



LRD Regional Park Ranger Conference

Recreation and Environmental Stewardship

Wednesday 24 October 2007

Covington, Kentucky

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Program Overview

Park Ranger Conversion Effort
Emerald Ash Borer (*Agilus planipennis*)
An Emerging Threat

08:00 – 08:45

**Presenter: Dr. Michael A. Loesch
Recreation Business Line Manager
NRM Program Manager**

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Park Ranger Position Evaluation & Conversions

PROCESS

- Design Position Evaluation Worksheet
- Develop Guidance for Use
- Designate Regional Consistency PDT
- Districts Conduct Position Evaluations
- Submit to CPAC

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Park Ranger Position Evaluation & Conversions

- CPAC/CPOC Prepare Model PDs
- CPAC/CPOC Prepare recommendations for examined positions
- Districts Review Conversion Recommendations/Resubmit if Needed
- Obtain transcripts of those in positions targeted for conversion

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Park Ranger Position Evaluation & Conversions

- Districts obtain transcripts from employees in positions scheduled for conversion
- Districts prepare and hold RPAs for positions scheduled for conversion
- CPAC/CPOC/PDT examine transcripts to determine if positive educational requirements met

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Park Ranger Position Evaluation & Conversions

- Districts submit RPAs for those eligible for conversion & meeting educational requirements
- Actual conversion process completed by CPAC/CPOC
- Develop policy and process for those in positions recommended for conversion but not presently able to meet educational requirements

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Park Ranger Position Evaluation & Conversions

- Develop process, training, etc., to assist those employees to meet positive educational requirements for conversion
- Clean up any lingering issues associated with conversion and union representation
- Prepare AAR of process and results

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Summary of Position Examination Results

- 221 positions evaluated
- 171 positions recommended for conversion
- Model PDs developed for the following
 - GS-0401-11 NRM Specialist
 - GS-0401-11 Supervisory NRM Specialist
 - GS-0401-11 NRM Specialist (Park Mngr).
 - GS-0401-09 NRM Specialist (Park Ranger)

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Results - Contiued

- LRB – 2 Evaluated, 0 converted
- LRE – 5 Evaluated, 0 converted
- LRL – 67 Evaluated, 53 converted (Rec)
- LRH – 58 Evaluated, 49 converted (Rec)
- LRN – 37 Evaluated, 31 converted (Rec)
- LRP – 51 Evaluated, 37 converted (Rec)
- LRD – 1 Evaluated, 1 converted (Rec)

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Spreadsheet Factors

- Factor A – Oversee/develop and implement ES programs & plans/revisions
- Factor B – Fire management elements of NRM
- Factor C – Recreation elements of NRM
- Factor D – Develop/Interpret/Administer NRM related laws, regulations, policies and business processes/practices

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Factor Analysis – Non-Supervisory (spreadsheet)

District	Factor A	Factor B	Factor C	Factor D	Total Prof	Non-Prof
LRH	29.5	3.9	12.7	14.0	60.0	40.0
LRL	23.5	1.0	18.4	9.3	52.2	47.8
LRN	39.3	1.7	29.5	19.4	88.0	12.0
LRP	25.1	3.4	33.8	29.6	91.3	8.7
LRD	15.0	1.0	10.0	71.5	97.5	2.5
LRD – Average	29.7	2.2	24.4	18.0	75.0	25.0

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Factor Analysis – Supervisory (spreadsheet)

District	Factor A	Factor B	Factor C	Factor D	Total Prof	Non-Prof
LRH	24.0	3.0	7.7	13.9	48.5	23.1
LRL	18.6	1.0	15.5	13.7	48.8	25.1
LRN	38.0	1.0	19.5	13.6	72.0	10.5
LRP	18.3	2.5	22.5	22.8	65.5	9.5
LRD Average	22.1	1.9	14.4	15.3	53.7	16.9

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Emerald Ash Borer

- History of Introduction and Spread
- Damage it Causes
- Biology
- Threat to Corps Lakes (region & nation)
- Control & Quarantine
- Potential Corps Management Steps
- Sources of Educational Material
- National EAB Program Contacts

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EAB - Appearance



Emerald Ash Borer – *Agrilus planipennis* - Adult
Iridescent green and copper color & bullet shaped

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EAB - Appearance



EAB – Larval Stage
4th Instar is about 3 centimeters long

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EAB - Appearance



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EAB - Appearance



Characteristic S-shaped feeding galleries

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EAB - Recognizing an Infected Tree

- Thinning of crown or yellowing of foliage.
- May be epicormic shoots (water shoots).
- May be extensive woodpecker damage or activity.
- D-shaped emergency holes (about 3mm diameter).
- Presence of larval galleries.

