FOREST and BIRD

BELLBIRD

KORIMAKO

(Anthornis melanura)

On Kowhai

(Sophora tetraptera)

AUGUST, 1952.

NUMBER 105.

Issued Quarterly.

Published by the FOREST and BIRD PROTECTION SOCIETY of NEW ZEALAND Incorporated.

BIG RATA, MOUNT NGAMOKO TRACK, LAKE WAIKAREMOANA.

[*Photo: Dr. J. T. Salmon*, A.R.P.S.

FOREST AND BIRD PROTECTION SOCIETY
OF NEW ZEALAND (Inc.)

Head Office: "Evening Post" Buildings, Willis Street, Wellington, N.Z.
Telegrams: Forestbird. **P.O. Box 631.**

LIST OF OFFICERS:

Patrons:

His Excellency The Governor-General of New Zealand, The Rt. Hon. Lord Freyberg, V.C., G.C.M.G., K.C.B., K.B.E., D.S.O. Her Excellency Lady Freyberg.

Representative of the Maori race: The Right Rev. the Bishop of Aotearoa.

Executive:

President: Arthur P. Harper, C.B.E

Du Pont, Mrs. A. J.
Falla, Dr. R. A., F.R.S.N.Z.
Cooper, R. W.
Jones, A. Morris, A.N.Z.I.A.
Nelson, R. C.
Vogel, J. E. F.
Hon. Treasurer: T. L. Ward.
Connelly, M., *Dunedin.*
McCaskill, Prof. L. W., *Christchurch.*
McGregor, Prof. W. R., *Auckland.*
Pryce, E. O., *Marton.*

Secretary: R. H. Carter.

Hon. Auditor: W. S. Wheeler (Watkins, Hull, Wheeler & Johnston).

Past Presidents:

1923-1930 Sir Thomas McKenzie, G.C.M.G.
1930-1931 Dr. L. Cockayne, C.M.G., F.R.S.
1932-1933 R. A. (later Sir Robert) Anderson, C.M.G.
1933-1945 Capt. E. V. Sanderson (Founder).
1946-1948 B. C. Aston, C.B.E., F.R.L.C., F.R.S.N.Z.

Honorary Vice-Presidents:

Rt. Hon. Viscount Bledisloe, P.C., G.C.M.G., K.B.E., and Lady Bledisloe.

Vice-Presidents:

Archey, Dr. Gilbert, O.B.E., M.A., D.Sc., F.Z.S., F.R.S.N.Z.	Auckland	McCaskill, Prof. L. W., M.Agr.Sc.	Christchurch
Cobeldick, Wm., F.R.G.S.	Christchurch	McLean, W. E.	Auckland
Du Pont, Mrs. A. J.	Wellington	Moncrieff, Mrs. P.	Nelson
Falla, Dr., R. A., M.A., D.Sc., F.R.S. N.Z.	Wellington	Nelson, R. C.	Wellington
Fraser, W. M.	Whangarei	Sladden, Bernard	Whakatane
Gilmer, Dame Elizabeth M., D.B.E.	Wellington	Thomson, J. B.	Invercargill

Representatives:

LR. NORTHLAND: C. W. Devonshire, Parua Bay School No. 2, Taurikura R.D., Whangarei.
AUCKLAND: The Auckland Section (see below).
THAMES VALLEY: P. Corbett, Hikutaia.
HAMILTON: R. E. R. Grimmett, M.Sc., F.N.Z.I.C., P.O. Box 490, Hamilton.
BAY OF PLENTY (WEST): T. D. Bathgate, c/o. A. Snodgrass, Te Puna, Tauranga.
BAY OF PLENTY (EAST): B. Sladden, 11 Fraser Street, Tauranga.
HAWKE'S BAY: Dr. D. A. Bathgate, 1005 Karamu Road, Hastings.
WANGANUI: Dr. C. Hughes-Johnson, 42 Wicksteed St., Wanganui.
NELSON: Mrs. P. Moncrieff, The Cliffs, Nelson.
MOTUEKA: Denis Brereton, Baton, Motueka.
CANTERBURY: Prof. L. W. McCaskill, 50 Clifford Ave., Fendalton, Christchurch.
WESTLAND: Rev. J. W. Walton, The Vicarage, Runanga.
DUNEDIN: M. Connelly, 22 Gladstone Rd.
SOUTHLAND: J. B. Thomson, c/o Box 154, Invercargill.

Sections of the Society:

AUCKLAND: Hon. Sec., Miss N. Macdonald, P.O. Box 1118, Auckland, C.1.
GISBORNE: Hon. Sec., Lt.-Col. A. Blackburn, 10 Score Road.
CHRISTCHURCH: Hon. Sec., Miss A. Anderson, 21 Makora St., Fendalton, N.W.1. Hon. Organiser: Miss M. Jennings, 7 James St., Redcliffs, S.E. 3.

OBJECTS OF THE SOCIETY.

To advocate and obtain efficient protection of our native forests and birds and the preservation of sanctuaries, and scenic and other reserves, in their native state, and to enlist the practical sympathy of both young and old in these objects.

The Society invites all those who realise the great economic and aesthetic value of our native birds, and who wish to preserve our unrivalled scenic beauties, to band together with it to carry out these objects.

The subscriptions are: Life Members £10. Endowment Members £1, Ordinary Members 7/6, Junior Members 3/- per annum. Endowment Members comprise those who desire to contribute in a more helpful manner towards the preservation of our birds and forests. This magazine is issued quarterly to all members without charge.

Convening and Secretarial Member of Nature Protection Council.

National Section of the International Committee for Bird Preservation.

Member of the International Union for the Protection of Nature (IUPN).

CONTENTS OF THIS ISSUE APPEAR ON PAGE 16.

EDITORIALS

Arbor Day: Plant Native Trees

THE chief glories of New Zealand have been our forests and unique bird population. Both these are now so gravely threatened that unless concerted effort is made to check destruction and to regain some of the ground already lost, New Zealand will no longer be the real New Zealand that we have known.

It is the duty of the present generation to make the effort, so that future generations may enjoy the old-time glory of our native forests and birds. There are many ways that this can be done. The major work of destroying introduced animals such as deer, goats, pigs, and specially opossums is such a herculean task that it can only be done by the Government. This task, we are glad to say, is being vigorously carried out by the authorities. Replanting indigenous trees on a large scale is also necessary, and the Forest Service is, at last, making a definite move in this direction, according to its last year's Annual Report.

But we must not just "sit back" and leave it to Government Departments—we can all help even if only in a very small way. "Every mickle makes a muckle", so the cumulative effect of small efforts would be of tremendous value.

What is the problem? It can be put in a few words. How to increase our forests by planting native trees and the under-growth so essential to their welfare, and thus encourage the increase of the native birds which are so necessary to keep the bush free from insect pests and help by continually distributing the seeds and pollen. A huge task, but as we have said, one that can be helped by the efforts of all nature lovers.

Arbor Day was set aside many years ago as an annual occasion on which trees are to be planted. It is observed with some ceremony, children are encouraged to take part, and are told by speakers how important tree planting is. Unfortunately too many Arbor Days have been observed by planting exotics. We have always protested against this and have urged the vital importance of making it an occasion for planting native trees or shrubs but not always successfully.

Those very valuable organisations, the local Beautifying Societies, can do a great deal to help in the work of restoring our native vegetation. It is very encouraging to see that several of them are pursuing this policy. The need is so urgent that we feel it would be worth while for them to hold a Conference of their Societies and get them all to adopt the plan of concentrating on planting "natives". **In doing this some knowledge of the trees' habits, etc., is necessary to see that they are planted in a suitable position to allow for subsequent growth. Also provision must be made for after-care to protect them from overgrowth of the vegetation and especially from damage by irresponsible and careless people and browsing animals. Some "natives" planted in the past have been too often left to look after themselves and simply died out.**

It should be remembered that one reason why our forests are deteriorating is the loss of native birds which helped them to exist, therefore it is of paramount importance to build up our bird population. The felling of so much bush has depleted the food on which the birds depended, therefore by planting suitable trees and shrubs we should provide a new supply of the food they want and so enable them to increase in numbers and spread over the country to resume their important work in the remaining forests besides being a constant joy to bird lovers.

