



# Forest and Bird

Issued by FOREST AND BIRD PROTECTION SOCIETY OF NEW ZEALAND (Incorporated)



N.Z. PIGEON ON POHUTUKAWA TREE.  
*1st Prize Native Bird Section. No. 2 Photographic Competition—T. W. Collins, Warkworth.*

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

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## CONTENTS OF THIS ISSUE.

	Page		Page
Problems Concerning Predation ..	1	Raincliff Pioneer Park ..	9
The Grass Grub Exterminators ..	2	The Late Frank Hutchinson ..	10
Wildlife Conservation ..	3	Awards for No. 2 Photographic Competition ..	11
Seed Distribution by Birds ..	3	The Caspian Tern ..	12
Carnivores and Raptores ..	4	Glimpses of Bird Life ..	14
Sportsmanship? ..	5	Guardian of the Forest ..	16
Erosion: New Zealand's Urgent Problem ..	6		

# PROBLEMS CONCERNING PREDATION

A TEDIOUS and slow method of exterminating a species is to destroy its natural enemies, i.e., its indigenous, not the imported or unnatural enemies. The natural enemy has lived in association with its prey for ages upon ages, without in any way impairing the numbers thereof, but having quite the opposite effects as even with the aid of its vigilant eye and guarded approach it is unable to catch the virile, wary and well fed individuals. The wounded, the starving and the diseased creatures are those which, being the most easily caught, are preyed upon. It must therefore be obvious that the natural enemy is nature's tool for maintaining the virility and thus the increase of a species. Biologists and ecologists recognise this fact, yet, the world over, we have the hunter, and the fisherman too, endeavouring to increase the numbers of creatures which they themselves wish to have the pleasure of killing by waging war on natural enemies (such as hawks and shags) which are the natural enemies of rats, mice, etc., and of eels, etc., respectively. In New Zealand, when one considers the vast numbers of cats, rats, hedgehogs, weasels, etc., that now roam the land, the efforts of those charged with the administration of game and fishing interests in the field to wipe out all natural and unnatural enemies read something like the well-known story about that good woman, Mrs. Parkinson. Rats, by the way, are scarcely ever mentioned, perhaps because it is not realised that while they are probably the most potent and most numerous of unnatural enemies of birds they are also the favourite prey of the harrier hawk. The story to which we refer, relating to Mrs. Parkinson, is well known and relates how this good housewife, the mother of several sturdy fishermen, lived on the Atlantic coast of England. She was scrupulous in house matters, so much so that the removal of her sons' boots was insisted upon before they entered the home. Her broom and mop were ever in evidence. One day, however, a great storm arose and swept the angry Atlantic billows far inshore and into her house. Mrs. Parkinson promptly seized her trusty mop. What for? To sweep back the Atlantic Ocean. A similar procedure seems to be evidenced when steps are instituted with a view to killing out cats, rats, hedgehogs, and the like. The whole country is over-run with such acclimatised unnatural enemies and the power of an autocrat with the means of the Bank of England behind him might be insufficient to combat the invaders. How then can the problem be dealt with? Let us turn our attention to natural, not unnatural and therefore unsafe, methods. Good soil produces most things that are good for desirable wild life and for ourselves. Poor soil, the result of erosion following forest mismanagement, produces a weed flora and fauna. Native vegetation growing on strategical areas to resist excessive water run-off is the only apparent means of widespread soil improvement. At the same time a few closed seasons in shooting, if not in fishing as well, accompanied by a largely "let alone" sort of policy would give nature an opportunity of re-adjusting matters in a degree, especially if nature's efforts were helped from all sides by a more than usually well thought out plan, such as the establishment of efficiently managed sanctuaries and inviolate refuges. But let the policy be firm against any further violent disturbances in nature such as result from efforts to establish foreign feral creatures. To read the story of past successfully acclimatised wild life is to read a story of disaster. In a large number of instances where some mammal, plant, insect, or bird has been purposely introduced it has later been declared a pest and had war waged on it; yet to-day many still pin their faith on the old methods of blind acclimatisation and transference of species from one locality to another. Evidently the desire to acclimatise is still unsatiated despite the grievous harm done by rabbits, deer, cats, rats, weasels, and goodness knows what else.

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*If a pioneer Englishman had discovered valuable coal-mines and opened them up; if an unskilled race had come afterwards and burnt the coal-mines, making clumsy attempts at working them, the feelings of the Englishman would match sentiments I have heard expressed by French foresters regarding the destruction of the kauri forests!—Sir David E. Hutchins, I.F.S.*

# THE GRASS GRUB EXTERMINATORS

(By Hugh Ross.)

THEY squat, or to be more exact, prop themselves against small mounds of brown sun-warmed earth while the hot north wind, boisterously ruffling their feathers, sends little dust clouds swirling about their unheeding persons. Contented, comfortable, three parts asleep, they rest after their meal. And they are *very* full! Gorged! Stuffed! Till the wonder is that those distended crops do not burst under the strain of the awe-inspiring loads.

Every morning from nine o'clock onwards they come. Individually, or by twos and threes, they appear, mere white dots against the blue horizon at first, but rapidly growing larger as they sail majestically nearer. By eleven o'clock something less than a hundred black-backed gulls have gathered to the feast. Only one item is on the bill of fare—grass-grubs. (Extra large! extra choice! ... succulent ... in fact, the tit-bit par excellence. Thousands of them! And all served ready to hand.) The "cafe" (so to speak) is a fifty-acre paddock in which the long neat rows of barren drills indicate a fruitless attempt to grow turnips. The grass-grubs are responsible for those bare drills, assisted, I might add, in no meagre degree by battalions of wire-worms. But it is the grass-grubs that have attracted the gulls. For these grubs are enormous specimens of their kind. All the season they have fattened on the turnips intended as winter feed for a thousand sheep. Now, however, the tables are turned. It is the seagulls who wax fat.

