

District of Columbia Enhanced Pest Detection Program

Students Monitor Urban Wood, Gain Knowledge and Experience

The Challenge

Nonnative wood-boring insects and pathogens that infest and kill trees pose a serious threat to our nation's forests. Exotic pests are frequently first introduced in urban areas where they go undetected until they are well established and have harmed host trees. Monitoring trees for insect emergence is time-consuming and resource intensive. Enhanced survey and detection methods are needed to identify new introductions of invasive insects and pathogens.

The Solution

Using trees removed in the course of regular urban tree care offers an opportunity for targeted detection. The Morgantown Field Office of the Northeastern Area State and Private Forestry is partnering with the District of Columbia Urban Forestry Administration, Department of Transportation, and District Public Schools, to examine the feasibility and cost of using wood samples from dead and dying trees to detect exotic wood boring pests and identify mortality agents. The project was developed as part of the District of Columbia's Cooperative Forest Health Program.

After a tree is removed, wooden bolts are collected from different parts of the crown and trunk, placed in rearing tubes, and incubated in a rearing area set up at Calvin Coolidge Senior High School. Science students then monitor the samples over the long term for pest emergence. This enhanced survey offers an opportunity not only for early pest detection, but also for hands-on demonstration and educational experiences that inform students about the value of urban trees, the importance of detecting exotic and invasive pests, and the pathways and consequences of urban pest introduction.



Adam Miller constructs insect rearing tubes in the Calvin Coolidge High School greenhouse. Sections of wood are placed in rearing tubes so the insects that emerge can be identified. (Photo: William Harris)

Resulting Benefits

- An established location where tree samples from throughout the District are monitored for nonnative insect pests.
- A partnership with Calvin Coolidge Senior High School that provides science students with a hands-on demonstration and educational experience.
- Increased awareness and appreciation of community benefits derived from trees in an urban environment.

Sharing Success

The partnership between the Forest Service, District of Columbia, and Calvin Coolidge Senior High School provides a model for early detection of insect pests in an urban area.

Public schools, in particular, provide unique opportunities to actively maintain the existing canopy coverage on school properties and to work with students to expand DC's urban forestry workforce.

—District of Columbia Assessment of Urban Forest Resources and Strategy



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