BIRD LOVERS! Make this August a tree-planting month. Plant kowhai, flax, manuka, ngaio, rata or pohutukawa.

National Parks

IN our issue of August 1949 we expressed our opinion that "in New Zealand . . . forest and bird destruction, the introduction of exotic flora and fauna have produced a series of problems which actually threaten our material welfare. Quite apart from sentiment, the position is serious. Therefore, in implementing a National Park policy, our objectives must be not only the safeguarding of wild scenery for public enjoyment, but also the strict preservation of our remaining forests and birds for economic reasons, such as soil conservation".

The Director General of Lands has stated in an address that "National Parks should be held in trust for the benefit of the people, should be virgin country—the main principle of control being that of preserving them, as far as possible, in their natural state, while at the same time providing adequate facilities for the public to visit and enjoy them". This official opinion coincides with our own as quoted above, namely that **preservation** of our forests and natural scenery is the key note—rather than any attempt to **"improve"** what nature has provided.

Reform Necessary

We have been assured that legislation is to be brought down to establish an efficient and practical policy of control and management of our National Parks. Upon investigation we believe the chief weaknesses, in the past, have been no uniformity of control, no settled over-all policy, some evidence of conflicting departmental interests, too large Boards of Management, a tendency to appoint members by virtue of some office held rather than for their practical knowledge of how to manage the areas and, finally, no settled plan for providing the necessary finance.

Canada and the United States have devised sound schemes of management and control of their Parks, and provide an example which we could follow with advantage, with modifications to suit local conditions.

In the first place there should be a Central Authority, established by Parliament, which will be responsible for the general policy, administration and control of all existing and future National Parks.

Secondly, local Boards or Committees should be established to carry out the policy of the Central Authority in each area.

Lastly Parliament should provide, by Annual Vote, an adequate sum of money to carry out the Authority's work. Such annual grant would be spent as decided by the Authority.

Both the Authority and the Board should, in our opinion, consist of fewer members than obtains at present on Park Boards. Experience proves that a small body, say, 6 or 8 practical men is much more efficient than one of large numbers. It is to be hoped that this condition will be recognised in the proposed legislation.

It is also, we think, essential that those appointed should have intimate knowledge of the areas to be administered, and of the peculiar characteristics of our natural forest for, **it must be remembered that preservation of each area in its natural state is one of the objects of National Parks.**

In saying this we do not suggest that the areas should not be available for public enjoyment. This can be provided for by a careful plan of tracks and possibly roads giving access to the areas, provided that it is planned so as to do as little harm as possible to the surroundings. It is this proviso that calls for men on the Authority who know our bush from practical experience.

[NOTE.—Since the above was written and before going to press, the National Parks Bill has been introduced into Parliament by the Hon. Mr. Corbett, Minister of Lands. This will be discussed in a future issue.—Ed.]

Shining Cuckoo in Grey Warbler's Nest

By H. J. PAYNE

MR. PAYNE, of Wairoa, having heard Dr. Falla during one of our weekly Nature Question Time Sessions from 2YA describe the paucity of evidence up to date as to the actual method employed by the shining cuckoo to deposit its egg in a grey warbler's nest, has sent us the following report of his observations.

When I lived in the country and while working with the sheep, I used to boil the billy at the one spot each day for lunch.

In a manuka bush a grey warbler was building her nest. I watched her every day until the nest was finished. She then had a spell for two days before the first egg was laid. She laid three eggs, one each day. On the fourth day I did my beat the other way round so arrived at the nest site at least two hours earlier. I went to the nest and there were four eggs. I sat down to my lunch and after I had been there a little while, still watching the nest, I saw a bird fly straight to the nest so I crept up ever so quietly and there was a shining cuckoo in the nest with her bill sticking out. I withdrew a few feet, still watching the nest and in about two minutes out came the cuckoo, and on looking in the nest I saw five eggs, four warbler's, whiteish, with pink spots, the odd egg a wee bit bigger, whiteish with light greenish streaks; the nest did not appear damaged in any way.

I still kept watch on the nest every day and in about 14 days the eggs all hatched, five all told. All went well for four days and then I found a young warbler dead on the ground below the nest; the same thing happened every day until only the cuckoo was left.

COVER PICTURE (From a Water-Colour by the late Miss L. A. Daff)

Bellbird (Korimako)

Anthornis melanura

THE bellbird rapidly decreased before the onset of civilisation, until by 1890 in most places it was very rare. Within the last thirty years, especially in parts of the South Island, it has so increased even in settled and urban districts that it seems that the bird has adapted itself to the new conditions sufficiently to ensure its perpetuation. One factor in this is undoubtedly the variety of its tastes as regards food. In the winter it feeds largely on insects found on the furrowed trunks of broadleaf, under the papery bark of fuchsia and native holly, or on the branches of all kinds of introduced trees. Berries are also eaten, especially those of coprosma, fuchsia, cabbage-tree, and mistletoe. The native ivy tree, New Zealand flax, ratas, Australian banksias, acacias, and eucalypts, tree lucerne, and red-hot pokers, all have flowers bearing nectar accessible to a bird with a brush tongue. But it is when feeding on fuchsia or kowhai that the birds give most pleasure, adding acrobatics to their other charms as they hang down in all sorts of grotesque attitudes in their efforts to insert their bills into the drooping flowers. Their fondness for nectar enables us to attract bellbirds to our homes by exposing coloured tins of sweetened water.

The song of the bellbird has much in common with that of the tui, even to the whisper songs, jangles, sneezes, gutturals, and chuckles. It is comparatively silent during the noontide heat, unless some few individuals meet on a tree or shrub that offers a tempting show of honey-bearing blossoms. A note or two is briefly sounded, the numbers rapidly increase, and after much noisy fluttering of wings a gush of clanging melody bursts forth from a score of quivering throats forming a concert of unharmonious yet most pleasing sounds. Towards dusk bellbirds utter a succession of notes like the tolling of some distant bell.

Estimation of the Effects of Deer in High Country

THIS is a digest of a paper under the above title by Mr. R. I. Kean, biologist of the Wildlife Division of the Internal Affairs Department. The full paper was published in N.Z. Science Review and reprinted in Wildlife Publication No. 13, and the digest has been prepared, with the author's helpful comments, in the office of this Society, in the belief that members would welcome a report of an authoritative investigation into the effects of deer.

When deer form a part of a balanced ecosystem, they are kept in check by predators, which are assisted by secondary factors such as disease and deficiencies of the various environments. Under such conditions, over-population by deer, if it occurs at all, would be rare. But such ecosystems are now few, being restricted almost to remote areas. With a general reduction of predators, deer over-population is common, with essentially the same consequences in any country irrespective of whether deer are indigenous members of the local fauna or not.

The most difficult problem is posed, not by the dense population, which can be reduced by shooting, but, as will be explained later, by the already reduced one which is shown by continued soil erosion to require still further reduction.

Success in deer control can only be attained through intimate knowledge of the deer, coupled with careful study of the reactions of the vegetation to browsing and trampling.

The clearest insight into deer problems can perhaps be gained by tracing the process of establishment of a hyopthetical deer colony in wet mixed forest. There is no reason to expect that red deer will ever be exterminated in this country. Of the nine species of deer known to be established in New Zealand, only one, the red deer (*Cervus elaphus Linn.*) is a national problem, and accordingly this species is the only one considered in this article.

Deer Herds

Deer do not wander at large. As a rule they restrict themselves to country with which they have become familiar.

