



Emerald Ash Borer

Park Maintenance and Operations

December 10, 2020

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Park and Recreation Department



Purpose



Provide an update to the Park and Recreation Board on Emerald Ash Borer and the potential impact to the Dallas Urban Forest.



Presentation Overview



- History on Emerald Ash Borer (EAB)
- Social Impacts
- Ecological Impacts
- SLAM Operation
- Proposed Action Plan



History on Emerald Ash Borer (EAB)



- Invasive boring insect originally in Asia
- First identified in Michigan in 2002 and has spread to 35 states
- Attacks Fraxinus (Ash) species in the US
- Has a 99.7% mortality rate once established



Howard Russell
Michigan State
University Bugwood.org

UGA1241011



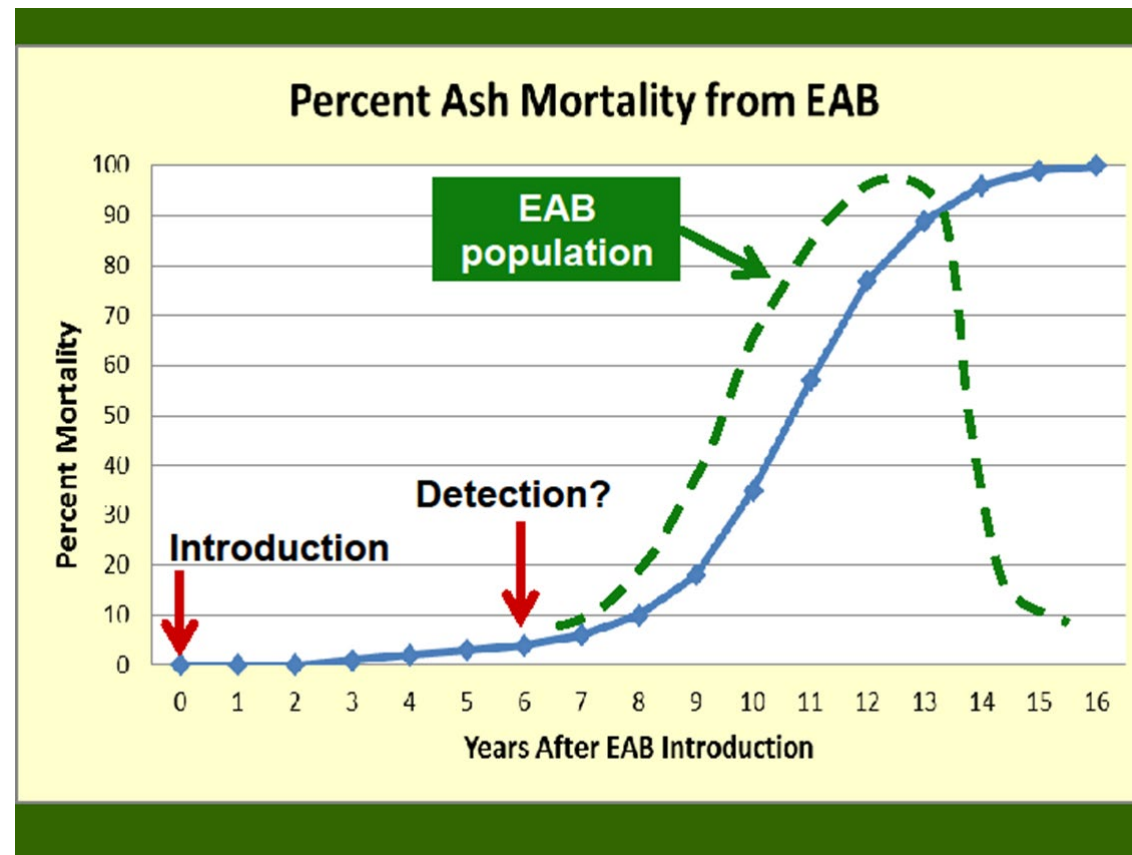
History on Emerald Ash Borer (EAB)



- In 2018, known in 3 East Texas counties and in Tarrant County
- Tarrant County is the ONLY known infestation in the state
- Not believed to be a transfer from East Texas
- Likely introduced through wood products transported by individuals moving from infested states
- Confirmed establishment in Denton County in 2020



Time from introduction to detection to mortality is rapid



Social Impacts



- Permanent loss of species in Urban Forest
- Replacement of forest takes generations to develop
- Increased storm water run-off
- Increased water consumption
- Enhanced heat island



Social Impacts



- Significant property value reduction
- Loss of neighborhood character
- More stress on underserved neighborhoods
- Increased cost to maintain, heat and cool homes
- Decreases property value

