

# **Exotic Wood Boring and Bark Beetle Surveys**

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- **Who**
- **What**
- **When**
- **Where**
- **Why**
- **Outreach**



## **Who:**

- USDA APHIS PPQ (Plant Protection & Quarantine)
- Missouri Department of Agriculture
- Missouri Department of Conservation

**“Collaboration, Coordination, Communication”**

# What:

“(EWB/BB)” surveys are designed to detect or delimit an infestation of exotic wood-boring or bark beetles in the United States to protect our natural resources



## Cerambycidae

Longhorned beetles  
Asian longhorned beetle,  
*Anoplophora glabripennis*  
(Motschulsky)

## Buprestidae

Jewel beetles or metallic  
woodboring beetles  
Ex. Emerald ash borer,  
*Agrilus planipennis* (Fairmaire)



## Curculionidae

Bark and snout beetles  
Ex. Walnut twig beetle,  
*Pityophthorus juglandis* Blackman

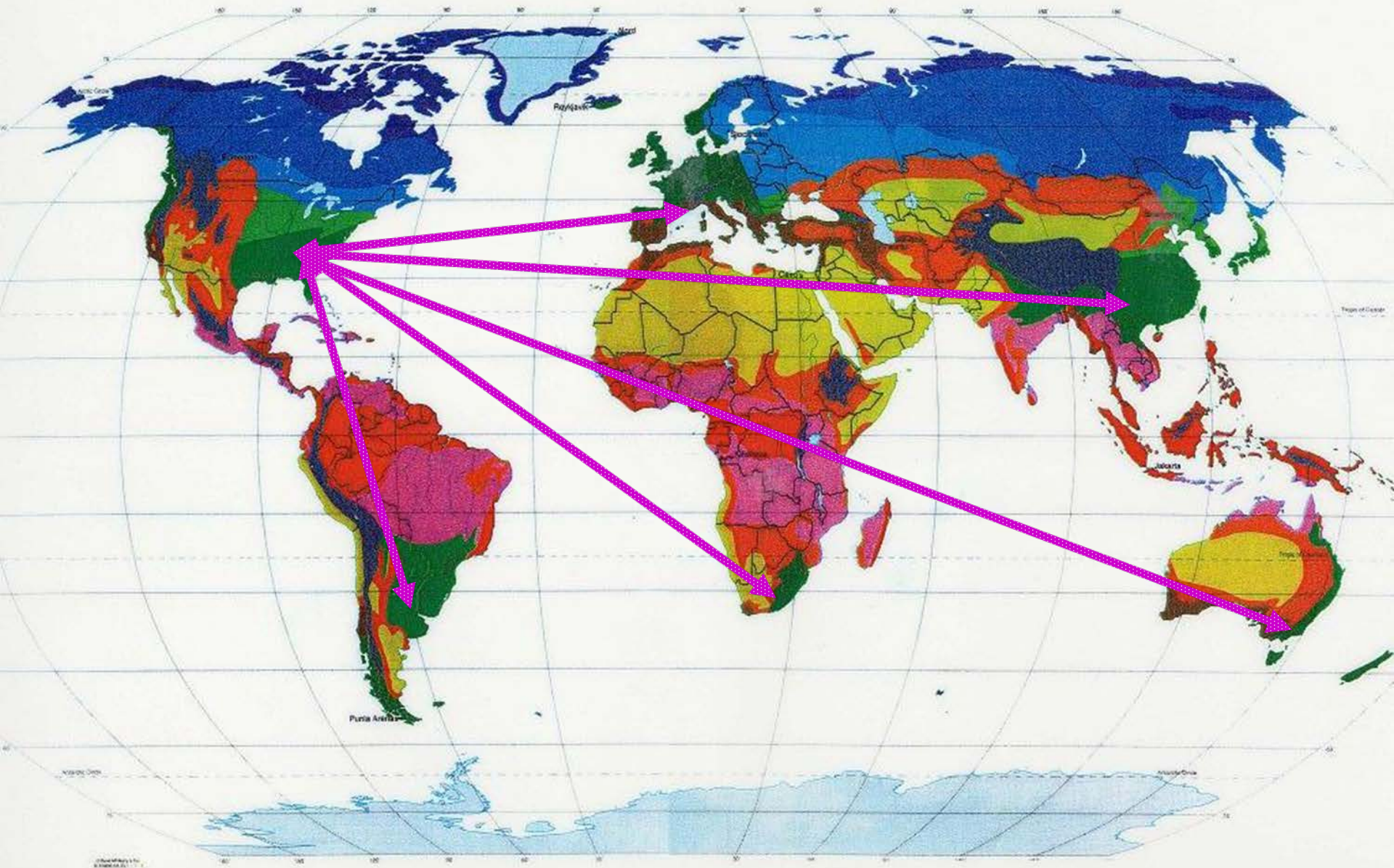
The term “exotic species” is geographical:

- Exotic species do not naturally occur in the ecosystem of interest.
- They may come from neighboring areas, not just from other countries.

