

Birds and Forest Protection

Dr. C. Gordon Hewitt, Dominion Entomologist, Ottawa, whose work in regard to injurious forest insects is well known to all members of the Canadian Forestry Association, has always endeavored to impress upon all citizens, and particularly upon the young, through the Boy Scouts and other organizations, the value of our birds as destroyers of injurious insects and of weed seeds. In a recent address, Dr. Hewitt went into this subject in detail, and from that lecture, as it appeared in the *Ottawa Naturalist*, the following parts relating more particularly to the forest side have been taken:—

‘The motives behind the widespread and increasing movement respecting the protection of our native birds may be included in two classes, namely, sentimental and practical. Most people, even in this material age, are sensible of feelings of affection towards our birds, and are delighted when the return of the first spring migrants announces the termination of our long birdless winter. But the practical considerations underlying the movement are not so generally appreciated, and for that reason æsthetic feelings will be assumed and the practical motives discussed.

‘Few people realize the place of insect pests in the general economy of life, but when it is understood that were it not for their controlling factors insects would, in a few years, destroy every form of vegetation, and consequently all animal life on the face of the globe, the significance of such controlling factors will be appreciated. In the United States it is estimated, on a conservative basis, that the annual loss on agricultural and forest products is about eight hundred million dollars (\$800,000,000). I have estimated that in Canada, on our field crops alone, the minimum annual loss due to injurious insects cannot be less than fifty million dollars; this does not take into account the enormous aggregate cost of controlling insect pests. And yet the most valuable insecticidal agencies we have are not only not encouraged, but, in many cases, ruthlessly destroyed. Such a short-sighted and wasteful policy cannot and must not be continued.

‘The quantity of insect food consumed by birds is almost incomprehensible, but the facts set forth by various investigators on this continent and in Europe give us some idea of the extent to which insects go to make up the diets of birds. Insects constitute 65 per cent. of the total yearly food of woodpeckers, 96 per cent. of that of fly-catchers, and 95 per cent. of the yearly food of wrens. Upwards of 5,000 insects have been found in a single bird’s stomach. The value of the birds is increased by the fact that at the time when insects are most abundant birds are most active and require most food, especially animal food, to feed their young.

‘A young crow will eat twice its weight in food; a robin weighing three ounces was found by Nash to consume five and one-half ounces of cutworms in a day. It is calculated that a pair of tits and the young they rear will consume about 170 pounds of insect food during a year. These facts and others to be given later will indicate the enormous destruction of insect life that is accomplished by the presence of birds. They constitute one of the fortunate balances of nature. But man is constantly upsetting the balance. Woodlands are cut down and give place to open fields; snake fences give way to wire; subdivisions and town lots obliterate the waste places and often the swamps. All these circumstances tend to drive away the birds formerly resident and breeding in such localities. Then outbreaks of injurious insects occur and their depredations are increased and prolonged by reason of the absence of such important enemies. Therefore, our aim should be to restore the balance by attracting the birds back to our parks and natural reservations.

‘Not only do birds destroy insect pests, but they contribute to the destruction of weeds. Certain species of our native sparrows are large consumers of such weed seeds as bindweed, lamb’s quarters, ragweed, amaranth, pigeon grass, etc.

‘The feeding habits of a few of our common species of birds which should be protected may now be considered. The Robin (*Planesticus migratorius*) probably comes first. Early in the year it feeds extensively on cutworms, those insidious enemies of our garden plants and crops; in March they constitute over a third of the robin’s food. It is accused of fruit eating, and yet of all the vegetable matter it consumes a large proportion consists