BIRDS

ISSUED BY

N.Z. NATIVE BIRD PROTECTION SOCIETY

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

SOUTH ISLAND ROBIN.
[Photo by Chas. Lindsay.

OBJECTS—To advocate and obtain the efficient protection and preservation of our native birds, a bird day for our schools, unity of control of all wild life, and the preservation of sanctuaries, scenic reserves, etc., in their native state.

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

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

SUBSCRIPTIONS:

Life Members, £5.

(Membership open to all)

Endowment Members, £1 per annum.
Ordinary Members - 5/- per annum
Children - - - 1/- per annum.

New Zealanders! Protect Your Native Birds!

BULLETIN No. 20. MARCH, 1930.

N.Z. NATIVE BIRD PROTECTION SOCIETY.

LIST OF OFFICERS.

Vice-Presidents:

Lady Maclean	.. ..	Wellington
Hon. G. M. Thomson, M.L.C.	.. ..	Dunedin
Hon. A. F. Hawke, M.L.C ..	.. ..	Invercargill
Dr. L. Cockayne, C.M.G., F.R.S.	.. ..	Wellington
Dr. J. G. Myers, Sc.D., F.E.S.	.. ..	London
J. P. Firth, Esq., C.M.G...	.. ..	Wellington
E. Phillips Turner, Esq., F.R.G.S.	..	Wellington
F. F. Hockly, Esq.	.. .. ..	Rotorua
H. Guthrie-Smith, Esq	.. .. ..	Tutira, H.B.
R. A. Falla, Esq., M.A. ..	.. ..	Auckland
W. W. Smith, Esq.,	.. .. ..	New Plymouth
A. G Simpson, Esq.	.. .. ..	Hunterville
Gilbert Archey, Esq., M.A.	.. ..	Auckland
James Drummond, Esq., F.L.S., F.Z.S.	..	Christchurch
Mrs. P. Moncrieff..	.. .. ..	Nelson
Bernard Sladden, Esq.,	.. .. ..	Tauranga
Wm. Cobeldick, Esq., F.R.G.S.	.. ..	Rotorua
G. C. Thomson, Esq.	.. .. ..	Dunedin
J. B. Thomson, Esq.	.. .. ..	Invercargill
Johannes C. Andersen, Esq.	.. ..	Wellington
W M. Fraser, Esq.	.. .. ..	Whangarei
A. Leigh Hunt, Esq., F.R.G.S.	.. ..	Wellington

HON. AUDITORS: Messrs. Menzies, Griffin & Ross, Wellington.

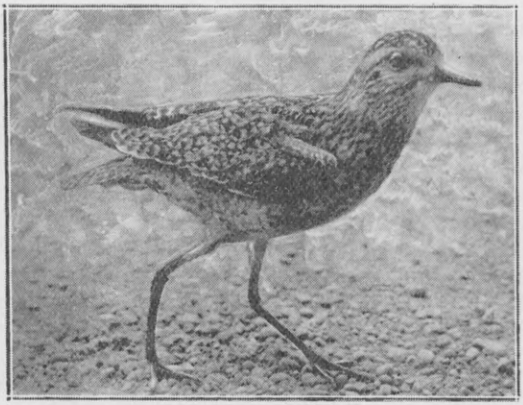
HON. SOLICITORS: Messrs. Buddle, Anderson & Kirkcaldie, Wellington

LIST OF LIFE MEMBERS.

Lady Maclean
Mrs. T. L. Young
Miss F. M. Cargill
Miss I. Hutchinson
Miss M. H. Maclean
Miss A. C. O'Rorke
Miss S. Turnbull
George Allman, Esq.
Orton Bradley, Esq.
John Chambers, Esq.
John R. Dickison, Esq.
Girl Guides' Assn. of N.Z.
Gerald Fitzgerald, Esq.
R. Harding, Esq.
W. G. Kindley, Esq.
Crosby Morris, Esq
F. Crossley Mappin, Esq.
Dr. Robert Nairn
Ernest Price, Esq.
Dr. Ernest Warren, Natal.
Geo. Lambert, Esq.
Herbert Price, Esq.
Arthur S. Russell, Esq.
G. O. K. Sainsbury, Esq.
G. C. Thomson, Esq.
J. Scott Thomson, Esq.
H. B. Stuckey, Esq.
Tararua Tramping Club
A. S. Wilkinson, Esq.
Willi Fels, Esq.
E. G. B. Meade-Waldo

LIST OF ENDOWMENT MEMBERS.