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EAB - Appearance

Native range of Emerald Ash Borer in Asia



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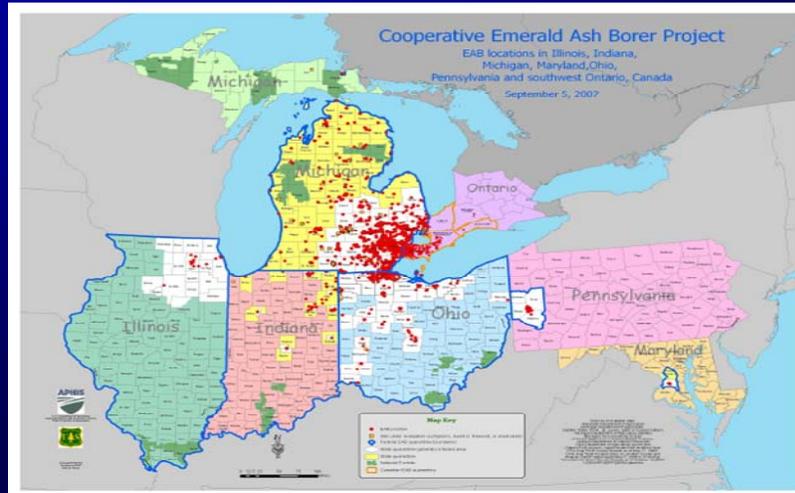
Introduction & Spread

- Probably arrived in wood packing materials – possibly as early as 1993
- Officially first ID'd in 2002
- Southeastern Michigan & Windsor, Ontario
- Found in Ohio – 2003
- Found in northern Indiana – 2004
- Found in Illinois – 2006
- Found in Pennsylvania – 2007
- Found in Maryland - 2003

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EAB – Current Range



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EAB – So What?

- Attacks all 16 Native Ash Species
- In China it also attacks genera *Ulmus* (elms), *Juglans* (Walnuts and Butternuts), and *Pterocarya*
- Spread is being enhanced by movement of ash firewood (eggs & larvae, pupae) and illegal shipment of nursery stock
- Once tree is attacked, 100% fatality

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So What - Continued

- Attacks any size ash tree
- Hard to detect initially – upper crown
- Kills trees in 1 to 3 years
- Has already killed 25 – 30 Million Ash
- Potential Urban costs could be \$20 Billion, billions more in forest products

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So What - Continued

- Larvae construct galleries that sever phloem tissue – tree wilts and dies when damage is sufficient
- 1.7 billion ash trees eastern U.S.
- USDA has already expended over \$100 million to research and control
- Potential impact as severe as Dutch Elm Disease and Chestnut Blight

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EAB - Biology

- Adults emerge from trees late April to - May, peak in late June
- Mate 7 - 10 days after emergence
- Lay average of 77 eggs in bark crevices during months of May - July
- Larve hatch in 7 - 9 days and tunnel into cambium layer and feed on phloem tissue and outer sapwood

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EAB - Biology

- Move into sapwood as they grow larger and feed aggressively until cold weather
- Over winter in tree and pupate in late April to June (Total of 4 larval instars)
- Construct pupal chamber in sapwood and newly formed adults stay there for 8 - 15 days

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Biology - Continued

- Adults make characteristic D-shaped exit hole in late April to June
- Adult females live 22 days while males about 13 days
- Larvae may take two years to mature in healthy trees

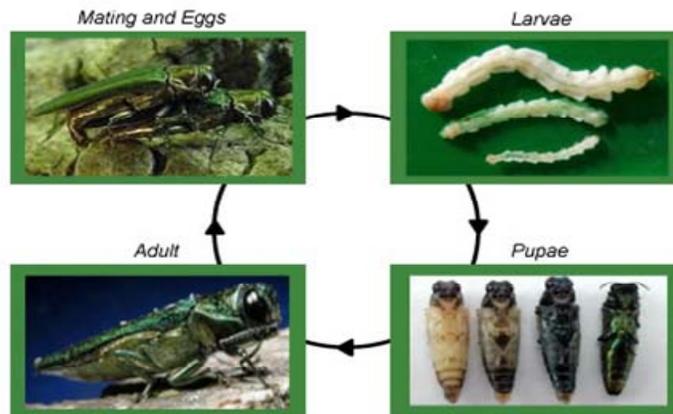
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Biology - Continued

