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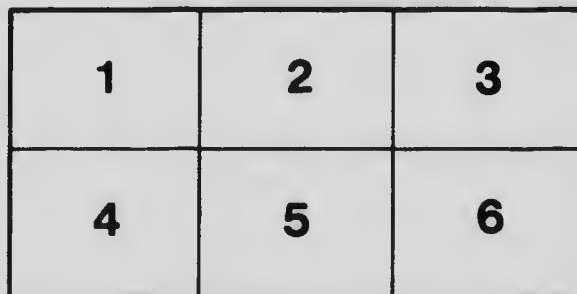
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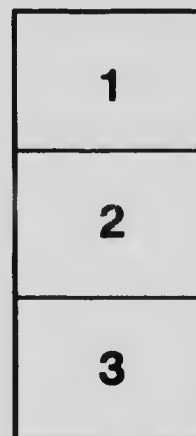
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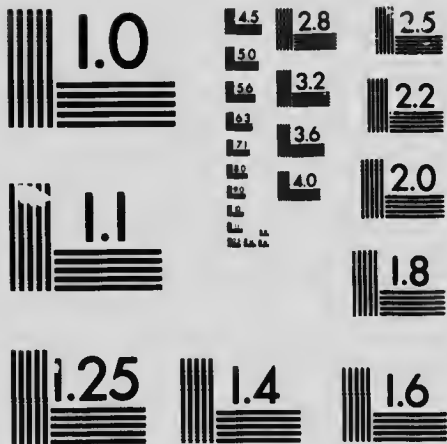
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**MINISTERS OF AGRICULTURE GIVE
VIEWS ON BIRD PROTECTION**

**WHY SASKATCHEWAN BELIEVES IN BIRD
PROTECTION**

BY HON. C. M. HAMILTON
Minister of Agriculture, Saskatchewan

**OUR OBLIGATION TO THE BIRDS BECAUSE
OF THEIR USEFULNESS TO AGRICULTURE**

BY HON. JOS. ED. CARON
Minister of Agriculture, Quebec

A TRIBUTE TO THE VALUE OF BIRDS

BY HON. MANNING W. DOHERTY
Minister of Agriculture, Ontario

THE VALUE OF BIRDS TO AGRICULTURE

Prepared by V. W. Jackson
HON. VALENTINE WINKLER
Minister of Agriculture, Manitoba

RB 98390

The Dominion Parks Branch, of the Department of the Interior, asked Provincial Ministers of Agriculture to give their views on the value of Birds. Their answers are given in this paper. If you think bird protection is unnecessary, read what they say.

WHY SASKATCHEWAN BELIEVES IN BIRD PROTECTION.

By HON. C. M. HAMILTON, *Minister of Agriculture,
Province of Saskatchewan.*

THE Saskatchewan Department of Agriculture is pleased to have this opportunity of reassuring the people of Canada of its deep interest in all matters pertaining to the conservation of bird life, more especially as they relate to the promotion of Canada's first industry. All too often when referring to our natural resources, we ignore our wild life heritage, and yet, in the final analysis, it is doubtful whether any other natural resource, at this stage of Saskatchewan's history, has yielded so much in actual cash value as the birds and animals of our province.

Were it not for the activities of our bird friends, which invade our province during the season when insect pests are found in greatest numbers, our farm crops would be seriously damaged, and in many cases entirely destroyed, as actually happened in many parts of southern Saskatchewan during the grasshopper outbreak last summer. More than one intimation has been received of the value of the birds during this plague. For example, a farmer, near Rouleau, reported that his crop was badly infested. An official of the department was instructed to make an investigation of the complaint, but upon arrival at the farm he was informed that his services were not required for the "gulls had cleaned them up." Unfortunately our bird population is considerably below normal, otherwise these outbreaks would not likely develop to such serious pro-

portions. We should recognize these great losses of valuable food supplies as signals of imminent danger and use them as stimuli for further effort towards maintaining nature's balance for the control of such pests.

Special emphasis was given to the subject of bird protection on the "Better Farming Train" last summer. Lantern slides of the common birds of the farm were shown to over ten thousand school children. At each meeting the boys and girls were entertainingly informed of the habits of the birds, and in order that they should carry away with them some lasting impression of the importance of bird protection, they were asked to memorize such short sentences as "Insects eat Crops." "Birds eat Insects." "Save the Birds." Which they always repeated vociferously in unison before dismissal. Next year we hope to introduce motion pictures of Saskatchewan bird life, dealing more particularly with some of the non-game birds protected under the Migratory Birds Convention Act.

