

The Asian Longhorned Beetle

Anoplophora glabripennis



Photo credit: Kyle T. Ramirez, Wikipedia Commons



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The Asian longhorned beetle

- Native to China & Korea
- May have been introduced into U.S. on untreated wooden pallets from China
- Larvae slowly kills hardwood trees by feeding on heartwood & sapwood
- Is extremely destructive and can destroy urban, suburban and forest trees, especially maple



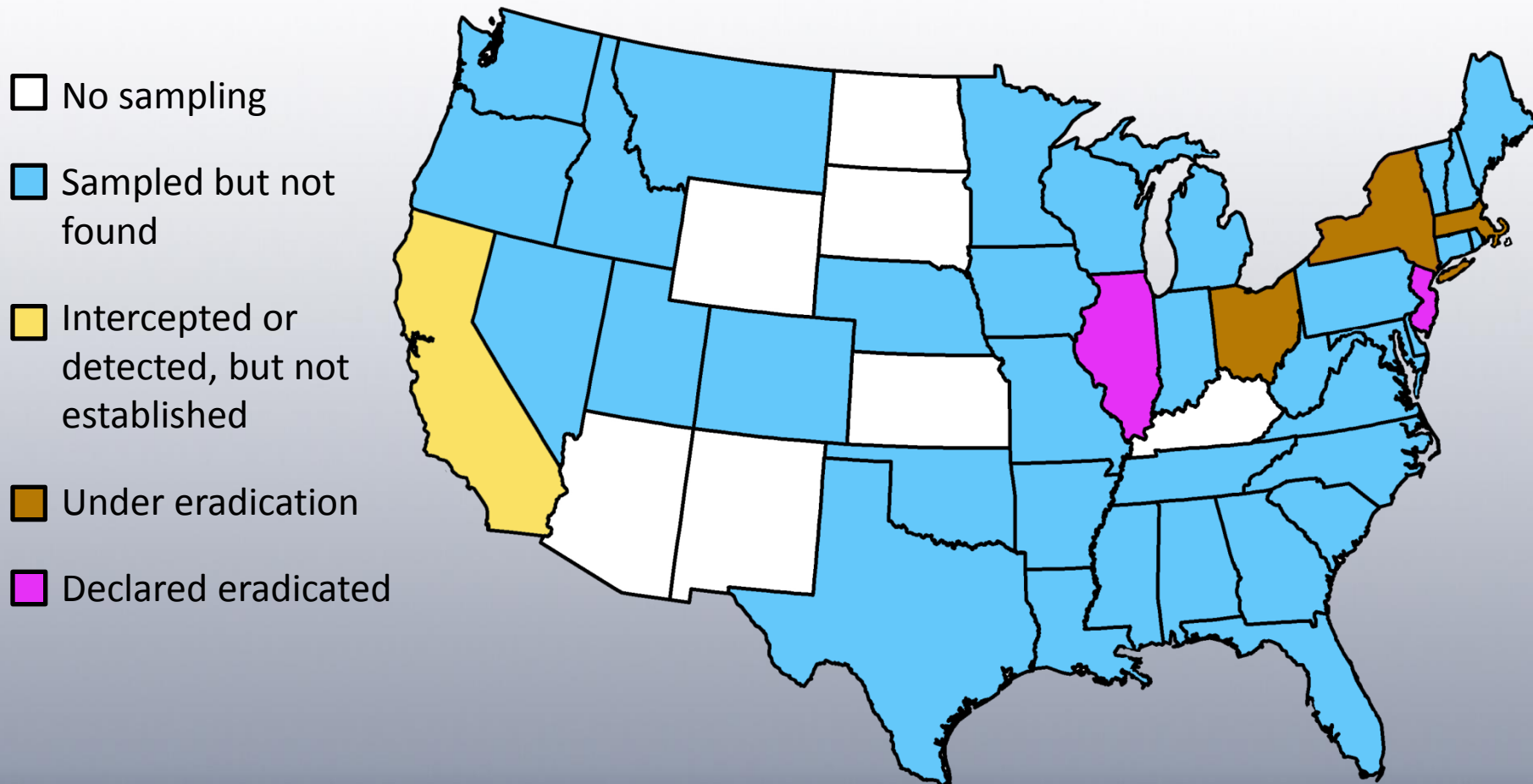
Photo credit: Melody Keena, USDA Forest Service, Bugwood.org, #5431704



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Distribution of the Asian Longhorned Beetle



Map based on information from NAPIS Pest Tracker – accessed 12/31/2013.



