The Plant Doctor's LANDSCAPE TIPS

By Dr. David L. Roberts, *The Plant Doctor LLC a.k.a. The Tree Doctor*

MURDER BY DEATH: THE EMERALD ASH BORER IS KILLING US!

INTRODUCTION

Ever since the discovery of the Emerald Ash Borer (EAB=Agrilus planipennis) by the author in 2002, the invasive insect has marched across the United States from its entry point into North America in Southeast Michigan, east and west, north and south. In the relatively short period of time (2002-2019) of 17 years, the insect has traversed west to Colorado and the Dakotas and east to New England and the East Coast. Imagine that this state's and the federal government's initial strategy for containment and eradication presumed the insect could only fly approximately one-half mile per year!

Billions of ash trees have been killed by the EAB (Photo 1). Billions of dollars in property value have been lost due to tree losses and due to damage done from falling trees. What is not often considered is the threat of the EAB to humans. Dead ash trees are falling at an alarming rate. In Michigan alone, millions of dead ash trees are still standing, and their structural failure is just a matter of time. Will these trees fall on you? On me?

ACCIDENTS AND DEATHS

Ash trees are falling daily. Accidents from falling ash trees are occurring almost daily.

Photo 1: Billions of ash trees have been killed by the Emerald Ash Borer. Ash trees tend to fail structurally (fall) within a few years after they die. This photo shows dozens of dead ash trees in Bloomfield Hills landscape around 2004-2005. Such trees pose a risk to people and property.

People are being injured or killed almost daily (Photos 2 & 3). While the number of deaths from ash trees is relatively low, the potential for human injury and death grows daily as millions of more trees succumb to the EAB. Even though many of the dead ash trees in isolated locations show little threat to humans, except for those who like to hunt and fish or those who spend time in woodlands, dead trees nevertheless pose

Photo 2: In March 2016 in Livingston County, this tree fell on Gary Cox's Ford Explorer killing him. (Photo from Ron Goodger's website *https://sites.google.com/site/deadashtreeskillingpeople/* and *https://www.freep.com/story/news/local/michigan/2016/03/16/gary-cox-driver-killed-tree/81884676/*)

Photo 3: The driver of this car was injured when an ash tree fell on a road in Kentucky and impaled the windshield. (Photo from Ron Goodger's website *https://sites.google.com/site/deadashtreeskillingpeople/* and *https://www.wpsdlocal6.com/2018/06/27/driver-recovering-from-broken-arm-after-tree-impaled-windshield/*

Photo 4: This rather large ash tree died several years ago along Route 115, a heavily traveled state highway leading to Cadillac, Michigan and ultimately via M37 to Traverse City, a destination for many tourists. Because this tree inhabits the west side of the road, it is simply a matter of time before this tree falls with prevailing winds eastward across the road, possibly onto travelers.

a serious threat to wildlife, other trees and the environment. For example, dead ash trees that fail structurally and injure oak trees can predispose them to Oak Wilt at certain times of the year. However, many ash trees in landscapes and woodlots along public roads represent a significant threat to humans (Photo 4).

THE "BIOLOGY" OF DEAD TREES

There's an old arborist saying, "There are two kinds of trees – those that have fallen and those that will fall." In other words, all trees will fall due to the gravitational pull of Planet Earth unless they are physically removed by humans. Dead trees begin to decompose the minute they die. Some trees are compromised by various diseases and pests before they die; such trees may fail while appearing very healthy (Photo 5). Compared to other species of

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trees, dead ash trees tend to pose greater risk and fall much sooner after death than other species (Photo 3 & Photo 6). Dead oaks and elms are more likely to stand for many years after their death (Photos 7 & 8), giving people more time to consider their removal before catastrophic failure. Another observation is that ash trees rarely "uproot" after they die; they tend to break off above the soil line.

Photo 5: This large oak tree toppled during a windstorm near Ann Arbor, Michigan. The tree was full-foliaged and exhibited no outward signs of issues. Hidden in the lower regions of the trunk and root collar area was a developing fungal decay. Luckily the tree fell along a road rather than on it.

Photo 6: Luckily, no one was injured when this tree fell on this SUV, caving in its roof. Perhaps the irony of this situation is that an invasive agent from Asia killed this American native tree, which then fell on this SUV imported from Asia.

