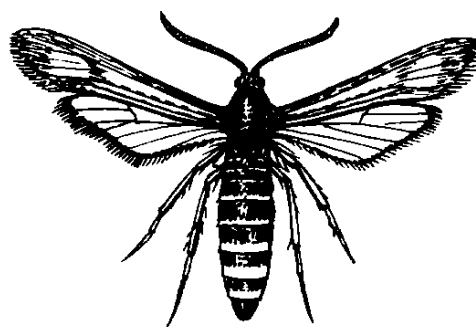


RASPBERRY CROWN BORER *Lepidoptera: Sesiidae Pennisetia marginata*

DESCRIPTION

Adults are clear winged moths with a wingspan of about 15 mm. The fore- and hindwings are transparent with dark margins and black fringe. The abdomen is black with yellow bands on most of the segments. Mature **larvae** are about 25 mm long with a white body and a brown head.



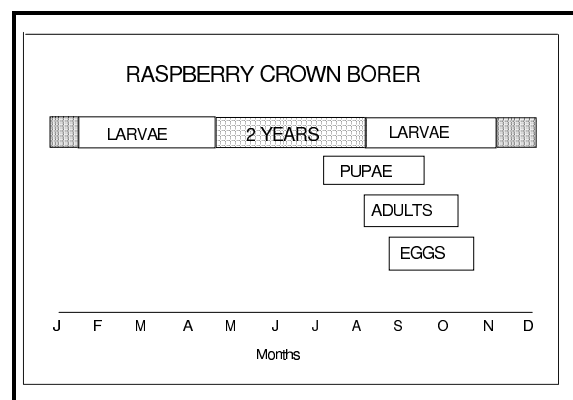
(original, Hall)

ECONOMIC IMPORTANCE

The raspberry crown borer is a serious pest on red and black raspberries, boysenberries, loganberries, and blackberries. Larvae feed in the larger roots, crowns, and at the base of canes causing reduced fruit production and often cause death of the plant.

DISTRIBUTION AND LIFE HISTORY

This pest occurs throughout the western United States. The raspberry crown borer overwinters as a tiny larva within a hibernaculum under the bark of the crown. In the spring, the larvae become active and leave their overwintering cells to feed in buds of new canes. They usually girdle the short new canes near the base, and a few may enter new growth at the tip. By mid-May, most of the larvae have bored through the harder portions of new canes, then downward into the crown. This injury seriously weakens the plant and results in poor yields. These larvae overwinter and begin feeding in the crowns the following spring. Larvae feed for several weeks until late summer when they pupate. Adults emerge during August and September and lay brown eggs singly on the undersides of leaves during October. The eggs hatch in about a month, and young larvae form the overwintering hibernacula under the bark of the crown. The life cycle requires two years.



MANAGEMENT AND CONTROL

Removing and destroying old or injured canes close to the soil line can help reduce damage since borers enter old stubs and injured canes to pupate. This should be done before mid-August to prevent any of the adults from emerging. Insecticides are commonly used to control larvae of this pest, but application must be carefully timed and thorough. Drench treatments of registered insecticides should be applied to the crown in mid-October or in the spring in March to control young larvae. Follow treatments with

irrigation or preceding a rain. Treatments should be made for a least two successive years since older larvae will mature and moths will lay eggs even when first year larvae are controlled. Infested fields have premature reddish colored leaves and wilted canes. Need for control may be determined by searching for young larvae at the base of cane buds in the spring, or by using pheromone traps to monitor adult emergence.