Public sentiment must play a large part in the campaign for better protection of our feathered friends and we believe that the best place to develop such a sentiment is among the boys and girls of school age, and it is now provided in this year's course of study that the pupils of grade four, five and six know something about the laws that give protection to wild birds and animals.

With the ratification of the treaty between Great Britain and the United States for the protection of migratory birds that pass between Canada and the United States twice each year, there was consummated the most advanced legal protection ever accorded to migratory birds. Compliance with the terms of this solemn agreement will undoubtedly bring about results that no other single effort could hope to accomplish. I am pleased to state that the Saskatchewan Game Laws were so nearly in accord with the terms of the treaty that it was only necessary to make one or two minor changes to our Game Act in order to have it conform with the terms of this international document.

Spring shooting has been prohibited in this province for nearly fifteen years, and a reversion to shooting at this season of the year is never so much as mentioned now. The sale of game is also pro-

hibited. Notwithstanding the rapid progress that has been made during the past few years, the campaign for the conservation of our Wild Life resources has only really commenced and the co-operation of all who are convinced of the importance of this worth-while movement is absolutely indispensable if we are to spread the gospel of conservation until all citizens appreciate the true value of this much neglected national asset.

OUR OBLIGATION TO THE BIRDS BECAUSE OF THEIR USEFULNESS TO AGRICULTURE.

By Hon. Jos. Ed. Caron, *Minister of Agriculture, Province of
Quebec.*

The harm to agriculture caused by certain birds has often been exaggerated. In our hurry to condemn some we have decided that all birds are harmful. On account of the rare misdeeds of some Raptores or rapacious birds because they occasionally carry off a chicken or because some other birds purloin seeds from newly sown land, more than one agriculturist has declared war on all denizens of the air.

This question is of great importance and should receive more careful consideration. It would be very unfair if useful birds should be placed in that category, on account of the misdeeds of some.

Very little observation would soon convince us of the economic importance of birds in relation to agriculture.

Firstly: let us consider that rapacious birds which do harm are less numerous than others, and they often repay the harm they have done by destroying rodents and even insects which cause such serious injury to man. It is not generally known, but it is true, that the birds of prey contribute, along with the more useful birds, in the destruction of these enemies of agriculture. It is consequently a wrong principle to carry on a war of extermination against even the hawks and owls without previously studying the nature of their food, and making allowance for the fact that the harm done is often balanced by good.

It is well known that many of our bird assistants eat an incalculable quantity of harmful insects. The owl, for instance, takes advantage of the night to destroy rats, mice and field-mice, all of which belong to the group of rodents whose activities mean only destruction as they are of no appreciable value to the agriculturist.

Many birds like to eat the seeds of different plants but the cultivated plants on our farms are not the ones most affected in such cases. The noxious weeds which fill our fields occupy the activities of our birds and they are continuously doing their best to destroy them. This assistance in weed control is worthy of mention and is too often overlooked.

It is important that we should at least be familiar with the names of our principal feathered agricultural assistants, those charming little creatures who fill the fields and forests with their harmonious songs.

It must be acknowledged that a group of birds of prey include very few of good and pleasing appearance and it is chiefly on that account that they are classed as thieves and vagabonds. However, except for a few really harmful ones their usefulness is very significant to us. The Broad-winged Hawk with his powerful sight, the Sparrow Hawk so quick in his movements, the owl with his mournful hooting are all kept busy destroying harmful rodents. Considerable damage, often irreparable, is done by the field-mice in our orchards. Let us leave the owls and beneficial hawks to increase their number in full liberty and carry on their excellent work of destroying these enemies of our fruit trees.

All children know of the active woodpecker who, with his fine beak continuously taps around the trees. He does not act in this manner simply for recreation. With his well-pointed beak he perforates the bark and from underneath it, guided by instinct, draws out the worm that eats the wood and which kills so many of our beautiful shade trees.

During the summer months our cultivated fields are visited by a multitude of grasshoppers. Unfortunately these jumping insects feed on the wheat and oats under cultivation. Our friends, the birds, during the time of the outbreaks are constantly busy trying to exterminate as many as they can of these wasteful insects.

We have also the cuckoos who are very fond of moths and caterpillars; these birds are chiefly useful in our orchards where they perform most of their work. One cuckoo alone in a very short time can devour over three thousand moths and caterpillars. Just imagine

the enormous quantity of insects that one thousand of the birds can destroy. The blackbirds, the Bobolink, the Tree Sparrow, all have beneficial habits and should be considered among the most useful birds to agriculture.