Mrs. G. Absolom
Mrs. Jessie Adams
Mrs. Ella C. George
Mrs. P. Moncrieff
Mrs. W. B. Nelson
Mrs. Grace Perston
Mrs. Alice M. Russell
Mrs. T. T. Thompson
Mrs. J. B. Williams
Miss M. P. Finlayson
Miss Birdie George
Mrs. I. L. Mc. G. Watson
Miss H. S. Hutchinson
Miss A. Matheson
Miss M. D. Robinson
Miss L. Valder
Miss Nancy Wilson
J. Archer Absolom, Esq.
J. Allen, Esq.
R. A. Anderson, Esq.
Alfred Atkinson, Esq.
Dr. D. A. Bathgate
A. Blackburn, Esq.
William Brown, Esq.
Blundell Bros., Ltd.
W. Cobeldick, Esq., F.R.G.S.
G. C. Fache, Esq.
Sholto Fergusson, Esq.
J. P. Firth, Esq., C.M.G.
W. M. Fraser, Esq.
A. R. Gudopp, Esq.
H. Guthrie-Smith, Esq.
Dr. J. Hardie-Neil
S. T. Harrisson, Esq.
G. Humphreys, Esq.
F. Hutchinson, Esq. (Junior)
K. Kirkcaldie, Esq.
Eric Lawson, Esq.
James McKay, Esq.
Dr. J. G. MacDonald
Will B. McKenzie, Esq.
Col. Geo. Mitchell
Royal Nelson, Esq.
Dr. Pottinger
Dr. F. R. Riley
Capt. E. V Sanderson
Bernard Sladden, Esq.
W. W. Smith, Esq.
State Forest Service
Hon Sir Robert Stout, K.C.M.G
J. B. Thomson, Esq.
Frank Wall, Esq.
W. H. Weggery, Esq.
Dunedin Naturalists' Field Club
North Canterbury Acclimatisation Society
Otago Tramping Club



GOLDEN PLOVER.
[*Photo by Chas. Lindsay.*

WILD life is fast disappearing the world over. Many are striving to save remnants of once numerous species. Others, those who place self-interest before national interests, are bent on destroying for gain or sport. New Zealand has some of the most unique flora and fauna in the world, if not the most unique. Aided by improved means of transport and ever increasingly destructive weapons the killers are taking far too heavy a toll. Birds are man's chief ally in his losing fight against insect pests. Are New Zealanders going to permit our national heritages to be lost for ever because of the self-seekers' personal desire for destruction or gain? We ask all the better thinking to band together as a league and say—No!

NEW ZEALAND'S BIRDS.

At a time immeasurably remote—somewhere about the close of the Secondary era—New Zealand formed the south-western extension of a great continent stretching north to Fiji and New Guinea. In that far-distant period the portion which was to survive as New Zealand when all the remaining links sank beneath the surface of the ocean was colonized by most of its land-birds—or, rather, by most of the ancestors of the birds which were later to constitute the most extraordinary avine population on the face of the globe. The connecting-links sank —and through all the æons of the Tertiary era to, comparatively speaking, the present day New Zealand was cut off from the rest of the world.

At the time when New Zealand was last connected with larger land-masses mammals had either not yet been evolved from the common reptile-like stock from which our present lizards and snakes and the birds themselves have arisen, or else they had not yet reached a land by means of which they could spread to this country. The birds, then, were the highest evolved inhabitants of this isolated land. It was a heavily wooded country. The birds and the forest grew in beauty side by side: with their indissoluble interdependence, the importance of which has never hitherto been adequately realized. Thus this ancient New Zealand was above all else a land of birds; no other land-mass so large has remained isolated so long, and in no other area of any considerable size have birds achieved terrestrial domination. Such an unusual state of affairs was certain to produce extraordinary results.—*Dr. J. G. Myers and E. Atkinson, in N.Z. Journal of Agriculture.*

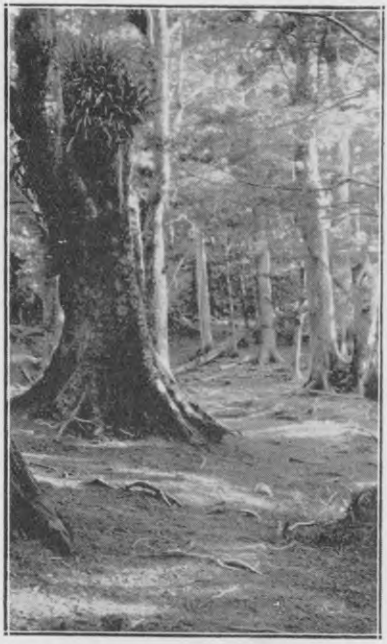
The Initial Steps towards Desert Formation caused by Over-grazing high Country.

[*Photo by U.S. State Forest Service.*

OVER GRAZING OF UPLAND COUNTRY.

(By PONGA.)