RON GOODGER'S MISSION

Some people become intimately involved with falling ash trees. Debbie, Ron Goodger's wife, was returning home from St. Joseph one day after her grandson had partaken in a robotics competition. When

Photo 7: I've watched this oak tree decline for several years, likely due to the Two-Lined Chestnut Borer and possibly Armillaria Root Rot. Although the tree is not likely to fall soon, the brittle branches will probably break off in chunks, threatening passersby.

Photo 8: This large American elm died of Dutch Elm Disease several years ago. As it continues to lose bark, the underlaying cork cambium will bleach white by the sun and eventually create a natural "artistic ghost." It is not likely to fall anytime soon but may begin dropping brittle branches just as the oak in Photo 7 will.

she topped the crest of a hill, a fallen ash tree suddenly appeared blocking the road. It was impossible for her to stop in time, so her Caravan struck the tree, breaking the tree trunk in half. In striking the tree, the vehicle's steering linkage broke and she lost control of the minivan (Photo 9). Luckily, as the car veered off the road, there were no other trees blocking the van's trajectory. Even though the minivan was considered totaled by the insurance company, it was the Goodgers' good fortune that no one was injured that day. A close call for sure!

Photo 9: Ron and Debbie Goodger's Caravan was destroyed when she struck a tree laying in the road on the opposite crest of the hill. The collision was unavoidable and broke the dead ash tree in half. Her steering linkage broke on impact and the van careened off the road. Luckily, no other trees blocked the path of the out-of-control vehicle and no one was seriously injured.

Ron questioned why this ash tree had fallen on a public thoroughfare. In his investigations, he found that there were many dead ash trees along Michigan's roadways. With further inquiries, Ron started searching for accidents and victims caused by falling trees, especially failed ash trees. His analysis was rather alarming, which he has summarized in Figure 1. Ron began using Google Earth and discovered he could readily determine dead trees along roadways and

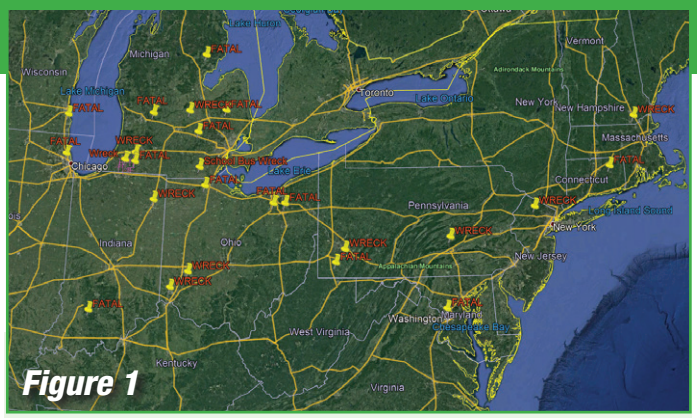

Figure 1: Ron Goodger has catalogued accidents and deaths from falling ash trees on this map borrowed from his website, *https://sites.google.com/site/deadashtreeskillingpeople/.*

Photo 10: In using satellite capabilities such as Google Earth, Ron Goodger could spot dead trees anywhere, but especially along roadways where people are most likely to be threatened. In some cases, his efforts to warn local communities, for example roadways leading to schools, has undoubtedly saved lives. Photo from Ron Goodger's website, *https://sites.google.com/site/deadashtreeskillingpeople/.*

particularly in high risk areas (Photo 10). In some cases, for example on roads leading to schools, he has been able to provide sufficient influence and warning to have some road sections cleared of dead trees that pose a threat to vulnerable people such as children on their way to school.

Ron, a retired electrical engineer, has made it his mission to raise awareness about dead trees along "target" areas (such as roadways) to try to prevent accidents and deaths from falling trees. Because of the Emerald Ash Borer and the unusually high number of dead ash trees, ash trees pose the most likely risk to all of us. Please feel free to visit Ron's Website to learn more, *https://sites.google.com/site/deadashtreeskillingpeople/wrecks.* Ron would also be very grateful for any experiences any of you may have to add to his website. Photos would also be greatly appreciated. Ron's Goodger's email is lrgoodger@gmail.com.