Physiological Differences

Different physiological requirements appear to be responsible for the separation of stags from hinds and young deer. During the greater part of the year, the hind is either pregnant or accompanied by a calf, so protection from climatic severity and rough travelling becomes important. The stag is a more robust animal, largely impervious to cold and dampness, but requiring good supplies of calcium and protein in an environment usually poorly provided with these essentials. His needs are determined first by the annual, extremely rapid antler and neck development, followed by building up for the active rut period when little food is taken. He needs nutritious food, and for this reason, as well as for innate tendencies, he wanders far, thus acting as a pioneer in extending the deer range, while hinds and young occupy the central opened out and tracked portions in which the most highly preferred foods have been depleted.

Lower Climax Forest

Observations show that deer have a preference for country with open forest rising to rolling grassland where there is scope for free movement. Heavy forest is not favoured. During the early occupation of the country, however, they will inhabit climax forest as the shrubs and ferns therein provide good food, but as these are eaten out and the area becomes more open, it is little used for feeding. Provided light and soil conditions are suitable, unpalatable or browse-tolerant plants then begin to replace lost species, and the forest shows signs of recovery. Opening out of the forest produces a general reduction of humidity, and the forest ground cover changes from a fern basis to a herbaceous one. Although the most palatable plants become reduced, depletable foods become replaced by permanent food species—grasses, sedges and herbs—resulting in an increase in the long term deer-carrying capacity of the forest.

The lower climax forest thus is generally little vulnerable under the conditions described especially when growing at an elevation (generally under 2000ft.) where a wide range of plants is available for regeneration including a number of low palatability species such as the fern *Blechnum discolor* (crown fern) or shrubs of the *Pseudowintera* (horopito) and *Myrtus* species or *Suttonia australis* (mapou).

Upper Climax Forest

Climax forest at higher altitudes is more vulnerable. Not only are the available plant species much fewer in number, but the fern and shrub species most useful as ground cover, *Polystitchum vestitum* (prickly shield fern), *Leptopteris superba* (Prince of Wales fern), *Astelia spp., Coprosma foetidissima* (hupiro) and *Olearia colensoi* (tupare) rank in palatability at least high enough for them to be regarded as staple deer foods, and also deer use at this elevation is very much greater than at lower levels.

It has been stated that, except at high altitude, climax forest is relatively invulnerable to low deer densities, but deer in high numbers will largely denude the forest of both the shrub layer and the ground cover. Litter is removed from slopes by the flow of surface water and soil is then exposed, during rain, to the impact of the heavy drip, falling without interception from the tree canopy twenty to thirty feet above.

Under such conditions soil loss is rapid, often resulting in exposure of loose stones which move slowly down-hill, effectively preventing regeneration, irrespective of browsing pressure.

Food Resources

The best food combining both high average palatability and availability for deer is found in subclimax communities such as occur on slip faces, stream margins, forest blow-downs, etc. In New Zealand typical species occurring in these communities are *Blechnum procerum* (kio kio), *Polypodium diversifolium, Asplenium bulbiferum, Microlaena*

avenaceae (bush oat grass), *Danthonia cunninghamii* (bush tussock), *Uncinia spp.* (hook grass), *Coprosma australis* (raurekau), *Nothopanax spp.* (five finger spp.), *Aristotelia racemosa* (wineberry), and *Melicytus ramiflorus* (mahoe). It is these areas, together with the upper forest scrub belt and the tussock grassland, that absorb deer which at first fed in climax forest.

Consequences of Deer Use and Population Changes

Deer in small numbers at first have little obvious effect in forest, natural regeneration being sufficient to hide the worst of their depredations. As the herds increase, however, with the large stags eating wastefully and destroying a large amount of plant food while only eating the titbits, the forest appears, generally rather suddenly, to be badly denuded, deer become visible in large numbers and the impression is given of a sudden large influx of deer.

Heavy deer population can be reduced without solving the high country soil erosion problem, for two reasons, (a) deer do not occupy country uniformly, but tend to concentrate in limited areas and (b) they will persist in frequenting eaten out slopes. These areas, which in the aggregate make up a large proportion of the steeper forest land are continually stripped and trampled.

Tall Tussock Grassland

High altitude tussock grassland is not invulnerable. *Danthonia flavescens* (snow grass), although not of high palatability, is a staple deer food. Destruction of tussock by browsing is relatively slow, but it is accelerated by deer concentrating upon individual tussocks, so it is not unusual to find, in one locality, eaten tussocks together with healthy, little-reduced tussocks. It seems likely that eating off the tips of tussock exposes more palatable portions below and it is reliably reported that deer will pull tussock to pieces, eating the soft bases and rejecting the leaf blades.

On the colder slopes the dominant plant association, *Carpha albina—Oreobalus pectinatus,* is little affected by browsing but is vulnerable to trampling which opens up the way to sapping by rain, frost and snow, and the rapid seepage into the soil aggravates the trouble.

Erosion

In the steep high-rainfall districts the commonest form of geographical erosion is by landslip. The scar heals fairly rapidly and passes through varying plant succession although a climax association may not have time to develop before slipping again occurs. Deer (and opossums) increase the incidence of slipping both by destroying plant cover and by increasing the under cutting of slopes caused by scouring due to increased and faster run-off.

Lower Rainfall Country

The foregoing descriptions have given a generalised picture of developments in high-rainfall country. Low-rainfall country such as beech or grassland presents a simpler situation. These areas favour rapid spread of deer of either sex owing to the easily reduced scrub layer. Forest food resources are limited, but the *Nothofagus* seedlings and the adventitious shoots produced during the pole stage of development probably have higher food values than mature beech leaves. Usually deer in such areas have a grassland economy, and forest has a supplementary role. A light deer population is able to keep a forest of this type denuded, but deer here are very much more easily destroyed than in high rainfall areas. Soil erosion problems are essentially similar in both wet and dry areas, but in the latter, scouring and consequent slipping are generally less.

Validity of Conclusions

The evidence on which the preceding paragraph is based has been drawn in the main from the Tararua Range which has changed during the past twenty years, section by section, from stable dense forest to depleted and rapidly eroding deer range.

The Tararua Range has been regarded as a standard area, with which it has been possible to compare most of the deer country of New Zealand either from brief personal visits, or from written and oral

Destruction of sub-alpine scrub by deer.

Soil loss due to increased run-off occurs in gully below.

Tararua Range.

[Photo: R. I. Kean.

reports of wildlife field officers. Observation and deduction during this period have been aided by evidence derived from the adjacent Haurangi State Forest which had been eaten out many years before.

Population and Control

From experience with deer and deer country, it is possible for a fairly sound estimate to be made of the number of deer which can be shot in one year on any large land area, but an accurate estimate of deer population, according to present indications, is impossible in New Zealand. Under most forest conditions, restriction of visibility, and deer movement make estimates unreliable, but probably the greatest source of error is caused by deer not being readily seen until population density has reached saturation point.

During the early days of organised deer control in New Zealand, a deer district would be shot intensively until numbers were reduced to an apparently low level, and then spelled while work was carried out in another area of high population. Rapid increase of deer again in the first area was thought to be due mostly to immigration from inaccessible back country. Some immigration certainly occurred, because numbers dropped on some unshot country, but it is the writer's belief that repopulation was due largely to the natural increase of a large hidden population. In other words, shooting considerably reduced the visible surplus, but it had much less effect upon actual population numbers. This phenomenon of sudden concealment is only the reverse of the deer irruption process previously described.

Some natural control of deer can occur in beech forest if adjacent grassland becomes covered with snow deep enough to inhibit movement, for winter deaths of deer of all classes are reported, but survivors again flourish with change of season. Except in mineral-deficient country, which is rare, malnutrition of deer seems hard to substantiate, and deer in eaten-out country seem to be able to maintain good condition on scanty diets of withered herbs, fallen leaves, adventitious shoots and a little grass and sedge; the persistence of numbers of deer in eaten-out areas is regarded as evidence that food is seldom a limiting factor, and that topography, cover, and altitude weigh more heavily in the constitution of a good deer area.