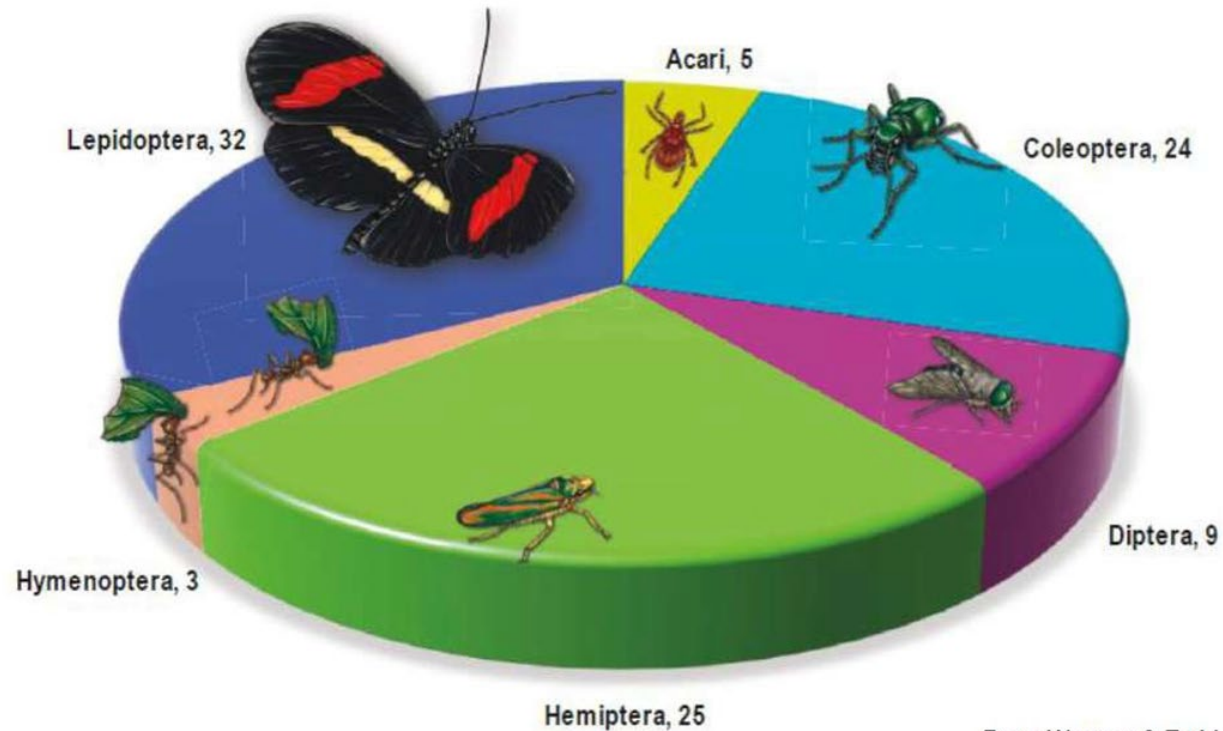


(Photo credit: Troy Kimoto, Canadian Food Inspection Agency, via Bugwood.org)



100+ Ash Specialists

Loss of ash as a forest (urban/rural) component means a weakened biodiversity



From Wagner & Todd, 2016



SLAM Operation



- Initiate SLAM (Slow Ash Mortality) program to slow spread, recommend by the Texas Forest Service
- Utilizes IPM principles
- SLAM will NOT eradicate EAB



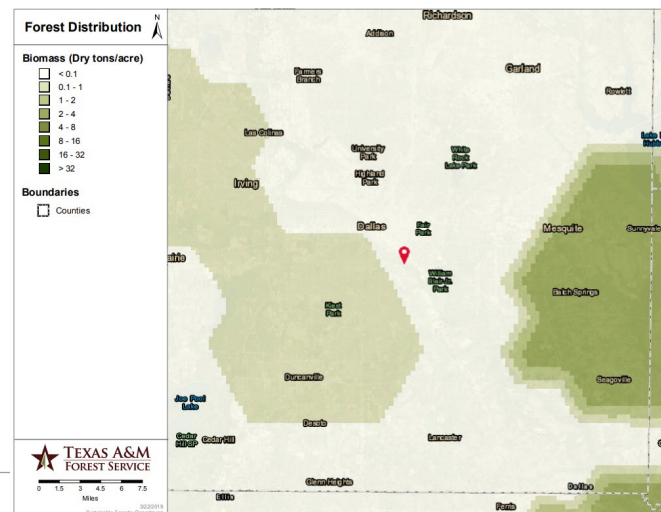
- Delineate EAB population and density
- **Determine ash density and distribution***
- Develop and implement suppression strategies
- Regulatory efforts – State and Local
- **Public Outreach – communication and education***
- Evaluation



SLAM Operation -Tree Inventory



- Conduct an inventory of Ash trees in Dallas— collaboration by TRN, PKR, and DWU
- Complete or sampled estimate
- Determine City vs. private trees
- Determine the current condition of trees
- All management decisions start with an inventory of Ash trees



SLAM Operation - Treatment Options



- Do nothing – remove trees only upon death
- Preemptive removal of ALL ash trees over 5 years
- Preemptive removal of ash trees and replace with comparable non-ash trees
- Treat ALL ash trees with insecticides or select individual trees



•VanNatta, A.R., R.H. Hauer, N.M. Schuettpelz. 2012. *Economic Analysis of Emerald Ash Borer (Coleoptera: Buprestidae) Management Options*. *Journal of Economic Entomology* 105(1):196–206.



SLAM Operation - Costs example



Mt. Pleasant, Michigan	
145 Trees Removed for EAB	
\$35,000	Salaries, Planting, Watering, Maintenance
\$34,940	Trees, Mulch, Topsoil & Supplies
\$33,151	Equipment Costs (lease/rent/use)
\$ 9,420	Fuel Expenses
\$112,511	Total Project Cost
\$776	Total Cost Per Tree to Remove/ Replace

➤ Arlington Heights Il

- \$11 Million to Remove 13,000 Trees
- **\$846** Cost Per Tree to R&R

➤ Milwaukee, WI

- A pprox.36,000 Boulevard Ash Trees \$27 Million to R&R
- **\$750** Cost Per Tree to R&R
- **Treating 27,000 Ash**

➤ Chicago, IL

- 81,000 Boulevard Ash Trees Estimate \$95 Million to R&R
- **\$1,173** Cost Per Tree to R&R
- **Treating 60,000 Ash**



Proposed Action



- Continue coaching department staff on training, monitoring, and planning for EAB
- Remove ash species from planting plans until peak of infestation has passed
- Recommend forming a multi-department, Citywide task force to develop and implement a SLAM program





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