Just how the gulls first discovered the grubs I do not know. Shortly after the turnips were sown I noticed an occasional gull walking about the drills. This was in January. One bird in particular seems to be always there. He has a deformed leg and at the start was further conspicuous by a couple of ragged wing-feathers. The extreme tips were missing, and I think this had been caused by a rifle-bullet. Right through the year this gull, along with a gradually increasing number of fellow gulls, has patronised the turnip field, living very well indeed on the big grubs.

Now, in early November, when the scant few turnips are eaten off by stock, I pull down the brake fences. When I lift the rows of stakes lying across the paddock a few days later there are as many as a dozen grubs under every stake. The earth is literally infested with them. When we commence cultivation the paddock is transferred from a happy hunting ground to a positive eldorado for the black-backed gulls. Back and forth they follow the tractor and the deep-biting ten-foot tandem discs, discs that are bringing forth to the sunlight a horde of wriggling, helpless white grubs. This provender the gulls attack with gusto, flying at first, then running awkwardly over the broken earth, pushing and shoving eagerly to the fore, and evidently every bit as eager for a good hard bite at a fellow being as at a grass-grub. When the first burst of speed is over and their hunger is somewhat appeased, they gradually sort themselves out, and settle down to the serious business of obtaining a soul-satisfying meal. Then with enthusiasm fast on the wane and so full that navigation proves difficult, they move slowly here and there, selecting choice tit-bits with the air of connoisseurs. Eventually they give in reluctantly and ease their gorged bodies on the sward, resting in the manner already described. (Incidentally, while they rest, the battle is carried on by starlings, who bear the grubs off to a mile-distant wood to feed their young.)

A full three hours the gulls allow themselves for their siesta, refusing to so much as preen a feather by way of exercise. Sometimes, however, the tractor will be gradually working nearer to them, passing at length within a scant ten feet of a gull. With uneasy shuffling of wings he watches it pass him by ere he again settles down comfortably. Poor bird! He has a few moments' grace, and then the thunderous exhaust of the forty-horse-power engine intermingled with the clattering of tracks heralds the tractor's return. Manifesting more and more symptoms of unease, the seagull, still very reluctant to move, nevertheless gets to its feet. Still vacillating it suddenly beholds



impending annihilation in the speeding monster bearing down upon it, and with neck and wings outstretched hurriedly paddles out of harm's way, whereupon all the other gulls, craning their necks, watch for a moment or two ere with a well-we-are-all-right-for-a-while demeanour they settle back again. Ultimately one and all fly across to the freshly disced ground and recognised sanctuary. Or it may be that the old brown retriever snoozing on the tractor cover or in the shade of a kerosene drum, and dreaming of his lost youth, wakes up, spies the somnolent gulls, and takes upon himself the task of stalking them. Seeing that the paddock is totally devoid of cover this idea is fraught with overwhelming difficulties. Yet his cautious advance (belly to earth, steps slow and cautious) causes a ripple of unease to run through the would-be

prey. Heads are raised and in one or two instances the owners get uncertainly to their feet, look at each other, and then at the more-stealthy-than-hopeful advancing foe. "It's that infernal dog again, why can't he let a poor bird rest in peace . . ." The "poor birds" have perforce to take to the air. They are off, they alight nearby, as they usually do, and the pantomime is resumed. Occasionally they are chased aloft half-a-dozen times. Usually, however, after the third or fourth attack they adjourn to the extreme corner of the paddock at the time their tormenter slouches back to resume his snoozing.

About three o'clock the tractor is stopped for a smoke-oh. All the seagulls raise their heads again. "Hullo; afternoon tea on the go? . . . well, we do not mind if we do," and back they fly to resume their grass-grub extermination.

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## WILDLIFE CONSERVATION.

"The first great need for the future wildlife programme," said Dr. Gabrielson at the North American Wildlife Conference, held at Washington on the 18th March, "is more information, dependable facts and no guesswork . . . research must be continued and on an increasing and expanding scale." To attain the goal of adequate and suitable places in which wildlife may live, he emphasised the importance of acquiring for this purpose such areas as are geographically strategic with relation to wildlife distribution. Finally, he urged, education must be extended into many fields. He declared that "we have not yet developed an effective mechanism for getting conservation understanding and information into the minds of those who do not yet know and appreciate its basic significance to future human welfare."

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## SEED DISTRIBUTION BY BIRDS.

(By L. W. McCaskill.)

The experiments at the Christchurch Teachers' Training College have been continued. The wax-eyes were fed on syrup from May to August. The droppings on the food tray were sown in sterilised soil in September last and yielded the following seedlings: *Cordyline australis* (Cabbage-tree) 132, *Benthamia fragifera* (Himalayan Strawberry-tree) 14, *Cotoneaster serotina* 5, asparagus 1. Total 152.

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## THE LATE W. H. GUTHRIE-SMITH.

By the death of this great naturalist New Zealand loses one of its foremost authorities on bird life. The Forest and Bird Protection Society has much to thank him for in past years. He was a keen supporter and helper. An obituary notice will appear in the November issue.

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Procrastination and lack of unity of effort are the shortcomings which threaten not only progress towards the efficient management of forest and wild life matters, but the very existence of the Empire. The whole national wellbeing is involved in the care and preservation of a sufficiency of strategically placed native forest and wild life reserves. The management of these vital resources or any part of them is not an affair for shooters and fishermen, as it seems to have been thought in past years, but, as the wellbeing of every section of the community is vitally concerned in these matters, the call should be for efficient national management and a whole-hearted national effort for the national welfare.—E. V. Sanderson.

# CARNIVORES AND RAPTORES

## NATURAL AND UNNATURAL

By P. A. Taverner

(Condensed from "Bird-Lore" for January-February.)

IT is often difficult to make those unfamiliar with biological reactions realise that good can come to any race through killing its component members. In conversational discussions there is no other question that comes more often to the fore, or upon which scientific pronouncement meets with more scepticism. That predation is necessary to the well-being of wildlife is often regarded as one of those highly speculative theories in which detached scientists like to indulge but which common sense rejects.

