

And when at last the word goes forth,
And its frail covering falls apart;
And, rising upward from the earth,
A new life thrills through every part,—
The great sun greets it with a smile,
And the soft airs of spring the while
Its unexpanded leaves beguile
From out their buds to start;

While over it, a sheltering tent,
The warm sky bends by night and day;
And at its feet, in sweet content.
The brook goes singing on its way;
And, lifting up its head, it sees
The lofty over-arching trees,
And feels itself akin to these
With silent ecstasy.

How like a dream must seem the strife
And longing of its stay below!
How brief the struggle of that life,—
Its days of waiting long and slow!
How strange and sweet the sudden bliss
That the dark way could lead to this!—
I think I now can dimly guess;
But one day I shall know.

From the Magazine *Old and New*.

2. \$100,000,000 LOST TO FARMERS BY INSECTS AND BY THE FOOLISH DESTRUCTION OF BIRDS.

Horace Greeley, in deprecating the wilful destruction of birds by farmers, boys, and others, thus warns them of the loss incurred by the foolish bird warfare:—

If I were to estimate the average loss per annum of the farmers of this country from insects at \$100,000,000 per annum, I should doubtless be far below the mark. The loss of fruit alone by the devastations of insects, within a radius of fifty miles from this city, must amount in value to millions. In my neighbourhood, the peach once flourished, but flourishes no more, and cherries have been all but annihilated. Apples were till lately our most profitable and perhaps our most important product; but the worms take half our average crop and sadly damage what they do not utterly destroy. Plums we have ceased to grow or expect; our pears are generally stung and often blighted; even the currant has at last its fruit-destroying worm. We must fight our paltry adversaries more efficiently, or allow them to drive us wholly from the field.

Now, I have no doubt that our best allies in this inglorious warfare are the birds. They would save us, if we did not destroy them. The British plowman turning his sod with a myriad of crows, blackbirds, &c., chasing his steps and all but getting under his feet in their eager quest of grubs, bugs, &c., is a spectacle to be devoutly thankful for. Whenever clouds of birds shall habitually darken our fields in May and (less notably) throughout the summer months, we may reasonably hope to grow fair crops of our favourite fruits from year to year, and realize that we owe them to the constant and zealous, though not quite disinterested, efforts of our friends, the birds.

But I do not regard the ravages of insects as entirely due to the reckless destruction and consequent scarcity of our birds. I hold that their multiplication and their devastations are largely incited by the degeneracy of our plants caused by the badness of our culture. On this point, consider a statement made to me some fifteen or twenty years ago, by the late Gov. William F. Packer of Pennsylvania:—

"I know (said Gov. P.) the narrow valley of a stream that runs into the west branch of the Susquehanna, which was cleared of the primitive forest some forty or fifty years since, and has ever since been alternately in tillage and grass. A road ran through the middle of it, dividing it into two narrow fields. A few years ago this road was abandoned, and the whole of this little valley, including the roadway, thrown into a single field, which was thereupon sown to wheat. At harvest time, this remarkable phenomenon was presented: A good crop of sound grain on the strip four or five rods wide formerly covered by the road; while nearly every berry on either side of it was destroyed by the weevil or midge."

Now I do not infer from this fact that insect ravages are wholly due to our abuse and exhaustion of the soil. I presume that wheat and other crops would be devastated by insects if there were no slovenly, niggard, exhausting tillage. But I do firmly hold that at least half our losses by insects would be precluded if our fields were habitually kept in better heart by deep culture, liberal fertilizing, and a judicious rotation of crops. I heard little of insect ravages in the wheat-fields of Western New York throughout the

first thirty years of this century; but, when crop after crop of wheat had been taken from the same fields until they had been well nigh exhausted of their wheat-forming elements, we begin to hear of the desolation wrought by insects; and those ravages increased in magnitude until wheat culture had to be abandoned for years. I believe that we should have heard little of insects had wheat been grown on these fields but one year in three since their redemption from the primal forest.

But, whatever might once have been, the Philistines are upon us. We are doomed, for at least a generation, to wage a relentless war against insects multiplied beyond reason by the neglect and short-comings of our predecessors. We are in like condition to the inhabitant of the British Isles a thousand years ago, whose forefathers had so long endured and so unskillfully resisted invasion and spoliation by the Northmen that they had come to be regarded as the sea-kings' natural prey. For generations it has been customary hereabout to slaughter without remorse the birds, and let caterpillars, worms, grasshoppers, &c., multiply and ravage unresisted. We must pay for past errors by present loss and years of extra effort. And, precisely because the task is so arduous, we ought to lose no time in addressing ourselves to its execution.

The first step to be taken is very simple. Let every farmer who realizes the importance and beneficence of birds teach his own children and hirelings that, except the hawk, they are to be spared, protected, kindly treated, and (when necessary) fed. They are to be valued and cherished as the voluntary police of our fields and gardens, constantly employed in fighting our battles against our ruthless foes. The boy who robs a bird's nest is robbing the farmer of a part of his crops. He who traverses a farm, shooting and mangling its feathered sentinels diminishes its future product of grain and nearly destroys that of fruit. The farmer might as well consent that any strolling ruffian should shoot his horses or cattle as his birds. Begin at home to make this truth felt and respected, and it will be the easier to impress it also on your neighbours.

Next, there should be neighbourhood or township associations for the protection of insect-eating birds. We must not merely agree to let them live—we must cherish and protect them. I believe that very simple cups or bowls of cast-iron, having each a hole in its centre of suitable size, that need not cost sixpence each, and could be fastened to the side of a tree with one nail lightly driven, would in time be adopted by many birds as nesting strongholds, whence they might laugh to scorn their predacious enemies. If every harmless bird could build its nest among us in a place where its eggs would be safe from hawks, crows, cats, boys, and other robbers, the number of such birds would quickly be doubled and quadrupled.

And we must summon the law to our aid. Though law can do little or nothing against stealthy, skulking nest-plunderers, it can help us materially in our warfare with the cowardly vagabonds who traverse our fields with musket or rifle, blazing away at every unsuspecting robin or thrush that they can discover. Make it trespass, punishable with fine and imprisonment, to shoot on another's land without his express permission, and the cowardly massacre of the farmers' humble allies would be checked at once, and, when public sentiment had been properly enlightened, might in civilized regions be arrested altogether.

3. THE GREAT USE OF BIRDS TO FARMERS.

Mr. H. Bruce thus writes to the *London Free Press* on this subject:—

The farmer who allows any person to kill the small birds about his place is sadly wanting in the feelings of a man of generous thought, and sound judgment; and if he permits these birds to be destroyed because they deprive him of a few of his cherries and green peas, he, to use the vulgar phrase, "saves at the spigot and loses at the bung." Careful experiments have shown that every robin consumes, during the year, fifteen lbs. of worms. Think of that, every farmer who complains of the robin or any other small birds, for they all eat in proportion. The thousand birds which surrounds your farm and homestead during the year, bringing joyful welcome to your senses morning and evening, with their sweet notes, and songs of love, do they not remind you of the Great Creator, of the Almighty One, whose tender care is ever for these little birds; and only fancy these thousands of small birds that surround your homes eat annually 15,000 lbs. of worms and other insects. Now taking into account the vast good they do to the farmer, independent of their sweet melody, who, I say, is the deep thinking man with a generous mind that would permit the so-called sportsman, or the boy with the murderous gun, to destroy them, and particularly "out of season." Even the poor black crow, now so common amongst us, he is the harbinger of spring, and is useful in his way; it is not, however, to be denied that he pulls up a great