

Firewood

A Major Vector of Forest Pest Movement



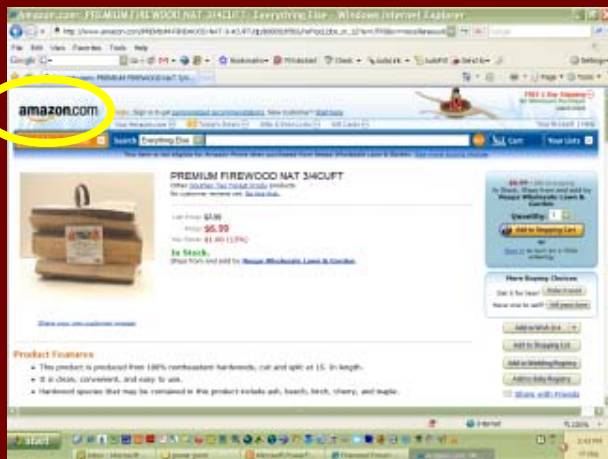
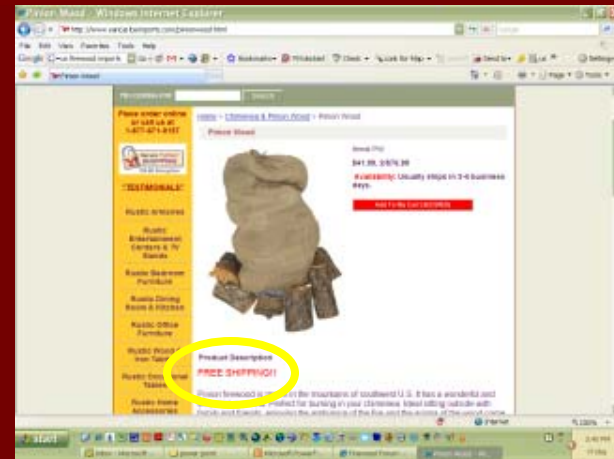
Jen Weimer
Forest Health Specialist
NH Division of Forests & Lands

The US imports firewood from at least 24 other countries

The World



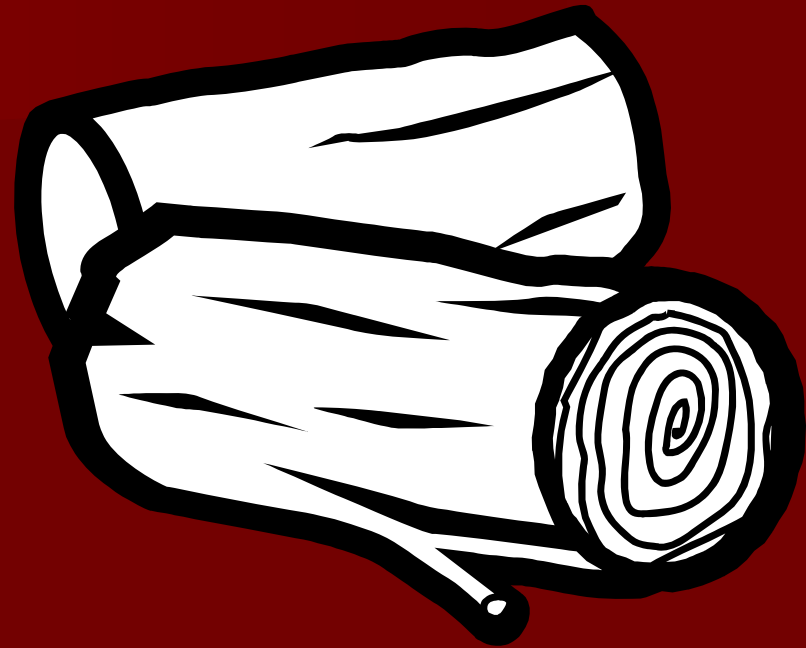
Firewood can be easily purchased on the internet



IS FIREWOOD A GOOD HABITAT FOR INSECTS AND DISEASES?