The horse could never have developed its speed without the wolf at its heels and the fear of death in its heart, nor the grouse its camouflage and quick reactions without the vital threat of the hawk in the air. Lacking predatory pressure, all organisms eventually deteriorate, as is plainly demonstrated by the flightless birds and other degenerate forms found on many oceanic islands where predation is absent.

The question is commonly asked that if predation is essential to the continued well-being of wildlife, why not destroy the predator, let man do the preying, take the predator's share, and thus achieve a double benefit? The argument sounds convincing and, like all wishful thinking, has a great appeal. It would be unanswerable if man preyed as does the predator. Unfortunately, he does not, but to the contrary. No hunter ever takes the poorest if he can help it, but always the best as far as he is able—the finest head of horns, the biggest bear, or the fattest goose. In this he is genetically and positively destructive instead of actively constructive, and consistently lowers the constitutional standard of the objective races.

The hunter may not always have the privilege of selection; but where he has not, he takes the average run of mine, the good with the bad in about the same proportions as are presented to his gun. He thus effects general reduction of numbers without any compensating benefit to them. Under these conditions

he may be genetically neutral, but he is numerically harmful.

The modern hunter, with his tremendous superiority in arms and equipment, does not take the place of the natural predator with whom the terms of combat are approximately equal, and strength and address are at a premium on either side. The best physical equipment against traditional predators is useless against the gun, in fact, the very feeling of strength and confidence that health and perfect co-ordination induces encourages an animal to take risks that lead towards destruction. With or without selection, the genetic effect of the hunter is degenerative and cannot replace the constructive role of the natural enemy.

The successful predator is regarded as a blood-thirsty ravenor, the successful human hunter, either with gun or the coin of the realm, is admired as a good provider. Here are two diametrically opposed standards of judgment. With the scales of prejudice removed from our eyes, predation should be looked upon as a normal and necessary process of nature.

Even with all the obvious conditions seemingly favourable and nicely adjusted—food, enemies, cover, shelter, etc.—there yet remain population densities that cannot be safely exceeded. All other controls of numbers failing, disease remains to set the limit. We all know that a few chickens can be kept in comparatively good health and productiveness under the most primitive conditions and with the slightest attention; but for the raising of poultry in numbers, the most scientific care and sanitary surroundings are necessary. Each individual differs from all others in its physical resistance to disease and in its chances of contracting it. A flock of one hundred individuals has just ten times as many chances of including susceptibles as a flock of ten. In scattered communities, individuals are more or less isolated and the spread of infection proportionately limited. In congested associations, disease can be rapidly transmitted through

the ranks. Thus, numbers and density of population are important factors in initiating epidemics and are to be guarded against accordingly. The most practical automatic preventive of over-population in wildlife is the predator that also often arrests disease at its onset and discourages its spread when once established. The species most subject to violent periodic fluctuations of population, such as mice, rabbits, grouse, etc., are those having great reproductive potentials and whose numbers can increase faster than those of the predator.

In nature, of course, no two sets of reactions

follow exactly the same pattern, but from both practical and biological grounds, it is evident that the natural predator occupies a role in the economy of nature that cannot safely be dispensed with. There may be cases where the interests of man and natural forces conflict so violently that control or even limited reduction of predation is justifiable or necessary; but such should not be entered into without full consideration of all the facts of the case and a thorough understanding of what we are about. Well-intentioned mistakes can have worse results than the evils they are planned to correct.

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## SPORTSMANSHIP ?

If during peace time, an unfriendly nation invited all New Zealand citizens to partake of free meals at a large number of restaurants, and then one fine day shot their guests as they ate the free meals, what would we say and think about the occurrence? Worse than this, however, takes place so far as much of the duck shooting is concerned. A goodly proportion of grey and other native ducks are fed daily prior to the opening of the shooting season in order to attract them to a suitable position. Decoys are then set out on an appointed day, usually the 1st May, to assure the birds that it is safe

to alight. As they alight, and while placidly waiting on the water for the usual meal, they are shot from cover. All good sportsmen, of course, resent the use of such unsportsmanlike methods as these, and many requests have been made to have the use of decoys and "baiting," as it is called, made illegal, but nothing happens except that ducks get less and less in number. The accompanying photograph, culled from many appearing in the daily press, depicting well filled bags and such like, was labelled "Taking aim." Note the sitting ducks.





# EROSION: New Zealand's Urgent Problem

(Major J. R. Kirk, M.B.E.)

*"Erosion has, indeed, been one of the most potent factors causing the downfall of former civilisations and empires, whose ruined cities now lie amid barren wastes that once were the world's most fertile lands."*

—Dr. G. V. Jacks—"The Rape of the Earth."

LIFE for most is such a hurried thing to-day, and its interests so complex, that evident facts, such as that grass is green, that rain causes floods, if observed at all, are hardly given a thought. For life goes pleasantly on, and legislators have been appointed to do all the necessary thinking to keep it so! Indifference is thus engendered, and it is usually not until the dire effects of some calamity of nature which overtakes a district are observed and perhaps felt, that indignation displaces indifference and the necessity for greater thought for the future is clearly seen. It is principally for those who have little time or inclination to read long articles or a scientific

symposium that the following facts have been marshalled.

Life depends absolutely upon the top layer, and the top layer only, of the earth's surface-soil. Remove that, and desert conditions result; nothing can grow, nothing live. It has been estimated that one inch of top soil was laid down every 500 years—in some places it took 1,000 years. Yet water and wind can take in a single day all the top soil from land which fire or mechanical process has first laid bare!

The natural vegetation, comprising trees hundreds of years old, tussock and other native grasses, protected and fed the soil. When the rain descended, its damage as floods was

A COMMON SCENE IN PAKEHA (WHITE MAN) TIMES. Photo T. W. Collins.