The Harrier Hawk under Investigation

THE Animal Ecology Section of the Department of Scientific and Industrial Research in conjunction with the Ornithological Society of N.Z. is carrying out an investigation of the harrier hawk by marking the birds with metal bands on their legs. Harrier hawks have been ringed by research workers, and the public is asked to co-operate in the investigations now taking place.

The bird is of considerable interest as a predator of both game birds and rabbits, yet very little is known about its behaviour and habits. Marking these birds should provide much information not only about their movements but also give some indication of how effective is the bounty system that is worked in some districts to control their numbers.

Already some results have been achieved from this study, and a hawk which was marked in Hawkes Bay in April this year was found near Lake Waitaki, North Otago, over 500 miles away, a month later.

The Department is asking that anyone finding a marked bird will send the ring to the Dominion Museum.

The Society has always been doubtful as to whether these birds' service as predators of vermin is outweighed by their destructive tendencies which has caused them in many districts to have a bounty placed on their heads. This doubt the Society has expressed from time to time in print. This investigation should be valuable if it can in any way settle this point, and members are asked to co-operate in any way they can.

McPherson's Bush, Turakina Valley

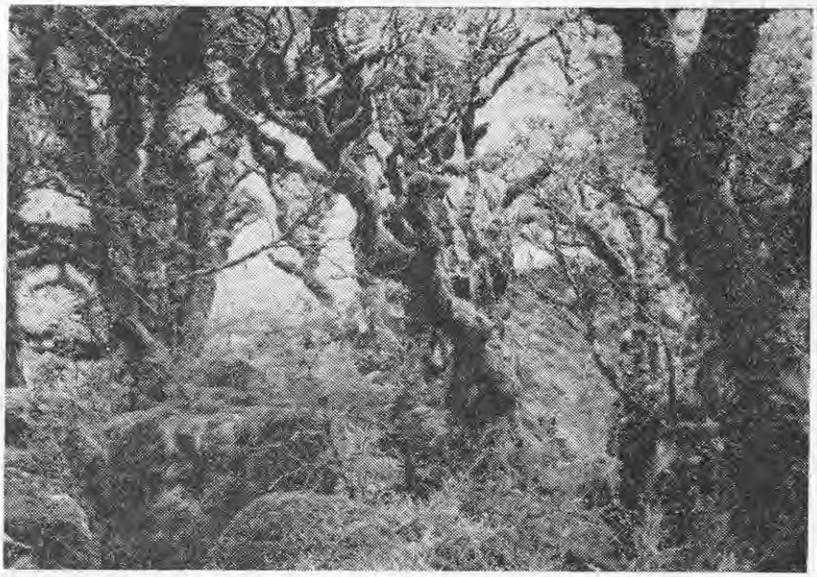
IN our previous issue we published a report of the transfer of this Bush from the Rangitikei Scenery Preservation and Tree Planting Society to our Society to be held in Trust for the use of the public as a scenic reserve.

Owing to circumstances which have since arisen our Society has agreed to a modification of the terms of the Trust so as to provide that the two Societies be co-Trustees. In effect, this will make little difference. The Bush will still be preserved as a scenic reserve, and the Rangitikei Society will be responsible for its maintenance in the meantime.

The Goblin Forest

By DR. J. T. SALMON

NOT many New Zealanders know of the existence in their country of beech forests of a type such as the one which has been nicknamed, by the few who have penetrated it, the Goblin Forest. In this article Dr. Salmon describes the stunted trees, abundant mosses, and the eerie silences which justify the name.



In the Homer and Gertrude Cirques, overshadowed by the great bulk of Mount Talbot, are small patches of stunted beech forest. These for the most part cling to the rocky sides of the cirques or struggle to disguise the great heaps of stones, some as big as small houses, which have flaked off from the sides of the surrounding mountains. One of these patches has acquired the name of "Goblin Forest". I first entered it with the late George Howes of Dunedin. We were working the Homer area investigating the insect fauna of these mountain regions. Howes had been there once before but it was my first visit. One day, in the Gertrude, Howes asked me "Had I seen the goblins?" On my replying in the negative he led the way to the opposite side of the cirque where we entered an extraordinary and fantastic area of mountain beech forest composed of stunted trees, none of which were more than 12 to 14 feet high. Their branches, gnarled and twisted by the rigours of the climate, appeared through festoons of lichens and moss, or rose

[*Photos by Author.*

(*Continued opposite.*)

Proposed Tararua National Park

A MOVEMENT is afoot to have the whole of the Tararua Ranges at least, and if possible also its extension via the Rimutakas to Palliser Bay, declared a National Park.

The sponsors are the Tararua National Park Project Committee with headquarters at Masterton. Included in its personnel are members and ex-members of Catchment Boards, River Boards, Electric Power Boards and Tramping Clubs. This Committee has circulated an attractively produced illustrated pamphlet in support of its case to local bodies, tramping clubs, Members of Parliament and others.

In this it points out that milling in the upper reaches of the rivers has left along almost the whole eastern side of the Tararua Ranges, right up to the foothills in many places, extensive shingle terraces, through which all the main streams from the Ranges must pass, the rapidity of the water run-off after heavy rains being greatly increased. It mentions that the botanist member of the Wairarapa Catchment Board some years ago recommended that at least 25,000 acres of the eastern foothills of the Ranges be resumed and either replanted or allowed to revert to natural growth. More licenses to mill bush further inside the area have, however, since been granted. It also quotes a combined advertisement of the N.Z. Forest Service and the Soil Conservation and Rivers Control Council in the Wairarapa Press, addressed to residents of the Wairarapa, which says: **"The forests of the Tararua Ranges are watershed protection forests which must be preserved. They are necessary for the conservation of water supplies for many towns and settlements, to minimise the flooding of fertile land and to prevent erosion".**

The President and Secretary of our Society and the Wellington Regional Planning Officer were invited to be present at a meeting of the Committee which was held on Sunday, 20th April, at Featherston, the time and place being arranged by the Committee for their convenience.

The Committee is asking for support for its case and the response so far has been encouraging. It hopes to send a deputation to the Hon. Minister of Lands to lay the case for a Tararua National Park before him.

---

goblin-like from over or behind great blocks of stone which themselves were all completely swathed in the most luxurious growth of moss, lichens and fern I had ever seen. As we entered we seeemd to pass into another world, cold, damp and eerie in its deathly stillness. I remember as we entered being startled by a small bird flying close in front of me, a couple of feet away, and making no sound; at the same time Howes' voice faded away, absorbed in the great blanket of moss and lichen that clothed this extraordinary place. I dropped my camera tripod but did not notice it as there was no sound of impact with the ground. Walking on this carpet of moss and lichen was almost noiseless and to talk to each other we almost had to shout. I retraced my steps to find my tripod buried in the moss where it had fallen, with only its head showing—it was a wonder it did not disappear entirely. I found I could bury my arm to the elbow in the moss at the spot where it had fallen. Looking around at the fantastic shapes of trees with the equally fantastic festoons of moss and great growths of lichen, one's imagination could run riot and as we walked through and out the other side I agreed that the place was well named the "Goblin Forest". Where it grows rainfall is over abundant, about 250 inches per year. This, enhanced by the mist produced by falling avalanches and cascading streams, together with a situation relatively sheltered from wind, has produced an exceptional climatic condition in which has developed this most extraordinarily luxuriant growth of moss and lichen that gives the spot its character. It was a particularly wet season when I first saw it. A few years later I visited it again, the season was drier, the growth less luxuriant and the effect less weird. Probably it varies with the nature of the season.

No doubt there are many spots in the mountain fastnesses of southern Fiordland of the same character.

