



Clear Wing Borers

The larvae of several species of clearwing moths in the insect family Sesiidae are important wood-boring pests in landscapes. Hosts include alder, ash, birch, fir, oak, pine, poplar, sycamore, willow, and stone fruit trees such as apricot, cherry, peach, and plum. Larvae that closely resemble those of clearwing moths include the American plum borer a serious boring pest of hosts that include fruit and nut trees, mountain ash, olive, and sycamore. Other common wood-boring pests in landscapes include bark beetles.



Adult Male Clearwing Ash Borer

IDENTIFICATION

Dying limbs, rough or gnarled bark, and sawdustlike frass (insect excrement) are good indications that trees are infested with wood-boring insects. When clearwing moth larvae bore beneath tree bark, they push frass from their tunnels; the frass is sometimes mixed with gummy tree exudate. Small piles or a scattered dusting of frass mark the location of tunnel openings. The larvae are 1 to 1-1/2 inches long at maturity and have a dark brown head and a whitish to pink body that darkens before pupating. After larvae mature and pupate and moths emerge, empty brownish pupal cases may be observed protruding from bark or on the ground near the base of the tree.



Sycamore Borer eggs on sycamore tree



Peachtree Borer pupa with "frass"

Clearwing moth adults have long, narrow front wings and shorter, wider hind wings. The hind wings, and in some species the front wings, are mostly clear. These moths fly during the day or at twilight, and their yellow and black coloring resembles that of paper wasps or yellowjackets. Adults display wasplike behavior by intermittently running while rapidly fluttering their wings. They differ in color depending on species and sex. They are often yellow, orange, or red on black or dark blue.

LIFE CYCLE

Clearwing moths develop through four life stages: egg, larva, pupa, and adult. Adults do not directly damage plants and live only about 1 week. Soon after emerging from the pupal case, female moths emit a pheromone that attracts males. After mating, the female deposits her tiny reddish to pale pink eggs in cracks, crevices, and rough or wounded areas on bark. Eggs hatch in about 1 to 4 weeks. The newly emerged larvae bore into the bark, cambium, or heartwood of the host tree. Mature larvae pupate beneath bark, except for the peachtree borer, which pupates in soil. The species discussed here have one generation per year except for the western poplar clearwing, which requires 1 to 2 years to complete one generation.

DAMAGE

Clearwing moth larval feeding can cause tree bark to become gnarled or rough. Borer feeding can damage the plant's food- and water-conducting tissues. With some clearwing species such as those that attack sycamore and pine. Feeding can weaken or kill branches. Branches weakened by larval tunneling may break and fall, especially during windy weather. Sometimes entire trees may die. Other types of wood-boring insects produce similar damage.

MANAGEMENT

The presence of this pest often indicates that plants have been injured, stressed, or neglected. Providing trees with appropriate cultural care is the primary damage prevention strategy. Sometimes larvae can be killed by puncturing or crushing them. Heavy infestations of clearwing moths may warrant treatment with broad-spectrum insecticides applied by a professional to kill adults, or both.



Clearwing borer damage on ash tree

Information obtained through the University of California



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