1st Prize Forest Destruction Section. Photographic Competition.





minimised, these protective features of nature retaining and detaining it. Birds nested in the forest and in turn protected the trees from the ravages of insects. Nature kept its equilibrium until Man, to whom the beautiful green land was given as a trust for all time, applied the fire stick, the axe, the saw, and the gun! Forests were fired and cut, birds in their millions were destroyed, the land was laid bare, and floods swept away the precious top-soil and buried it in the ocean.

Have you time for just a few of many instances? Then read on! Three billion tons of solid material, washed out of the fields and pastures of America every year by water erosion, contain forty million tons of phosphorus, potassium and nitrogen. To haul this incomprehensible bulk of rich farm soil would require a train of freight trucks 475,000 miles long—enough to girdle this planet at the equator nineteen times!

Approximately 400 million tons of solid earth are annually dumped into the Gulf of Mexico by the Mississippi River alone—the greater part of it super-soil, richer than that of the Nile!

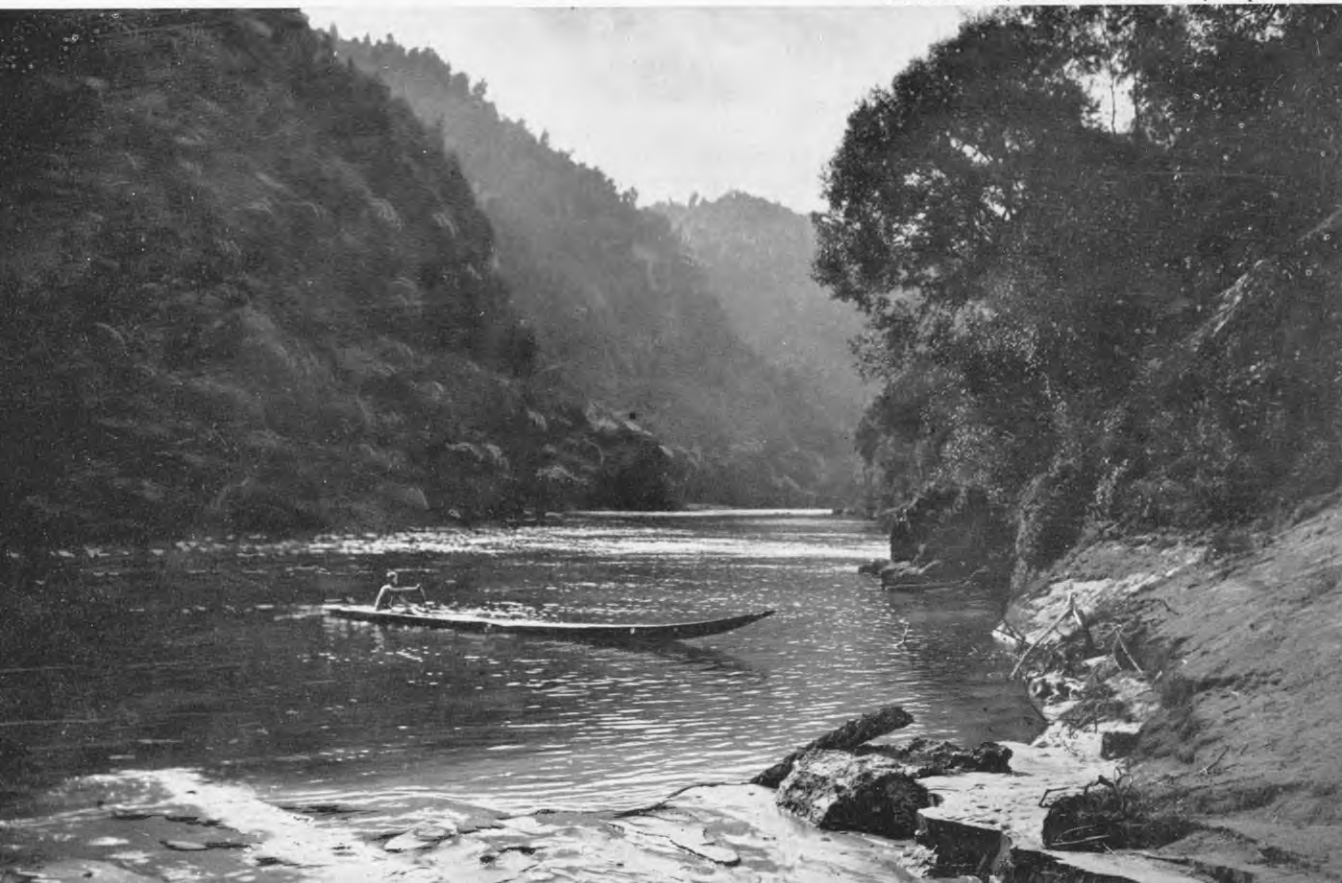
Farms in America in what is known as the "Dust Bowl"—Western Oklahoma, Western Kansas, Eastern Colorado, parts of Texas and Wyoming—blew clear out to the Atlantic Ocean 2,000 miles away. On a single day 300 million tons of rich top soil were lifted from the Great Plains, never to return. More than nine million acres of good land have been virtually destroyed by wind erosion, and serious damage is reported on nearly 80 million acres!

Birds are the chief enemies of insects, and without their protection, plant and animal life are thrown out of balance, while life for man speedily becomes unendurable. Yet listen! The last Passenger Pigeon, the most abundant and most beautiful of all American game birds, died in the Cincinnati Zoo in 1914. Towards the end a single season's slaughter in Michigan alone accounted for five millions of these unfortunate creatures!

Thus the beauty of the bird, and the brightness of its flight, have followed the natural vegetation into oblivion, with billions of acres of life-sustaining soil; almost incomprehensible material and financial loss has been suffered,

#### AN ALMOST UNIVERSAL SCENE IN MAORI TIMES.

Photo courtesy Tourist and Publicity Department.



and an environment lovely to the eye sacrificed.