A commission set up by the United States of America, has recently furnished a three volume report on the over grazing of high country. Such national disasters as Mississippi floods have led the authorities to see the need of attention to this grave matter. Here in New Zealnd most of our land is steep with an extremely shallow soil covering. Be it remembered, too, that this soil is always running down towards the sea and never running up. It took the forests, which formerly grew on this land, thousands upon thousands of years to form the covering on the underlying rocks. Ours is a narrow country with no part far removed from the sea. Swift streams and rivers quickly convey anything which enters them to the sea. Surely, then, the too drastic denudation of our highlands in this country calls for thought and enquiry. But when we add to this more or less necessary use of our high country the grazing of millions of plant-eating animals on the forest - covered backbone ranges, surely it is time to do more than think and enquire. There are some, well qualified to judge, who consider that some of these forests on our southern ranges are already doomed. Are we going to stand idly by while these essential forests are destroyed? If so, every citizen will pay a well merited and heavy penalty because no nation can prosper without a sufficiency of forests, and New Zealand at best can be no more than a paupers' country and all because we idly looked on and allowed the few to make use of our priceless forests for the sake of a very little mere sport.



The initial steps towards desert formation in New Zealand. Photo taken in Haurangi State Forest (19,000 acres) in the Wairarapa, where some people interested in stalking claim that deer are under control. Note the total absence of floor covering and of regeneration. A continuance of these conditions means forest depletion, then devastation.

A COMING MENACE TO NEW ZEALAND.

DESTRUCTION OF SEA-BIRDS BY WASTE OIL.

"Never shall I forget the first sea-bird I saw destroyed by the oil, a guillemot in the last stages of starvation cast up on the beach by the tide, no longer a bird in form, but just a mass of black filth, terrible because alive. I don't want to shock you, but these things have to be told, and after all to hear about suffering is far less terrible than to experience it or to watch it.

"Since then I have seen sea-birds in hundreds, either drifted up by the tide or cast ashore by the waves in heavy weather, gannets, cormorants, guillemots, razor-bills and puffins, and every one of them was either dead or dying of starvation. That is the fate of every sea-bird caught in the oil; as I told you just now it can neither dive, nor swim, nor fly, it just drifts starving on the sea currents till it dies and sinks, or is cast ashore.

"Surely it is a terrible thing to say that hundreds of thousands of beautiful sea-birds die every year of slow starvation along our shores, but even more terrible is the fact of their degradation, for the plumage of a bird is everything to it, as you would understand if you ever saw the frantic efforts of even a slightly oiled bird to clean itself.

"The case of the birds doesn't want any special pleading, it speaks for itself; and it would speak even more appealingly could you see my clients as vividly as I see them, the great gannets, the cormorants, guillemots, and razor-bills and the cosy little puffins, surely of all birds the most charming.

"There is only one thing to be done, and that is to stop the ships from discharging their waste oil into the seas. But it can only be done by an international agreement between the maritime nations to respect the sea."

London radio broadcast by Mr. H. de Vere Stacpoole.

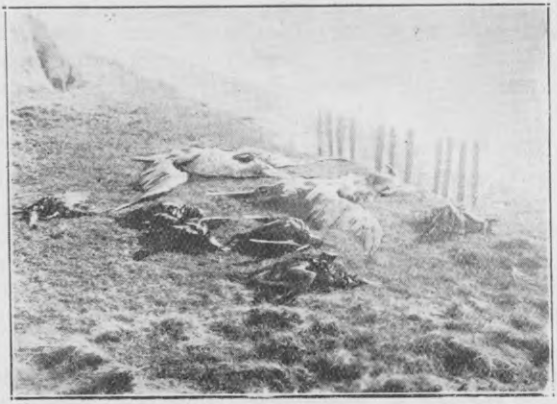
OPOSSUMS.

(By Captain E. V. Sanderson.)

It is pleasing to note that the Minister of Internal Affairs has decided to take the only satisfactory course and institute a more comprehensive survey on the food habits of these animals in New Zealand before permitting further distribution. An examination of some 266 stomachs from Kapiti Island has already been made. These showed little indications of animal matter but that considerable bird food was consumed. It was stated by the scientist who made the examination that there was food for both bird and opossum present on Kapiti. This latter contention is,

however, not quite wide enough as the opossums are now very limited in number on Kapiti, and further any lessening of bird food supply must axiomatically be at the expense of the birds, especially in the winter months. There is also the grave danger of the routine of bird food supply being upset where exotic plant-eating animals are present. For instance, opossums are reputed to be very fond of the young shoots of the Kotukutuku (or konini bearing tree), and by repeatedly removing the spring shoots of this deciduous tree cause the deaths of many trees. The konini is a particularly valuable bird food berry, and the loss of many of the trees which bear this berry will undoubtedly result in the depletion or extermination of some species of birds because the necessary food is not available at the particular time of need. The destruction of many other berries or trees, such as the Houhou or Five-finger must similarly have like results. Opossums are showing up in localities where they have not been legally introduced, and vastly greater precautions and penalties than those at present in vogue are essential to prevent illegal action by some of those monetarily interested in the skins of these animals.

There has been much talk but no decision has yet been arrived at with reference to an improved means of catching opossums than the present inhumane, cruel, and bird-destroying trap. A spreading of the agitation already commenced in some parts of the world against the wearing of furs, as was successfully done with feathers, will surely result if less cruel means of killing fur-bearing animals are not devised and strictly enforced.



