the North Island race is *reischeki*, for which the type locality is given as Manturu (sic) and Waikato. The cuckoo-shrike (*Coracina novae-hollandiae*) which sometimes straggles to New Zealand, belongs to a highly successful species with nineteen races extending over India, southeastern China and Australasia.

The authors are alive to the difficulties of being consistent in the inclusion of vernacular names. Perhaps it is a little unfortunate that such well-known English names as Welcome Swallow, Black-faced Cuckoo-shrike, Horsfield Bush-lark are omitted.

This fine volume is the polished product of Danish book-making. Binding, print and layout are unexceptionable. _____ R.B.S.

NOTICES

A STUDY OF THE RED-BILLED GULL

Red-billed Gulls have been banded in New Zealand since 1943 and over 4,600 have now been banded. Returns have been coming in steadily and much useful information about their dispersal and movements is accumulating. Over the past two years a large number of birds were banded at Kaikoura Peninnsula and an exceptionally interesting dispersal pattern is emerging.

All this has prompted the launching of the present project. It is proposed to conduct a census of the breeding colonies with the co-operation of O.S.N.Z. members and a general study of the dispersal of these gulls from their breeding colonies based on a large scale colour banding scheme. It is planned to start the coming season with breeding colonies in the middle districts, namely Kaikoura Peninsula, Lake Grassmere, Nelson, Stephens Island, Kapiti Island, Cape Palliser and a large scale night roost on Somes Island.

If sufficient help can be organised, the banding programme will be extended to other colonies further afield. It is thought that the project will last some five years.

The co-operation of every member of the O.S.N.Z. is solicited immediately for the following information for the census:

(a) Locality of known breeding colony (or colonies). (b' Locality of known large regular night roosts.

(c) Approximate number of nesting pairs or roosting birds.

(d) Information on access to colonies for banding purposes.

(e) Photographs if available.

It will be obvious that the success of this scheme depends on the co-operation of every member of the Society who knows of colonies or roosts and they are asked to forward same to either F. C. Kinsky, Dominion Museum, Wellington, or L. Gurr. Massey Agricultural College, Palmerston North.

We wish to stress that nobody should assume that any Red-billed Gull colony is too well known to be reported.

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FIELD STUDY COURSE AT FAREWELL SPIT

A course for a limited number of active ornithologists who are especially interested in shore-birds is being arranged under the leadership of Mr. B.D. Bell, for the period between January 21 (assemble at

Nelson) and January 30, 1961. Those wishing to attend must apply to Mr. Bell, Wildlife Branch, Dept. Internal Affairs, Wellington, before the end of October. As numbers have to be restricted, preference will be given to applicants from the South Island.

The fee will be about f_5 . Please indicate if you will have a car available.

*

THE COMPILATION OF THE INDEX

For some years the index for Notornis has been compiled by Miss N. Macdonald. The Society is deeply indebted to her for undertaking this most useful work. The Editor is happy to announce that Mr. D. G. Fenwick assumed this task in 1959 and is responsible for the current index.

NEW MEMBERS to 27/5/60

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BACK NUMBERS OF "NOTORNIS"

Members are reminded that back numbers of Notornis and the carlier N.Z. Bird Notes are obtainable from the Society. Enquiries about costs and the parts still held in stock should be made to:....O.S.N.Z., Box 45, Clevedon, Auckland.

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

As there is a steady demand for back numbers of Notornis and especially for the earlier N.Z. Bird, Notes (1943-1950), members are asked to offer to the Society, for gift or sale, past numbers which they no longer need.

SUBSCRIPTIONS IN ARBEARS

Council has instructed the Treasurer to suspend issue of "Notornis" in the case of members whose subscriptions are three months in arrears, i.e., at 30th June; issue to be continued after payment is made.

On June 30th last, 185 members had not paid and on September 30th, 91. $\pounds 13/4/$ - was lost to the Society in extra costs and loss of journals, while the treasurer was given more than two full days of extra work. There is no justification for this and tardy members will be expected to show a better appreciation of the voluntary work being done for them. Those who have paid promptly and particularly those who have paid in advance are heartily thanked.

H. R. McKENZIE,

Honorary Treasurer, O.S.N.Z.

In continuation of New Zealand Bird Notes

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