

A Glimpse of the Coastline, Little Barrier [Photo R. A. Falla

BIRDS

New Zealanders! Protect Your Native Birds!

ISSUED BY

N.Z. NATIVE BIRD PROTECTION SOCIETY

E. V. Sanderson, Hon. Sec., Box 631, Wellington

OBJECTS—To advocate and obtain the efficient protection and preservation of our native birds, a bird day for our schools, and unity of control of all wild life.

Affiliated with the International Committee for the Protection of Wild Birds.

The foundation of true conservation is in the setting aside of sanctuaries efficiently and rigidly controlled by men who know how.

Subscriptions

Life Members, £5; Endowment Members, £1; Ordinary Members, 5/-; Children, 1/-. (Membership open to all)

BULLETIN No. 16.

NOVEMBER, 1928,

N.Z. NATIVE BIRD PROTECTION SOCIETY.

LIST OF OFFICERS.

President:

SIR THOMAS MACKENZIE, G.C.M.G.

Vice-Presidents:

SIR DOUGLAS MACLEAN, KT.				Wellington
SIR GEORGE FENWICK, KT.				Dunedin
HON. G. M. THOMSON, M.L.	C.			Dunedin
HON. A. F. HAWKE, M.L.C.				Invercargill
Dr. L. Cockayne, Ph.D., F				
Dr. J. G. Myers, Sc.D., F.E.				London

				Wellington
F. F. Hockly, Esq				Rotorua
H. GUTHRIE-SMITH, Esq.				Tutira, H.B.
R. A. FALLA, Esq., M.A.				
W. W. SMITH, Esq				New Plymouth
A. G. SIMPSON, ESQ				Hunterville
GILBERT ARCHEY, Esq., M.A.				Auckland
JAMES DRUMMOND, Esq., F.		F7S		Christchurch
Mag D Morrange	L.D.,			
Mrs. P. Moncrieff		***		Nelson
BERNARD SLADDEN, Esq.			4.4	Tauranga
WM. COBELDICK, Esq., F.R.				Rotorua
G. C. THOMSON, Esq				Dunedin
J. B. Thomson, Esq				Invercargill
JOHANNES C. ANDERSEN, ES				Wellington
W. M. Fraser, Esq				Whangarei
A. L. Hunt, Esq				Wellington
11. L. 110M1, ESQ				Wennigton

LIFE MEMBERS:

Mrs. T. L. Young Hon. Sir Thomas Mac-Kenzie, G.C.M.G. Sir Douglas Maclean, Kt. George Allman, Esq. Dr. Robert Nairn

JOHN CHAMBERS, ESQ. F. CROSSLEY MAPPIN, ESQ.

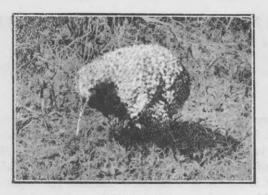
LIST OF ENDOWMENT MEMBERS.

LADY MACLEAN
MRS. G. ABSOLOM
MRS. JESSIE ADAMS
MRS. ELLA C. GEORGE
MRS. W. B. NELSON
MRS. GRACE PERSTON
MRS. ALICE M. RUSSELL
MISS BIRDIE GEORGE
MISS H. S. HUTCHISON
MISS T. HUTCHISON
MISS A. MATHESON
MISS A. MATHESON
MISS L. VALDER
MISS NANCY WILSON
R. A. ANDERSON, ESQ.
J. ARCHER ABSOLOM, ESQ.
DR. D. A BATHGATE
BLUNDELL BROS., LTD.

COBELDICK,. Esq., F.R.G.S. G. C. FACHE, ESQ. SIR GEORGE FENWICK, KT Sholto Fergusson, Esq. J. P. Firth, Esq., C.M.G. W. M. Fraser, Esq. A. R. GUDOPP, Esq. H. GUTHRIE-SMITH, Eso. Dr. J. Hardie Neil. S. T. Harrisson, Esq. G. HUMPHREYS, Esq. F. Hutchinson, Esq. (Tunior) ERIC LAWSON, ESQ. I. B. MACKIE, ESQ. JAMES McKAY, Eso. WILL B. McKenzie, Esq.

