

THE PURDUE LANDSCAPE REPORT

In This Issue

- [Fall Brings Football & A Lawn Policy Shift](#)
- [Dead Man's Fingers](#)
- [Tune up Your Spider Mite Management This Fall](#)

Fall Brings Football & A Lawn Policy Shift

(Lee Miller, turfpath@purdue.edu)

Later this week, fall finally brings the respite of cooler temperatures and a much-needed drink of rainfall. While the cool-season species such as tall fescue and Kentucky bluegrass that dominate most of the Indiana lawnscape revel in this well deserved breather from disease pressure and high temperature stress, the metabolism of warm season plant species slow with the mercury drop. Fortunately, this means our warm season annual weeds such as foxtails and crabgrass see their reign end when the frosts begin. A minority of lawns in southern IN with warm season perennial turfgrasses such as zoysiagrass or bermudagrass persist through winter by entering a sort of hibernation termed winter dormancy. When these warm season perennial turfgrasses slow growth due to cooler temperatures and enter dormancy, they become more susceptible to large patch and spring dead spot. When present as weeds in a cool-season lawn, these two warm season grasses also stick out like a sore thumb as tan patches in a sea of green.



Most in Indiana are maintaining a cool season lawn, and therefore now is the time to focus on aggressive fertilization for recovery, aerification, and herbicide control of broadleaf weeds. This represents a distinct policy shift from June and July when the lawn is in a “prevent defense”, just trying to keep the score even and stay in the game. Now, however, we want to add the inputs to allow the lawn to excel and win while warm season weeds are declining, broadleaf weeds are going into storage mode, and the most severe lawn diseases are no longer of concern. So before or after the football game this weekend, consider bolstering your lawn so it arrives into next spring season as a strong contender. Below are some general fall maintenance guidelines and guidesheets that contain more information.

What about the tree leaves? Unless excessive, moderate amounts of tree leaves can be simply mowed and mulched into the turfgrass canopy with no detriment. Leaves left on the surface that stack and smother the turfgrass will result in thinning and loss though. In some cases, leaves can fall and be left even after putting the mower away, and in this case they still need to be removed as soon as possible during weather opportunities in winter and early spring. A previous Turf Tip covering this topic can be found here –

<https://turf.purdue.edu/what-to-do-with-all-those-falling-leaves/>.

Fertility: Load most of the fertilizer into these fall months. A full pound of nitrogen applied twice in the fall (approximately September and October) will enable sustained recovery and spread. Cooler temperatures will still restrict growth though and the fertilizer application won't result in a huge flush of leaf growth that needs extensive mowing. Dr. Cale Bigelow co-authored this publication which expands on this aspect and provides other hints for lawn maintenance –

<https://www.extension.purdue.edu/extmedia/AY/AY-32-W.pdf>.

Mowing & Aerification: Keep mowing heights at the regular three + inches or as high as the mower deck will go. Mow until the turfgrass stops growing, or as indicated above, perhaps when the leaves stop falling and accumulating.

Aerification is an intensive process that should be conducted on older lawns that have compacted soils or on Kentucky bluegrass or zoysiagrass lawns with extensive thatch accumulation. For more information on these practices, see

<https://www.extension.purdue.edu/extmedia/AY/AY-8-W.pdf>.

Weed Control: Problematic broadleaf weeds are going into storage mode, sending carbohydrate reserves down into the plant to enable winter survival. Fall is the best time to apply a general-purpose broadleaf herbicide because it will travel down that same road to reach more of the plant. Dr. Aaron Patton, our turfgrass weed specialist co-authored this publication that gives more complete information –

<https://www.extension.purdue.edu/extmedia/AY/AY-9-W.pdf>.

Dead Man's Fingers

(Janna Beckerman, jbeckerm@purdue.edu)



Figure 1. Dead man's fingers is an apt moniker to describe the fruiting body of *Xylaria* species.

Photo by Janna Beckerman.

Dead man's fingers is an apt moniker for a gruesome-looking fungus (*Xylaria polymorpha* and related species) that produces club-shaped fungal fruiting bodies that appear as fingers growing around the base of dying or dead woody plants and even wooden objects in soil (Fig. 1). With more than 25 species of *Xylaria*, generalizations are difficult to make (Fig. 2), but we will persevere anyways, recognizing that some *Xylaria* species are limited to a saprophytic

existence decomposing wood (like *X. polymorpha*) while others, like *X. mali*, cause an opportunistic black root rot on apple and crabapple (Rogers, 1984; Rogers and Callen, 1986) or nothing at all (Fig. 2). Other *Xylaria* species infect Norway maple, honey-locust, elm and pears (flowering and edible). Perhaps the scariest thing about dead man's fingers is its taxonomy: *X. polymorpha* is an extremely variable and complicated species showing "multiple interfaces and intergradations with numerous other taxa" making speciation a challenge (Lee et al, 2000), which may explain why a crabapple with a bad graft union covered in dead man's fingers looks otherwise healthy!



