

Linden/Basswood Borer

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his native insect pest can damage basswood and European or littleleaf linden. The olive green adult beetles are $\frac{1}{2}$ " to $\frac{3}{4}$ " long, have long antennae and usually three black spots on the wing covers. **It is the larvae, however, that do the real damage.**

Larvae are creamy white and grow to about one inch long. Feeding just below the bark, the borers cut off the flow of nutrients and water between roots and leaves. **Most damage is in the lower portion of the trunk, lower limbs, and surface roots.** Frass (sawdust and excrement) packs the larvae tunnels and may be pushed out and collect in piles. Bleeding may also occur at exit sites.

Early signs of attack by linden borers can be subtle and easily overlooked. Larger trees may not show symptoms for two to five years, while smaller trees may show symptoms the year they are infested.

Extensive borers damage causes rapid decline and death.

Leaves of infested trees will be less abundant and smaller than normal, especially in the upper crown. Leaves may drop prematurely. Bark bulges out over areas where feeding activity has taken place and the bark may crack. Structural weakening can result in broken limbs. Round $\frac{1}{4}$ " to $\frac{3}{8}$ " exit holes may be visible in the lower trunk, surface roots or branch crotches. These holes are made by adults which emerge after overwintering inside the tree. After mating, they lay eggs which hatch and begin boring into the tree to feed.

Inspect trees during the summer for larval activity. Trees already weakened or damaged are more susceptible. **Maintaining overall tree health and vigor is an important prevention strategy.** Proper soil fertility and irrigation can minimize potential infestation and subsequent damage.

Dead or dying trees may harbor large numbers of borers and should be cut down and burned or chipped before adults emerge in the summer to prevent spread.

Your Wachtel Tree Science and Service Certified Arborist will **develop a multi-strategy program for linden borers based on the scope of the borer attack in your tree.** This may include: trunk injections; bark sprays (won't control larvae already in the tree but will control new ones/two critically timed treatments are needed); or soil-applied systemic insecticides (often useful when dealing with smaller trees or as a follow-up treatment after trunk injections). Linden borers live for two to three years, so control efforts must be maintained for at least that length of time.