BIRDS KILLED BY OIL, FRESHWATER, ISLE OF WIGHT—GANNETS AND GUILLEMOTS.
[Photo by R.S.B.P.

THE ÆSTHETIC VALUE OF BIRDS.

(Extracted from "The Practical Value of Birds," by JUNIUS HENDERSON.)

"The beautiful is as useful as the useful." —VICTOR HUGO.

Whatever tends to make the world better and happier; whatever ministers to the æsthetic longings of the human soul; whatever leads the thoughts of men and women for the moment from the sordid pursuit of gain or from the race for personal aggrandisement to beauty in any form; whatever entices tired and care-worn people for a time from the shop, or office, or store, or mine, or quarry, and brings them into closer contact with the beauty, grace and charm of things out-of-doors; is of direct material value to the human race, even though that value may not be measurable in yards, acres, tons, bushels, or dollars.

The partial outdoor life of the student of birds fits both mind and body for life's contests. Nothing so surely restores the soul, sickened with trouble, disappointment or defeat, as to get out into the fields and woods and watch our feathered friends, with their bright coats and graceful flight, to listen to their cheery songs and observe their interesting habits—their mating, their home-building, the rearing of their young, their comings and goings in the spring and autumn migrations.

Few civilised human beings doubt the value to humanity of music, poetry, and the painter's and sculptor's arts. Even the savages of the Stone Age gave expression to a love of beautiful things in their rude drawings on cavern walls, and the wild tribes of the earth have their music, perhaps every bit as good as the crude beginning from which our own wonderful modern music slowly evolved. Beauty of every sort is good for the human soul, and he who fails to respond to its call loses much of the richness of life.

"If eyes were made for seeing,
Then Beauty is its own excuse for being."—EMERSON.

Birds have been the inspiration of much that is fine in art, poetry, and song. The world would be impoverished, indeed, if it were all destroyed. So, too, we should lose much if the chastening songs of birds were all hushed and their plumages turned to ashes.

More and more every year are the American people turning to the study of birds as part of their recreation. Ornithology has become a delight to thousands. Amateurs may be seen everywhere with field-glasses, cameras and notebooks in hand, peering into the bushes and treetops in the hope that some new

candidate for observation may present himself; or that, perchance, by good fortune, he may be even induced to pose for his photograph, thus making a permanent visual record of the observation. "Hunting with a camera, instead of with a gun," has become a slogan in certain quarters. Others amateurs, leaving cameras, field-glasses, and notebooks behind, perhaps derive more pleasure from their observations because they are not encumbered by accessories or the feeling that they must spend a portion of their time in using their paraphernalia and recording their observations with pen and ink.

Printing presses are kept busy in the publication of books and magazines devoted wholly to ornithology, to say nothing of the numerous articles on birds in general periodical literature. Professional ornithologists are flooded with requests for information on the subject. Boys whose future once looked doubtful have become interested in birds and their protection, thus acquiring new ideas concerning the humane treatment of other creatures, and new interests in life to replace former bad habits; hence are destined to better citizenship.

There is no better training of the power of quick and accurate observation, nothing more stimulating to the analytical qualities of the mind, than the study of birds in the field. No careless observer can correctly note the various characteristics by which species may be distinguished one from another as they flit through the bushes—the shape and size of the bill, wings and tail, the colours of various parts of the plumage, the song or call note, and so on. The botanist may sit down with book in hand and plant before him and study it at leisure. The geologist may put the fragment of rock in his pocket and examine it in the laboratory. The field student of ornithology must note and fix in his mind the details of structure and colour of his bird on the instant, so that he will have an accurate picture of it in his mind as he seeks to identify it from descriptions and pictures in the books.

Hence from the moral, æsthetic and educational points of view, as well as for purely utilitarian reasons, general public recognition of the value of birds is important. So in the detailed discussion of the strictly economic phases of bird life we must not forget the less tangible values. We may well remember that even if the birds had no economic value whatever, they would still well deserve our study, encouragement, and protection.

Do you ne'er think what wondrous beings these?
Do you ne'er think who made them, and who taught
The dialect they speak, where melodies
Alone are the interpreters of thought?

Whose household words are songs in many keys,
Sweeter than instrument of man e'er caught!
Whose habitations in the tree-tops even
Are half-way houses on the way to heaven!

—LONGFELLOW, *Birds of Killingworth.*

CONTROL OF WILD LIFE.

(By CAPTAIN E. V. SANDERSON.)

The wild life of any country has an intimate bearing on the prosperity of its human inhabitants. As for instance in New Zealand our forests supply the all essential timber, check erosion and the devastation of our farming lands thereby, while our pastoral and agricultural pursuits are largely influenced by the presence of desirable birds and their activities in checking insect and rodent pests and germ diseases. Indeed, the very prosperity of our country depends in a very large degree on the efficient care and control of wild life matters.