Col. Geo. Mitchell Dr. Pottinger Ernest Price, Esq. H. G. Price, Esq. Capt, E. V. Sanderson Bernard Sladden, Esq. W. W. Smith, Esq. H. B. Stuckey, Esq. G. C. Thomson, Esq. J. B. Thomson, Esq. J. S. Thomson, Esq. W. H. Weggery, Esq. Dunedin Naturalists' Field Club. North Canterbury Acclimatisation Society.

OTAGO TRAMPING CLUB.



HAAST'S KIWI,

Liberated on Little Barrier, October, 1928.

[Photo-W. R. B. Oliver

Birds and Forests.



HERE is now scarcely a civilised country in the world which has not come to recognise the importance of bird life, especially insect eating birds, in relation to agriculture. Insect pests cannot be held in check by sprays and carnivorous insects except on extremely limited areas. The bird is our chief ally and can alone turn the scale. Wherever birds are destroyed in a wholesale manner insect plagues follow in the wake. The question is, shall we in New Zealand recognise the full importance of this matter, or shall we stand idly by and await results before applying the remedy? Each year brings increasing numbers of insect scourges, and the loss sustained by their destruction of our food supplies in New Zealand has been estimated at many millions of pounds. Shall we kill the birds and pay the piper?

THE NEED FOR STOCKTAKING OF OUR BIRDS.

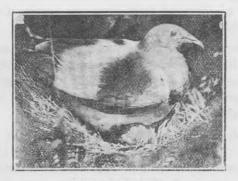
By J. G. Myers, Sc.D., F.E.S.

A farmer who set aside a tract of land with a certain number of sheep, forbidding people to kill them, but taking no steps whatever for twenty or thirty years to assure himself of their welfare or even of their continued existence, would be considered a fool, Yet that is precisely what New Zealand has done and is still doing with regard to treasures of international scientific value, of which she is the guardian on behalf of the world. Some of the most interesting and peculiar of the native birds have not been recorded authentically for periods varying up to thirty years or even longer. We do not even know whether certain species still exist. There is some excuse for this ignorance when it concerns the birds of the Auckland Islands and other outlying stations, where at least, as far as we know, the birds which remain are not being directly molested. But with regard to several highly important mainland species, enumerated below, there is imperative need for authoritative information on their existence and welfare. Such information could be efficiently and promptly gathered, at infinitesimal expense, by well-qualified officers already in the Government service. And we would suggest, with all respect, that it is essentially a matter for Government action. These birds are the wards of Government. It is important, if they still exist, that their present haunts be declared sanctuaries and that every effort be made to increase the breeding-stock, with a view to re-colonising areas from which they have disappeared. It might be by no means advisable to publish the exact localities where the rarer species survive; but such information ought decidedly to be in the hands of the Government and those concerned in the enforcement of the bird protection laws.

The first of these birds is the huia,—one of the most interesting species in the world. The last authentic living specimen was seen by Mr. W. W. Smith in 1907. Since then there has been a number of reports from various localities, but the best have just missed satisfying all the demands of an authentic record. The writer himself, in spite of several unsuccessful hunts, believes that the huia still survives, probably in extremely limited numbers. It is surely well worth while to assure ourselves finally on this point.

Other species are the North Island Thrush, apparently last seen alive in 1902; the tekahe (Notornis), of which one specimen was seen in 1914; the orange-fronted parrakeet; the laughing-owl; the sand-plover, and the black stilt. The Stephen Island Wren may still survive in Cook Strait, or other islets which cats and rats have not yet reached. All these represent some of the very élite of New Zealand birds, and the apathy which can stay content with the bare mention of their names in the protected list, and no further enquiry into their very existence, let alone their welfare, is nothing short of scandalous.

There are many problems concerning the present distribution, numbers, and well-being of many other species which, while by no means so rare as the above, are still far less abundant than they might be, and for which the margin of safety is small. this category belong the kakapo, the kaka, the kiwis, the parrakeets, the crows, the saddleback, the stitchbird, the robins, the yellowhead, the wrens, some of the ducks and others which will occur to every bird-lover. Research is urgently needed into their special habits and particular enemies; into the reasons why they occur in some districts and not in others; into the possible means we may take to ensure them active, practical protection. This at least is certain—that no species is standing still or will stand still. All are either increasing or decreasing; all are affected directly or indirectly by the progress of settlement. Shall we stand aside and let the process take its course as it has done in the past, or shall we now take careful stock of our avian heritage, and do all that is humanly possible to hand it on intact or even improved?



