Global Institute of
Sustainable Forestry

YALE UNIVERSITY

**Program on Private Forests**

Global Institute of
Sustainable Forestry

Yale School of Forestry
& Environmental Studies

360 Prospect Street
New Haven, CT 06511

T 203.432.5983
F 203.432.3809

http://research.yale.edu/gisf/ppf

**Dr. Chadwick D. Oliver**
Chair

**Mary L. Tyrrell**
Director

# New Threats to North American Hardwood Forests?

## A scientific panel discussion of the potential impact of exotic wood-boring insects on forest ecosystems and forest-based economies

February 27, 2003 4:30 pm
Bowers Auditorium, Sage Hall
205 Prospect Street, New Haven, CT

The trend towards globalized travel and trade patterns has resulted in the worldwide spread of formerly regional insects and pathogens. With increasing frequency, exotic organisms are being accidentally released into new ecosystems which lack natural predators or species with evolved host defenses. These introductions carry with them the potential for massive ecological and economic damage.

A recent example of such an introduction is the fungus responsible for California's Sudden Oak Death epidemic, which is believed to have arrived from Europe via contaminated nursery plants. Likewise, an Asian wood-boring beetle, the Emerald Ash Borer, was introduced in Southeast Michigan and Ontario, where it is estimated that this pest has killed tens of thousands of trees. North American forests currently face a serious threat in the form of another exotic wood-boring insect pest, the Asian Longhorned Beetle (ALB).

### The Asian Longhorned Beetle

A native of Asia, the Asian Longhorned Beetle (*Anoplophora glabripennis*) is considered to be a serious and widespread pest throughout China. In August 1996, it was discovered to be inflicting fatal damage to trees in Brooklyn, New York. Although no one knows exactly how it arrived in the United States, the most likely scenario is that it came in poplar timber used for crating heavy material, such as pipes, imported from China. Currently there are four known infested sites in Chicago and five in New York, including Central Park and midtown Manhattan. Efforts to combat ALB in these urban settings have met with mixed success, and the zone of infestation might indeed be spreading. In October 2002, ALB was discovered across the Hudson River in Jersey City, New Jersey. This beetle has devastated urban forests, killing over 7,000 trees in New York and Chicago.

### Potential Threats

It is reasonable to assume that the Asian Longhorned Beetle and other similar pests will spread beyond their current localized outbreak zones and into the suburban and rural forests of North America. If the ALB moves into natural forests and kills or weakens a significant portion of a given tree species, it will significantly change the structure, composition and diversity of the hardwood forests of the United States and Canada and severely impact forest-based economies.

The potential for ecological and economic damage is substantial. The Asian Longhorned Beetle has demonstrated a voracious appetite for the maple, elm, and birch trees common to North American forests. Similarly, the Emerald Ash Borer has successfully infected every species of ash it has encountered. The 16 species of ash found in North America constitute a significant component of North American hardwood forests. Many of these forests are already under the combined stresses of air pollution, acid rain, periodic drought, insect outbreaks and disease, which will likely reduce their resistance to attack.

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## Opening A Dialogue

On February 27, 2003, YFF will host a scientific panel to discuss the state of knowledge about the Asian Longhorned Beetle and to explore strategies for monitoring, containment, and risk reduction that can be implemented within the forestry community. The following day, on February 28, YFF will hold a workshop-type facilitated dialogue among forest managers, landowners, scientists, educators and government officials, about strategies to deal with potential ALB invasion into hardwood forests. A key focus of the discussion will be how to greatly expand education and awareness. The guests for the scientific panel discussion are:

Dr. Lloyd C. Irland
President, The Irland Group

Dr. Melody Keena
Research Entomologist, USDA Forest Service
Northeastern Center for Forest Health Research

Dr. David Nowak
Project Leader, USDA Forest Service
Northeastern Research Station

Mr. Frank Sapio
Forest Entomologist and Unit Manager, Forest Resources Health, Inventory and Monitoring
State of Michigan, Department of Natural Resources

Dr. Michael T. Smith
Research Entomologist, USDA Agricultural Research Service
Beneficial Insect Introduction Research Unit

Dr. David W. Williams
Research Entomologist, USDA Forest Service

The panel is free and open to the public. No registration is required. If you would like to participate in the workshop on February 28, please contact Page Bertelsen at 203.432.5117 or yff@yale.edu. This event is sponsored by the Program on Private Forests of the Global Institute of Sustainable Forestry at the Yale School of Forestry and Environmental Studies, and the American Forest and Paper Association.

The **Global Institute of Sustainable Forestry** (GISF), at the Yale University School of Forestry and Environmental Studies, fosters leadership through innovative programs and activities in research, education and outreach in support of sustainable forest management worldwide. The Institute was created to address the management and conservation of both domestic and international forestlands in a holistic and comprehensive fashion. In pursuit of these ideals, GISF has developed several formal programs including the Program on Private Forests, the Program on Forest Certification, The Forests Dialogue, the Program on Forest Physiology and Biotechnology, the Program on Landscape Management, and the Program in Tropical Forestry. In addition to these initiatives, GISF has become the center for forestry at the School, coalescing and coordinating the many activities related to sustainable forestry, including the Yale Forest Forum and the School Forests.

The **Program on Private Forests** is engaged in education and research on issues concerning the health and sustainable management of private forestlands. The mission of the Program is to advance the state of knowledge about sustainable forestry on private forestlands at multiple scales and within multiple contexts (both physical and cultural). The work of the Program is published in various formats, including working papers, Yale Forest Forum Review publications, the web, and journals.