YES, IF

- The Bark is on
- The moisture content is still high
- Freshly cut
- Large and un-split pieces



- As wood moisture content decreases, larval development time increases:
 - Buprestidae have emerged after as long as 50 years from a window sill
 - Cerambycidae as much as 40 years from a bookcase

Northeastern Area, State & Private Forestry
Proceedings of Firewood Forum 2008
Frelinghuysen Arboretum
New Jersey
April 15, 2008



Kyle Lombard, NH Division of Forests & Lands



Kyle Lombard, NH Division of Forests & Lands

- At risk:
 - Parks/campgrounds
 - Out of state sportsmen
 - Retail firewood sellers
 - Homeowners who heat with firewood
 - Major events that draw out-of-state visitors



Nobis Engineering

Emerald Ash Borer



Confirmed

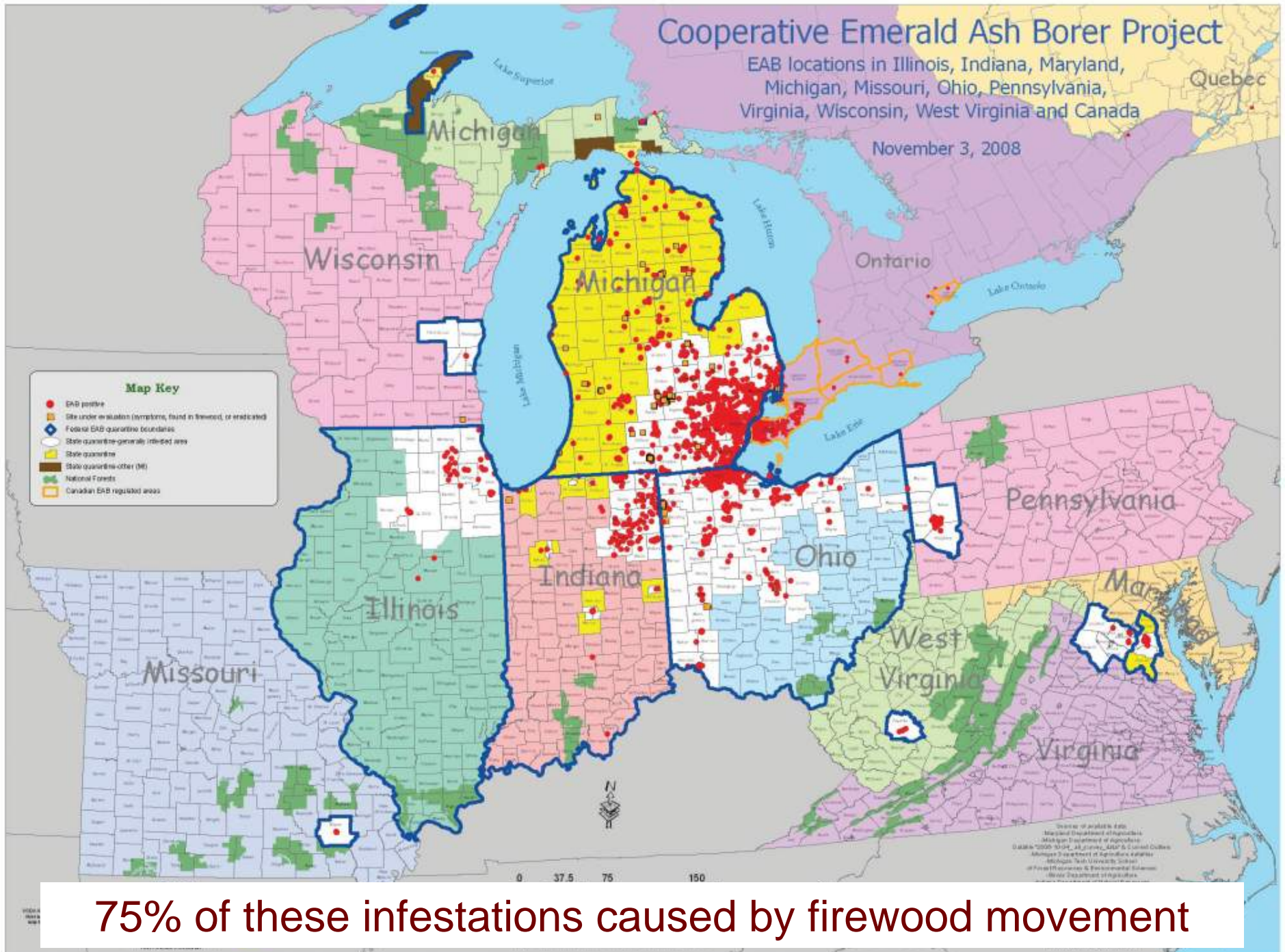
Infestations due to Firewood:

- **EAB Finds in Michigan Parks and Campgrounds**
- Private campground in Branch County
- Private campground in Cheboygan County
- Brimley State Park, Chippewa County
- Charles Mears State Park, Oceana County
- Straits State Park- Mackinac County
- Young State Park- Charlevoix County
- Sleeper State Park- Huron County
- Ludington State Park- Mason County
- Warren Dunes State Park- Berrien County
- Rifle River Recreation Area-Ogemaw County
- Mackinac State Forest- Montmorency County
- Veterans Memorial State Forest Campground- Benzie County
- **...In Indiana**
- Private campground in Steuben County (State record)
- Private campground in LaGrange County
- Private campground in White County
- **...In West Virginia**
- Private campground in Fayette County (State record)

Cooperative Emerald Ash Borer Project

EAB locations in Illinois, Indiana, Maryland, Michigan, Missouri, Ohio, Pennsylvania, Virginia, Wisconsin, West Virginia and Canada

November 3, 2008



75% of these infestations caused by firewood movement

Asian Longhorned Beetle



Jen Weimer, NH Division of Forests & Lands



Alien Forest Pest Explorer

www.fs.fed.us/ne/morgantown/4557/AFPE/

Pest Distribution Map Asian Longhorned Beetle *Anoplophora glabripennis*



ALB from Worcester, MA could easily come to NH in Firewood!



USDA
Forest Service



Northern
Research Station



Forest Health Technology
Enterprise Team



RSAC
Remote Sensing
Applications Center

Other Pests in Firewood

Sirex Woodwasp
Gypsy Moth
Beech Scale
Numerous Bark Beetles

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Oak Wilt
Dutch Elm Disease
Butternut Canker
Sudden Oak Death
.....



Joseph O'Brien, USDA Forest Service

CAMPER FIREWOOD SURVEYS

In 2006 we started a survey of campers at NH State Campgrounds and found that firewood was moving an astounding distance.

Firewood brought to NH from:

California

Virginia

New York

Quebec

Ontario

New Jersey

Connecticut

Rhode Island

North Carolina

Maryland



CAMPER FIREWOOD SURVEYS

2006 At Mount Monadnock SP

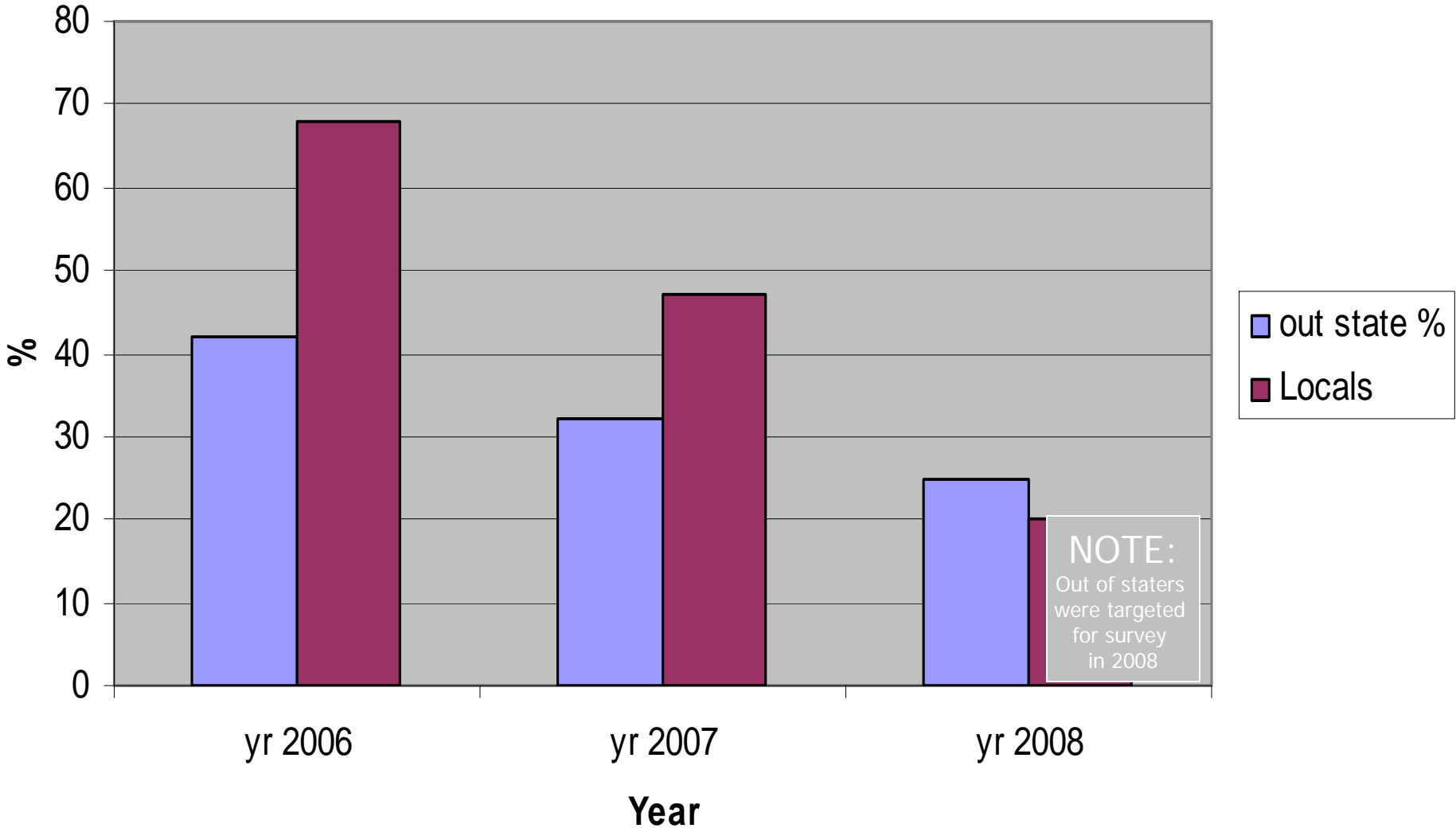
- ❖ 93 campers in survey
- ❖ 49% brought firewood from home
- ❖ 57% from out of state, 42% of those brought firewood
- ❖ 17% from outside New England, 18% of these folks brought firewood.

