

Painting Our Way Out of a Corner

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Each time I present on invasive pests, it begins with a slide of Chicken Little, a character who fomented mass hysteria by convincing other animals the sky was falling. It's usually good for a chuckle. Inevitably I then proceed to unload a barrage of bar graphs, pie charts, alarming statistics, and photos of mayhem wrought by the featured pest. A final slide shows the position of the sky, with arrows in the direction of gravitational pull at 9.8 m/s/s, proof that the sky is indeed falling. For some reason, fewer people laugh at the end. Go figure.

Threats to forest health posed by invasive species are no joke. Yet I think we educators often come across like Chicken Little, squawking about yet another threat to trees. It would be hard to blame the average person for asking themselves, gosh – how many times can the sky fall, anyway?

The term “compassion fatigue” describes the way we have become inured to accounts of war and famine because such reports come at us so fast and frequently. A 2018 Pew Research Center survey found 68% of Americans mentally tune out a lot of the news, and in 2019 the Nieman Journalism Lab documented a small but fast-growing segment of the population who avoid all news. This trend has implications for forest health.

While invasive species are distressing, what concerns me more is the risk of feeling so overwhelmed that we throw up our hands and tune out further information. The danger of thinking that we can't make a difference, and therefore should not bother, could result in as much harm to our forests as the pests themselves.

There's a pithy fable about a child who rescues starfish from the beach after storms, returning them to the ocean. When told not all starfish can be saved, the kid hurls another into the surf and quips “that one can.” Right now we have the chance to do much better, to help save oak species by adopting an affordable, largely time-neutral, and deceptively simple practice when pruning or cutting oaks.

First a pitch for keeping our noggins out of the sand. Roughly 40% of new invasive-species infestations are discovered by informed citizens – people who know about the issues, but are not paid to look for them. In 2011, a high-school girl on a science field trip found hydrilla, the most aggressive aquatic invasive plant in North America, in Cayuga Lake inlet, the first finding of this species in NYS. Did she save the world? Well, no. Who wants that anyway – your life would be a media-attention nightmare. But had it taken another year or two to detect hydrilla, the situation would be far worse.

If we care about trees, we owe it to ourselves to keep up-to-date on forest pests and diseases. But it's essential to spread the word, too.

Oak wilt, a virulent pathogen first identified in 1944 in Wisconsin, is of unknown origin, but certainly behaves like an invasive. It spreads by root grafts and spore transfer. Underground tree-to-tree spread, while an important consideration near known outbreaks, is in the larger picture much less important than airborne transmission. This latter route is where we come in.

Oak wilt kills healthy red, black, pin, and other red-type oaks in two to six weeks. White-type oaks take a year or two to die. After a red-type oak succumbs, the pathogen makes mycelial spore pads under the bark, causing small bark splits. A spore-laden flux, reported to smell like Juicy Fruit gum, is secreted, which attracts insects, the most significant of which are sap beetles in the family Nitidulidae.

Nitidulid beetles feed on sugars from the sapwood of newly cut oak stumps, pruning, and other wounds. Normally, not a problem. Unless the beetles have recently wallowed in spores at an oak-wilt spore pad. Though spore pads develop only on red-type oaks, all oaks can be infected by a spore-covered beetle.

So here's the big news: Paint is your friend.

From April 1 - July 1, the risk of spreading oak wilt is extreme, and from July - September it's moderate. Any exposed fresh wound on an oak, whether stump or a pruning wound, puts them at risk. Do not cut oaks, or allow them to be wounded, from March through September. OK, now stop laughing.

We all know this is not practical. The work-around is to spray-paint each wound or stump immediately after cutting. And it can be any exterior paint; whatever you have. I emphasize immediately because nitidulid beetles can find fresh oak sap in under an hour. On pruning wounds, paint the whole thing (Having spent years trying to convince people not to paint wounds, this is SO hard for me as an arborist). With stumps, only the sapwood needs to be covered.

It would be fair to ask why a stump should be painted. It's because depending on how many root grafts are connected with that stump, spores deposited on a cut stump could infect a number of nearby trees through grafts.

The painting of oak stumps and pruning wounds between March 1 and September 30 must become standard practice in the forestry, utility-clearing, and tree-care industries, effective this coming spring. Demand it in logging harvest contracts, and from any arborist you hire. Everyone plays – no exceptions!

Oak wilt is not hundreds of miles away. It is as close as the first idiot who brings firewood home from visiting his buddy whose dead tree he helped cut up. No matter how insulated you feel you are from oak wilt, please adopt this practice.

In so many invasive-species cases, there really is nothing we can do, yet here is our chance to hold a very important line. Implementing these guidelines can vastly reduce the risk of seeing oaks go the way of the American chestnut. Let's do our part to prove Chicken Little wrong.

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