

Training Improves Insect Identification

Northeastern Bark Beetle and Woodborer Taxonomy Training

The Challenge

The impact of invasive species is one of the biggest concerns of the U.S. Forest Service, and the Northeast has one of the highest concentrations of invasive species in the United States. Invasive insect populations are highly destructive to native forests and can cost tens of millions of dollars in monitoring, eradication, and control efforts each year. The ability to quickly and accurately spot the often subtle physical differences between native and invasive insects can often make a big difference in the early detection of invasive insect infestations.

Forest health managers frequently search for invasive pests by baiting insect traps in the forest with pheromones that attract certain kinds of insects. Unfortunately, many pheromones are relatively generic and attract a wide variety of insects. In turn, these same managers spend a great deal of their limited time sifting through piles of similar-looking insects searching for invasive species.

Some of the most destructive invasive insects include the emerald ash borer and Asian longhorned beetle. The latter, for example, looks very similar to the white spotted sawyer. While these two species might appear to be the same at a casual glance, their destructive potential in native ecosystems is anything but similar. While the white spotted sawyer is relatively harmless, the Asian longhorned beetle is the subject of a massive, multimillion dollar eradication project in Massachusetts and other locations. Knowing how to spot the differences in appearance between the two is critical to forest health.

The Solution

The USDA Animal and Plant Health Inspection Service, Plant Protection and Quarantine, and the U.S. Forest Service, Northeastern Area State and Private Forestry, jointly sponsored and organized free training in Massachusetts for State and Federal forest partners in 2009. Leading

Leading entomologists from NA and APHIS are teaching forest health managers how to better identify invasive insect species.



Participants use microscopes to get magnified views of insects. (U.S. Forest Service photo)

entomologists offered methods to help forest managers improve their ability to identify invasive species. In all, 30 cooperators from New England and New York, as well as others from as far away as Canada and Louisiana, took part in the low-cost, yet highly effective, training sessions.

Resulting Benefits

The training helped cooperators to more accurately and quickly distinguish native bark beetles and wood borers from exotic ones. The attendees' improved insect identification skills can help them detect invasive species infestations earlier. This should improve the effectiveness of invasive insect eradication and control efforts across the region.

Sharing Success

The organizers surveyed students to gauge their opinions about the quality and effectiveness of the instruction. The feedback was very positive. Students also pointed out opportunities for organizers to make future training sessions even more effective. Working together, the instructors and students are continuously improving the students' invasive insect identification skills to better protect forest health.



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