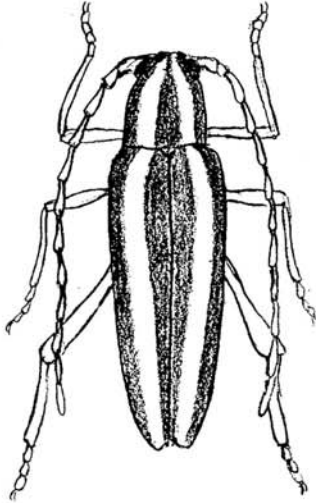


ROUNDHEADED APPLE TREE BORER

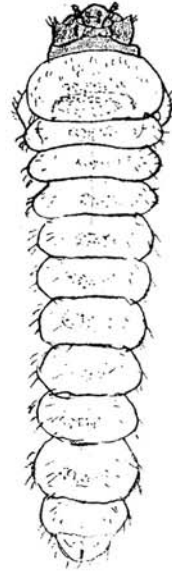
Saperda candida (Fabricius)

DISTRIBUTION - The roundheaded appletree borer, a native North American insect, occurs over most of the eastern U.S. (except the deep South) and in Ontario and Quebec. It is most common in the northeastern states, including Maine.

DESCRIPTION - The adult borer is a distinctive, elongated beetle about 20 mm. (just under 1 inch) long. The upper part of the body is medium to light brown with 2 conspicuous white stripes extending the entire length of the insect and converging at both ends. The legs are light grey and the antennae are darker gray and about the length of the body (slightly longer in the male). The underside of the body is whitish. The larva is a creamy white legless grub with a brown head, 30-40 mm. (1 1/4 - 1 1/2 inches) long when mature. The cylindrical body appears tapered with 13 segments that decrease in diameter from the head backward.



adult x3



larva x3

HOSTS - This pest attacks woody members of the Rose family. Favored hosts include serviceberry, crabapple, mountain ash, hawthorn, guince, apple, pear, chokeberry, plum and cherry.

DAMAGE - The roundheaded appletree borer is a serious nursery pest in Maine. It is devastating to young trees, with damage quite insidious until it is too late to save infested trees. Attacks are normally confined to the trunk base, where the larval stage feeds first on the inner bark and later in the sapwood and heartwood. Infested trees may exhibit yellowish or off-colored foliage. Feeding galleries in the trunk base cause structural weakness and infested trees may break off in high winds or when leaned against. Young trees are killed outright when girdled by larval feeding. Adults feed on leaves, twigs and fruit but cause little damage.

LIFE CYCLE - The borer overwinters as larvae in various stages of development under the bark of infested trees. Mature larvae begin pupating in the spring about the time apple blossoms first appear (during April and May, but very dependent on weather conditions). After about 20 days, adult emergence begins (though round exit holes chewed through the bark) around the time of apple petal fall (late May to early June) and continues for up to 4 weeks. Adults may be around through August. They are slow moving and fly only short distances. Female beetles mate and start laying eggs 7-10 days after emergence. Most eggs are laid on the trunk of host trees within 6 inches of the soil level during warmer parts of the day. Females cut a slit in the bark with their jaws and insert single eggs between the bark and wood. A total of 20-40 eggs may be laid. Eggs hatch in about 2 weeks and the grubs begin feeding on the inner bark or deeper into the trunk. Strings of brownish, sawdust-like frass are extruded from small holes over the gallery and may collect on the ground in clumps. During this first season, injury is usually evident on the bark surface as a darkened, slightly depressed spot, with clumps of frass and sometimes oozing sap. The following spring, the grub renews its feeding in the sapwood and penetrates into the heartwood in smaller trees. Relatively broad, irregular tunnels, packed with borings extend above and often below the soil surface. During late summer and fall of the second year, the larva begins tunneling in an ascending direction just beneath the bark and soon forms a pupal chamber in which it will pupate the following spring. Three or four years may be required to complete development in more northern areas.

CONTROL - Attacks of roundheaded appletree borer may be limited by removing wild hosts (such as serviceberry and old apple trees) near the nursery. Also remove and destroy badly infested trees in the nursery. Use cultural practices (weed control, irrigation) to maintain trees in good health and vigor. Avoid burlap wraps and spiral trunk guards as these may invite attacks by borers. If possible, infested trees should be treated by hand in early spring and again in September. Use a wire or knife to puncture or dig out the grubs (remove some soil from around the base of the trunk to aid inspection). Injury by the roundheaded appletree borer is not common in commercial apple orchards because of the frequency of spraying for other pests. When chemical control becomes necessary in the nursery, use an insecticide that has some residual activity and start applications about 2 weeks after adult emergence begins (around late June or 2 weeks after the end of the apple blossom period), repeating at 2 week intervals through August. Recommended materials include permethrin, bifenthrin, methoxychlor, carbaryl, Imidan and malathion.

Before applying any pesticide, **READ THE LABEL**. Pesticides must be applied only as directed on the label to be in compliance with the law.