PIGEON ON NEST.

CROPS AND FORESTS SAVED BY BIRDS.

From "The Practical Value of Birds."

(By Junius Henderson).

Birds that ordinarily take small numbers of insects as food take them in much larger quantities when the insects become more abundant. The same is true of birds that eat mice, gophers, prairie-dogs and other destructive mammals. The facility with which birds, within certain limits, may turn from one kind of food to another and the ease with which they pass from one locality to another, make them especially valuable as enemies of agricultural pests, and enable them often to save crops, orchards, and forests from destruction.

It is well known to naturalists that when insects, rodents, or other food for birds become unusually plentiful in a particular locality, birds flock to the vicinity from quite a distance. There are numerous apparently well-authenticated instances of such gatherings mentioned in the literature. How the birds discover these unusual local conditions is not always clear. There is reason for the belief that in some instances the mortality of young birds is reduced because of the abundance of food, resulting in a real increase in the total numbers of birds, not a mere assembling of scattered birds from the surrounding region, but that is quite certainly not always the case.

An interesting and instructive instance is furnished by Eastern Massachusetts, where a great increase in the rabbit population during a favourable season was followed the next winter by an unusual number of Great Horned Owls, which fed extensively upon the rabbits.

Possibly the best-known incident of the sort is that of the Gulls and crickets in the early history of Utah, which has been related in many publications. Myriads of crickets, having destroyed one crop in the Salt Lake Valley, were fast ruining the second, which would have left the people, in the absence of trans-

portation facilities or ready communication with the outside world, in dire distress. Before it was too late Gulls arrived "by hundreds and thousands," and saved the crops from destruction and the settlers from starvation. In commemoration of this event, which was considered by the Mormans a miraculous intervention of Providence, the people have erected a beautiful and expensive monument to the Gulls.

One of the most notable outbreaks of insects in the history of the United States is the Rocky Mountain migratory locust plague of 1873 to 1876 in the Great Plains region, which was thoroughly investigated at the time by government agents, who collected a large amount of definite data as to the important part birds played in the control of the insects. Owing to the wide-spread extent of the visitation, obviously there were not enough birds to control it over the whole area, but locally many fields of wheat and other crops were saved from the ravages of the insects by various species of birds. Indeed, it is said that the only fields in that great region that were not ruined were those to which birds flocked.

Another spectacular and destructive movement of insects was the migration of the Colorado potato beetle across the United States many years ago. Many fields of potatoes were destroyed and great damage done to the others before methods of artificial control were developed, but there are numerous accounts of the local rescue of crops from the beetles by flocks of birds. The much-detested English Sparrow is said to have saved a crop of asparagus from the aspargus beetles at Buffalo, New York. California orchards have several times been saved from outbreaks of canker worms by Brewer's Blackbirds, which flocked to the rescue and worked from tree to tree, completely cleaning the insects out. The same well-known bird of the West saved the foliage in Northern California from a plague of caterpillars. They also visited the fields in large numbers during a bad outbreak of butterflies and materially helped in getting the insects under control, 95 per cent. of their food at the time consisting of the butterflies. Allen reports that in one section of Nebraska the Blackbirds, Quail and Plover gathered in numbers and saved fields of wheat from a grasshopper invasion.

Several years ago in Colorado the "beet worms" were working havoc in the sugar beet fields and the farmers were preparing to fight the enemy when they noticed great flocks of Red-winged Blackbirds hovering over the fields devouring the insects. Next

day the fields were almost entirely free from the larvae, and the birds, having finished the job, had departed.

Nearly 20 years ago, at Boulder, Colorado, for several years the leaf-rollers defoliated the box-elder trees, and it seemed that they were doomed, but in the third year of the attack Red-winged Blackbirds appeared on the scene and soon freed the trees of the insects, which have made no serious trouble there since. Inasmuch as these birds had not been in the habit of visiting the city, it is difficult to explain how they discovered the abundant supply of insects, but similar occurences are so common among birds that there is nothing surprising about it.

BARN OWLS HELP.

Howard G. Taylor, of Riverton, N.J., writes in connection with barn owls, the subject of a recent article in *Nature Magazine* by Mrs. Mabel Gillespie, that these creatures as has been found are economically valuable to man. Two adult owls, named Castor and Pollux, raised four broods of youngsters near his home, and every day the remains of rats and meadow mice were found under the nest. The owls, during their sojourn, eliminated numerous generations of rats which lived on the banks of a neighbouring river and caused considerable damage.