But in the first place among our feathered friends belong without doubt to the graceful swallows. They are general favourites. While flying gracefully they catch flies, beetles and other harmful insects. The warblers, thrushes and robins, take the place of the air-hunting swallows in the trees and hedges and with great efficiency destroy there numerous harmful insects.

Even the Crow, although so contemptible in many ways, is a protective element to agriculture. It is true that during the sowing season this bird sometimes has the bad habit of unearthing oats, corn, and other seeds, but this does not last long. As soon as the young plants make their appearance, the Crow looks for its food among the beetles, cut-worms, grasshoppers, moths and field mice. It is even believed by some that the Crow fully repays for the damage done by it.

From the above statements we must draw the logical conclusion that the usefulness of birds is unquestionable. We already love them for their cheerful warbling around our homes and in our forests as well as for their gracefulness and constant activity. Their charm is such that the country without birds would be a desolate place and we would refuse to live in it.

Many of the most beautiful species of birds prefer living close to habitation, where they build their nests and favour us with their charming songs during the bright early summer mornings. Let us have some gratitude towards the birds who render so many good turns in spite of our cruelty to them. By all means we must give protection to these friends sent by Providence to the agriculturist, by giving them shelter, respecting their nests and facilitating their increase. Any intelligent child with good natural disposition will protect the birds, but this is not sufficient; let us teach the children how to love them. Let us put aside these cruel customs which favour the extermination of the birds. Whoever protects these small creatures is a good citizen, and follow in this way the spirit of our Creator.

A TRIBUTE TO THE VALUE OF BIRDS.

BY HON. MANNING W. DOHERTY, *Minister of Agriculture, Province of Ontario.*

As the country becomes more thickly settled the question of the efficient protection of birds becomes more urgent. As the forest gives place to farms there is bound to be a diminution of those species which live only in the deep woods, and those species which live in open woodlands and in open country are brought into closer relation with man.

The true position of birds in relation to man is not generally or at all adequately recognized. If some species or even a few individuals of one species, manifest injurious tendencies this fact is at once noticed, but the good work which is carried on, quietly yet unceasingly, by the great majority of species passes almost unrecognized. There is also a good deal of misunderstanding in regard to the economic status of various species. Thus all hawks and owls are frequently condemned as injurious and are shot at every opportunity, though as a matter of fact we have in Ontario only two common injurious species of hawks and one injurious species of owl, while we have five common hawks and four common owls which are beneficial. These nine beneficial birds of prey are of inestimable value to the farmer in his warfare against injurious rodents. One of their principal items of food is mice, which do an immense amount of damage to agricultural products by eating grain, destroying the roots of grasses, thus sometimes ruining meadows, and by girdling young trees in orchards.

Another group of birds whose relationship to man is quite generally misunderstood are the woodpeckers. They are frequently complained of as injurious to orchards, since through faulty observation the work of the Yellow-bellied Sapsucker—that makes the series of round holes drilled in the trunks and larger limbs of trees—is taken for that of the true woodpecker, such as the Downy Woodpecker.

birds which perform a very valuable service for man, in extracting the wood-boring larvæ which are destructive to trees.

The great majority of birds which inhabit our fields and orchards are highly beneficial. Thus 93 per cent of the food of the Phœbe consists of insects, chiefly of injurious species. Of the food of the Meadowlark 73 per cent consists of insects. The native sparrows, that is all species with the exception of that imported pest, the House Sparrow, are very valuable not only by reason of their insect-eating proclivities, but also because they destroy an immense amount of weed seed. The American Goldfinch consumes great quantities of thistle seeds. The swallows are ceaselessly active from daylight till dark gathering in flying insects of various species, including many species which are serious pests. The vireos and the warblers search each leaf and twig for the minute plant lice and the eggs of other kinds of insects. The nuthatches and the Brown Creeper explore the crevices in the bark and extract hibernating insects and their eggs. The Chickadee is also a diligent seeker after small insects and eggs and one Chickadee has been found to eat 1,028 eggs of the cankerworm in one day.

These few facts show the economic value of our birds, and to this we must add their æsthetic value—the joy which their gay plumage, interesting ways and beautiful songs lends to rural life.

VALUE OF BIRDS TO AGRICULTURE.