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Host Plants

- Very good hosts:
 - Maple
 - Elm
 - Buckeye
 - Willow
 - Poplar
- Good hosts:
 - Birch
 - Sycamore
- Occasional hosts:
 - Hackberry
 - Russian Olive
 - Mountain Ash



Leaf of Sugar Maple

Photo credit: Paul Wray, Iowa State University, Bugwood.org, #UGA0008379



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Signs of Asian Longhorned Beetle



Oviposition pit



Exit hole



Pupal chamber frass



Adult feeding damage
on bark



Exposed feeding
galleries

- External signs include:
 - Oviposition pits
 - Frass or shavings
 - Hollow bark
 - Exposed feeding galleries
 - Exit (or emergence) holes
 - Adult feeding signs

Photo credit:

Top row – Joe Boggs, Bugwood.org, #5476353 and #5476351

Middle row - Kenneth R. Law, USDA APHIS PPQ, Bugwood.org, #5392784 and Dean Morewood, Health Canada, Bugwood.org, #1193003

Bottom row - Melody Keena, USDA Forest Service, Bugwood.org, #5431708



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Signs of Asian Longhorned Beetle

- Internal signs on living or recently cut wood include:
 - Feeding galleries on sapwood
 - Tunneling through wood



Feeding galleries



Pupal chambers

Photo credit:
Kenneth R. Law, USDA APHIS PPQ, Bugwood.org, #5392783 and Melody Keena, USDA Forest Service, Bugwood.org, #5431706



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Symptoms of Asian Longhorned Beetle

- Sap flowing from wounds
- Oviposition stains
- Cracks in bark
- Callus tissue growth around wounds
- Yellowing & drooping of leaves
- Branch dieback & tree death



Branch dieback in maple

Photo credit: Jason Sharman, Vitalitree, Bugwood.org, #5454691



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Identification Asian Longhorned Beetle

Adult male



Adult female



Clockwise from upper left: egg, immature larva, pupae, adult, mature larva

Photo credit: (Top)- Kenneth R. Law, USDA APHIS PPQ, Bugwood.org, #UGA4798041, (Bottom right to left) - Michael Bohne, Bugwood.org, #UGA1262001 & #UGA1262002



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Life cycle of Asian Longhorned Beetle