MY CLOSE ENCOUNTERS OF THE ASH KIND

Episode 1: One day in 2009, I was traveling down a gravel, back-country road to a friend's home when I noted an ash tree just

Photo 11: This ash tree begin falling during windy conditions just as I was traveling past it on this gravel road to a friend's house. Luckily, in "gunning" my Jeep, I had just dodged a potential catastrophe.

Photo 12: This ash tree fell on Holt Road just 15 minutes before I travelled through the area on my first motorcycle ride of the 2019 season. Passersby helped the patrolman pull the ash to the side of the road. If I had ridden through the area 15 minutes earlier, I might have been struck by the falling tree, possibly preventing me from writing any future articles such as this one.

beginning to fall due to high winds. I gunned my Jeep Cherokee and made it past the falling tree just in the nick of time (Photo 11). Although the tree was fairly small, it could have penetrated my windshield, caused damage to my vehicle or caused me to lose control of my Jeep, possibly hitting other trees just off the road in my endeavor to avoid a crash.

Episode 2: One day early last spring (2019), a lovely day and my first motorcycle ride of the season, I was riding towards the small town of Holt, Michigan. I happened upon a scene in which an ash tree had fallen on the road 15 minutes previously. A police patrol SUV was blocking my lane and a group of concerned citizens had just helped the patrolman drag a small-medium sized ash tree off the road (Photo 12). Luckily, no one was injured despite this being a heavily traveled road. My first thought was that I had missed a potentially serious if not fatal accident by minutes. If the ash tree had fallen directly in my path or on me, I might not be here today to write this article. While people in automobiles are being killed by falling ash trees, at least automobiles provide

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some measure of protection. Those of us who ride motorcycles or bicycles or those who jog or are pedestrians, including those who walk their dogs, are especially at risk.

WHO IS RESPONSIBLE?

Many of the (ash) trees that pose a threat to high target areas, such as roadways, exist in the right-of-way of the township, county, state, or federal government (for interstate highways). The responsibility of these dead trees varies from state to state, from county to county and from township to township. From what I can determine, government entities (whether state, county or township, etc.) may decide to remove trees in their right-of-way if they pose a risk. The government entity may also ask a property owner if the government entity can remove a tree that they deem a risk to their right-of-way, even if the tree resides outside of governmental entity's right-of-way. However, in Michigan as well as many other states, it is the property owner's responsibility to remove tree risks even if the tree resides on a government right-of-way. That is why so many dead (ash) trees inhabit government right-of ways. When accidents do happen, government entities often claim "government immunity", placing the responsibility on the private citizen (Photos 13 & 14).

Photo 13: This tree was pruned by the county road commission about 12 years before the top half separated from the lower trunk (arrow), falling onto an automobile (Photo 14) during a violent thunderstorm. The bad wound created by the pruning did not heal properly resulting in decay and carpenter ant activity, weakening that area of the tree.

Photo 14: The top portion of the tree (from Photo 13) that separated from the main trunk fell on this car and killed the young driver who was married and a recent father. His baby in the back seat survived. The county who performed the pruning claimed "government immunity" placing the liability for the death of the young man on the property owners.

Photo 15: A relative of a young, pregnant woman snapped this photo of a dead birch tree that had fallen on the young woman as she was walking on this public sidewalk in a city. The young woman was knocked unconscious; gratefully, she and her baby survived. Apparently, many property owners do not even recognize the risk of dead trees on their property. Is it our responsibility to educate them?

OUR INDUSTRY AND OUR RESPONSIBILITIES

Our industry engages in tree, landscape and lawn care. When we perform our services, it is vitally important that we warn our clients and the public about the risks of dead trees or hazardous trees. When we see dead or hazardous trees, we should inform people of their responsibility. Because the public considers us the "experts," it is important that we perform our due diligence by warning people about the potential for harm to humans and properties by hazardous trees. We should keep notes of our efforts and preferably educate the public and/or our clients in-writing. One never knows when someone might try to hold us accountable for an accident after we have been on a property. In our efforts to try to help educate people, it is highly probable that many of us will be blamed for trying to "hustle" the public for more work, but it is better to protect ourselves and the public through our efforts than to not do anything. Many property owners seem not to understand the risk that even dead trees pose to others . . . or themselves (Photo 15).

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