the town, were any not even h dropped ould have ices as in the larvæ usie, is an the trees ere badly

ch he has nveniently the insects rst time, I number of out in this ough there the eggsf the twig ately after s ; they do agged and we the terd consume e apex and ase, and as g disturbed. cies of sawn being in roung larva n the body. he duration) last about Townships, oons. It is t moult the r instead of the worm is e different ; pluish-white he leaves of white colour

The black ear the thothese do not nore moult ; wn, is about and thoracic iust before trees to the l of a darkamong the s writes me bottom of a oin up about out pass the

winter in the larval form, and it is not until the following spring that the pupal stage is attained. This is the case with most, if not all, the Tenthredinide which pass the winter in a cocoon.

The perfect insect is a handsome Saw-Fly, in general appearance, as to shape and size, somewhat resembling the well-known Gooseberry Saw-Fly (Nematus ventricosus) ; but it is slightly larger and quite different in colour. The head and thorax, as well as the nine-jointed antennæ, are black, together with the base and tip of the abdomen : segments two to five and part of the upper and the whole of the lower surface of segment six, are of a rich waxy orange colour; the first and second pair of legs vellowish, the femora a little darker than the rest of the legs and slightly tipped with black above, and the third pair of legs is much longer than the others; the femora are a little darker, about the same colour as the abdomen, more decidedly tipped with black above; the tibiæ are $\mathcal{P}^{\mathcal{A}^{\mathcal{C}}}$ light-yellow for two-thirds of their length, and from that spot to the ends of the legs the colour is black. In the other two pairs of legs the tarsi and claws are yellow like the rest of the leg. The wings are black-veined, with a tawny fore margin on costa; the dark spot towards the tip of the wing, known as the stigma, is black, and there are only three sub-costal cells in this species. The perfect insect is a handsome Saw-fly, the wing of the female expanding about three quarters of an inch, the antennæ are long, over half the length of the body, which latter measures about half an inch. Perfect insects emerge towards the end of June or in the beginning of July, the date varying according to the locality. The eggs are laid in the terminal young shoots of the tamarac, and sometimes in one of the lateral shoots as well. I was not fortunate enough to observe the process of oviposition, nor indeed to find the unhatched eggs: but in the last Annual Report of the Entomologist to the United States Department of Agriculture. Dr. Packard has published a most interesting report on this insect with a beautiful coloured plate. In this report he describes the manner in which the eggs are laid, as follows :

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"The female saw-fly makes about a dozen incisions in the terminal young, fresh, green shoot, sometimes in one of the side shoots next to the terminal one ; judging by the shape of the hole, the eggs are of the shape described by Ratzeburgh, *i.e.*, oval cylindrical, and about 1.5m.m. in length. The eggs are placed in two rows, alternating, not exactly parallel, one being placed a little in advance of the other. The eggs are inserted at the base of the fresh, soft, young, partly-developed leaves of the new shoots, which are usually by June 20th to 30th, only about an inch or an inch and a half in length. The presence of the eggs causes a deformation of the shoot, which curls over, the incisions being in all cases observed, on one (the inner) side of the shoot. * After the foregoing lines were written, we fortunately observed a female in confinement, June 29th, while engaged in the process of ovipositing; we should judge that the operation of sawing the slit and depositing the egg required not less than five minutes, and perhaps not much more than that length of time. The fly had been evidently at work some time previous. as a number of eggs had been laid along the shoot; she had begun at the further end and worked down to the base of the new, fresh, green shoot. She stood head downward while engaged in making the puncture, and was not disturbed by our removing the larch twig from the glass jar and holding it in our hand while watching the movements of the ovipositor under a Tolles triplet. The two sets of serrated blades of the ovipositor were thrust obliquely into the shoot by a sawing movement; the lower set of blades was most active, sliding in and out alternately, the general motion being like that of a handsaw. After the incision is sufficiently deep, the egg evidently passes through the inner blades of the ovipositor, forced out of the oviduct by an evident expulsive movement of the muscles at the base of the ovipositor. The slit or opening of the incision, after the egg has passed into it, is quite narrow and about 12 m.m. in length. While engaged in the process the antennæ are motionless; but immediately after the ovipositor is withdrawn, they begin to vibrate actively, the insect being then in search of a site for a fresh incision. * * * * Although the slit is at first closed, as soon as the embryo increases in size the twigs swell where they have been incised by the ovipositor, and the slits enlarge and gape more or less, becoming much larger and more conspicuous than when the eggs are first deposited."