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Elm Bark Beetles

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ELM BARK BEETLES

Elm bark beetles were of little concern until Dutch elm disease arrived in America. It is through these insects that the fungus responsible for the disease is able to enter the tree and produce its devastating effect.

The native elm bark beetle, *Hylurgopinus rufipes* (Eichoff), and the smaller European elm bark beetle, *Scolytus multistriatus* (Marsham), are the insects involved in disease transmission. Of the two species, the European elm bark beetle is the major vector of the disease in most areas, because of its breeding dominance over the native species.

The adult *S. multistriatus* is shiny, reddish brown, and about 3 mm long. *H. rufipes* is slightly smaller, dull brown, and has a rough body surface. The adults of the two species are easy to distinguish from one another. However, their eggs, larvae, and pupae are so similar in appearance that in the field they cannot be distinguished unless their galleries (under the tree bark) are well developed and can be examined.

The native elm bark beetle occurs in the eastern and central states from Maine to Virginia and west to Mississippi, Kansas, and Minnesota. It has also been found in Ontario, Canada. It overwinters as a fully grown larvae in either dying trees or recently killed trees. These galleries extend across the grain of the wood. Two or more generations occur each year.

The European elm bark beetle, as its name implies, is a native of Europe. In the U. S., it was first discovered in 1904 near Boston, Massachusetts. Since that time, it has spread to most of the states which lie east of the Rocky Mountains and to Utah, Nevada, Oregon, California, and Ontario, Canada.

This species overwinters as a fully grown larva in the bark. Larval and pupal development is completed in the spring and the adult begins to emerge about the middle of May.

The emergence period extends over several weeks. The adult feeds on young bark. It selects the crotches of elm twigs as its major feeding site. When the female is ready to lay eggs, she chooses an unhealthy elm tree and bores into the bark of the trunk or larger branches to prepare an egg-laying gallery, which is oriented parallel to the grain of the wood. Each tunnel radiating from the central egg-laying gallery is the work of one larva. When the larval stage is completed, the insect pupates at the end of its feeding gallery. Upon emerging from the pupa, the adult chews a hole through the bark and becomes free to migrate to other elm trees. Two or more generations occur each year.

Source of Information

INSECTS THAT FEED ON TREES AND SHRUBS

Warren T. Johnson and Howard H. Lyon

Comstock Publishing Associates (Division of Cornell University Press)
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