

YARD & GARDEN REPORT

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Emerald ash borer heads to the Rockies

The emerald ash borer (EAB) has made a giant leap westward. The pest was detected in Boulder, Colorado last September.

The closest EAB population to Boulder is in Missouri, 600 miles away. Since the borer only flies about ½ mile, we know the EAB in Colorado was spread when someone moved infested ash trees, logs or firewood into the area. The borer was found on the Colorado University campus, among other sites.

EAB has killed millions of ash trees in the Great Lakes region since its discovery in Michigan in 2002. The borer creates tunnels inside ash trees, destroying the veins and causing dieback. This pest is one of the most destructive tree pests ever found in North America.

Emerald ash borer is not in North Dakota and no treatments for ash



Fig. 1. A single load of infested firewood can introduce emerald ash borer into our state.

trees are needed at this time. The pest was detected in the Twin Cities in 2009, but has not been found west of the metro area. The pest has not been detected in our neighboring states/provinces of South Dakota, Montana and Manitoba.

The spread of EAB across North America has been slowed. Shipments of ash nursery trees and ash logs with bark are regulated, and transporting firewood outside of quarantined areas is illegal.

Nevertheless, the leap to Colorado shows the borer can suddenly pop up anywhere and anytime. We need to stay vigilant in North Dakota to protect our thousands of ash trees. Ash firewood should be bought and used locally. Do not move firewood when camping.

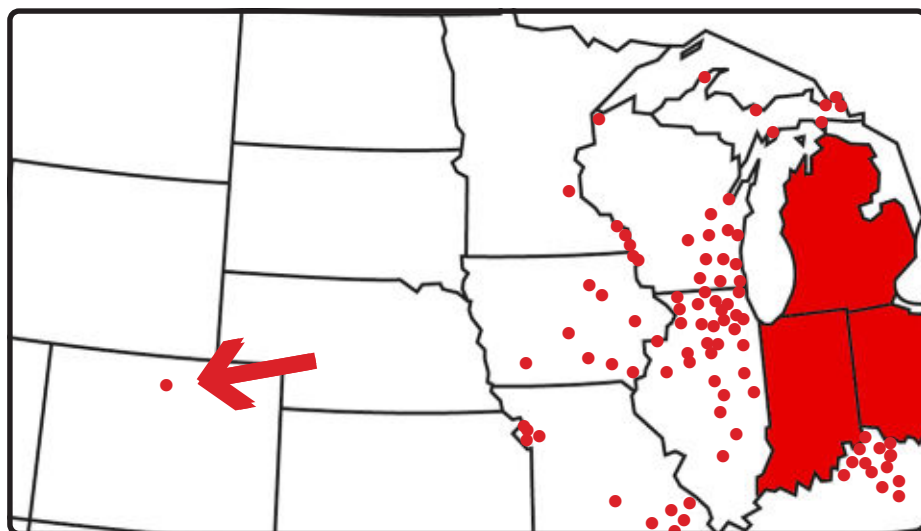


Fig. 2. Simplified map showing initial detections of emerald ash borer in the west. Nearly all counties in Indiana, Ohio and lower Michigan have detected the pest.

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Dripping trees

Cotton balls are popping out of tree branches (*Fig. 3*). Inside these balls are pests sucking on sap and excreting a sticky poop. This poop is creating a mess on cars, decks and sidewalks. Nuisance ants, bees and wasps are being attracted, and a sooty mold develops.

This damage is caused by cottony maple scale. The pest prefers to feed on silver maple, but it will attack other maples, linden, elm, honeylocust, hackberry, dogwood and many other leafy trees, shrubs and vines.

Each cottony sac may contain over 1,000 eggs. These eggs are hatching now into *crawlers* that will feed on the sap of leaves all summer. A spray of lightweight horticultural “summer” oil will kill the crawlers, if needed. Only use a spot spray if the entire tree is not infected.

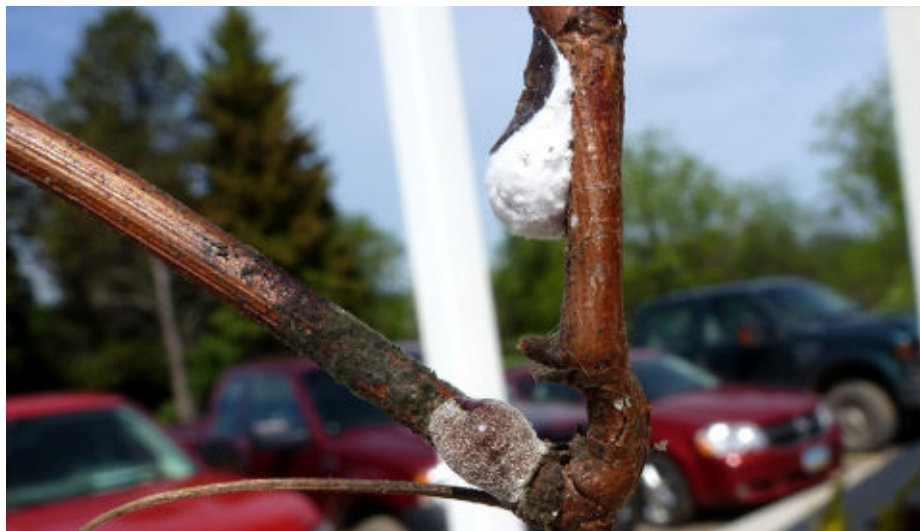


Fig. 3. Cottony maple scale on a grape vine. The cottony sacs may contain over 1,000 eggs of sucking pests. The excrement may develop a black, sooty mold.