CAN BIRDS COMMUNICATE?

The question of bird communication is again brought up by H. H. Groves, of Wisconsin, who reports an unusual incident of bird migration. A flock of geese were flying southward over Wisconsin wilds, in regular formation. Suddenly the rear guard pushed to the front, and flew a second or so beside the leader, who almost immediately turned the flock at right angles toward the west. The guard returned to his place, and the flock passed from view. There was a lake westward—straight on there was only dry land. Had the goose seen the water, and advised the captain of the flock?—(Nature Magazine.)

THE IMPORTANCE OF THE WEKA.

The weka is considered by those who have given the matter study and careful observation to be one, if not the most important, of our indigenous birds that attend to the destruction and therefore control of pests inhabiting the ground. Careful tests of this bird's habits will demonstrate how extremely active he is in destroying snails, wood lice, and all manner of pests. With his strong beak he is able to turn over quite large pieces of wood and debris in order to gain access to the concealed food, while in the forests his destruction of rats is thus praised by such a competent observer as Guthrie-Smith who writes: "It is to such species as the crows, the robins, the tits, the warblers, the thrushes, the saddleback, the bush-creeper, the yellowhead, the whitehead, the wrens, the tui, the bell-bird, the pigeon, and the parrakeets that the presence of the weka is an unmixed boon. If they still continue to survive it is to his ceaseless vigilance, his policing of the woods, his eternal patrol of them by day and night, that we owe their lives; and these species, we may say, he watches without reward. From other kinds aided in the struggle for life, such as rails, ducks, pukeko, possibly, and from the fern-bird and groundlark, certainly he does take his toll. It is a tribute levied fit and fair, and the merest fraction of what is robbed by rats; a mere nominal fee, in fact, charged for life insurance. The larger kinds of birds, such as kiwis, hawk, falcon, etc., under normal conditions watch their eggs too carefully to give the weka a chance. If in any way his presence in the woods affects these birds it is to ensure a high degree of faithful incubation. To them he is a tonic against sloth and carelessness. If, then, in New Zealand any serious interest ever comes to be taken in our native birds, the most efficient method of preserving the smaller tree-breeding species lies in the propagation of the weka. Of all the birds that deserve our care he comes foremost, and assistance withheld from him is help denied to half the indigenous birds of New Zealand." Where opossums have been introduced it is difficult to see how this very valuable bird can be re-established as the traps set to catch these imported fur-bearing animals must sooner or later prove fatal to such an inquisitive bird as the weka. Many people assert that the weka is more than an equal match for the weasel if he gets first hold, and reports state that in the western Nelson district wekas have evolved the idea of attacking these pests in pairs and are thus increasing, while on Kapiti sanctuary the rat appears to have adopted a system of working in mobs, possibly with a view of combating the weka's activities. Whether such is the case or not rats appear to be

gaining an upper hand, and the contents of the nests of many birds are reported by the curator as having from time to time been destroyed. Careful examination of the stomach contents of these rats and of the omnivorous opossum by scientists compent to do so should determine which is the evil doer. The weka when present in numbers was declared war upon by some Acclimatisation Societies owing to his liking for eggs, but here again research should have preceded action in the face of the fact that other indigenous ground nesting birds had not been exterminated but had prospered, while a recent case was the nesting of a mateless hen pheasant on an island where wekas were present in large numbers. The bird laid over a dozen eggs, and the nest was not molested. Surely then, as has been mentioned by Guthrie-Smith, the function of the weka, as shewn in this case, is to destroy the eggs of those birds which do not faithfully attend to their incubation duties. There is yet much further room for experiment and observation with a view of the re-establishment of such a desirable bird as the weka, but unfortunately those in authority are not keen to carry out much work in this direction owing to the necessary cost even though the results might prove of inestimable value to our own welfare.

E. V. SANDERSON.

FEEDING BIRDS IN THE WINTER.

