Exotic Fungi and Insects on Wood Product Imports

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Forest health risks are emerging from exotic species of insects and fungi on wood product imports into North America. The products are unprocessed wood that includes packing materials, chips, logs, timber, and lumber. Wood packing materials account for 50% of the wood imported into the United States. These materials include dunnage, packing crates, packing blocks, spools and pallets.

With increasing international trade, all countries are being challenged to contain indigenous species within their borders. Several countries seek mitigation treatment of wood products to kill *Bursaphelenchus xylophilus, Heterobostrychus aequalis* and *Rhagiium* spp. The United States, Britain and Canada have concerns about the importation of the spruce bark beetle, *Ipes typographus,* and symbiont stain fungus, *Ophiostomapolonica*. When the Asian long-horned beetle infested Brooklyn, New York, more than 2000 trees had to be destroyed, costing the federal and state government more than $5 million. A similar infestation now plagues Chicago. The USDA has prohibited the importation of untreated wood packing material from China and has proposed extending this ban to other countries. The International Plant Protection Convention (IPPC) is considering a proposal for a treatment standard that would be required on the exportation of wood packing materials worldwide.

Mitigation methods for debarked packing material that are being investigated include fumigants, kiln heating, and microwave or gamma irradiation. Our laboratory is conducting research on kiln heat parameters needed to kill the Asian long-horned beetle (ALB) on lumber. Wooden pallets from China have previously carried the Asian long-horned beetle into the United States. A surrogate species, *Monochamus carolenesis*, has been selected for the studies, as it is indigenous to the Midwest, has similar size and life cycle as ALB. Timber colonized by pheromone-attracted *Monocharnus* on the Nicolet National Forest will be milled into lumber, kiln treated and assayed at the Forest Products Laboratory (FPL). Our ultimate goal is to establish efficacious, practical and verifiable kiln heat treatment schedules for eliminating insects and fungi associated with wood packing materials.

Detection methods are needed for identification and location of invasive species. The methods would be used for quarantine pest detection on imports to determine compliance of treatment requirements and efficacy of the mitigation methods. Some diagnostic methods that are being considered include ultrasound, DNA fingerprinting, tomography, pheromone lures, and electronic sniffers. Our laboratory is testing the use of new nondestructive ultrasonic equipment patented at FPL and licensed by Perceptron. We expect to determine if the ultrasonic assay system can be used for detecting and locating ALB in timber and lumber.

PANEL: WOOD DECAY AND STAIN FUNGI ON WOOD IMPORTS/EXPORTS

Barbara Illman – Organizer, Moderator

***Introduction.** Barbara Illman, Moderator

***Exotic Fungi and Insects on Wood Product Imports.** Barbara Illman, USDA Forest Service, Forest Products Lab., University of Wisconsin

***Insects, Fungi, Wood and Humans.** Tom Hofacker, USDA Forest Service Washington Office.

***A New Wilt Disease of Takamaka Trees in the Seychelles.** Joan Webber, Forestry Commission Research Agency, UK.

Introduction

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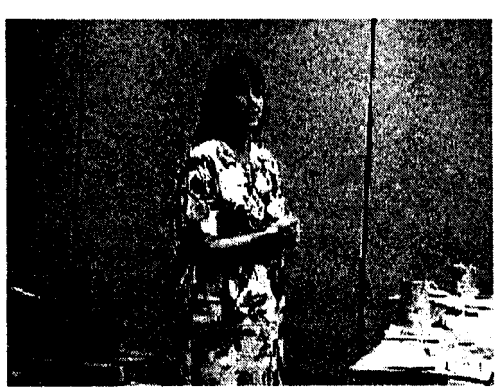
Exotic species, also known as non-natives, introduced, nonindigenous species or invasives are changing the natural areas in the United States. These exotics may have expanded beyond their native range or been introduced from other countries around the world. Many scientists think that the spread of exotic species is one of the most serious, yet least appreciated threats to biodiversity. Exotics inflict a heavy toll on American agriculture, reducing the quality and raising the cost of food, feed, and fiber. This panel presents a review of problems encountered with exotic species on wood product imports, a list of insect and fungal infestations found in the United States in the last 12 months, and a case history of a newly reported disease.



PROCEEDINGS OF THE FORTY-EIGHTH WESTERN INTERNATIONAL FOREST DISEASE WORK CONFERENCE

OUTRIGGER WAIKOLOA BEACH HOTEL
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