

known as grey birds. The most abundant of these are the Chipping Sparrow, Song Sparrow, Vesper Sparrow, and Field Sparrow. The first three are to be found everywhere; the fourth is more locally distributed, but is sufficiently abundant to be of economic value where it occurs. They are all of the so-called seed-eating class, but the seeds eaten by them are the seeds of plants that can be dispensed with.



White Throated Sparrow.

I have but rarely found any cultivated grain amongst their stomach contents, the only ones being a few oats in the fall. All through the summer the principal part of the food of the adults consists of insects, and the young are fed entirely upon them until they leave the nest. As these birds raise two and sometimes three broods each season, this means a vast number of insects taken from the crops. Small insects of all kinds are eaten, but the birds seem to show a preference for beetles, particularly for the pea weevil or pea bug. These appear about the peas when they are in blossom, and I have often watched the Chipping Sparrow, Vesper Sparrow, and Song Sparrow, together with the much-abused House Sparrow, busily engaged in capturing these beetles about the pea vines, and specimens taken by me at this time had their crops and stomachs filled with them.

When the breeding season is over, these sparrows gather into flocks, and may be found in large numbers in the weedy patches too often left about the farm. Here they are doing service not less valuable than that rendered by their destruction of insect pests in the summer, and which has only to be observed to be appreciated.

I have found that in confinement birds of this class will each consume about a quarter of an ounce of small seed every day. Multiplying this quantity by the number of sparrows to be seen on any farm, and an idea will be obtained of the quantity of weeds disposed of by them during the season.

In the spring we are visited by an innumerable army of sparrows larger than those I have mentioned. These are the White-throated Sparrow, White-crowned Sparrow, and the Fox Sparrow. They are on their way to their breeding grounds north of us. The Fox sparrows pass through early in April and rarely stay more than three or four days. The other two come later and remain much longer, their migration lasting about three weeks. During all this time they frequent weedy places, where they may be observed industriously foraging for the seed of injurious plants. About the middle of September they return, having their numbers

largely increased by the young raised during the summer, and they remain for about a month. During that time they visit nearly every weed patch and brush heap in the province and feed luxuriantly, not only on the seeds of the weeds we are most anxious to get rid of, but they also find in such places large numbers of mature insects which would lie there dormant through the winter ready to emerge in the spring to work mischief in the crops. Each female insect killed at this time means cutting off the source of supply of several hundreds of larvæ for the next year. In this way the birds are doing most excellent work for the farmer, the value of which can hardly be calculated in dollars and cents, and it is work that, with all our industry and ingenuity, we are not yet able to do for ourselves.

WILD CANARY.

Another useful weed-destroyer is the common American Goldfinch, or Wild Canary, as it is generally called. The majority of these little birds remain with us in Southern Ontario all through the year. In winter they gather into flocks and resort to the evergreen woods, where they are not often noticed. At this season their food consists of seeds of the hemlock and of such plants as stick up through the snow. On mild winter days flocks of them may sometimes be seen visiting the weed patches about the clearings. In the summer they scatter all over the country, frequently nesting in small trees about the farms and orchards. They are not insect-destroyers to any appreciable extent, their favorite food being the seeds of some of our most noxious plant enemies, such as the dandelion, Canada thistle, and others bearing plumed seed. The first appearance of these birds in the cultivated parts of the country is generally coincident with the seeding of the dandelion. As soon as the seed is formed numbers of these birds, assisted by some of the sparrows I have before mentioned, and the purple and indigo finches, may be seen flitting from head to head, eagerly feeding upon it, and so preventing a greater spread than we have of this troublesome plant. By the end of July and on through August the Canada and other thistles are forming and ripening their seeds. The little gold-



Song Sparrow.

finches fairly revel in these. Their sharp beaks are adapted for probing the involucre of the plant and extracting the seed, from which they cut off the plume and devour it. This class of weeds is one of the worst pests we have to contend with and very difficult to get out of the land where it has established itself. As it is, we are over-burdened