Along the Track

NELSON.—On April 5th last I was staying about 6 miles from Nelson and during the morning set out to walk the 80 yards or so down to the gate. The pathway was closely bounded by a wire fence, and before I had covered a third of the distance there was a swoop and a flash, and a shining cuckoo perched close by on the wire. As I came up, it rose and perched a couple of yards further on, and so it did all the way to the letter box. It was a fascinating experience! Several times the bird was so close as to be almost touchable; and it was wonderfully marked, so brilliantly bronze green above, and so strongly and strangely barred across the underbody.—*Miss L. M. Hunter-Brown.*

[*April 5th is unusually late for a shining cuckoo to be still in New Zealand and it was probably one of the occasional ones which stay behind and winter here.—Ed.*]

AUCKLAND.—It has been very interesting watching a little family of pukekos at the edge of a raupo swamp in Northcote. After first noticing parent birds with four chicks at the outer edge of the raupo, we visited the scene weekly and were rewarded one day by seeing them being fed. Wading into the shallow edge, the parent birds would dig down vigorously at the roots. After working hard for quite a few minutes, they would manage to tear a piece of root off and bringing it to the surface, would walk to the more solid edge and tear small pieces off (apparently holding it down with one foot while doing this) and feeding the young chick who had been eagerly watching this procedure. He hastily swallowed each piece, standing by till the next tit-bit was ready.

In the meantime the other parent had managed to get quite a large piece, about 4 inches long, and the other chick followed his parent hastily to receive his portions. Only two chicks were seen this day and on subsequent visits, so we wondered if the others hid away after being fed or if the family was reduced by eels.

Now they are three-quarter grown and only occasionally seen when we go to visit them, but as it is quite a large swamp it affords them a good sized area to feed in. They reminded us of the pictures of the notornis chicks with their black down and long legs. Next season we hope to see another family being fed and reared.—*A.* and *J.P.*

TAUPO—Morning meal to music.—Some years ago, I had the pleasure of a prolonged visit to the sanctuary, the Little Barrier Island, and while there, saw and heard something memorable and beautiful, a bellbird feeding its young. On a trellis-work outside my bedroom window, every morning, the mother bird brought her two tiny "chicks" always too early for me to see them arrive; what I heard first was the sweetest little bell-note imaginable, and there, within about four feet from my window, were a mother and two babies, the two tiny ones balancing carefully on the cross bars, and apparently practising baby bell notes while they waited for the mother's return with their dainty morsels. I could never decide what the particular provision was—it appeared to be mainly liquid, and it was amusing to see how carefully the mother served each in turn, pushing the greedy one—the boy, no doubt—gently aside when he tried to get more than his share. There being no danger from cats or disturbing humans, I had the pleasure of seeing this, day after day, until I suppose the small ones gained a certain amount of confidence—they got plumage fairly rapidly—and went with their mother to learn to forage for themselves.—*M.L.*

[*An ornithologist to whom we referred this tells us that he has never heard young bellbirds utter any bell-note, but a competent observer tells us that he has frequently heard morning after morning a bellbird practising before breaking into song; upon each occasion three or four false starts would be made before the songster apparently felt attuned to go through the whole theme. The young birds must have left the nest and been already able to fly; the mother bird would not have "brought" them to the trellis.—Ed.*]

STRATFORD.—I got back home near 7 p.m. after a long slow ride per passenger and goods train which left Taumarunui near 9.30 a.m. I do not like the express as it traverses the best part of the journey in darkness and it is impossible to see any of the country on the way. From No. 11 tunnel to Tangarakau the scenery is really magnificent, about the best I have seen anywhere in the North Island from a carriage window, a real riot of forest covered hills.—*M. I. Armstrong.*

A Builder Looks Back

By B. IORNS

IN the life time of many present day builders, timber was so plentiful in this country that it was considered a virtue to export it.

Thus we read that in the year 1888 over 43,000,000 feet of timber was shipped away from New Zealand, over 30,000,000 feet of it being kauri.

For the six years from 1888 to 1893 well over 220,000,000 feet went overseas.

The additional amount that has left our shores in the 59 years that have elapsed since 1893 would all add up to a colossal total of irreplaceable timber lost to this country.

Such prodigality coupled with the reckless burning of valuable timber in the overhasty clearing of land could only have one result.

Up to 40 or 50 years ago, a builder founded a house on rows of piles of the best heart timber, be it totara, silver pine or kauri, and close walled these piles with boards to the ground.

The outer walls of the house, he covered with weatherboards or rusticating with liberal stopboards covering all the corners.

Verandah and porch floors and steps were all of heart timber.

All the inside of the walls and ceilings he closeboarded with rough and match lining, doors were heavy and solid with wide architraves and skirtings; ceiling heights were 10, 11, or 12 feet.

Since that time the steadily decreasing quantity and quality of timber available challenged the builders' powers of adaptiveness, substitution and invention.

This challenge has on the whole been fairly well met, and now we find that the equivalent house has concrete foundation walls and piles, concrete verandah and porch floors and steps.

Fibro cement sheets, asbestos sheets, rough cast, or brick veneer cover the outside walls or maybe even the walls themselves are of concrete blocks.

On the inside walls and ceilings, plaster sheets and wallboards have full sway, and ceiling heights have been reduced to little over 8 feet. Doors are now a skeleton framework of pinus insignis covered with plywood, with a minimum of architraves and skirtings. Where once he put wide kauri sink tops and kauri wash tubs, he now chooses between stainless steel, terazzo or plastic for his kitchen sink, and either concrete wash tubs or straight out washing machine for the laundry.

The 5 or 6ft. close-board fence that once surrounded every section he has replaced with one of concrete posts and wire and netting.

No longer is he a builder of wooden bridges or culverts, reinforced concrete has pushed the few remaining ones almost into the historical relic class whose demolition the builder eagerly awaits as supply of valuable timber.

When our builder is finally finished with this changing world, he will then have the alternative of taking his last ride in a fibrous plaster coffin.

However this is a legitimate field that still stubbornly resists the substituter, for in spite of the fact that such plaster coffins fulfil every requirement, our annual dead take with them up to ¾ of a million feet of first class timber to be buried in the ground or burned in the crematorium, enough to build almost 100 houses a year.

Our conservation forests have been whittled down to well below the danger line, but still this waste and export goes on.

Necessity is the mother of invention and man is an adaptable creature, but so far no one has invented any synthetic or plastic trees, or given us a prefabricated forest to put on our catchment areas or watershed hills.

With few exceptions, all wildlife must have cover of some sort—cover in which to conceal its homes, cover into which it may dart when attacked by an enemy, cover in which to rest or sleep or in which it may find protection from the elements.

Without exception, all wildlife must have adequate food at all seasons in order to survive.

Dr. H. H. Bennett in "Soil Conservation".

"Te Waha o Rerekohu"

WE have received the following information from Mr. Jackson, Head Teacher of Te Araroa Maori District High School, in whose grounds the big pohutukawa of the above name, illustrated in our last issue, stands. The information was given him by Mr. W. A. Brown and Mr. E. Patae, members of the local tribal committee who in their turn received it from an old Maori gentleman named Tu Terangiwhiu Puha, who has an extensive knowledge of the local history and genealogy.

Under the Maori rule of possession, the land which a Maori wished to keep must be occupied, and custom required a Maori to keep his "fires burning" on the land.

The land on which the tree stands was given by Hati Houkamau for the building of a school, and the fact that there was no protest is proof that it had been continuously in occupation since the day of his ancestors. His ancestor was Rerekohu, a descendant of a senior line from the Paramount Chief Tu Whakairiora after whom the tribe is now called. The Ngati Manu and Ngati Harau, tribes which were "offspring" of the chief Whakairiora but not of a senior line, brought food to Rerekohu, whose house, near the pohutukawa, was called Poho Tawiriwiri, and whose store house where the food was kept was called Pataka. For that reason the pohutukawa was given the name of Te Waha o Rerekohu (the mouth of Rerekohu).

When Hati Houkamau gave the land for the school, he stipulated that Te Waha o Rerekohu, which is regarded as *tapu* owing to an incident in an inter-tribal war, be preserved. There is a school rule that pupils do not touch or climb the tree.