Here in New Zealand Acclimatisation Societies were formed many years ago to introduce desirable forms of wild life owing to the upsetting of Nature's balance by the comparatively sudden conversion of forest covered lands into open country. A sufficiency of birds adapted to the purpose of checking insect pests was not present; insect life increasing beyond all bounds, threatened to make agricultural pursuits an impossibility. A great and onerous responsibility was thus thrown largely upon Acclimatisation Societies. As years went on, owing to the method of the election of the executives of these societies by the votes of sportsmen alone, they have drifted largely into fishing and shooting clubs, leaving the main objects of their original formation neglected and all interests other than the sportsman's. Other bodies took up various branches of wild life as the necessity arose, as for instance the Department of Lands held on to the care of scenic reserves, Internal Affairs sanctuaries under the Animals Protection and Game Act, 1921-2, the Tourist Department other sanctuaries, and later the Forest Service were handed the care of Forest Reserves, etc., etc. This multi-control has, as would be expected, resulted in much waste of wild life revenue and much diffusion of any expert knowledge available, a confliction of opinions, and an endeavour on the part of those bodies controlling to use the various sections as they thought fit. Research into the many complex and vital problems con-

nected with wild life matters has been practically nil, while the controlling bodies have been content to rely on mere hearsay evidence, especially if the hearsay evidence was in the direction desired. Now is this business-like? Would anyone care to have their own personal affairs run without a guiding hand and without any common policy? Can such a medley be in the best interests of the community? Surely the whole should be looked upon as a whole. All individual interests are intermixed and inter-allied intimately with the care and control of wild-life matters. Under our present system or lack of system one body is frequently defeating the aims of another. Nay, even one Acclimatisation Society is at times working on opposing lines to others for the want of expert leading direction and the representation of other interests on their executives than sportsmen. In the course of the direction by the Department, which is supposed to control Acclimatisation Society efforts, the opinion of the first authorities in the land have in the past been disregarded, as witness the wholesale distribution of plant-eating animals in our forests.

Surely common sense and patriotism should appeal in bettering our present methods and in remedying the disastrous mistakes of the past. Nature lovers, for one body, submit that they have as much right as the hunter to have their wishes considered as they enjoy themselves as much, nay more, in their way than the hunters do in theirs and there are more of them. Likewise the forester, the agriculturist, and many others have their rights.

Wild-life care is the work of experts and much scientific and accurate research is necessary before coming to conclusions. Acclimatisation Societies have been accused in the past of deciding in five minutes matters on which it would take twelve months careful scientific work to reach a logical conclusion.

Acclimatisation Societies should surely aim at something higher and nobler than merely catering for the killer. They can be converted into highly useful bodies by sanctioning and obtaining the representation of other bodies on their executives besides sportsmen, and can be converted into a valuable connecting link between the controlling body and the people. Upland game birds have now become negligible in numbers and our water fowl is rapidly on the decrease mainly owing to poaching all the year round. Our forests are sadly menaced by the presence in them of plant-eating animals. Nay, the very prosperity of this fair land is in jeopardy owing to past blunders in wild-life matters. A Commission or Board of Enquiry into the results of the past efforts to administer wild life and the placing of the whole matter on a sound basis is long overdue.

REMEDIES AGAINST BIRD DESTRUCTION.

(Extracted from "The Practical Value of Birds," by JUNIUS HENDERSON.)

Many things can be done not only to prevent undue destruction of birds, but also to encourage them and increase their numbers where advisable. Foremost among these is the creation of a healthy public sentiment by the dissemination of accurate information. An astonishing number of otherwise well-informed people are totally ignorant of the practical value of birds—their relation to human welfare. Much is being done to correct this (in the United States). Much more should be done.

The interest of thousands of school teachers has been enlisted and they have introduced the study of birds into the curricula of their schools, but there are large areas where nothing of this kind has yet been done. The Audubon Societies, with their junior organisations, are doing splendid work along this line, a work that should be pushed into every corner of the land. In a great many localities the Boy Scout, Girl Scout, and kindred movements are doing good work in interesting the youth of the land in Nature, including the birds. It is quite customary in some portions of the country to call upon the Boy Scouts to post notices in the forests and along the highways, urging people to protect the birds and spare the wild flowers. Such organisations should be given every possible encouragement and every effort should be made to get executives for the organisations who are themselves well trained, in order that the information they pass along to the boys and girls may be accurate. Many newspapers are willing to give space to articles bearing upon this subject, and such articles should be prepared by men and women who have made sufficient study of the subject to avoid misleading statements. Much may be done by those interested in the study of birds to encourage the newspapers of their localities to devote more space to the subject, in connection with other phases of natural science, and to furnish the editors with information.

Such a campaign of education is essential to the passage of wise laws for the protection of birds, but the passage of laws cannot solve the problem. Laws will not be enforced without enthusiastic public sentiment behind them. A sufficient police force to patrol the whole country and watch for violations of the law is not practicable. Futhermore, the great majority of officers charged with the enforcement of laws do not even know there are any laws for the protection of any but the game birds, have not the slightest knowledge of the need of such protection or of the importance of birds, and are totally devoid of any interest in the subject. Hence our chief hope lies in the educational campaign,

the dissemination of knowledge, the creation of public sentiment based upon that knowledge.