The feeding of native birds in the winter when food is scarce is being much experimented upon, and without a doubt many birds are thus saved to breed in the spring which would otherwise perish from starvation. One friend of the birds at Waimate for instance has set up quite a hostelry, and the principal guests are bell-birds, but tuis and white eyes also tender their patronage. Perches are made and tin cups attached containing syrup, composed of four parts of water to one of sugar. The cups are painted a bright red. The cups are filled twice a day, early morning and sunset. As many as twenty bell-birds will be singing and feeding at once. In the winter when they are hungry the birds drink out of the cups while their host is filling them, and it is frequently possible for him to stroke the birds. When the nesting season is on they do not appear so often, but as soon as the young birds can fly they are brought along to be introduced to the feeding cups. Most of the perches are placed near windows so that people inside may watch them. One perch is situated outside the host's bedroom window, and in the morning the birds come inside and make a great fuss until their appetites are satisfied. Surely many of us must envy the pleasure this gentleman must get in befriending the birds.

MAORIS BECOME CONSERVATIONISTS.

Our Maori friends who have more recently lived near nature than we pakehas shew a great knowledge of the habits of our native birds, and know well how to win their affections. Thus it would astonish many a shootist who is prone to wait carefully screened in order to even get within shooting range of a duck, to see the wild ducks come sailing down to the call of the Maori on Kapiti Island, then pitch unconcernedly at his feet and be fed out of his hand. Let a stranger however be present and the bird will likely pass at a goodly distance. In the mating season a duck will at times bring along her husband who takes a lot of convincing that the ground is good and safe. Then again at Mangamuka, in the Hokianga district, our native birds have a true friend and protector in Mr. Nopera Otene, an influential chief in that district. This enthusiast goes in for the thing on a more extensive scale, and preserves the birds by the establishment of sanctuaries. It is to be hoped other Maoris will be induced to follow the example of Mr. Nopera Otene, and thus help to undo the evil which the pakeha has done our wonderful and unique bird life.

LITTLE BARRIER.

Amongst the most successful bird sanctuaries in the world our own reserve of Little Barrier Island may be considered to hold a leading position. Guarded to a considerable extent by its isolated position, some 15 miles from the mainland, and cared for by an honest and interested curator this sanctuary holds premier position amongst our bird refuges. The wiles and bribes of collectors where rare birds are present are unavailing with regard to Little Barrier, and no opossum royalties tempt the self seeker in this direction because these animals are not present. The curator writes as follows with reference to the present condition of matters on this sanctuary which is controlled by the Department of Tourist and Health Resorts. Enhanced means of patrol, such as a launch, and the confining of all domestic animals in a fenced paddock, are items that may be suggested to further improve matters in connection with Little Barrier.

"You will be interested to know that the stitchbirds are in-

creasing on the island. One need not go very far into the bush before they are heard and seen. Once I was travelling in one of the gullies and in less than an hour I had located fifteen stitchbirds.

"For some months we have had large numbers of the native birds coming around the house, many feeding near the door, and even coming into the kitchen. There are several species: Tuis, bell-birds, wax-eyes, and kaka parrots. They were all very tame, especially the bell-birds. We fed them with last year's jelly. bread crumbs, oatmeal porridge, and milk. The bell-birds come on to the table while we are taking food, hopping around picking up crumbs. In the morning, when I am draining the milk into the pails, the bell-birds sit along the rim trying to catch the milk as it flows in. The tuis are very fond of soft bread and milk. It is very interesting to see them, perhaps nine or ten, standing round the rim of a small bowl enjoying the soft food, while many of the bell-birds are feeding from another dish. The little waxeyes come around and get their share. They sometimes all feed together, but the tuis occasionally peck the bell-birds, but neither of them touch the wax-eves.

"When the kakas (two) come down they claim the whole board. All the rest fly to the trees where they give us a charming concert. It is a real pleasure to listen. One of the kakas visits us every evening after dark as we leave a little soaked bread near the house. It is very amusing to hear it on the roof of the house, and we can hardly see it in the dark as it walks up and down on the ground. I don't know how it sees in the dark so as to find its food. It is also very tame. A few weeks ago I was nearly shooting the kaka by mistake, I took it for a wild cat. I knew the cat was prowling near the house at night and I set to watch it. I tied a dead rat with wire to a kerosene tin so that a noise would be heard when the cat took it, then waited in the kitchen, with the door partly open. It was moonlight, and I could see the shadow of the tin at a distance. Waiting patiently for about an hour I saw an object moving, then heard the noise of the tin. I was just on the point of drawing the trigger when I discovered that it was the kaka parrot. The kaka seemed smaller and much darker. (I was unaware at this time of the kaka's nocturnal habits.) However, I got the wild cat a few nights afterwards."