2007 At Several State Campgrounds

- ❖ 104 campers in survey
- ❖ 37% brought firewood from home
- ❖ 71% from out of state, 32% of those brought firewood
- ❖ 22% from outside New England, 26% of these folks brought firewood.
- ❖ **NOTE:** Most campers were aware of the issue after arriving at campground and were nervous during survey. This may have lead to false data.



Campers Bringing Firewood from Home to State and Federal Campgrounds in NH





Firewood Study

Results to Date:

In just 9 samples from ME, MA, and NH

We have found:

Ants

Snails

Sow bugs

Spiders

Millipedes

Centipedes

Termites

Bark lice

Woodwasp



4 different species of bark beetles

So, We know
firewood movement
is a problem.....

How do we fix it?

Help Protect our Trees

USE LOCAL FIREWOOD!

Bringing firewood into New Hampshire from other areas can accidentally spread damaging insects and diseases that threaten the health of our forests. Once infestation occurs, control of these pests involves drastic measures, including complete removal of **all** trees (infested or otherwise) in the affected and surrounding areas.



Adult Emerald Ash Borer. Actual size is 7.5 to 13.5 mm



Adult Asian Longhorned Beetle. Actual size is 20-30 mm

Transporting firewood spreads
insects and tree diseases.

What you can do to help:

- ✓ **Don't travel with firewood**
- ✓ **Use local firewood**
- ✓ **Contact the Forest Health Office with concerns about pests in your firewood.**



Firewood may contain insects and diseases

NH Division of
Forests and Lands
Forest Health Section



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(603) 464-3016

Visit us on the web at:
nhdfl.org

Outreach

What We Have:
(Mixed Messages)



Wisconsin Department of Natural Resources

What We Need:

- Aggressive National Campaign & Federal Regulation
 - Standardized Treatment
 - Certification of Firewood
 - National Educational Message



USDA REQUIRES TREATMENT FOR ALL FIREWOOD FROM CANADA TO PROTECT AGAINST INVASIVE SPECIES

WASHINGTON, Oct. 22, 2008--The U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) today issued a federal order, effective immediately, requiring heat treatment for shipments of all firewood made of hardwood species entering the United States from Canada.

To ensure that pests such as the Asian longhorned beetle or emerald ash borer do not enter the United States through the movement of firewood from Canada, APHIS is requiring all firewood made from any hardwood species be heat treated to a minimum temperature of 71.1° Centigrade for 75 minutes. Commercial shipments of firewood must also be accompanied by a treatment certificate issued by the treatment facility. Noncommercial shipments must be accompanied by either a treatment certificate issued by the treatment facility or an attached treatment label.

This action is necessary to prevent the introduction or spread of wood pests through the movement of firewood made from hardwood species from Canada into the United States.

Are Timber Mats a Vector for Pest Movement?



Carolina Mat Incorporated

Any Other Burning Issues?



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603-464-3016

www.nhdf.org/forest-health/

Alastair Heseltine, a Canadian artist living in the Pacific Northwest