A number of sportsmen's associations in the United States are engaged in intelligent patriotic efforts to conserve game birds. Many of their members are also interested in the protection of non-game birds. They should receive support in all proper endeavours. It is not at all advisable to prevent hunting, but it is quite important to place it under proper control; otherwise in a short time there will be no hunting. Extreme sentimentalists who demand complete cessation of hunting in most cases eat the flesh of fishes and mammals killed in quite as cruel ways as is the game killed by the hunter. The need is of intelligent conservation in the interests of all the people, and that is what most sportsmen's organisations are seeking. They may sometimes make mistakes, as we all do, but their motives are usually good and mistakes can usually be corrected if detected in time.

The early bird laws of the United States provided for the destruction of birds by means of bounty acts, instead of their protection. Especially were laws directed against such gregarious birds as the Blackbirds and Crows, because they were generally supposed to be altogether harmful to crops, and against the Hawks and Owls, because they were all suspected of being enemies of the poultry. Subsequent investigation has shown that the Blackbirds and Crows do a great deal of good to offset the damage they do, and only a few species of Hawks and Owls cause trouble in the poultry yards, while the great majority do a vast amount of good in the destruction of injurious rodents and insects. Consequently, such laws are not now very much in vogue.

Through the efforts of the United States Department of Agriculture, the American Ornithologists' Union, the National Association of Audubon Societies and other organisations and individuals, most States have enacted laws for the protection of all except a few species of non-game birds, while the national government has negotiated treaties with adjacent countries providing for protection of migratory birds, and Congress has enacted a law providing for the regulation of hunting migratory birds, under the terms of the treaties.

A number of very important bulletins and other publications dealing with methods of attracting birds have been published during the past few years. Among the suggestions offered, an important one is the provision of feeding places and food for birds during bad weather and times of scarcity of food. Another is the planting of wild fruits and other non-commercial fruits attractive to the birds and affording them a substitute for cultivated fruits in order that they may not be so strongly tempted by ripening cherries.

The provision of better nesting places is very necessary where natural nesting sites are scarce. For species that nest in holes, enclosed bird boxes may be provided, of different sizes and especially with openings of different sizes for various species. In many places small piles of brush may be so placed as to provide nesting cover for ground-nesting species. The value of encouraging the nesting of birds has been demonstrated on more than one occasion. For example, Forbush tells us that an invasion of army worms in Massachusetts did no harm on farms where provision has been made for nesting sites. Hewitt says that in 1905, in a large area in Germany, where insects were defoliating the trees, the wood of Baron von Berlepsch, in which birds had been encouraged by numerous nesting boxes, was almost untouched by the insects, which were kept in check by the birds. The Baron has written a book on Methods of Attracting and Protecting Wild Birds, and Wharton has from his own observations given us a shorter account of the methods adopted.

The necessity of protecting birds, particularly during the nesting season, from stray house cats has been discussed at some length in another chapter. As therein indicated, a large proportion of young birds about farms, villages, towns and cities, upon leaving the nests, become victims of cats. If all the cats could be kept in confinement during the nesting season, it would immediately result in a large increase in the numbers of insectivorous birds. Manicuring the cats has also been found effective. Cat-proof wire fences, which prevent the cats from entering enclosures where birds are nesting, and guards for the trunks of trees, which prevent cats from climbing them after young birds in the nest, have been devised. Anti-cat ordinances have been passed in some cities and proposed in others, but they have not proved popular, because of ignorance of the facts, and are bitterly opposed by those who believe that their cats should be allowed to run at large regardless of the rights of their neighbours.

The establishment of properly guarded private and public bird preserves—areas in which the destruction of birds of all kinds is prohibited at all seasons—is another means of encouraging the birds and maintaining their existence or even increasing their numbers locally. Numbers of such refuges have been provided, but the plan is capable of great extension and doubtless much more will be done in that direction in the future. The setting aside of their breeding places as refuges is an especially valuable method of preventing the extermination of such birds as the Egrets. The desperate character of the market hunters is revealed by the fact that wardens of some such preserves have been killed by the collectors of plumage for the hats of the fair sex—a business unintentionally encouraged by those who demand the plumage.

THE SENTIMENTALIST.

(An editorial appearing in *American Nature Magazine.*)

One frequently sees the Nature lover or "sentimentalist" scored for his lack of grasp of a situation that is often tersely described as "Game versus Vermin," or some other aspect of conservation. Since the opinions expressed often show a lack of appreciation of the standpoint of the non-hunting lover of wild life that is quite as profound as the ignorance that is ascribed to him, his viewpoint may be emphasized.