CHILDREN'S PAGES

PA, MA, AND THE BABIES.

(By WEKA.)

The following story proposes to tell of the successful rearing of a healthy brood of five by a pair of the most companionable birds in the New Zealand bush. Few lovers of our native bird life whose good fortune it is to reside in districts where there is a semblance of indigenous forest but are aware of that little gem upon the landscape, the tomtit, or as named by the Maori, miromiro. There are two species of this purely insect and grub eating unit of our native fauna, and known to ornithologists as Myiomoira Toitoi in the North Island, and Myiomoira Macrocephala in the South Island. The cock bird shows only two colours in his raiment, black and white in the North Island, and black and yellow in the South Island, there being no blending of these but a distinct line between the markings. The colouring of the hen bird is, however, much more subdued, being similar in both Islands, and the chief features being a light buff on the breast and underparts and dark grey elsewhere. Who has not lived adjacent to the bush and penetrated its depths but a little distance without soon finding company in this charming little fellow, who seems to know that the choice worm is soon to be exposed to his searching glance by the disturbance of the forest floor? During the winter of 1927, the writer had got as near as possible on speaking terms with several miromiros, but always of the male persuasion. Spring followed in due course, and on one drizzly day in October he was introduced by one of his black and white friends to what eventually proved to be the latter's fianceé. A week passed and the then lovers spent a considerable portion of that week-end flying in and about the walls of the writer's residence. On the following Saturday (29th October) the wide overlapping eaves were being examined most minutely by our two lovers now apparently mated, particularly where the prevailing winds did not touch, and along towards noon, to the writer's surprise and delight, the first layer of her future home, consisting of a string of coarse spider web, was laid by Mrs. Tommy on a supporting beam under a sheltered eave not more than seven feet from the ground, and with the writer standing in full view not three yards away. It was an ideal situation, and one that could not by any possible chance be reached by any member of that arch enemy of our feathered friends, the cat. During the remainder of that day and all next day (Sunday) little wifey worked like a galley slave, hubby not taking any part whatever in the actual construction of the home, only putting in an appearance when at one stage some worms collected by the writer had been placed in a handy position. He was probably doing his duty in the offing sorting out the best material for the abode. By the following morning at 8 o'clock cobwebs, moss, and dry beech leaves had been so assiduously collected and woven together that the busy housewife was out of sight in the nest. Next week-end saw the nest completed. On neither the Saturday nor the Sunday was a sign to be seen of either Mr. or Mrs. Tomtit, although the former could be heard warbling away merrily in the distance. The birds' absence enabled a close inspection of the nest to be made, and it was wonderful how securely it was fastened to the supporting beam and to the rough plastered wall of the house, the mass of spider web no doubt being the holding agency. It may here be mentioned that the nest was at a distance of about 8 feet from the opened window of a bathroom, and it was from this vantage point that observations were mostly made day and night, the latter being possible by means of the electric light. Sunday night (November 6th) an inspection in the early evening disclosed one egg. On the following Wednesday night there were 4 eggs in the nest, and the little wife had apparently commenced to sit. For the next 18 days she sat closely, leaving only to get the food necessary for her existence. Never once was it observed that she was relieved by her lord and master, but to his infinite credit be it said, day after day, wet or fine, he fed his mate and never once did he come to the nest to do so. The process of feeding adopted was no doubt designed to prevent the nest with its precious contents being observed. It consisted of hubby, after he had collected the worm or insect, flying to an overhanging tree directly opposite the nest about 30 feet away, and there giving, in lieu of his usual warble which was almost continuous throughout the day, a subdued whistle, when quick as a flash wifey left the nest and the pair met in a sheltered patch of manuka some 40 feet away in another direction. All day long this went on, something like an average of 20 minutes separating the meetings on the days of observation. On one occasion the interval was only 10 minutes. And if by any chance the writer or other person was where he could be seen from the nest, the little wife would not return thereto until there was no one in sight. An interesting incident during the sitting period was the feeding by the male bird of another young male bird which was observed on two occasions to intercept the former on his regular visits to his spouse with satisfactory results. On the evening of 26th November (Saturday) during a view of the nest about 9 p.m. hubby was seen to be perched upon the side of the nest, and first thing next morning it was revealed, wifey having temporarily left the nest, that the eggs had given place to bare-backed little strangers, mostly head. During that day only the smallest particles of food were provided and these at long intervals, the happy mother being content to mostly sit upon her brood of babies and keep them warm. At one stage a large soft feather was brought home and packed away amongst the family. For the following 18 days, or for exactly the same period taken over the sitting, father and mother were kept extremely busy, and it was noted that the older the youngsters grew the longer the moth or worm or caterpillar became. During the early stages both pa and ma, after bringing home some food, would stay at the nest closely examining the babies and appeared to be very gently removing something, probably lice, and at all times every attention was given to the keeping of the home scrupulously clean, any droppings being taken away at departure. It was not until the feeding process had been going on for a fortnight that the family was seen to consist of 5, and it was about this time that the little home was getting all too small. On the 11th December two of the family were out on the edge of the nest stretching and fluttering their wings, and on the afternoon of that day there was some excitement when a hand was put into the nest and the whole brood tumbled out to the ground. Pa and ma flew round greatly flustered while the gathering in took place, and little difficulty was experienced in returning the straying family to bed. It was then observed that three of them were cock birds and two hens, the colouring of the former being quite pronounced though not so marked as in the case of father. On the evening of the 14th (Wednesday) all were at home with mother keeping them warm, but before 7 o'clock next morning the home was deserted. During that day and the next, the family of seven remained in the immediate neighbourhood, but by the week-end had taken their departure-it is hoped to be individually a source of pleasure to others as they had been collectively to the writer.

