

LOCUST BORER MAY BE IN YOUR BACKYARD 75

By Douglas C. Allen

I drove by a patch of black locust not too long ago and noticed the telltale signs of a locust borer infestation.

spreading root system that is especially good at binding soil. Because of these two characteristics, this tree often is planted on

tion is needed to hold soil in place.

Also, locust wood is very decay resistant and a popular source of fence posts in rural areas. Posts and poles containing many borer galleries are weakened and may decay more rapidly than solid wood, because rain water is able to enter through exposed remnants of larval galleries.



Fig. 1. Stand of black locust damaged by locust borer.

Maybe you, also, have seen stands of sapling and pole size black locust with several dead stems and trees with broken tops, limbs or trunks. Close inspection reveals scarred, deformed wood with exposed remains of many larval galleries. The nature of the damage following repeated attacks by locust borer makes the host especially susceptible to “wind snap”. The end result is a stand of black locust that looks like it was raked by a windstorm (Fig. 1).

Importance of Black Locust – Though not a commercial timber species, black locust plays an important role in our landscape. As many readers may know, this tree belongs to the legume family and, therefore, is a nitrogen fixer. That is, certain bacteria associated with its roots are capable of producing this essential element. The end result is that black locust can do well on nitrogen poor sites where most tree species will not thrive. In addition to these beneficial bacteria, locust has a shallow,

nutritionally poor soils, especially sites with a potential for erosion typical of reclamation areas or embankments where vegeta-



Fig. 2. Locust borer adult.

The Insect – Adults are dull black beetles 0.5 to 0.8 inches long with several bright yellow bands on the back (Fig. 2). The full grown larva is segmented, white, worm-like, and 0.8 to 1.0 inches long with well developed, dark colored mouthparts.

Biology – Beetles emerge from infested wood in late summer and early fall. They feed on goldenrod pollen. After mating, females deposit large, bright white eggs in bark crevices. Young larvae emerge from the egg before leaf fall and burrow into the corky inner bark where each larva excavates a small depression within which it will overwinter.

Larvae begin moving into the sapwood as soon as warm weather arrives in spring, about the time locust buds begin to swell. This activity creates wet spots on the bark where sap oozes from entrance holes. Brownish, sawdust-like particles also appear around these small openings. When larvae get bigger, conspicuous piles of granular frass (a mixture of fecal material and fine wood chips) are produced as the insects bore into the trunk. Frass soon accumulates in bark furrows and at the base of the tree (Fig. 3). This material is bright white when the insect is working in sapwood early in the season but turns yellowish as soon as larvae penetrate heartwood. The completed gallery is 0.8 to 1.25 inches wide and 5.0 to 6.0 inches long.

Damage – When tree trunks become riddled with galleries (Fig. 4), they are easily broken by the wind. Mortality occurs when both the trunk and major branches are infested and the tree begins to break up.

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Fig. 3. Frass (arrows) produced by locust borer larvae.

Managing the Problem – It is unlikely that many landowners would ever attempt to grow black locust on a large scale. However, in addition to its use in erosion control and for fencing, it has some value for wildlife and certainly adds diversity to the landscape. As with many woodborer problems, the key to minimizing damage by this insect is to keep the host vigorous. Black locust does best on rich, loamy soils or soils of limestone origin. To retain a healthy stand of locust on your property, it makes sense to encourage it on good sites. The borer favors trees growing on poor sites

because, even though locust is capable of providing its own nitrogen supply, it is stressed by lack of other nutrients and inadequate moisture. Black locust under stress is especially attractive to the beetle. A population can be kept in check, at least temporarily, by removing and destroying infested material as soon as signs of boring become evident.

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Fig. 4. Locust stem riddled with borer
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