The "sentimentalist," as he is termed, often in derision, may have as broad a background of experience as his critic. Sometimes he is a sportsman who has seen, with the passing of the years, the gradual depletion of our wild life, and who has laid aside the gun. He may be one who has never hunted, but derives ample enjoyment from observation of wild life, without killing. Sometimes he has other points of view. In any case his attitude should, in fairness, be accorded that degree of respect that accompanies sincerity of purpose not actuated by hope of gain.

Especially during the past thirty years have we seen the wild life of our continent ravaged in the name of sport, and the commercialism that depends on it. In this destructive alliance there has grown up a theory that the rights of the sportsman are paramount, and that he is justified in destroying any species that interferes with one that has been designated as game. This attitude seems to betoken a degree of selfishness, and an assumption of ownership, that will not stand the test. Has he who has never taken up the gun abandoned title to his share of grouse, or quail, or hawk, or owl? Is not his enjoyment as worthy of recognition as that of the man who finds enjoyment in killing? By what process of reasoning is the non-killer asked to relinquish his share? Surely he has a right to claim joint interest in wild creatures, and to assume some responsibility for their protection.

Settlement has seriously interfered with many of our larger species; no one believes that the bison could maintain its millions on our western plains. But settlement, and natural enemies, and diseases, have all been much overworked in accounting for the recent rapid decline in our game species. The disinterested student, reviewing the history of our game during the past few decades—an ever-dwindling supply pursued by a constantly increasing army of hunters—believes, unless a truer type of conservation is adopted, that the virtual disappearance of those marvellous creations that in his own memory peopled abundantly the woods and fields and marshes of our continent is inevitable. If in his pleas for less killing he may seem to tread on the toes of

sport, it is through fear that the few larger species that are yet spared us in fair numbers will follow those that have gone.

An assertion given much emphasis is that the non-killer does little or nothing to preserve our wild creatures. What greater protection can be given the bird than to spare its life? And, as examples, let us remember the gift of Marsh Island, Louisiana, by Mrs. Russell Sage; the Rainey Wild Life Sanctuary, in the same state, financed by Mrs. Grace Rainey Rogers; the earlier successful work of Abbott H. Thayer in behalf of the sea-bird colonies on our Atlantic Coast, and the recent act of Edward Bok in establishing his Florida preserves. What of the thousands of dollars contributed by the Audubon Societies and other disinterested organizations, and expended in sanctuaries, warden service, and winter feeding? Especially let us not forget that greater value, unmeasurable in terms of money, represented by the moral and educational influence of such efforts.

The school of thought that the Nature lover represents and that brings him criticism is largely the direct product of conditions that are continually becoming more evident. His forces are being recruited from the ranks of those whose repugnance to the slaughter that so often masquerades as sport has forced them to action, by landowners and farmers who resent the destruction of property caused by careless hunters, and who are determined to protect the wild creatures they raise, and by sportsmen who have come to realize that the benefits gained by life in the outdoors may be obtained without killing, and who are welcoming this new régime.

The "sentimentalist," contrary to the conception pictured by his critics, is by no means an isolated and visionary back-number, ignorant of his subject and spending his time deploring and supplicating. He is a student of the present, interpreting it by the lessons of the past, and working for a more abundant future. The fact that he is being recognized as a militant force is significant.

FORESTS AND WILD LIFE.

(By Captain E. V. Sanderson.)

"It is axiomatic that wild life, including mammals, birds, and fish, depends primarily on the maintenance of the forests," says the December bulletin of the American Game Protective Association. Fish, because forests are the regulator of rivers and streams. In New Zealand it is mainly the floor covering, so peculiar to our forests, which is the main water controller. If this is damaged or destroyed then rivers and streams rush impetuously down in times of heavy rain scouring out fish-cover and fish-food, while in times of drought these water channels become more or

less a series of pools. Trout fishermen should therefore be active in forest preservation, lest their recreation be lost. The first essential in the conservation of game birds and our native birds is that their habitat should be in natural condition. Thus the forests are the homes and food supplies of our forest inhabiting native birds, and no native forests means no native forest inhabiting birds. Game birds, too, must have cover; indeed, the pheasant in this country, or what few remain, are becoming more and more prone to live and roost in the fringe and patches of forests, while quail always find the forest a safe sanctuary.

Surely, then, it is in the interests of all, except some few of the deer stalkers, who think more of their stalking than their country's welfare or anybody else's interests, that plant eating animals should be exterminated from our forests which the highest authorities in the world say, owing to their peculiar past existence, are totally unequipped to withstand the ravages of plant-eating animals. No forests means no fish, no game birds, no native birds and no future prosperity for New Zealand. We cannot afford to replant our forests if they are destroyed, and we cannot replace them with a forest so well designed for water conservation, the prevention of erosion and those beneficial, nay necessary conditions, brought about by forests to our national well being, nay, our very existence as a people. Every good citizen should, and must, insist on the elimination of plant-eating animals in our forests lest we strike that rock which has time and time again wrecked former peoples—forest depletion.