The term “invasive species” refers to biological attributes:

- It can displace native species, or
- It can establish and out compete native species
- They are alien to the ecosystem under consideration
- They can cause economic harm, environmental harm, or harm to human health.

# WORLD CLIMATE



In 2014, **\$18.4 trillion** worth of goods were traded globally per year and **15 billion tons** of merchandise were moved.





2014: More than half of the **\$8.7 trillion** of goods moved in the USA was encased in or supported by **SWPM.**



Trade volume is so large that most countries can manage to inspect only **1%** to **2%** of shipments.



**97 percent** of quarantine significant tree pests found by port inspectors are associated with **SWPM**.



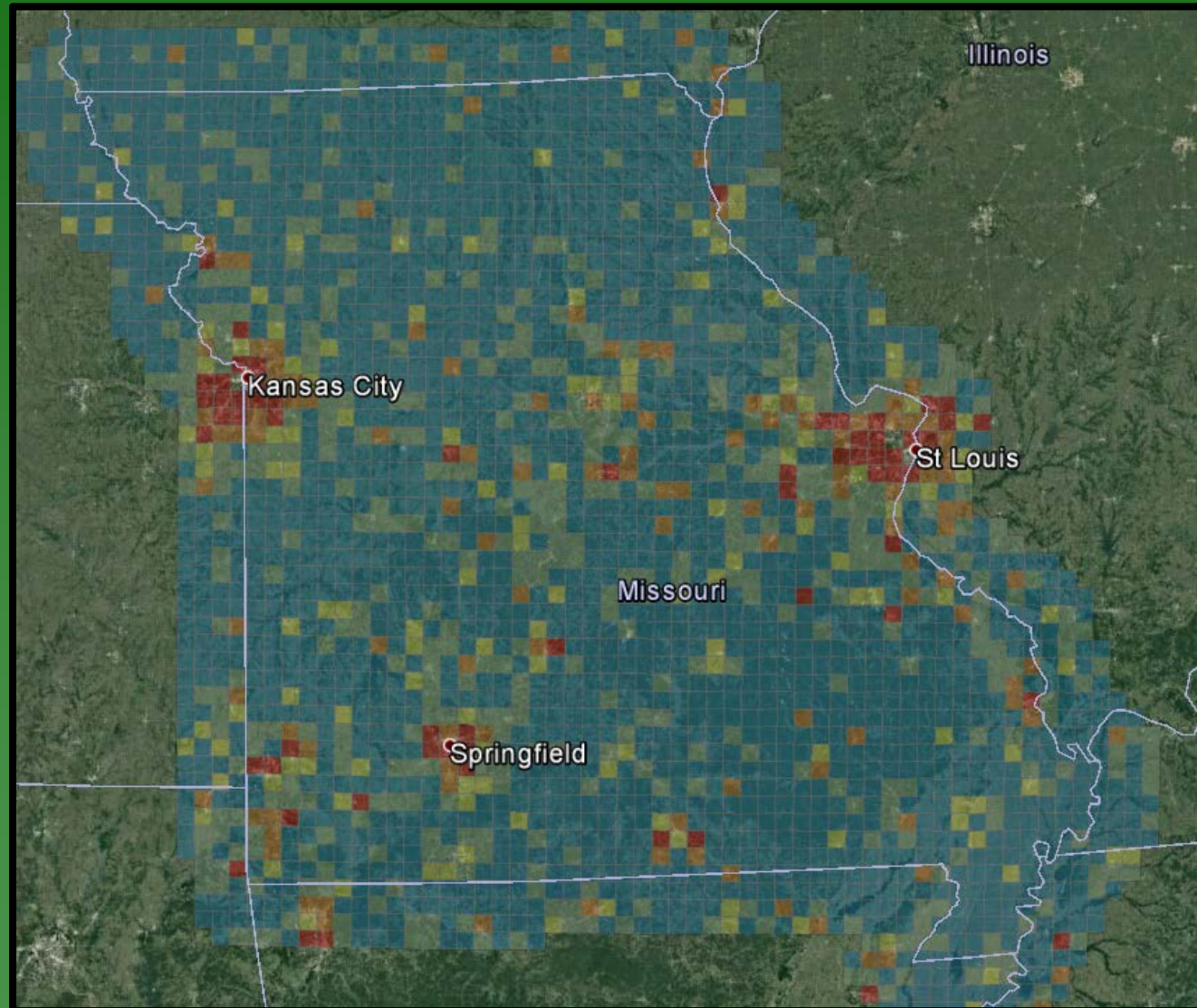
In spite of current “bark-free” import requirements, about **9 percent** of maritime shipments contain bark.