Emerald Ash Borer Life Cycle

Click on each life stage for details



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EAB – Threat to COE

- 4 APHIS quarantined states in LRD (IL, MI, IN, OH)
- 40+ LRD lakes in quarantined states
- 82 lakes in or adjacent to these states
- 1.5 million campers – chief venue of spread is movement of firewood

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EAB – Threat to COE

- More than ½ million acres of COE forested land with ash being a major component of the ecosystem
- National Reservation System with campers moving across U.S. and Canada
- LRD COE could serve as avenue for spreading EAB across North America

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EAB - Control

- Early detection, removal of infected trees, clearing of ½ mile buffer where all ash trees are removed
- Burn diseased wood or chip (chips less than one inch in size)
- Primary control – prevent spread (leap frogging) by restricting movement of firewood and infected planting stock
- Normal spread about .5 miles/year

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EAB - Control

- Certify companies that trade and handle regulated products (green ash lumber, planting materials, chips, logs, etc.)
- Restrict movement of hardwood firewood outside of states with EAB infestations

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EAB – Spread Prevention

Plant Materials Quarantine

- USDA APHIS Interstate Quarantine (Illinois, Indiana, Ohio, Lower Peninsula of Michigan, and soon Pennsylvania)
- Intrastate Quarantines by states of Illinois, Indiana, Ohio, and Michigan – by County

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APHIS QUARANTINES

- Published in Federal Register
- Prohibits interstate movement of hardwood firewood out of quarantined states
- Regulates interstate movement of Ash planting stock and ash raw materials such as green lumber and logs
- Enforced by APHIS Inspection Officials
- Fines of up to \$250,000 for violations

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Corps Management of EAB

- **Public Education**
 - **Press releases**
 - **Post materials on Gateway, USACE, Division, District, and Project websites**
 - **Post on NRRS Website**
 - **Post materials on Recreation Area bulletin boards, gatehouses**
 - **Distribute notices and materials to marinas, bait shops, concessions, etc.**
 - **Present interpretive programs on EAB**

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EAB Management – Cont'd

- **Employees (Train Rangers & Maintenance) – particularly in Identification of insects, symptoms of trees under attack, disposal of infected ash materials**
- **Work with concessionaires and local businesses that might be selling firewood (USDA Compliance Agreements, etc.)**
- **Work closely with state and APHIS EAB**

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EAB Management – Cont'd

- May have to establish District Engineer Title 36 local regulations prohibiting bringing hardwood firewood on project – particularly for projects in quarantined counties

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EAB – Educational Materials

Educational Aids

- EAB Identification Guide Card (USFS NA-IN-12-06)
- EAB The Green Menace DVD
- USDA USFS EAB The Green Menace brochure (Program Aid 1769)
- USDA USFS EAB Pest Alert (NA-PR-02-04)
- APHIS EAB Firewood Poster (Program Aid 1887)
- Cooperative EAB Program Infestation maps
- EAB Key Chain

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EAB – Educational Sources

Websites

- <http://www.emeraldashborer.info>
- http://www.aphis.usda.gov/plant_health
- <http://www.entm.purdue.edu/EAB>
- <http://www.ohioagriculture.gov/pubs/plnt/curr/eab/>
- <http://www.michigan.gov/eab>
- <http://www.na.fs.fed.us/spfo/eab/>

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EAB - Contacts

If you suspect you might have EAB
in your area call

- Michigan – 1-800-325-0023
- Indiana – 1-866-NO-EXOTIC
- Ohio – 1-888-OHIOI-EAB
- Pennsylvania – 1-866-253-7189
- Wisconsin – 1-800-462-2803
- USDA AHIS – 1-866-322-4512
- Maryland – 410-841-5920

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EAB Coop Program Contacts

- Overall Program Head – Mr. Ralph Bell – Raleigh, NC (901) 855-7312
- APHIS EAB Public Affairs Officer – Ms. Sharon Lucik – (801) 844-2713
- Central Ohio – Mr. Andrew Wright – Bowling Green, OH (419) 352-5434
- Tennessee – Mr. Jim Dattilo – (615) 907-3357, Ext. 52641

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Coop Prog. Contacts – Cont'd

- Southern Ohio – Ms. Allison Benzinski (614) 626-1032

If you want to talk about EAB you can call me at (513) 684-3192

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