MAN'S GREATEST RIVAL.

"The insects are man's rivals for possession of this planet," declares Dr. L. O. Howard, who was for thirty-three years chief of the U.S. Bureau of Entomology. "They are damaging us infinitely more to-day than at any time since civilisation began." These insect invaders want what we want. They eat what we live upon. They are destroying our crops, ruining our orchards, plundering our gardens, and ravaging our forests.

The most recent onslaught of the insect kingdom has been made by the Mediterranean fruit fly in the citrus groves of Florida. This pest, excluded from the United States until this year, was discovered by J. C. Goodwin, nursery inspector for the Florida State Plant Bureau. On the seventh of last April he found larvæ in grapefruit he was preparing for breakfast. Investigation in Washington, D. C., proved them to be the larvæ of the menacing Mediterranean fruit fly. Within a week hundreds of experts were at Orlando, the centre of the fight, attempting to curb the pest. Congress rushed an appropriation of 4,250,000 dollars to the stricken district. Quarantine rules

were rigidly enforced in the contaminated area. The war was on, but the victory was far from won.

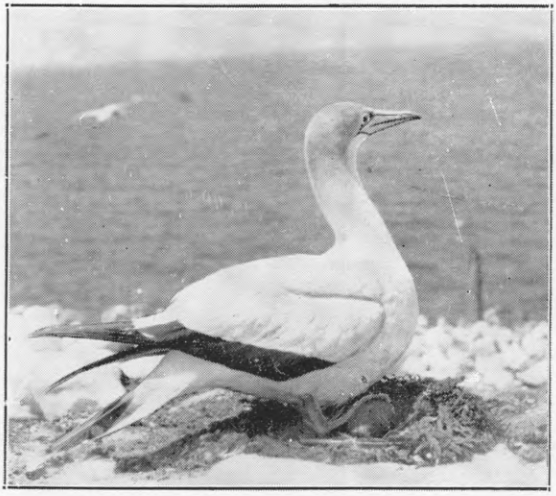
The situation is serious. "The terrible thing about the Mediterranean fly," Cyrus French Wicker declares in the September *Current History*, "is that from no place where it has yet become strongly established has it ever been exterminated or expelled. . . . This is no unimportant or insignificant foe! This terrible and unconquerable enemy can cause our country more damage than any war in history."

But the danger of the fruit fly is only one of the numerous pests of the insect world that man is attempting to combat. The gypsy moth and the brown-tailed moth in the New England States keep thousands of men busy every spring and fall combating their advances into our forests. In the cotton belt of the South the boll weevil is the dreaded enemy. This weevil that came across the border from Mexico destroys approximately two hundred million dollars' worth of our cotton every year! In the Central States the corn beetle is fought by the farmer. In some localities this enemy ruins 75 per cent. of the corn crop. And while the farmer is fighting this pest, his neighbouring fruit grower in California is spending 45,000,000 dollars annually to protect his groves from scale insects and other pests. Add to these the Japanese beetle, the peach borer, the Mexican bean beetle, and the alfalfa weevil, and you begin to see the array of enemies in their millionfold strength that man must constantly fight.

With all our scientific research and combative measures, we are losing against the onslaught. As one writer, describing the Mediterranean fruit fly, has ably written in the Orlando *Evening Reporter-Star*, "It is the deadlier war between species and species, between world-bestriding man and one of the countless kinds of insects that are trying, blindly and unknowingly but none the less desperately, to eat him literally off the planet. Tick and warble fly threaten his meat, chinch bug and corn beetle threaten his bread, and now comes this latest addition to the long list we already have to fight in America, to snatch the ripe fruit away from his hand."

With an ever-increasing population to consume fruits and vegetables man must find a way to combat the tiny enemies or starve to death. "Our best entomologists agree that we cannot hope to drive out these insidious destroyers of our crops and gardens," declares Henry W. Hough; "the most we can do is to check them—perhaps for but a little while."

"Should we," Professor Wicker concludes pessimistically, "of all nations, fail now in our endeavour, our world may, as some scientists affirm, be turned over within the course of a few centuries to the insects, and man will have lived in vain."—*Signs of the Times*.—Insect-eating birds are our main ally.



GANNET ON NEST,
Barrier Islet
[*Photo by B. Sladden.*

SPOTTED SHAGS,
Coromandel Coast.
[*Photo by B. Sladden*

BITTERN.
[*Photo by Chas. Lindsay.*

New Zealanders!

No Insect-eating Birds
means no crops.

Fire in our Forests
means sudden death to our forests,

Animals in our Forests
means certain death to our forests.

No Native Birds
means no native forests.

No Forests
means decreased production, desolation and poverty,

Will YOU help to avoid these results?

ALLIED SHEARWATER.
[*Photo by Chas. Lindsay.*

Please pass this Booklet on to a friend if of no further use.
Extra copies will be forwarded Free on request.

Printed by Blundell Bros., Ltd., Willis Street. Wellington.—38150