PREPARED BY V. W. JACKSON FOR HON. VALENTINE WINKLER, *Minister of Agriculture, Province of Manitoba.*

Birds prevent insect plagues. Plagues of locusts occur only in treeless and birdless countries like Egypt. Where birds are plentiful, insects are kept in check. The waterfowl of the Mississippi valley save it from the Rocky Mountain locust. Blackbirds, plover, quails and prairie chicken have rescued Nebraska from crickets several times. Meadowlarks, kingbirds, cuckoos, grouse, killdeers, black terns and gulls have no doubt saved Manitoba from the devastating army worm, which, on several raids, never got farther than the southwest corner of the province. Grosbeaks, nighthawks, and quails feed upon potato bugs and slugs. The United States has spent millions in investigating the damage due to insects and the value of birds in checking that damage. The annual loss of crops and trees due to insects is thought to be nearly \$700,000,000 in the United States, and \$125,000,000 in Canada. Fifty thousand birds' stomachs have been examined by the United States Biological Survey, and it was found that over fifty different species fed upon destructive caterpillars, and fifty live upon destructive scale insects and plant lice. One Nighthawk's meal was found to consist of 340 grasshoppers, 52 bugs, 3 beetles, 2 wasps and a spider.

Robins take five ounces of food per day, Chickadees will eat 200 to 500 insects per day. Most birds take over 100 insects daily to feed their young, to keep up their high temperature, and supply energy for twenty active hours per day. Chester A. Reed gives the following figures for Massachusetts: 800 square miles x 640 x 5 insect eating birds per acre x 100 insects per day, equals 21,000 bushels of insects consumed per day in that small state. Five times that amount, would be consumed in all probability in Manitoba.

Take a peneil and calculate the value of our birds to Manitoba: 47,000,000 acres of farm land x 3 birds per acre x 1½ ounces of weed

seeds or insects per day x 150 days, bird season, equals 887,000 tons of pests destroyed each summer by our birds. (J. J. Golden.)

Birds also consume great quantities of weed seeds. Our winter birds—and we have 43 species—live principally upon weed seeds. The Juncos start in early on Russian pigweed, and the buntings, the redpolls, the winter grosbeaks, the jays and the sparrows. In Iowa, 10 sparrows to the square mile during the winter of 200 days, consume 875 tons of weed seeds. Forty species of sparrows in the United States are seed-eaters, 97 per cent of their food being weed seeds, 64 per cent of the food of the Mourning Dove is weed seeds, and 27 per cent of the Meadowlark's food is weed seeds.

Gophers and mice are bad, but they would be worse if it were not for hawks and owls; the hawks work by day and the owls by night. The Horned Owl will swallow a striped gopher entire. The bones and hair are then disgorged as pellets. Thousands of pellets are often found under the roosts of these owls. In the stomach of a young Horned Owl two weeks old, the remains of five mice were found. Three thousand skulls of gophers and mice were found in the retreat of a pair of Barn Owls. All the hawks are expert at catching young "Flickertails."

Our hawks are not as harmful as supposed. Thousands of stomachs of hawks have been examined by Fisher, King and Beal.

220 Red-shouldered Hawks: Less than 2 per cent poultry.

65 Broad-winged Hawks: No trace of poultry.

320 Sparrow Hawks: No trace of poultry, but 101 mice, 224 insects, 52 birds, 12 reptiles.

124 Marsh Hawks: Only seven contained poultry, and 79 contained mice.

Rodents are the natural diet of hawks and only the Sharp-shinned, Cooper's, Pigeon and Goshawk maliciously attack poultry.

The Great Horned Owl or Cat Owl is the only one which attacks poultry, all others during their nightly prowling are great destroyers of mice and voles.

Unfortunately, we have seen how readily the cankerworm can destroy the Manitoba maple and plant lice destroy the elm. No doubt the wholesale destruction of our native maple in the south-

western part of the province was due to the scarcity of birds on the area with fewer trees. The cankerworm never ravishes the maples in the "park country" or more thickly wooded area. Even shrubs afford a great protection for birds and in these perhaps half of our birds build their nests.

SUMMARY.

Insects, weeds and gophers hinder farming.
But for birds, farming would be impossible.

Our Birds are—

Insect devourers;
Weed seed eaters;
Mice and gopher catchers;
Tree protectors.

Protect the Birds—

Spare the natural bluff or thicket.
Set out windbreaks or shelterbelts.
Put up birdhouses and feeding trays.
Birds like suet and water baths.

Copies of this pamphlet and others issued to further bird protection in Canada as well as copies of the Migratory Birds Convention Act may be obtained from the Commissioner, Dominion Parks Branch, Department of the Interior, Ottawa.—M.B.L., 13. 1920.