As genealogists hold the opinion that Rerekohu lived 450 years ago, the tree must be of considerable age. It is also of interest because of the fact that Sir Apirana Ngata was born "under" Te Waha o Rerekohu; his parents lived nearby.

The Scilly Islands Pohutukawa

ON reading the article by R. B. Godward in our last issue, Mr. William Hammond, Thorton's Bay, writes: "An early resident of Thames, Mr. J. W. Hall, chemist, was a great lover of our New Zealand flora and fauna. He had some acres of native bush to which he was constantly adding. *Podocarpus hallii* was named after him. He was keenly interested in raising the native plants from seed.

"Many years ago he told me how he had forwarded seed of the pohutukawa to General Dorrien Smith of the Scilly Islands and how years afterwards he had received word that plants grown from the seed he had forwarded were in full bloom.

"Mr. Hall said that he had also sent seed to the Riviera and other places on the Mediterranean but had not heard whether the attempt to establish the pohutukawa in that locality had been successful."

A reference in Kirk's "The Forest Flora of New Zealand" shows that Hall probably commenced his plantation in the early 1870's. General Dorrien Smith, who was in New Zealand in 1909 and at that time probably in his 50's or 60's, would be a descendant of the Augustus Smith mentioned in Mr. Godward's article.

Another Friendly Pigeon

MR. HAMMOND also caps the "Friendly Pigeon" story in our last issue with another. "We had a very stormy and wet night, and next morning we found on the roadside a native pigeon, in an apparently dying state, wet through and unable to move. We managed to get some warm honey water down its throat, wrapped it in warm flannel, and placed it near the fire. In about 2 hours it had revived and ate some cotoneaster berries. On the following day it was quite lively and made itself at home on the back of a chair. We got more berries from the bush and its appetite seemed hard to satisfy. One morning it was perched behind me as I sat at the breakfast table. I had almost finished a cup of tea when the pigeon fluttered on to the table and sipped the remainder of the sweetened tea.

"We gave the bird full liberty outside. It rested on a post beside the lawn. It would flutter from the post on to my shoulder, then fly to the ground and sip dew from the grass then fly back to the post. It was not at all afraid of visitors, but would perch on their fingers and allow them to stroke it. It became quite fond of berries from the African box thorn. When I was confined to my bed, suffering from a cold, the pigeon walked up and down on the window sill, then flew away and we saw no more of it."

5232 Opossums in Three Months

MR. G. G. ATKINSON, chief ranger to the Egmont Park Board, after an inspection of the opossum menace on the West Coast of the South Island reported to his Board that the southern rata in bloom would not be seen again, and that one man on the West Coast trapped 5232 opossums between January 12 and March 16 of this year, his biggest kill in one day being 235.

Sanderson Sanctuary

	£	s.	d.
Received to date	293	2	2
Mrs. F. E. H. Martin		10	0
	£293	12	2

Quarterly Newsletter

Date.—The news in this Newsletter is that received in the office of the Society up to 30th June.

Tauranga Primary School.—The large and active Forest and Bird School Group in this school, under the guidance of Mr. P. Furse, sends us frequent accounts of its activities. Recently a cutting from the local paper reached us of an essay competition held for the members in which two nine-year-olds, Anne Wishart, and Lynne Gilbert, scored more points than anyone else necessitating the abandonment of an idea of dividing the competition into senior and junior divisions; Ian Cameron was highly commended.

Nature Question-Time Broadcasts, Prize-winners.—Commencing with May of this year the N.Z. Broadcasting Service is giving a book prize every month for the best question of the month. The winner of the prize for the first month, May, was Master Guthrie Beatson of Ngatimoti, Baton, Motueka. The winner of the prize for June was Sonia France of Roseneath, Wellington.

Auckland Section.—A most successful field day was held at Motuihi Island on 10th May. More than ninety members were present under the leadership of Mr. R. B. Sibson, and spent the day studying the birds of the Island. The party met Mrs. Hilda Ross, M.P., who was visiting her son on the island. Introduced by Sir Alexander Young, Mrs. Ross spoke of the important part young people had to play in such Societies as ours. A picture of this episode appears on the inside back cover of this number.

We have received a copy of the Section's attractively printed card programme of events for 1952/53, an interesting list of Lectures and Field Days which caters for the tastes of all types of members. The preparation and organisation of such a programme must entail considerable work and the officers of the Section responsible are to be congratulated.

Auckland's first evening function of the year, held in the Zoology lecture theatre of the University, took the form of a Brains Trust. The panel, chaired by Mr. W. T. Slater, comprised Mrs. B. Knight who answered botanical questions, Mr. E. G. Turbott entomological, Mr. R. B. Sibson ornithological, and Mr. A. W. B. Powell marine life. Great interest was shown by a good attendance of members. Afterwards Mr. Noel Gleeson showed some beautiful films of the Firth of Thames which were much appreciated.

McPherson's Bush, Turakina.—On 22nd March a party from the Rangitikei Scenery Preservation and Tree Planting Society, joint Trustees with our Society of this Bush, paid it a visit of inspection and heard Mr. McLeay, a neighbour of Mr. McPherson's, describe how before it was fenced he could drive cattle through on horseback, whereas now in the short space of eight years astonishing growth had occurred, which should make botanists watch the development of the Bush with keen interest. After tea, Mr. G. L. Marshall, Patron of the Rangitikei Society, presented to Mr. McPherson an album of photographs of the Bush as a token of his Society's appreciation of the gift.

Christchurch Section.—Miss Jennings has been appointed Honorary Organiser of the Section's activities.

On 29th March an evening meeting organised by Miss Jennings was held at Redcliffs. This meeting filled a good-sized hall with an appreciative audience, a tribute to Miss Jennings' enthusiastic work, particularly among the young people of Redcliffs, to which suburb she has recently moved. Mrs. W. S. MacGibbon showed colour films of the Southern Lakes and Sounds, Christchurch through the seasons, and the Section's 1951 outings. Mr. J. T. Erridge told the story of his pet crow, while Mrs. MacGibbon showed films of these and other birds on Mr. Erridge's property. One of the shorts was of Mrs. MacGibbon wearing clothes taken off a dummy on which pots of sweetened water had been regularly placed, with the result that she was covered with silvereyes, who, provided she stood still, showed no fear.

On 16th April, the Section held a meeting at which Mrs. MacGibbon showed the film of Christchurch throughout the seasons and the Section's 1951 outings which she had previously shown in Redcliffs. Professor McCaskill showed and commented on, colour films taken while tramping through the Haast Pass.

Above is a photograph by Miss Aldred of the lunch interval at a successful field day held by the Section at Glentui on 19th April. The snap only embraces part of the party, and we are not sure of the nature of the activity in progress in the centre!

On 17th May a social evening was held for the Redcliffs members, at which, in spite of rain, 70 were present to hear Mr. Norman France, a Missioner, give an illustrated talk on China, India and the Pacific Islands. The Chairman of the Christchurch Section, Mr. Bailey, gave an account of the objects and work of the Society, and Miss Jennings told of her work among the young people and her efforts to obtain a piece of land in the district for the planting of native trees.

The Section held a meeting on 18th June at which Mr. W. W. Leonard, who is motorcycling round the world with a camera, showed scenic films. The contrast between two high-vantage-point films, one of a Canadian city almost invisible under its trees, and one of Auckland, like other New Zealand cities with all its buildings showing, was remarkable. Mr. Leonard gave the same talk 10 days later, in a packed house, to Miss Jennings' Redcliffs Group.

Junior Along the Track

Timaru.—On Labour Day last year, I happened to catch sight of a sparrow chasing a wax-eye. They chased each other round about until finally while the wax-eye had half turned to see its adversary, it banged into a wooden fence and clung there. I took it inside and gave it some honey and water which it drank when I left the room. After a while it flew away again.—*H. Willberg,* 13 years.

Hatters Terrace, Westland.—Last November a pair of long-tailed cuckoos were seen every day flying from tree to tree in the school grounds. They continually called to each other.

