

shown in all its stages.) The larvæ are, when full grown, from three-fourths of an inch to one inch in length, and are soft whitish worms with rows of squarish black spots along the back. (Fig. 35, 4.) When disturbed they throw back their heads and jerk themselves about as shown in the figure. Like those of the preceding species they may be found upon the trees during July, and spin dark compact cocoons from which the flies do not issue until the following summer. I have recorded (Ott. Field-Nat. Club Trans. No. 4, page 76) the presence in destructive abundance of the larvæ of this or an allied species upon the red-pine (*Pinus resinosa*) in this vicinity in 1881. Unfortunately the observations necessary to identify the species were not made at the time, and I have since been unable to discover the insects upon these trees. There are other species of *Lophyrus*, known to prey upon the pines, but I have not been able to find any mention of their occurrence in Canada.*

The genus *Lyda* contains larger species which are wider and more fattened, and which have long, slender antennæ. The larvæ also differ from those of all other saw-flies in having no abdominal feet, and in having three-jointed antennæ, and a pair of appendages of similar form on the anal (last) segment, which is covered above by a hard horse-shoe shaped plate. I have captured four or five species of these saw-flies on white pine, the most abundant being *L. maculiventris*, which appears in June and July. Larvæ, some of which are probably those of the species just mentioned, may be found late in the season feeding singly, or two or three together, in the clusters of leaves which they bind loosely together with silk which they are able to secrete, freely and rapidly. Last August, I collected specimens belonging evidently to two species, but owing to an accident they all perished, and further study will be needed to determine the question.

SUB-FAMILY 5. CEPHINÆ.

The species, few in number, which belong to this sub-family, have the neck elongated, the antennæ multi-articulate, 21-28 jointed, and the wings with two marginal and four sub-marginal cells. Of their habits but little is known; the larvæ probably feed in the new wood of different trees and shrubs. Three species belonging to the genus *Phyllæus* are recorded from Canada, but they are rare and I have never met with any specimens.

SUB-FAMILY 6. XYELINÆ.

These insects have the ovipositor exerted and nearly as long as the abdomen. The antennæ are about thirteen-jointed, the third joint being greatly elongated. There appears to be but one Canadian species, *Xyela minor*, a small blackish insect about one-tenth of an inch long with twelve-jointed antennæ.

THE LARCH SAW-FLY—*Nematus Erichsonii* (Hartig).

BY JAMES FLETCHER, OTTAWA.

During the last year or two, a new and formidable insect-enemy to our forest trees has appeared in Canada, in the shape of the larch saw-fly, *Nematus Erichsonii*. The first notice of this saw-fly as an American species was, I think, Dr. Hagen's short note pub-

* The genus is omitted from the Check List of the Toronto Natural History Society, and Abbé Provancher, in his admirable work (Petite Faune Entomologique du Canada, Vol. II., p. 228), states that he had never met with specimens.

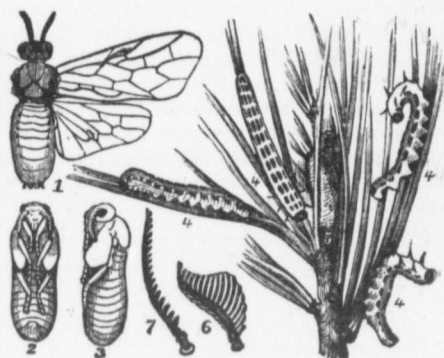


Fig. 37.

lished in 1880, in the Larch tree occurrence. So the effect that the species Americana by a species so much in was at that the species Quebec Mo which he st of their foli Provinces, enormous a this species not knowing supposed th frequent in was able to suffered mos diminish. I kindness of which were trees which of them ther trees will be of the summe had presume were twisted ing specimens October, in w down by the possible that these leaves, may yet have marauding ar weakened tree remedy. The insufficient for recorded for th this, too, is the great to attrac found a few tw and at Ottawa these facts, and the continent d of the larches i were in Quebec Below Qu Junction, by th Soon after leavi seen for a long that I again ha Dalhousie, N.B. larvæ closely.