The foregoing are facts relative to only part of the United States of America, but in my travels I have seen with despair the good soil being carried down the great rivers of China and Africa as well, and being blown away in Australia, the primary cause being man's unwise interference with those features of nature which were meant to be of a protective character.

And what of New Zealand? We have the example of these other countries to guide and warn us, but on we go, gaily throwing cigarette butts and matches along the bush-lined roads, firing natural cover, hacking down trees from mountain sides and hill-tops and ruining for ever a natural beauty with no compensating result whatever, dissipating a capital fund, of the interest of which we are wickedly or carelessly depriving posterity—the only effect the ruination of the hillside and the plains below! For the most part these areas are not replanted, but we spend thousands in straightening water-courses to give the floods which now follow quicker run to sea with their valuable cargoes of life-giving soil!

New Zealanders, awake! It is not too late to save what remains and possibly to rehabili-

tate much that has been despoiled. Europe has learned the lesson, and Denmark, much in the news to-day, has now twice as many forest trees as she had 75 years ago; Sweden began to preserve her forests in 1600, and adopts a wise policy of cutting and replanting; while in Asia, Japan over 50 years ago initiated an erosion-prevention policy with results that are the joy of all who visit that land. And America is not asleep!

The State must have the co-operation of the people, and landowners especially must be prepared to help—themselves. It will be costly, but, as has been wisely remarked, further delay will be more so.

From "Rich Land, Poor Land," a study of waste in the natural resources of America, by Stuart Chase, and published by Whittlesey House, New York and London, I have used the main material for this article. I recommend this book, and hope it will be widely read. Applying its final paragraph to this country, I conclude: "The strength of New Zealanders is due to these islands. They have moulded us, nourished us, fed their abundant vitality into our veins. We are their children, lost and homeless without their strong arms about us. Shall we destroy them?"

*1st Prize Seabird Section. Photographic Competition, T. W. Collins—RED-BILLED GULLS ON BIRD ROCK.*



# RAINCLIFF PIONEER PARK

(By L. W. McCaskill.)

ONE of the outstanding Centennial gifts to the people of New Zealand is a magnificent area of bush at Raincliff, South Canterbury, which has been set aside as a memorial to the pioneers by Major P. H. Johnson. As very little of the original mixed rain forest now remains in Canterbury, this gift of bush, the worth of which is enhanced by its being easily accessible from all the centres of population, is especially valuable.

The present bush area comprises over 200 acres of dense vegetation, but adjoining the bush is a large area of manuka shrub-land in which native trees of all kinds are rapidly overtopping the manuka. Stock-proof fencing shortly to be erected will hasten this extension of the main forest. The dominant tree is white pine or kahikatea; there are hundreds of them, tall, straight and clean. A recent estimate showed that there were over 2,000,000 feet of timber in the white pines alone. Other

big trees are totara, matai, and pokaka, some of them truly noble specimens. In addition there are over forty species of broad-leaved trees and shrubs typical of mixed Canterbury rain forest. Remarkably few exotics occur, and these are mainly on the outskirts where they could easily be eradicated.

Bird life is abundant, surprisingly so for such an isolated area. Bellbirds are numerous, so are fantails, waxeyes, warblers, riflemen and tomtits. A few pigeons and moreporks appear to be permanent residents, and it is believed that robins still exist in an almost impenetrable area in the heart of the bush.

Plans envisaged by Major Johnson involve further acquisitions which would bring the total area reserved to nearly 1,000 acres. With public access confined mainly to the outskirts it would appear that we have in sight the preservation of one more area where some of our bush birds will find permanent protection.

A SCENE IN RAINCLIFF PIONEER PARK.

Photo L. W. McCaskill.





# THE LATE FRANK HUTCHINSON OF RISSINGTON, HAWKE'S BAY

By W. H. GUTHRIE SMITH

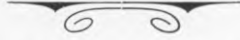
In Mr. Frank Hutchinson's death at Rissington on April 6th an honoured and widely known personality of Hawke's Bay has passed away. The Hutchinsons came originally from Yorkshire and are among the numerous Quaker families who have done much, very much, for New Zealand. With his parents, brother, and sisters, Mr. Hutchinson, then a lad of 13, reached New Zealand in 1881. He was educated at the famous Quaker School of Bootham, York, the Napier High School and Wellington College. Nine years later was founded the well-known Rissington Romney stud flock. Mr. Hutchinson's stud work was very much to him. Until the last two or three years he was always to be seen at the various stock shows and many will miss his friendly greeting and characteristically whimsical comments on men and creatures and things. Mr. Hutchinson was a genuine country man, happy in his surroundings and eager to pass on his enthusiasm. He was one of those fortunate persons deservedly domiciled in the country, to whom life on the land was the best of birthrights. He had much of the wide interest of his uncle, Sir Jonathan Hutchinson, in many branches of science. For some time indeed he worked in his famous relative's Haslemere Educational Museum, England, still a model to other institutions of the kind. Without claiming rank as a specialist in any department of botany he possessed a wide acquaintance with our New Zealand flora.

The problems of geology and zoology were perennial interests. His tastes were very catholic. From mountain top, sea beach and certainly not least from the saline swamps of Hawke's Bay previous to the uplift of 1931 spoil was forthcoming after each visit. With the half humorous, half shamefaced look of the school boy bidden to empty his pockets of their miscellanies, he would decant his cargo of rubbish, as he was wont to term it. After the challenging interrogatory look would duly follow self-laughter at himself and his collector's proclivities. Then, last and best of all, eager recollections wise comments and observations. Pur-

