

farmer and gardiner to cultivate assiduously the acquaintance of all his insect friends, for although their individual efforts may be feeble, yet combined they no doubt maintain a powerful check on insect enemies.

Another common insect which is subject to attacks of Lady Birds is the well-known and universal *Colorado Potato Beetle*. Five species of our friends are known to devour this beetle—the spotted, the nine-spotted, the thirteen-spotted, the convergent, and the icy, Lady Birds; the latter, *Hippodamia glacialis*, Fabr., is closely allied to the Convergent Lady Bird, and is found far north, and may be taken under the ice and snow. The larvæ of these are equally as voracious as the perfect beetles, but the larva of the *H. convergens* is a perfect cannibal, for when there is a deficiency of other good food, he has no hesitation in devouring the helpless pupæ of his own kind.

The Grape Phylloxera, *Phylloxera vastatrix*, Planchon, has been found to be attacked by several species of the genera *Coccinella* and *Scymnus*, whose young, thickly covered with white and evenly shorn tufts of a cottony secretion, are frequently found at their good work within the galls. The last pest we will now mention is

The Pine-Leaf Scale Insect, *Mytilaspis pinifoliae*, Fitch, a bark-louse which injures many of the pine trees, as the red, the white, the yellow, the Pyrenian, the Scotch and others. "The twice-stabbed Lady Bird may frequently be found crawling over the scale-infested trees, and is most efficient in checking the increase of the Coccids. Both the beetle and its gray and prickly larva feast upon the lice, and require great numbers of such minute animals to appease their appetites. I have often colonized a dozen or more larvæ on to a badly affected young tree, and the rapidity with which they clear such a tree is both interesting and satisfactory. Still another insect of this family, namely, the Painted Lady Bird (*Coccinella picta*, Randall), I have discovered preying on our Pine-leaf Scale. (See Riley's Fifth Annual Report).

## AN OUTLINE SKETCH OF THE CANADIAN BUPRESTIDÆ.

BY JAMES FLETCHER, OTTAWA.

Of all the enemies against which man has to contend, there are none, perhaps, which are so hard to combat, nor which deserve more attention, than those belonging to the insect world.

These tiny atoms, apparently so insignificant, in some instances so small, as to need the closest search, or even a microscope, to discover, beset him in every direction, and, if ignored, will cut, pierce, and, in some cases, utterly destroy whatever his labour produces. Not many years ago Entomology was one of the most neglected Sciences, and only considered worthy of the attention of simple people and children, as describing pretty things likely to amuse them; to such an extent was this carried, that as late as the last century a lady of high rank in France was burned as a witch, the only evidence against her being that she was seen to collect and preserve insects. Even at the present day, both in England and Canada, there is much deplorable ignorance of "La belle Science" among the very people to whom, more than any one else, a knowledge of it is of the first importance. I have frequently been greeted with smiles of amusement (which have had a good strong admixture of pity in them) from farmers and countrymen, when asking for permission to collect on their grounds, the general tenor of their answers being, "Oh, yes, I suppose you won't do much harm;" and I have always been under a very decided impression that they looked down upon me as a poor innocuous creature that *could* do no harm. Many a quiet chuckle have I had in the deepest recesses of my sleeve, and many a quiet ramble, too, have I enjoyed, by this means perfectly immuned from all interruption by game-keepers or farm labourers, who regard the Entomologist (*Angl.*: "Fly-catcher," *Amer.*: "Bug-catcher,") much in the same light that they view the rooks that pick up the worms after the ploughman. These good simple fellows (not that I wish in the least to retaliate) will sometimes endeavour to encourage you, and even assist in collecting insects, which in the case of Coleoptera, are occasionally good specimens; but that is the exception, and by no means the general rule, especially with Lepidoptera. On one occasion during the past summer, I was hailed by a gardener who informed me that he had a "bug" for me, and who, after fumbling in his trousers' pocket for a short time, produced a tin tobacco-box, and then, from beneath some very black, damp-looking tobacco, disintombed

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Thanks to and Wood, in others, to pop exceedingly low every one to pe the insect pests mite to the ca number of spe more than desc interesting spec of these insects guish them, an I considered m of these are dif Entomologists, Annual Report Leconte in his too, used to a g this paper.

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