

the thorax. Both thorax and wing-covers are pitted with minute dots. The larva of this species, which is very similar to that of *tenebrosa*, is occasionally found in sound pine logs, but much more frequently in decaying logs and stumps.

HARRIS' BUPRESTIS—*Chrysobothris Harrisii*.

This lovely little beetle measures about one-third of an inch in length. The female is of a beautiful metallic green all over; the male has the legs and the sides of the thorax of a reddish-bronze, with a purplish tinge towards the tips of the wing-covers. The thorax has a conspicuous furrow down the centre, and is marked with some irregular indentations, which are repeated also on the finely-punctured elytra. The beetle is found on white pine saplings towards the end of May and in June; the larva lives under the bark of young trees and in the smaller limbs of older trees.

CYLINDRICAL PINE BORERS.

Eight species of cylindrical bark beetles belonging to the family *Scolytidae* are known to attack the white pine, of which perhaps the boring *Hylurgus* (*Hylurgus terebrans*) is one of the most common, and since they are all very similar in their appearance and habits, this may be taken as a representative species. The beetle is about a quarter of an inch long, of a nearly cylindrical form, a chestnut-red colour, and is thinly clothed with yellowish hairs. It is found in abundance in May in pine forests and amongst lumber in mill-yards and elsewhere throughout the greater portion of North America. The larva is a small, yellowish-white, footless grub, with a yellow, horny head, which bores winding passages in many directions in the inner layers of the bark of the tree, and also in the outer surface of the wood.

Xyleborus xylographicus (fig. 22) is another member of this family, which has proved to be a formidable enemy both to the white pine in the north and to the yellow pine in the south.



Fig. 22.

THE PALES WEEVIL—*Hyllobius pales*.

Among the weevils, or snout beetles, there are also several species which injure the white pine, one of them is known as the pales weevil (*Hyllobius pales*). It is a dark chestnut-coloured or black weevil, from three to four-tenths of an inch long, sprinkled with dots more or less bright, which are found, on magnifying them, to be clusters of very fine, short, yellowish-gray hairs. These insects are quite common in May and June among pine trees, and lumber piles. The female perforates the bark of the tree with her snout and in the excavation deposits an egg, where it shortly hatches into a white or yellowish-white larva, which burrows beneath the bark, consuming its substance and loosening it from the wood. In the autumn the larva bores into the sap-wood, forming a cell nearly a quarter of an inch deep, arched over the top with a roof of sawdust and woody fibre. Within this enclosure the larva changes before spring to a pupa, from which the beetle escapes early in the summer. It is found from Maine and Lake Superior to Florida.

THE WHITE PINE WEEVIL—*Pissodes strobi*.

This is a common weevil met with at all times during the season, but most commonly in May. They affect the upper shoots of the trees, depositing their eggs in the bark of those which are young and growing thriftily. When hatched the young larvæ devour the wood and pith, causing the shoots to wither and die. The leading shoots being destroyed, the trees become irregular in their growth and much disfigured. The larva is white, and about one-third of an inch long. The beetle (see fig. 23) is of an oblong, oval form, rather narrow, about a quarter of an inch long, of a dull dark brown colour, with two dots on the thorax, and a short, irregular, white band behind the middle of the wing-covers. They are also ornamented with a few patches of tawny yellow.



Fig. 23.