OWLS TO THE RESCUE.

Lord Howe Island in the South Seas has been beset with an army of rats, particularly bothersome to the eleven inhabitants of the island. Poison and cats have failed to execute the rodents, and recently a number of owls were shipped from San Diego to wage war on the rats. Let us see, didn't some powder company list the owls as vermin and urge their extinction?—(Nature Magazine.)

ECHOES OF A VANISHING HOST.

(By Alexander Sprunt, Junr.)

A low, though distinct murmur, hushed by distance, but ever growing into a louder hum, sinking, rising, in an increasing monotone, came across the still air. It vibrated steadily, rose and fell in growing tones, its wavering cadence as uninterrupted now as the voice of the restless surf. Rapidly it mounted higher, developing into a moaning roar, pervading the whole expectant stretch of field and stream. The children glanced at each other wonderingly, and moved, half fearfully, toward the house. As though some giant cataclysm was about to occur, the roar deepened and grew in volume until the very air seemed to tremble, when, over the tree tops, appeared a swiftly rolling dark mass, its outer edges broken into thin streamers, which opened and closed as though a thousand individual particles were being hurled about by the violent momentum of the central body.

The man's face lighted; he broke into a run. "The pigeons, mother," he shouted, "they are back again." Suddenly the light of the afternoon sky faded—twilight, almost darkness closed over the clearing as the forefront of the mighty mass passed over the cabin. The children, huddled together, glanced upward in fearful wonder as the rolling billows swept over them. It seemed as if the roar of a mighty storm was convulsing the countryside. Rank after rank, a vast company of hurrying birds, beating the air with a million wings, dipped toward the farther woods, their wide spread phalanx shutting the sky from view.

Company after company settled into the woods, lighting on the swaying trees until their groaning branches could stand no more. Sharp cracks resounded through the uproar, the swishing crash of falling limbs passed unheeded as they poured their living freight to the ground, covering them with a mass of twigs and swirling leaves. Whole trees swayed, bent and collapsed to the forest floor, crushing hundreds of the fluttering birds into the earth. Band after band circled overhead, dropping in, now rising to swirl about each other in indescribable confusion over the swarming multitudes in the trees below, while lower still, on and under the litter which covered the ground, were bleeding bodies, broken wings, and a thousand trickling streams of red.

Pandemonium reigned as the larger part of the host moved ever forward overhead, to fill the trees for miles around with members of its stupendous company. Little by little, the uproar grew less, the roar sunk into a troubled murmur, died down, flared up again as the splintering crashes echoing among the forest aisles bespoke more birds hurled downwards to their deaths, and, at length, true darkness came, casting a dusky curtain over the whole wild scene. The laden trees grew quiet, the fluttering, broken bodies on the ground were stilled. And on the face of the man who still watched from the edge of the clearing was a look of wonder, not unmixed with awe.