## What and When: Looking at 2017

- USDA APHIS PPQ (Plant Protection & Quarantine)
  - Oak commodity survey
  - Emerald ash borer survey
  - Trace forwards (potential)
- Missouri Department of Agriculture
  - Oak commodity survey
  - Pine shoot beetle survey
  - TCD survey
- Missouri Department of Conservation
  - TCD survey
  - Emerald ash borer survey

## Where:

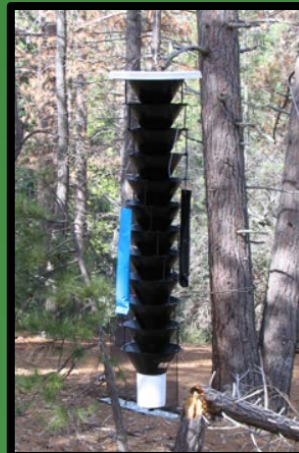
- Statewide surveys
- Dependent upon:
  - Pest
  - Host
  - Staff



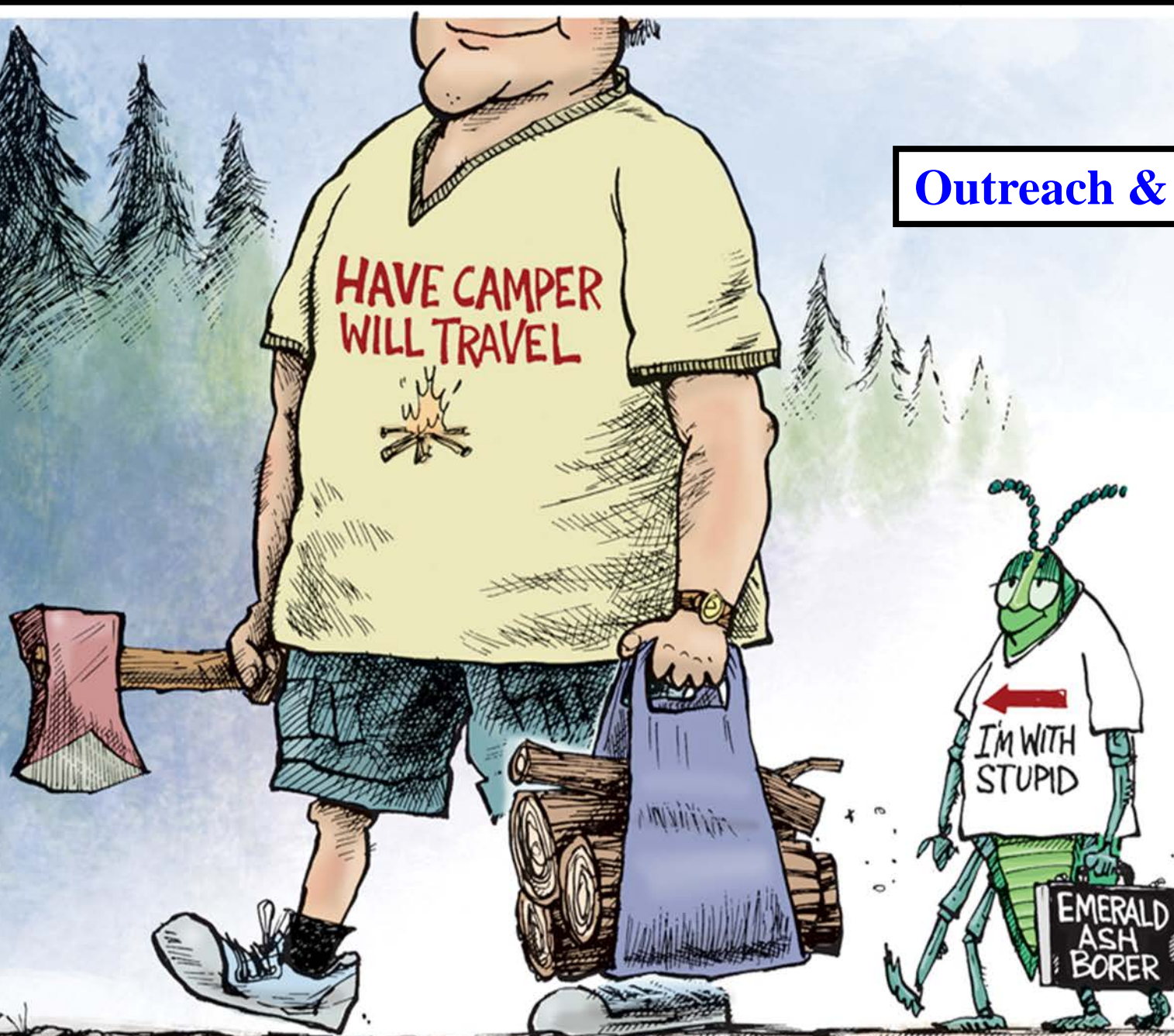
# Why:

## Exotic wood-boring and bark beetles (EBB/BB)

- Cause damage by feeding on host shrubs and trees, lowering timber quality and yield
- Transmit pathogens to host plants
- Weaken or kill host plants



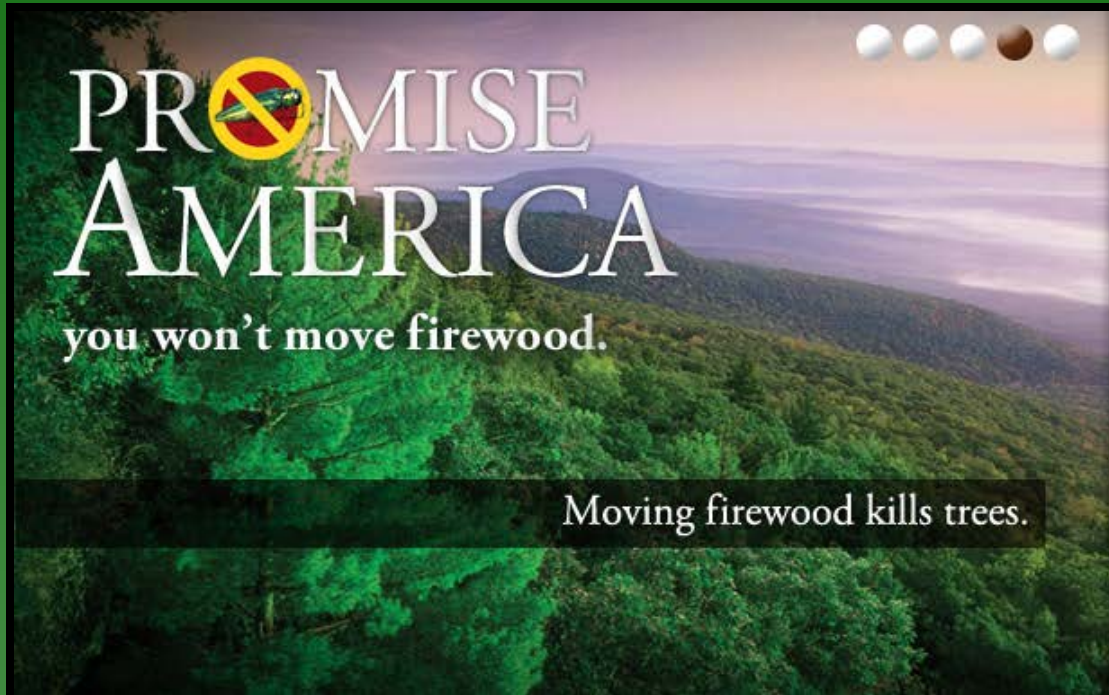
**Outreach & Education**



## Outreach Target Audiences

- General Public
- Municipalities
- Foresters, Arborists
- Forest Products Industry
- Nursery Industry
- Campgrounds
- Utility Workers
- Firewood buyers and sellers
- Universities (Education)





Educational material, brochures, meetings, conferences, workshops, trainings, media and public outreach, website





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