suits and studies so pleasant to himself he loved to share with others. Many young folk must date their earliest real interest in Natural History to their first acquaintance with him. For many years he gave informal talks on scientific and country matters at Hereworth, Woodford House, St. Luke's, Queenswood, and other schools in Hawke's Bay. "The East Coast Naturalist," written out and handed from subscriber to subscriber, was founded by him at a very early date. He wrote papers on many subjects in the excellently produced "Forerunner." In correspondence with his friends he disclosed a delightful gift of humorous expression. His short stories have never been published. They reveal a unique and original mind. They were reserved for his ain folk and his ain fireside. With such proclivities and tastes it was not surprising that he should have sorrowed over the rapid disappearance of the forests of New Zealand and the native birds so plentiful in the 'eighties. In 1918 he bought a fine block of unspoilt virgin bush at Puketitiri, particularly well set off by its dense wind-smoothed fringe of high country scrub growth and its yellow foreground of native tussock. Purchases of this kind, like virtue, are their own reward. Any man working on these unselfish, far-sighted lines necessarily foregoes personal benefits. For such an object—and this is too often forgotten—the owner is contented if not to scorn delights, at least to forego delights and live laborious days. Whilst Mr. Hutchinson's energies endured he did his personal best to preserve his forest area from the thousand perils that endanger such property. Then because of failing health he did what he had always intended to do, handed over his charge as a gift to the Dominion. This purchase was not the chance whim of a wealthy man, an evanescent by-thought paid for, and passing out of mind. Doubtless it was paid for, not in coin but in personal frugalities and self-denials. The impressive concourse of friends in all walks of life at his funeral bears witness to the high esteem felt for him and to the true appreciation of an unassuming, unselfish life.



**No. 2 Photographic Competition**—The prize winners in this Nature Study Photographic Competition were: K. H. Barfoot, Onehunga, Scenic Section, and T. W. Collins, Warkworth—Native Birds—Sea Birds and Forest Destruction Sections. A number of otherwise fine studies were disqualified owing to the unnecessary inclusion of unnatural objects such as motor-cars, launches and human figures.



**"SUNSHINE IN THE FOREST."**

*1st Prize Scenic Section, No. 2 Photographic Competition—K. H. Barfoot, Onehunga.*





# THE CASPIAN TERN

(By Wesley Sanderson.)



THE Caspian tern is the largest tern in the world. It is like its smaller relatives in that it has a forked tail and pointed wings, also a dagger-like beak.

The colour of the Caspian is white except for slate-grey on the wings and shoulders and a blue-black cap in summer or a grey one in winter. The young ones have spotted wing feathers and grey caps. The feet and legs are small, black and webbed, while the three-and-a-half-inch beak is light, bright red.

The Caspian tern is a fish-eater. It flies along about thirty feet above the water with its beak pointing downward at right angles to the body. Every now and then, perhaps to see where it is going, it looks up with a jerk of the head and then goes flapping on until it sights a fish; it flutters above the water for perhaps half a minute, then closing its wings it drops down on top of its prey, and a second later it is in the air swallowing the fish. When diving, the tern often keeps the tips of its pointed wings above water.

In early spring, about August or September, the terns collect in groups of two or three hundred or in still smaller groups. In late September they set about their work of nest-building. About a mile out on the beach in front of our home on the Whangarei harbour there is a shell bank about a foot above high spring-tide level, and on this about three hundred terns usually nest. All I know about the Caspian tern I learned from this colony.

After they have been at the colony for about a month they start to pair up for the nesting. The courtship is interesting. They bow to each other, run round in small circles and come to a stop facing each other. Next they bend their legs until their breasts reach the earth and their beaks touch each other on the ground; then they raise their heads very slowly and stretch them far back, uttering curious noises in their throats at the same time.

The nest, which is a hollow about three inches deep scratched in the shells, is sometimes lined with seaweed. In this the female usually lays two eggs and on rare occasions three—never more. These are dirty, whitish brown, blotched with dark brown. After

about two to three weeks of incubation, which is carried on by the sun alone on hot days, the chicks poke their tiny beaks through the shells and start to squeak. This is a period of danger for the tiny creatures. Some can't force their way through the shell, while the shell sticks to the wet down of others and they die. I have often helped the chicks out of the eggs.

When first hatched they are very ugly, but after an hour in the sunshine they are beautiful snowy white chicks with pink legs and beak. When the chicks hatch, the parent birds are kept very busy searching for food, bringing to their young mainly herring or piper, which is placed head first in the baby's open beak. Often these fish are as big as the chick, so the little fellow props itself up and goes to sleep, and as the fish digests the rest slips down until finally the tail has disappeared and the fish is digested. As the chicks grow the beak quickly develops, while the feet hardly grow at all. When the chick is a month old its legs have turned black, and it wanders all over the colony.

I remember on summer Sundays we used to walk out to the colony, which is near a deep tidal creek about a mile across the beach from the house. When we were within half a mile of it a group of half a dozen old terns would fly out and have a look at us, then return.

Then when we were within a couple of hundred yards of the colony a mob of about twenty males would rise up and attack us. They would hover about thirty feet above our heads and then dive at us, missing our heads by inches only. If we took our dog with us he sometimes received a peck or two. As soon as we arrived every pair of wings would be raised skywards, and then with a whirl they would all rise and we would be subjected to a fierce attack. As the birds hovered above our heads they would utter harsh short crackly notes, and as they dived they would let out an ear-splitting, crackling call. As this was happening, all the chicks over a week old had either sought shelter in the mangroves or had run down the beach and taken to the sea, where they could be seen swimming to the opposite shore some hundred yards away. Then the parents would fly over to their young and encourage them along on

their perilous voyage. When on the other side, they would wait until we left, then return with their parents fluttering over their heads.

Some of the youngsters were in difficulties when we arrived, for many of them had fish six inches long in their throats. Most of these were disgorged, but others were swallowed. Some of the larger chicks were so full that they could not run.

Their greatest enemy is the tide. Some four seasons back, after it had been blowing hard from the east for nearly a week and had been raining heavily most of the time, the spring tide banked up and came high above its usual mark. By 11 a.m. the tide reached its highest, completely covering the shell bank. Alas, it was the middle of the nesting season and there were hundreds of young birds there in various stages of development, and dozens of eggs. Presently the rain stopped and the wind died down completely, so father and I went for a walk when the tide went out. Dozens of young dead terns were lying amongst the seaweed, and also a pair of little blue penguins, starkly cold in death. We went on to the nesting place. The shell bank had partly washed away, and all that remained of the once happy colony of young birds was about a dozen big youngsters.