The passenger pigeon once inhabited a large range. From north central Canada and Hudson Bay it migrated as far south as the Gulf Coast, and west to the Great Plains, occurring all over the eastern and central parts of this country. The nesting grounds were mainly in the northern parts of the United States. In appearance, it was a beautiful bird; the slatey blue of the head and neck and duller hue of the upper parts shone with brilliant, metallic iridescence, while the reddish chestnut of the breast and underparts blended harmoniously with the whole. The tail was long and graduated, the outer feathers white, with black and chestnut markings toward the base. The common mourning dove of to-day is frequently confused with the passenger pigeon, but although similar in colouration, it is much smaller, and always shows a blackish spot behind the eye which was entirely lacking in its larger cousin.

When a flock appeared it was the signal for the whole community to turn out, and gunners were much in evidence besides those with cruder weapons. Fields were baited with grain, and the birds repairing thereto met a slaughter which was fearful. As many as one hundred, and more, were often killed at a single discharge, and this continued as long as the ammunition lasted. As if this method was too slow, the birds were caught by huge nets which were set over baited areas, and sprung when enough pigeons had congregated beneath. This was much more effective than powder and shot, and the birds thus killed were packed in barrels and shipped to market. It is said that one concern who handled them used fifteen tons of ice in packing one shipment.

It will be readily seen from the foregoing accounts that there was some reason for thinking, as everyone did in those days, that it was impossible to exterminate the birds. And, except for one potent fact, the huge flocks would doubtless have existed for many years. This was the treatment which was accorded the pigeons on their breeding grounds. *As in the migrations, the numbers which gathered together to nest were almost beyond belief. They could not but attract the widest attention, and when the fact could be put to commercial advantage, there were many who took what spoil they could.

When the nesting season was on, large parties visited the locality both night and day, and killed the birds until their arms ached. The indifference of the pigeons amounted at times to stupidity, and aided in their own destruction. Trees were cut down with their burden of squabs, while the adults were netted, suffocated with sulphur fires, clubbed, shot, and dispatched in various ways, by a multiplicity of weapons. It is on record that after the birds had been packed for shipment the farmers in the neighbourhood turned their hogs loose in the ruined rookery to fatten on the bodies which the packers had overlooked. From one point in Michigan, one hundred barrels of birds were shipped to market every day for thirty days, and, allowing four hundred and eighty birds to the barrel, a fair estimate, this would bring the total to the astounding figure of one million four hundred and forty thousand birds. And there were many such wholesale butcheries.

When such facts as these are faced, it is small wonder that the pigeons did not last. Each year showed a decrease in their numbers, the market slaughter thinning the ranks with speed. In the '90's, reports that pigeons were seen needed verification. Collectors had watched their opportunity, and had taken advantage whenever possible. The end was at hand. At the beginning of this century the passenger pigeon had all but disappeared. Vague reports would be heard every now and then, but investigation showed that all were based upon the sight of the mourning dove. To see a live passenger pigeon, one had to visit a zoological park, where some few still existed. It was in such a place that the Finis of their history was written. For many years, the Cincinnati Zoological Park possessed a female which was on exhibition, until, in 1914, this last survivor of a once mighty host passed away.

So ends their tragic history. It is one which reflects no credit to mankind in his treatment of the wild kindred, but we may hope that the lesson has been learned that will benefit others of the furred and feathered inhabitants of this country, and gain protection for them.—Reprinted from *Nature Magazine*, November, 1928.

EVERY LITTLE HELPS.

(Signed) BIRD LOVER.

The above message from one of its child members has been received through the post by the Society wrapped around a threepenny piece. Verb. Sap.



TUIS AND BELLBIRDS
Feeding at Caretaker's Door,
Little Barrier.

[Photo—R. Nelson.



[Photo-R. Nelson.





BELLBIRDS AND TUIS FEEDING Little Barrier.

[Photo-R. Nelson.

New Zealanders!

No Insect-eating Birds means no crops.

Fire in our Forests

means sudden death to our forests,

Animals in our Forests

means slow but certain death to our forests

No Native Birds means no native forests.

No Forests
means decreased production, desola-

means decreased production, desolation and poverty,

Will YOU help to avoid these results?

Please pass this Booklet on to a friend if of no further use.

Extra copies will be forwarded on request,