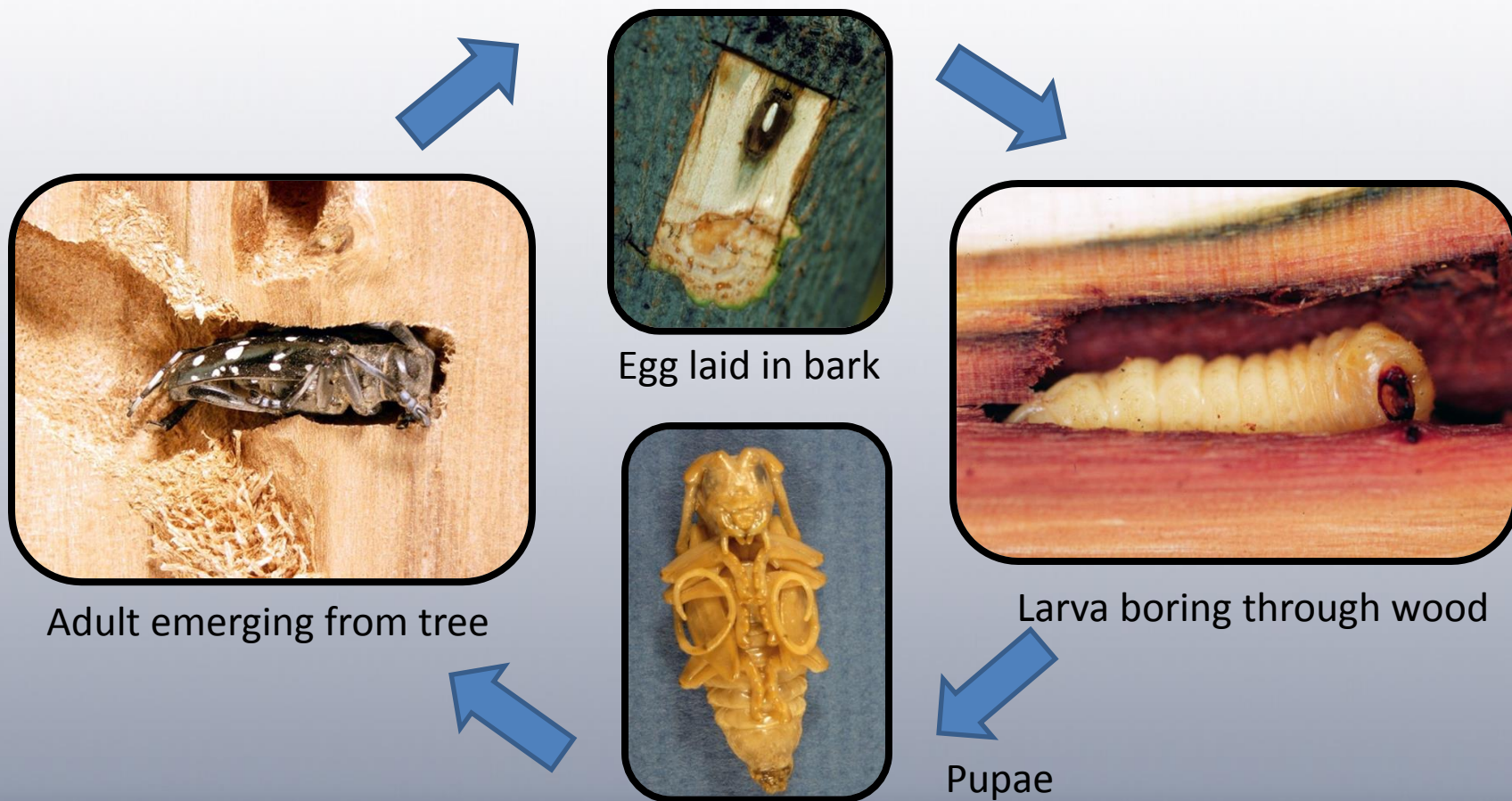


Photo credit: (Top, clockwise) - Larry R. Barber, USDA Forest Service, Bugwood.org, #UGA3047042; Dennis Haugen, USDA Forest Service, Bugwood.org, # UGA1393003; Michael Bohne, Bugwood.org, #UGA1262006 & #UGA1262009



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Monitoring of Asian Longhorned Beetle

Report sightings at:
<http://asianlonghornedbeetle.com/report-your-findings>
or call (866)702-9938



Aerial tree inspections from bucket trucks, smokejumpers accessing trees in difficult areas, visual inspection from the ground

Photo credit: Thomas B. Denholm, New Jersey Department of Agriculture, Bugwood.org, #UGA1253035; APHIS photographer Daniel J. Parry; Andrew Koeser, International Society of Arboriculture, Bugwood.org, #5375276



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Management for Asian Longhorned Beetle

- Proper water management & polycultures can make trees less susceptible
- Imidacloprid on host trees in quarantined areas
- Removing infested trees and replanting with non-host trees
- Treating wooden packing material
- Don't move firewood in or out of state! Buy it where you burn it!



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Look-alike Species

Asian longhorned beetle Southern pine sawyer
Anoplophora glabripennis *Monochamus titillator*