When coming home, I noticed a white thing on a small islet, so I went over and found a young tern almost dead. I took it home, and after about an hour it was quite lively again. As I had no fish or meat I was forced to give it a slug. This it would not eat until salted.

I kept the baby bird until the first fine day and then returned it to its birthplace.

So far I have only mentioned the terns' unconquerable foe, but now I turn to rats. About a quarter of a mile from the nesting place there is a small islet situated in the midst of huge hollow mangroves—an ideal home for rats. Every night dozens of huge brown rats used to steal through the dark desolate wastes to the colony, there to rob, murder, and carry off eggs and young ones. We noticed this happening, so one day we went a-hunting and caught twenty-five of these rats.

As can be guessed, all the terns are not always successful in their quest for food. Then they turn pirate and rob the other terns of their prey. Often I have seen a tern with a fish being pursued over the land. Of course both strive for the highest position, the result of which is that they both rise to a great height. Often the pursued is so hard pressed that he has to drop his prey, which falls rapidly earthwards. The terns drop after it, and before it has gone fifty yards have caught up with it. The bird that arrives there first seizes it in its beak and, spreading its wings, shoots upwards and off he goes with the loser in hot pursuit. Occasionally, however, they both reach the fish at the same time and fight for possession. When terns fight, they do not continue fighting for long. After a few seconds one can usually be seen to be getting the worst of the combat, and this one soon flies away, hotly chased by the other.

#### YOUNG TERN SWIMMING TO SAFETY.

Photo A. N. Breckon.





## GLIMPSES OF BIRD LIFE

(By Waitua.)

## BIOLOGISTS, POETS, AND THE AVIAN TRAGEDY

**J**UST as the little green silver-eyes (we used to call them blight-birds in the North) come again and again to the flower-covered "tree lucerne" tree outside my Wellington window (June, 1940), so I delight to make frequent visits to a book on birds; reading a little, then stopping to meditate on the thoughts suggested. A bit of fact here. A bit of argument there. A Nature book is as full of reflections as a tree is of flowers.

The Fifth Bulletin of the International Committee for Bird Preservation (hereafter referred to in this article as the Bulletin) has a formal bookish appearance, but inside it abounds in bird life. Birds had a world itinerary long before Cooks Tourist Agency. Birds could have told Captain Cook many things he did not know. It is said that the flight of birds gave the first idea of the location of that dip or saddle in the Otago mountains called McKinnon's Pass. Birds were pathfinders long before man. But man's discovery of their tracks and their timetable has been ruthlessly used against them. The stopping points on the pilgrim's progress of migratory birds are adorned with traps and with guns, even with machine guns.

"Decimated during migration." This expressive phrase occurs here and there in the Bulletin. Of the Grey Lag Goose (*Anser anser*) Sweden, in its section of the Bulletin, reports: "It is said that the flocks that leave in the autumn are more numerous than those returning; they have thus become decimated during the migration. The New Zealanders and the Northern Eskimos are said to share between them the responsibility for any decimation in the returning godwits. Perhaps the easiest way would be to blame the Eskimos, because they will not hear the accusation. It seems to be waste of time to blame New Zealanders, who hear but care not.

From this New Zealand reflection one returns to the Bulletin and its hard facts. Sweden throws a curious light on the feeding of mallards during winter, a common custom of the Swedish public in mallard-inhabited localities. This winter feeding, it is stated, "saves the mallards from the dangers of migration, and

has greatly contributed to the maintenance of the stock of this species. The fed birds become very tame." Feeding birds for their winter-maintenance, or to save them from migration risks, is one thing. Feeding them in order to tame them to look down gun-barrels on the 1st of May is quite another thing, and is an activity of which no New Zealander can be proud.

Another New Zealand activity is the war on certain New Zealand birds that are predatory or that are merely believed to be predatory. Norway reports in the Bulletin renewed efforts "to put an end to the excessive persecutions of various birds of prey; the Norwegian poet, Carl Schoyen, especially has stepped into the breach to defend the eagles of Northern Norway."

Where is the New Zealand poet who can use his art to help his native birds? The poet, the artist, and the cartoonist can all render aid.

And what of the scientist—what of the biologist? Writing to the Bulletin as Chairman of the New Zealand Forest and Bird Protection Society, Captain E. V. Sanderson reviews the white man's war on native birds and plants. "Acclimatisation Societies find guilty, and sentence to death various native birds; yet biological research (Captain Sanderson states) is practically unknown."

The societies possess all the serene self-confidence of the half-informed. Half-truths are their ammunition; and general biological ignorance prevents the half-lies (the reverse side of their half-truths) from coming to light.

Australia too reports a biological research deficit. In the Australian section of the Bulletin one reads that in studying the problem of the diminishing numbers of certain species: "Australia's chief need is a small biological department attached to each State Government. So far the matter has been left to private bodies and individuals."

In a country like Australia, composed of six Federated States, with a Federal Government, or seven Governments in all, it is difficult to secure parallel action by the Governments. But in New Zealand, with only one Govern-



ment, there is no such excuse. The New Zealand Department of Internal Affairs should have had a biological section long ago. Only now is a progressive Minister trying to move in that direction. Very late, but better late than never.

Acclimatisation is full of traps. When Norway welcomed the establishment of the fur-farming industry, no one seems to have foreseen that birds would be taken in dangerously large numbers to feed the silver foxes. But so it has proved. "Already the numbers in some of the great bird colonies have diminished perceptibly." More fur, less feather.

I hope to return again to the Bulletin and sift some more Nature facts from its general bundle of straw, just as the silver-eyes will return to-morrow to the "Tree-lucerne."

