

Emerald ash borer

What it is

Native to Asia and Russia, the emerald ash borer is a destructive wood-boring insect that has killed nearly 100 million ash trees across the Midwest and eastern North America. So far it has not reached Montana, but because the insect can travel in firewood, it could easily show up in a load transported from another state.

How to ID it

The ash borer is a half-inch-long metallic-green adult beetle with a red abdomen. Its presence can be indicated by D-shaped bore-holes in ash tree bark.

Where it's found

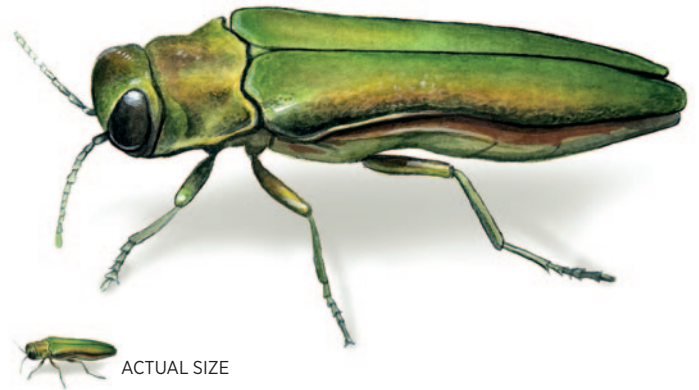
Emerald ash borers were first discovered in Michigan in 2002. Since then they have spread to 35 states, becoming the most destructive invasive wood-boring insect in U.S. history. The closest ones to us are in southeastern South Dakota and Denver, Colorado.

How it spreads

The main way this insect travels is via transported firewood. Fortunately, extreme cold temperatures in the Midwest in recent years have slowed its westward spread.

Why we hate it

The larvae of emerald ash borers tunnel through tree bark and feed on the inner layer of trees, killing them. Because they need



little water, green ash are the most commonly planted trees in many Montana communities east of the Continental Divide. If it ever arrives in the Treasure State, the invasive pest could wipe out shade trees in entire neighborhoods and towns.

How to control it

Infected trees can be treated with yearly insecticide applications. Scientists are also experimenting with biocontrol—releasing tiny parasitic wasps that prey on emerald ash borers. The best way to prevent these bugs from reaching Montana is to never import firewood from another state. If you think you have found an emerald ash borer or an infested tree, contact Carson Thomas with the Montana Department of Agriculture at carson.thomas@mt.gov.

LIZ BRADFORD

THE MICRO MANAGER

A quick look at concepts and terms commonly used in fisheries, wildlife, or state parks management.

“Lake Winterkill”

Winterkill is a condition in which fish in shallow lakes and ponds suffocate from a lack of dissolved oxygen in the water.

In Montana and other northern states, what’s technically called ecological hypoxia mainly happens in late winter after months of heavy snowpack cover a lake and prevent light from reaching underwater plants. That causes the plants to die, and then bacteria consume the decaying plant material.

It’s the bacteria that eat up all the oxygen. Reproducing rapidly with all that dead vegetation to eat, those billions of little organisms absorb dissolved oxygen to survive, robbing it from fish and underwater insects.

Oxygen originally enters pond and lake water from the air through wave action and from photosynthesis by aquatic vegetation. When ice covers the water, the only source of oxygen is from plant photosynthesis. Clear ice with no snow cover allows enough sunlight to keep the vegetation alive. But if the ice gets too thick or snow covers the surface, the plants begin to die from lack of sunlight.

Small, shallow lakes are the most vulnerable to winterkill



Winterkill on a shallow prairie pothole lake covered with thick snow.

because they hold less water and oxygen and typically have more vegetation that dies in the winter.

In some lakes and ponds highly prone to winterkill, FWP installs solar-powered aerators that add oxygen by either stirring the water surface or sending compressed air to the bottom. ■

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