Pine sawyer beetle
Monochamus carolinensis

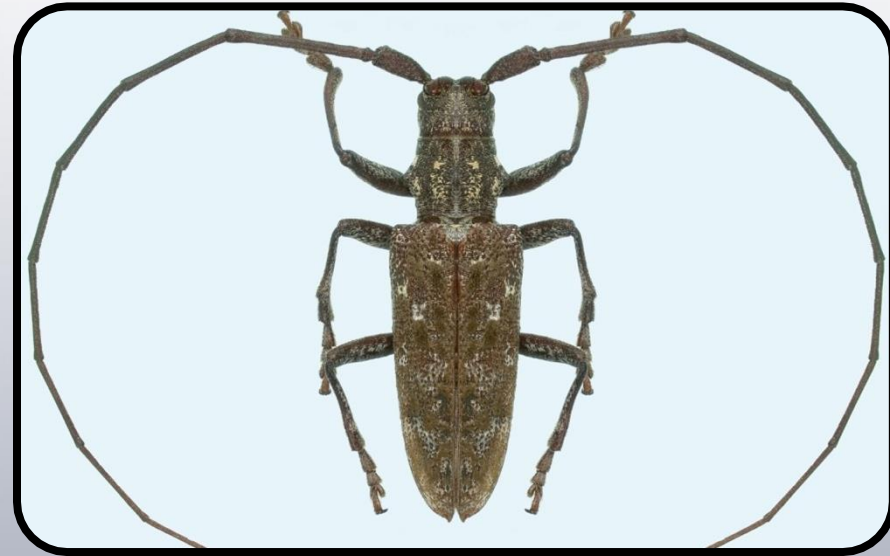


Photo credit: (Left to right) - Michael Bohne, Bugwood.org #UGA1262002; Eugenio Nearn, Smithsonian Institution, National Museum of Natural History, Department of Entomology; Natasha Wright, Florida Department of Agriculture and Consumer Services, Bugwood.org , #5203073

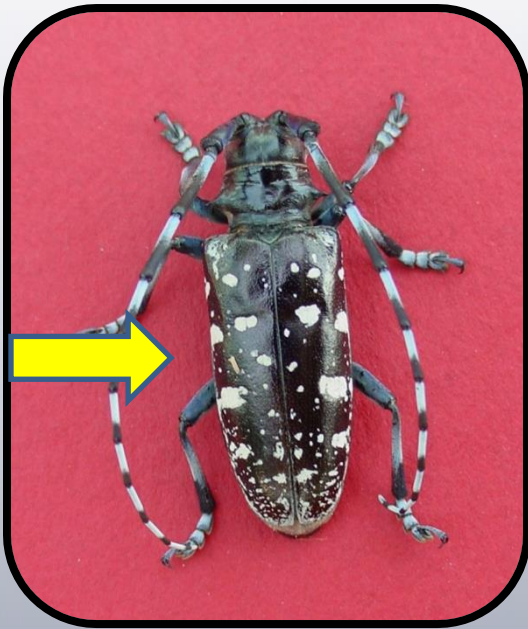


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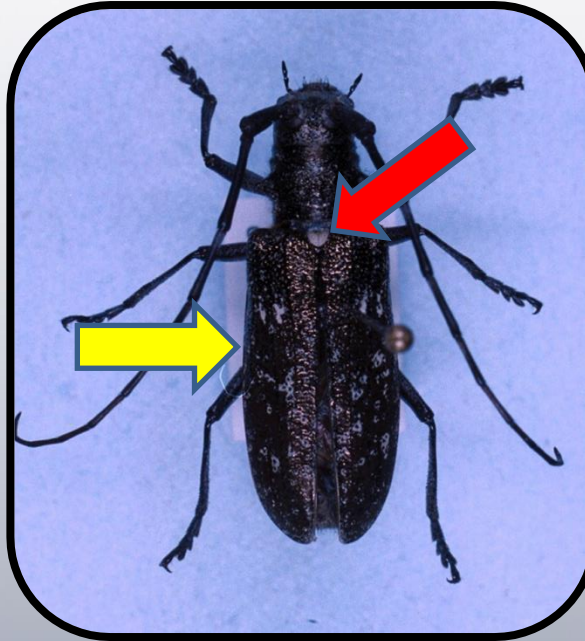


Look-alike Species

Asian longhorned beetle
Anoplophora glabripennis



Whitespotted sawyer
Monochamus scutellatus



Cottonwood borer
Plectrodera scalator



Photo credit: (Left to right) - Michael Bohne, Bugwood.org #UGA1262002; E. Bradford Walker, Vermont Department of Forests, Parks and Recreation, Bugwood.org, #UGA4836002; Jim Baker, North Carolina State University, Bugwood.org, #1549692



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Look-alike Species

Asian longhorned beetle
Anoplophora glabripennis



Long-jawed longhorn beetle
Trachyderes mandibularis



Photo credit: (Left to right) - Michael Bohne, Bugwood.org #UGA1262002; Eugenio Nearn, University of Florida



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Collaborating Agencies

- U.S. Department of Agriculture Animal and Plant Health Inspection Service (USDA-APHIS)
- Cooperative Agricultural Pest Survey Program (CAPS)
- Florida Department of Agriculture and Consumer Services (FDACS)
- National Plant Diagnostic Network (NPDN)
- Sentinel Plant Network (SPN)
- Protect U.S.
- University of Florida Institute of Food and Agricultural Sciences (UF-IFAS)



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