Scales are usually controlled by ladybugs, parasitic wasps and other natural enemies. Pesticides should be applied only if necessary. We often find scale problems when pesticides are used regularly.

If scale problems persist for two or more years, chemical control may be needed. Sprays of acephate, carbaryl or cyfluthrin are effective when applied in the summer crawler stage. Acephate has some systemic action to it; the others will kill on contact. A soil drench of imidacloprid is another option.

Borers buzzing in the pumpkin patch

Squash vine borer moths are invading gardens (*Fig. 4*). The pests will lay eggs inside the vines of squash and pumpkins. Once the eggs hatch, the larvae destroy the base of the vine and cause it to wilt.

The adults are active during the day and make a buzzing noise when flying. You can trap them by placing yellow bowls with soapy water in the patch. The moths are about 1/2-inch long, with an orange abdomen and black spots (*Fig. 4*). Once you see moths in the bowls, consider spraying the base of susceptible plants with an insecticide such as carbaryl (Sevin), cyfluthrin (Tempo) or permethrin. Repeat 7–10 days later. Moths are less attracted to summer squash and butternut squash.



Figs. 4, 5. Borer moths are laying eggs at the base of squash vines. These eggs hatch into larvae that destroy the vine, causing it to wilt and die.

Most gardeners discover the pest after they see the vines wilting. In this case, look for the borer inside the vine at the base of the plant. It will be surrounded by brown frass (*Fig. 5*). Slice open the vine, remove the borer, and lay the vine on the

ground. Cover the wound with soil and keep it moist. Sometimes the vine will send out new roots near the wound and the vine will recover. Dead vines should be removed to get the borers out of the garden before they pupate.

Apple maggot flies piercing fruits

Apple maggots are the most destructive pest of apples in our state. The tiny maggots create tunnels or “railroad tracks” in fruits (*Fig. 7*). The adult flies are emerging now.

Should you spray your tree to protect the apples? Maybe, but only if the flies are there.

Monitor for the presence of maggot flies by hanging traps in the trees. These traps are red spheres coated with Tanglefoot, a sticky glue (*Fig. 8*). The flies are attracted to the red spheres, thinking they are a ripe apple to lay eggs inside—but then they land and get stuck.

You can make your own traps out of wooden balls (3 or more inches in diameter), painted red, with an eye screw and wire hook. Ripe apples from the store can be hung in the tree using clothes hangers. Coat the traps with Tanglefoot.

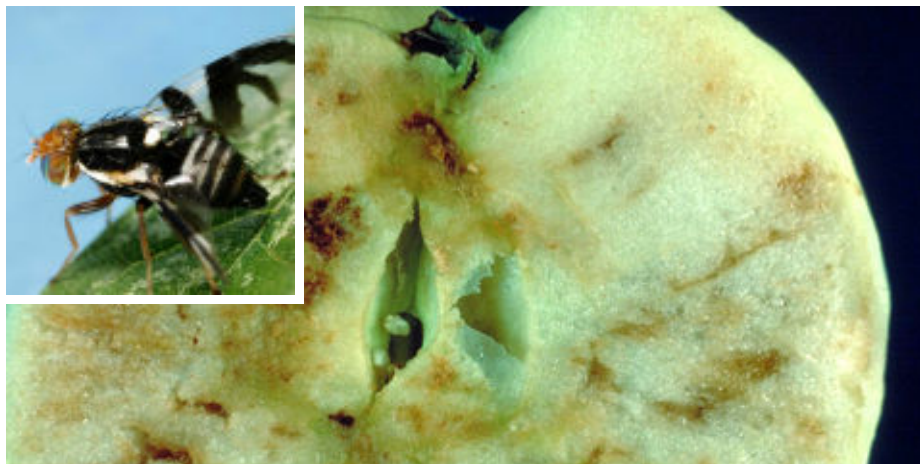
Hang 1–2 traps in small trees; 5 or more in large trees. Place traps facing a brushy area and/or on the south side of the tree.

Whiteout—in July?

North Dakota has long winters, but it's surprising even here to see white, fluffy clumps falling from the sky in July. We are experiencing a blizzard of snowy white, cottonwood seeds.

The cottonwood is the largest and fastest growing tree in North Dakota. It's popular because it is hardy, does not require any special care, and grows quickly—annual growth rates of 5 feet are common.

Cottonwood is native to our state and tolerates our harsh environment. It will tolerate wet and dry locations, acidic and alkaline soils, and even saline conditions.