#### DESTINY.

In Man's great need he shall return  
To the deep and fertile earth  
And stand amazed,  
Not at what his hands have wrought,  
Great tools of steel and ponderous weight,  
Seeking out his own destruction,  
But at the power of homely soil  
In giving birth to living things.  
Earth's secret—Life—  
He cannot comprehend.  
He shall behold  
The dainty fern  
On shaded mossy bank  
Watched over by a gnarled and ancient tree,  
The climbing orchid and the long festoon  
Of supple twining vine,  
Flowers and luscious berries  
Tempting gay and sombre birds  
To propagate their kind;  
Birds with little haunting songs  
That tell in whispers of the years  
They knew before was Man:  
Or birds that blazon forth  
In hurried tumbling notes  
Their joyousness in life.  
Here in the forest  
He shall find a peace  
That none but Nature has;  
Shall cease to wonder why  
There should be War.  
For none can see and hear but feel  
That Man shall turn again  
Unto the earth. —Geraldine Baylis.

## LEST YOU FORGET...

### August is Bird Month.

*I am not poor—my garden has more gold  
Than all the banks of all the world could hold;  
I am not friendless—visitors each day  
Eat of my food, and singing fly away.*

—Lalia Mitchell Thornton.



## CHILDREN'S PAGE

## GUARDIAN OF THE FOREST

(By Flora Patie.)

HIGH hills surrounded the clearing in the bush where Pura and Wai lived with their parents, hills that were covered with ever-green native trees. Through a beautiful valley the river ran, and following its windings the new motor road brought tourists to admire some of New Zealand's grandest scenery. In the great scenic reserve the children's cousin, Rehua, was employed, and he often took Pura to the bush with him. The Maori boy loved the trees and flowers and birds of the forest, and he also had a great respect for Tane-mahuta, the forest god. He had heard his grandfather tell many thrilling tales of "Te wao-tapu nui a Tane" (Tane's great sacred forest).

One day Pura and little eight-year-old Wai were left at home while their parents went to visit relatives twelve miles away. The children were to look after the pigs and the fowls and milk the cows at the proper time, but for the rest of the day they could do as they pleased. After their dinner of potatoes and watercress, Wai washed the dishes and tidied up the whare, and then went out to play in the garden. Pura wandered up the hill at the back of the whare and stretched himself full length by the side of the creek that came tumbling down over the stones.

Pura wanted to think about the future. His schooldays would end next year, and then—what? Through the school lending library he had learned that there were many other boys in the world who had the same love for nature as he himself had. (Some had become famous men.) Pura would have liked to ramble with "Edward Wilson, Nature Lover," to visit "Grey Owl," the little beavers' friend, to see the lovely bird pictures painted by Audubon, the artist, but he would be content if he could help to protect Te Wao-tapu nui a Tane.

Pura's day dreams were interrupted by a loud cry from Wai, "Ee Pura, kia tore!" (Pura, make haste!) He bounded down the track to where Wai stood pointing to a thin column of smoke far down the road. "Ahi, kapura" (fire) exclaimed the boy in dismay. He had heard a

car passing and guessed that a lighted match or a cigarette, carelessly thrown out, had fallen on a tuft of dry grass. Pura caught up an axe and quickly cut two branches from a manuka tree. Wai caught their school pony and, not waiting to throw even a sack over his back, they rode off down the road.

The wind was blowing directly towards the forest. Tane-mahuta's children were in danger! Were the birds to be without a home to-night? Would the flightless ones, like the kiwi, die to-night, and what would happen to their babies?

In the distant hills, where he had been staying with friends last year, Pura had seen little charred bodies after a forest fire. In spite of the brave efforts of the Maori people, a great tract of beautiful native bush had been destroyed. It was there that Pura had learned to beat out the creeping flames with the branch of a tree. How the children worked! Little Wai on the edge of the fire while Pura attacked the more dangerous spots. The line of fire, fanned by the wind, spread rapidly; the heat scorched their faces; and the smoke almost blinded them.

Before long Pura sent Wai to a place of safety, for he was afraid of her cotton frock catching fire.

From under a shady tree Wai watched for Rehua, who should be coming home soon. Yes, there he was, his horse at full gallop. "A Rehua e haere mai nei" (Rehua has come), she shouted to Pura.

The smoke was blowing back towards the road, and the boys were able to work swiftly up and down the line, beating out the now smouldering fire. Later, as they rested beside Wai to watch that the fire did not re-kindle, Rehua said to Pura, "The boss says that I am to be promoted and he wants a boy to take my place. How would you like the job?" The burn on Pura's foot kept him awake that night, but he was too happy to care. Was he not to become a guardian of the great sacred forest of Tane?

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# FOREST AND BIRD PROTECTION SOCIETY

## OF NEW ZEALAND (Inc.)

### APPEAL FOR BEQUESTS.

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.

### CALL FOR SANCTUARIES.

The Society would also welcome the responsibility of administering suitable sanctuaries for land or sea birds, provided that a small annuity is added for the payment of a caretaker. *Such sanctuaries could be named after the donor, and would thus be a perpetuation of his name as a saviour of New Zealand's forest and bird life.* It is suggested that such sanctuaries should be administered in a manner to ensure their return to their original and natural conditions as nearly as possible.

### OBJECTS.

*To advocate and obtain the efficient protection and preservation of our native forests and birds, enlisting the natural sympathy of our young, unity of control of all wild life, and the preservation of sanctuaries, scenic reserves, etc., in the native state.*

*Affiliated with the Society for the Preservation of the Fauna of the British Empire (Patron, His Majesty King George VI.) and with the International Committee for the Protection of Wild Birds.*

Recognising that it is essential for all those who desire to save our Forest and Bird Life to band together, I enclose herewith my subscription of £ ..... as a subscriber to the Society. I shall be glad to receive the quarterly magazine, "Forest and Bird," without further charge.

#### SUBSCRIPTIONS:

Children	.....	.....	£0	1	0	per annum
Ordinary	.....	.....	0	5	0	" "
Endowment	.....	.....	1	0	0	" "
Life	.....	.....	5	0	0	