

Signs of Infestation:

Initial detection of emerald ash borer in ash trees is difficult. Signs of infestation include:

Canopy dieback, beginning at the top of the tree and progressing downward



In later stages of infestations, ash trees may form sprouts from the trunk and roots.

Bark can split, exposing "S"-shaped galleries underneath



Adult beetles leave a "D"-shaped exit hole in the bark roughly 1/8 inch in diameter, when they emerge.

Woodpecker activity and damage increases where they are trying to get to the larvae in the tree.



It may take up to five years for the canopy of an infested ash to thin and decline. Since borers infest the upper branches of the tree, **the "D"-shaped holes cannot be seen from the ground until the tree is severely infested.**



How Can We Make Your Life More Enjoyable?

- Lawn Care
- Plant Health Care
- Bed & Border Weed Control
- Tree & Shrub Pruning/Removal
- Tree & Shrub Planting
- Irrigation Services
- Outdoor Perimeter Pest Control
- Holiday & Event Decor

N
O
I
T
I
D
L
O
S

Emerald Ash Borer

Toledo Street Before and After Emerald Ash Borer
Before: June 2006 After: August 2009



Photo Courtesy of Dan Herms, Ohio State University



The most destructive forest pest in North America, killing

over **50** million trees in 20+ states. Found in Boulder, CO. on September 2013.

A 100% guarantee that all work will be done correctly and to your complete and total satisfaction.



Denver
Castle Rock / Boulder
303.337.6200

Monument
719.302.5117

Fort Collins
Loveland / Greeley
970.221.1287

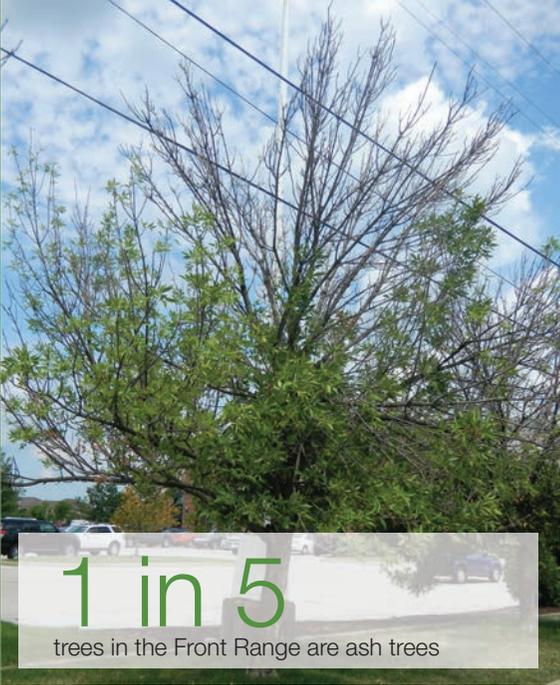
Longmont
720.204.1846

www.MySwingle.com

Copyright 2014 Swingle, Inc. All rights reserved.



After EAB, our urban forest will never look the same.

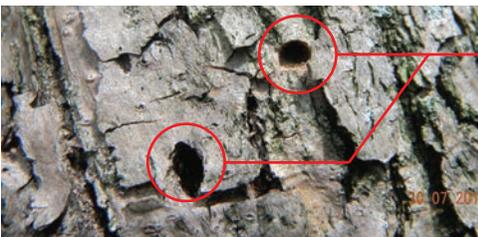


1 in 5
trees in the Front Range are ash trees

Mountain pine beetle is responsible for devastating much of our Colorado mountain forests. Experts believe emerald ash borer will do the equivalent to our urban forests, with an estimated one in five trees being ash. According to the Colorado Department of Agriculture, the green metallic beetle was found by Boulder forestry staff on September 23rd, 2013. This was the first official discovery of the beetle in Colorado.

EAB is considered the most destructive urban forest pest ever seen in North America. It is responsible for killing more than 50 million ash trees in over 20 states. An estimated 1.45 million ash trees in the Denver Metro area are at risk. All species of the North American ash (*Fraxinus* sp.) are susceptible. Mountain ash (*Sorbus* sp.) is not included.

ALL ash trees are susceptible and may die-
the key is detection and protection.



Adult beetles leave a "D"-shaped exit hole in the bark, roughly 1/8 inch in diameter, when they emerge.

Swingle Recommends:

Depending on your proximity to where emerald ash borer is detected, your ash trees should either be protected with a trunk injection or soil injection. A trunk spray can be applied, but only in cases where a trunk or soil injection is not feasible.

Option 1: A trunk injection will protect your tree(s) for up to 2 years and may only be completed in spring or summer.



Option 2: A soil injection will protect your tree(s) for 1 year and can be completed in spring or fall.



Steps to take, if you haven't already:

- First, consult an expert, such as a Swingle Landscape Care Consultant, to verify ash tree inventory, evaluate your trees for infestation and make custom recommendations.
- Prune dead branches. Dead branches weaken the tree; an unhealthy tree is less likely to survive an emerald ash borer attack, because it will not accept the treatment as well and it is already weakened.
- Do not plant new ash trees. Good substitutes for ash include lindens, honeylocusts, hackberrys, oaks and elms.
- Additional recommendations may include tree fertilization and lilac/ash borer or ash bark beetle spray.
- Do not move firewood made from ash trees out of the area.

History:

Emerald ash borer (*Agrilus planipennis*), was introduced accidentally into Michigan in wood packing material imported from eastern Asia sometime in the 1990's. It became well established in Michigan until ash trees started dying in 2002, when it was first detected. It is responsible for the deaths of millions of ash trees in the Midwest and eastern U.S.

How do I know if I have an ash tree?

We recommend a Landscape Care Consultant visit your property to verify your ash tree inventory.

However, ash trees have:

1. Compound leaves with 5 to 11 leaflets
2. Branches and buds are in pairs directly across from each other (opposite branching)
3. Mature bark has diamond-shaped ridges



S
O
L
I
T
D
N