During lunch one day, we were sitting on the school steps watching one of the cuckoos. A blackbird flew into the tree and immediately began its sharp protesting notes. Suddenly we were startled by sharp cries and then there was silence.

The cuckoo then flew to the plantation with the blackbird in its beak.—*Brian J. Talbot.*

[*The Head Teacher saw this too.—Ed.*]

Inglewood.—In the bush above my home, close to the Mt. Egmont reserve we found a Harrier Hawk's nest. The nest was in a swamp clearing in the bush. The nest was just a platform beaten out in a clump of toi-toi. It was lined with rushes with some dried grass as well. On the platform we found two young hawks and one white egg about as big as a good size bantam's egg. It was very interesting watching the young birds grow, and it was great the way that they used to sit back on their tails and open their beaks and claws ready to strike at us if we went too near them, but they made no sound at all. We took several snaps of them in different positions.

After some time the young birds left the nest and lived on a big log not very far from the nest. When we went near the young birds their parents flew overhead or sat on a tall tree screaming at us. When we saw the hawks the last time the larger one of the two flapped his way up on to a small waiwaka tree and glared most fiercely down at us.

One day my brother saw one of the parent birds capture and carry away a stoat to its nest.—*Florence Perrett,* 13 years.

[*We publish one of Florence's snaps below. It would be quite possible for a harrier to deal with a stoat, though we have not heard of this before. Look at the portrait inside the back cover!—Ed.*]

Marton.—I am at Nga Tawa, a boarding school in Marton, which has a native patch that belongs to the school. In the native patch are native trees and shrubs of N.Z., e.g., rimu, kowhai, red beech, totara, whau. In nature study we sometimes go down to it and learn the names and what they look like, so we can recognise them at any time.

Often when a girl is leaving she buys a tree and plants it in the native patch. She looks after it till she leaves, and then another girl adopts it.—*Priscilla Williams,* 11 years.

[*A good idea for other schools.—Ed.*]

Kerikeri.—If you rub a cork on a flat bottle with water on the side you are rubbing, it makes a noise like a fantail.—*Deirdre Dwan,* 12 years.

Oamaru.—Last weekend, when, at Kakanui, I was returning from a swim across the river basin I surprised a medium sized grey-brown bird with long legs which I think must have been a dotterel. It was feeding along the river bank and seemed undisturbed by my presence. I swam to within a yard of it and followed it as it moved along the water's edge with a little running step. I watched it for about three minutes then had to stand up because of shallow water whereupon it ran for about three yards and then flew a little way still seemingly quite unafraid and uttering no sound. I was interested to note that when its wings were spread they revealed a creamy-white band following the line of its fairly long narrow wings. When it stopped flying it continued pecking among the stones completely ignoring me as if nothing had happened. —*Christine Allan,* 15 years.

[*This would be a wader of some sort. Depending on its size it could be a N.Z. Dotterel or one of the larger migrants such as Hudsonian Godwit, especially if beak and legs were noticeably long.—Ed.*]

Mauriceville.—One day I went over to the orchard where I heard a noise which sounded like a mason bee but louder. I went home and told my father. After a few days he went over and had a look. He found where there was a hole in the tree. Suddenly a kingfisher flew out. It must store its food because there was a lot of rotten meat and rubbish in the hole.—*Dawn McGovern,* 12 years.

[*Kingfishers have a burring or hissing note, and the sound could have come either from the adult or from young ones which were probably in the hole. A kingfisher's nesting hole is most insanitary.—Ed.*]

SOWING RARE NATIVE PLANTS

Leon Hampson-Tindale, whose address is "opp. Park Rd., Western Hutt Rd., Lower Hutt", writes:—

I am a junior member of the Society, and I have made a hobby of collecting seeds of rare native plants, e.g. taurepo, and planting them in bush where they have not grown previously. If you know of any other junior members interested in this, will you please ask them to communicate with me for the purpose of "swapping" seeds.

Will any junior interested write to Leon direct.

In bush which has been so changed by man or by animal pests that it is never likely to regain its natural state and in plantations or gardens, this is a very worthwhile activity and we congratulate Leon on it. We feel, however, that we must sound a note of warning where untouched bush is concerned: to plant strange seeds in that might not be so good—it would be going contrary to nature.

The Wonderful Wanderings of Wiremu Double-you Weka

By E. H. C.

Chapter 9.
CARELESS GIANTS

WIREMU walked whistling along the path; it was a lovely morning; the sun filtered through the leaves, filling the bush with soft greenish light. You could not help singing on such a morning as this!

Then he stopped! His face clouded as he gazed in perplexity at a tree which stood barring his way. Again the many puzzling things that had worried him for the past few days flooded his mind. This tree, sick and bedraggled like so many others, its bark cut and scarred as if some huge monster, with razor sharp claws, had scratched its trunk across and across. Other trees had vanished leaving only their stumps—smooth stumps that showed none of the jaggedness of a fallen tree—something must have taken those trees. There were wide paths never seen in the deep dense bush from which he came; there were clearings, too, where the undergrowth had been broken and trampled as if some great animal had used them for a stamping ground. All about him the bush was thinning; the number of young trees coming on to take place of the old were few; the dense impenetrable tangle of creeper and fern, which Wiremu knew, gave place to just a few scattered plants. Surely some gigantic creature was invading the bush, damaging, breaking and retarding its growth, and threatening the bush folk by reducing their homes and larder. What could it be? Could Wiremu do anything against someone strong enough to remove whole trees?

Just then he heard voices. But what voices! Wiremu shivered; they were far louder than the voices of any bush creature and with them came a rythmic pounding as of huge feet. Was he about to see the monster? He shrank behind a fern, curiosity mastering his wish to flee, and gazed in fascinated terror at the bend round which this new horror must come. The voices grew louder, nearer and nearer tramped the heavy feet; the bushes shook; Wiremu froze in dreadful expectation.

Then the bushes parted, leaving Wiremu staring straight into the faces of two of the biggest and queerest animals he had ever seen. They were straight and thin like tree trunks. They had two legs like a bird but with great clumsy blocks for feet, and thin featherless wings with claws at the ends that flapped as they walked. On their heads grew tufts, like limp grass, which hung about their white featherless faces.

Wiremu stared in amazement; could it be true? Surely they fitted his mother's description. Yes it must be, Wiremu was sure of it. They were men! Men like Mr. McGillicuddy, who had given his ever-so-many-greats-grand father the name that Wiremu now bore.

Wiremu was fascinated. Now they were gazing at the tree—perhaps it worried them too to see the bush being spoiled; perhaps they would help him drive out the cause of the damage. Men were the birds' friends, Wiremu remembered how good they had been to Wiremu the first, he remembered his little friend Sydney Silvereye's stories of the scrumptious food they put out on their bird trays in the great city.

What were they doing now—what was that sharp thing one had brought out. On No! Not men—it couldn't be! But sure enough there right before his eyes one of the two was cutting deep into the already sick tree.

Just then Piwakawaka, the fantail, flew out of the bushes and darted and twisted about the two men. Wiremu called him. "Are they really men," he asked. "I thought men were our friends." "Oh, these are only young ones, boys they call them," answered Piwakawaka. "They're my friends all right, see how the clumsy things have disturbed all the insects for me." "But look what they are doing." Piwakawaka looked grave. "They're not purposefully hurting the tree, they're cutting their names. They just don't think. They leave their rubbish about too, they don't realise how horrid it looks—come and see."

Piwakawaka led Wiremu to a pretty clearing. Wiremu almost cried as he gazed about him. Rubbish lay everywhere. "It's the stuff they wrap their food in and the food they don't want," said Piwakawaka. "It's such a shame the way a few careless people spoil places for everyone else."