Figs. 6, 7. Apple maggot flies are laying eggs that hatch and create tunnels.

The apple maggot fly is 1/4 inch long (slightly smaller than a housefly), with dark markings on its wings and a white spot where the thorax meets the striped abdomen (*Fig. 6*).

If you find a maggot fly, you should consider spraying the crop—unless you plan on making lots of maggot-infested apple sauce and cider this fall.

Recommended pesticides include carbaryl, malathion or esfenvalerate. Organic growers may consider spinosad. Continue spraying as long as maggot flies appear.



Fig. 8. Trap covered with apple maggot flies.

But the cottonwood is a messy tree. Its fluffy seeds plug up air conditioners. Its branches break easily in storms. Its twigs and leaves are subject to diseases and will readily drop during summer.

Its sheer height (70 feet tall) and susceptibility to storm damage makes it a questionable choice for landscapes in the long run. A cottonwood is much better suited for a windbreak or a river bottom. That being said, it is hard for a person looking for quick shade to resist the rapid and reliable growth of this tree.

The all-male clones ‘Siouxland’ and ‘Robusta’ will not shed cotton



Fig. 9. Cottonwoods are messy.

and have been selected for resistance (but not immunity) to disease.

Survey of problems found in North Dakota yards and gardens this week:

TREES AND SHRUBS



F10, 11. Dutch elm disease

A major branch shows yellowing and wilting. Take a one-inch-diameter sample and look for brown streaking beneath bark and in sapwood. Remove infected branch promptly; go 8 feet or more into symptomless wood. Removal of tree is most effective option, especially if multiple branches affected. Burn, bury or chip wood.



F12. Galls on leafy trees

Leaves develop bumps. Ash, linden, hackberry, and silver maple among trees affected. Damage is mostly aesthetic. Pesticides not needed.



F13. Herbicide injury

Leaves become elongated, curled or cupped. Most woody plants survive. In the future, use herbicides only when needed. Spray when wind is minimal; use heavy droplets; avoid hot days.



F14. Winter injury

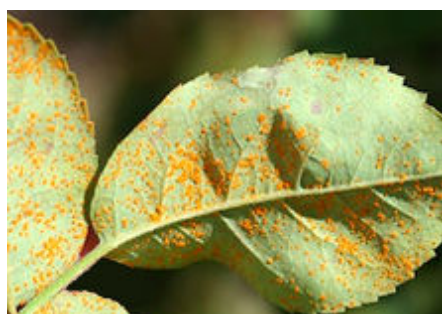
Use a knife or thumbnail to scratch the young bark. If you see green tissue (shown at right), there is life in the tree. Be patient and hope for the emergence of new buds.



F15. Yellowheaded spruce sawfly

Larvae defoliate spruce, beginning with young needles. Feeding occurs in large groups. Insecticidal soap kills young larvae. Carbaryl, acephate, or cyfluthrin recommended for large infestations.

ROSES



F16. Rust

Powdery orange spots on lower leaf surfaces; brown spots on upper. Remove infected foliage. Avoid overhead watering. Apply fungicides. Grow disease-resistant varieties.



F17. Black spot

Round dark spots with fringed margins. Surrounding tissues turn yellow. Remove infected foliage. Avoid overhead watering. Apply fungicides. Grow disease-resistant varieties.



F18. Pear slugs

Slimy larvae skeletonize leaves of rose, chokeberry, pear and cherry. Control with Sevin or insecticidal soap. No treatment needed on mature plants.

Survey of problems in North Dakota yards and gardens (continued)

FRUITS



F19. Shotholes in chokecherry

Bacterial or fungal lesions drop out of leaves, creating holes. Rake leaf litter. Avoid irrigating foliage. Inspect branches for cankers; remove if found.

VEGETABLES



F20. Herbicide injury

Pesticide drift or contaminated manure may cause extreme curling of foliage. Vegetables are contaminated. Avoid spraying herbicides in summer.

LAWNS



F21. Mushrooms in lawns

Organic matter (tree roots, stump, or construction lumber) in soil is decomposing. May emerge for years. Rake mushrooms; do not eat.

WEEDS



F22. Yellow sweetclover

Cut down or spray before seeds disperse. Use 2,4-D amine, dicamba or glyphosate. Biennial; blooms and sets seeds its second year, then dies. Seeds stay viable for 30 years.



F23. Thistle

Thorny perennial. Cut down to prevent seed dispersal; expect plants to resprout. Spot spray with dicamba or glyphosate. Fall applications best to move herbicide throughout its roots.



F24. Field bindweed

Aggressive, persistent perennial with spade-shaped leaves and white or pink blooms. Its deep roots make pulling difficult. Spray with glyphosate or dicamba. Fall applications best.

Credits

Sources:

Hahn, J. and S. Burkness. 2007. *Squash vine borer management in home gardens*. University of Minnesota: Twin Cities.

MacKenzie, J. J. Hahn, and M. Grabowski. 2011. *Pest management for the home apple orchard*. University of Minnesota: Twin Cities.

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