With that Piwakawaka flew off leaving Wiremu to examine the horrible mess. If it was food perhaps he could eat it and tidy things up a little. He scratched and poked about for an hour, eating all he could, and certainly the glade looked much better. Then he stopped—what was that? Then again! Repeated by many voices, cries of terror rang everywhere. Hundreds of birds flew past him straining their wings to the uttermost in frantic haste. Piwakawaka flew close to Wiremu, his eyes starting with fright. "Fire," he shrieked, "Fire."

"What is it?" "Where?" said Wiremu. "Fire," gasped Piwakawaka, casting a terrified glance behind him. "It's hot, hotter than the sun, men use it to make their food hot and if they don't stamp it out or pour water on it to kill it, it grows and grows and eats everything, all the trees and us too if we don't fly fast enough, run!" and Piwakawaka darted into the bush.

Wiremu looked round. Where was this new enemy? All he could see was a low cloud or perhaps mist, hanging over the trees. But in another minute he too was fleeing for his life, for bursting through the cloud and rushing towards him came a great roaring monster that grew bigger every minute.

(*And in next issue you will read what happened.*)

NEW LIFE MEMBERS ENROLLED SINCE LAST ISSUE.

Brandon, A. de B., *Heretaunga.*
Brown, Alan N., *Wanganui.*
Dalrymple, H. W., *Bulls.*
Duncan, J. D. G., *Heretaunga.*
Kahn, Claude, *Wellington.*
Thomas, Mrs. M. M., *Christchurch.*
Thomson, H. C., *New Plymouth.*
Young, D. M., *Wellington.*

NEW ENDOWMENT MEMBERS ENROLLED SINCE LAST ISSUE.

Bauchop, Mrs. M. J. E., *Havelock North.*
Berridge, R. K., *Taka Taka.*
Bohmer, Hugh, *Wellington.*
Burrell, H., *Auckland.*
Duke, Mrs. Harry, *Auckland.*
Fanning, Leo. S., *Wellington.*
Fisher, W. J., *Christchurch.*
Grose, T. S., *Christchurch.*
Hay, Hon. Mr. Justice, *Wellington.*
Pepperell, Bruce, *Hamilton.*
Pottinger, G. M., *Wellington.*
Robertson, D. A., *Wellington.*
Smith, Miss G., *Rotherham.*
Taylor, Mrs. D. A., *Auckland.*
Telkin, H. M., *Havelock North.*
Terry, S. E., *Wanganui.*
Whyte, R. A., *Wellington.*
Webster, O. G., *Heretaunga.*

(The above Lists are up to 15 June 1952.)

(Numbers now are: Life Members 383; Endowment Members 455.)

A List of Life and Endowment Members is issued annually with the November Journal to adult members.

APPEAL FOR BEQUESTS AND SANCTUARIES

Is there any cause more worthy of bequests by public-spirited citizens than the objectives of the Forest and Bird Protection Society, which is working wholly and solely for the welfare of New Zealand, present and future? Here is a suggested form of bequest:—

"I give and bequeath the sum of ..... to the Forest and Bird Protection Society of New Zealand (Incorporated), and I declare that the receipt of the Treasurer for the time being of the said Society shall be a complete discharge to my executors for the legacy hereby given to such Society."

The work and record of the Society, the personnel of its membership and Executive are a good guarantee that the best possible use will be made of such bequests.

The Society would also welcome the responsibility of administering suitable sanctuaries.

CONTENTS OF THIS ISSUE.

Registered as a magazine at the G.P.O., Wellington for transmission within New Zealand.
Printed by Blundell Bros. Ltd., Wellington, for the Forest and Bird Protection Society of New Zealand Inc.

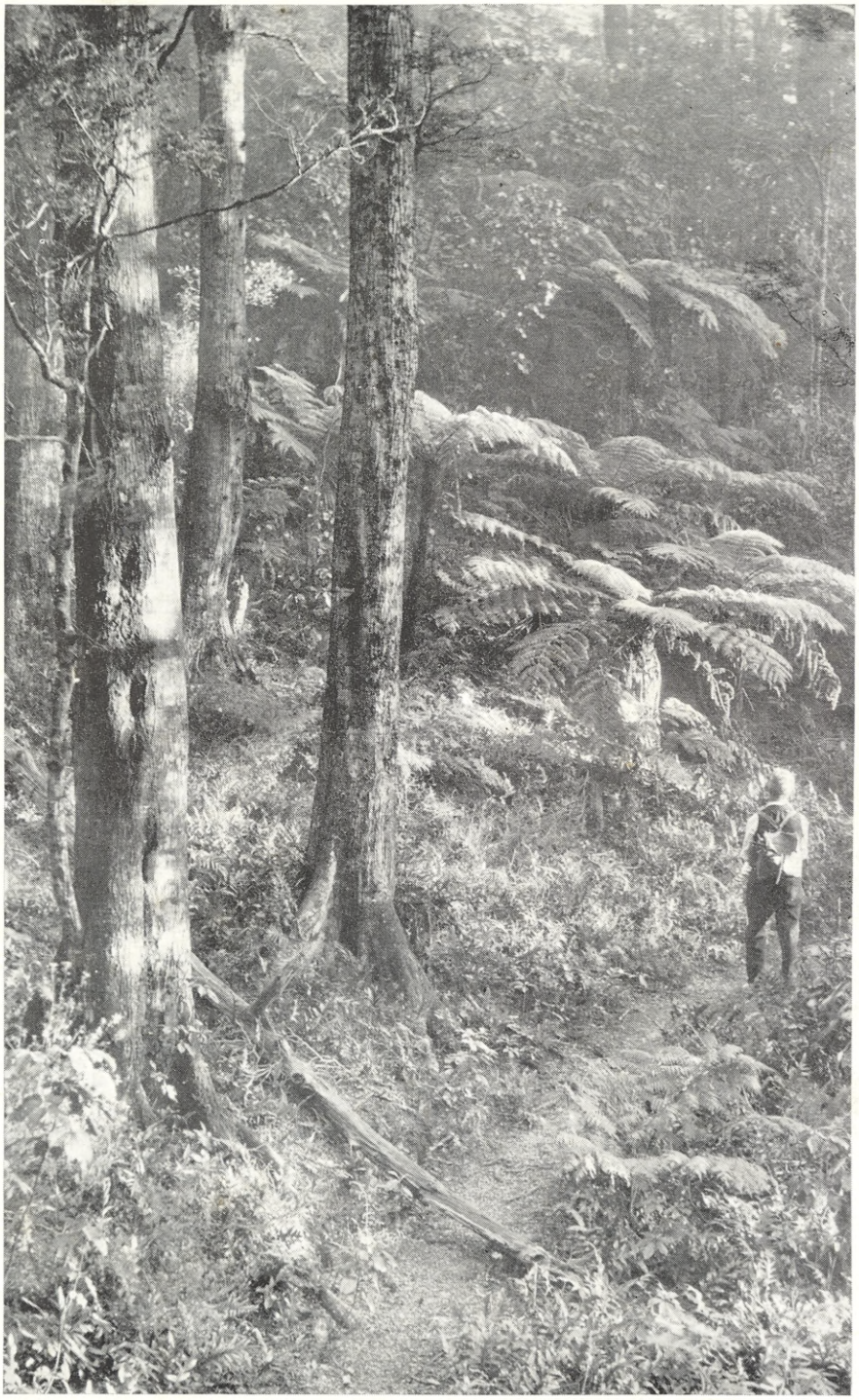
Portrait! Close up of young harrier hawk, by *Florence Perrett* (see "Junior Along the Track" notes).

Crop of ragwort, fireweed, thistle etc., which has taken possession in a clearing of the forest after milling operations. Slopedown Forest, near Clinton.

[Photo: S. V. Scelen.

Mrs. Hilda Ross, M.P. (left foreground) addressing members of the Auckland Section at Motuihi Island on 10th May (see Newsletter).

[Photo: Noelle Macdonald.



BEECH FOREST, YORK BAY, WELLINGTON.

[*Photo: Dr. J. T. Salmon,* A.R.P.S.