Figure 2. Unknown *Xylaria* grown on fallen log.
Photo by Janna Beckerman.

Symptoms and Signs

Symptoms of infection by *Xylaria* may appear as stress and decline, including slowed growth, dieback, premature autumn coloration and leaf drop, and even crown or structural root cankers. Apple, crabapple or pear trees infected may produce an unusually large crop of undersized fruit.



Figure 3a. Dead man's fingers can be found associated with otherwise healthy, asymptomatic trees, or simply growing on dead wood—not necessarily causing disease.



3b. Close-up of the rootstock with multiple croppings of *Xylaria* on the crown. Photo by Janna Beckerman.

Signs of *Xylaria* are more readily identified—namely, the dead man's fingers (Fig. 4)! The club shaped, fingerlike fruiting bodies appear singularly or as clustered "fingers" about 1- 4 inches high, often at the base of infected or dying trees, or nearby large structural roots (Fig 4). In the spring, ascospores are produced by the "fingers", creating a bluish bloom on the tips of the fingers. Cutting into a finger reveals a white interior with black bubbles that produce the sexual spores (ascospores). The "fingers" can release these spores for several months or years. In the spring, *Xylaria* can produce asexual spores (called conidia) anywhere on its surface,

while also producing threadlike structures (called hyphae) that grow through dead or dying wood. *Xylaria* can survive as hyphae in roots for up to 10 years and can spread from plant to plant via hyphae when plant roots contact each other.



Figure 4. Dead man's fingers may look more like dead man's toes, but in general are 1-4" in height and can also grow in mulch, as seen here. Photo by Janna Beckerman.

Pathogenic *Xylaria* species form a sheath around roots forms a black sheath or zone lines (also called spalting by wood workers). Keep in mind that many wood decay fungi produce these zone lines so their presence isn't diagnostic. Finally, some species of dead man's fingers are saprophytic, their growth may even appear on mulch, and may not be an indication of disease.

Management

The appearance of dead man's fingers around or near the base of an apple, crabapple, pear or other susceptible host, the fungus may be indicative of a root rot problem. Unfortunately, by the time 'fingers' appear, the damage has been done to that area (roots, crown) of the tree. There are no fungicides labeled for control of this disease and removing the 'fingers' reduces

overland spread of spores—it doesn't reduce the hyphae that are growing into the root system and continue to decompose it.

When trees are being removed, be sure to have the stump and large structural roots removed and/or ground down. Do not use infected wood for mulch to minimize the risk of spreading the fungus. When replanting, be sure to avoid planting other susceptible species in the same vicinity.

Literature Cited

Jin Sung Lee, Kwan Soo Ko, Hack Sung Jung, Phylogenetic analysis of *Xylaria* based on nuclear ribosomal ITS1-5.8S-ITS2 sequences, *FEMS Microbiology Letters*, Volume 187, Issue 1, June 2000, Pages 89-93, <https://doi.org/10.1111/j.1574-6968.2000.tb09142.x>

Rogers, Jack D. "Xylaria acuta, Xylaria cornu-damae, and Xylaria mali in continental United States." *Mycologia* 76.1 (1984): 23-33.

Rogers, J. D., & Callan, B. E. (1986). *Xylaria polymorpha* and its allies in continental United States. *Mycologia*, 78(3), 391-400.

Tune up Your Spider Mite Management This Fall

(Cliff Sadof, csadof@purdue.edu)

Mites are eight-legged arthropods who pierce plant cells to feed on them. Plants that are attacked by mites lose their green color and appear somewhat bronzed. Spider mites will make webs to help them forage on leaves unencumbered by irregular leaf surfaces. The

accumulation of webs, and old skins of mites can give heavily infested plants a dusty appearance. This can make plants unsightly and affect their health.

Lack of rain this summer and fall has spared spider mites from drowning and being washed off leaves during heavy rains. Warm weather in late August and September allowed warm season mites, like two spotted spider mite, European red mite on flowering fruit trees, honeylocust, maple and oak spider mites to flourish. With the daily highs consistently below 85 F, cool season mites like spruce spider mite, boxwood spider mite and southern red mite have been increasing in number.

Now would be a good time to take stock of which plants have spider mites to help you plan your control strategy.



Figure 1. Plants infested with mites appear to be bronzed from tiny stipples.



Figure 2. This serviceberry leaf has live European red mites, eggs and old shed skins that accumulate on the leaf.



Figure 3. Tap the branches over a white sheet of paper. After giving the mites 10 seconds to grab hold of the paper, turn the sheet sideways to let the debris fall off. Then examine the specs to determine if they are spider mites. A 10X hand lens or smartphone can help you see these small pests.

Cool season mites, including southern red mite, boxwood spider mite and spruce spider mite may require treatment this fall to keep their populations from building. **This could be accomplished with a garden hose and a strong stream of water** or a 2% solution of horticultural oil or insecticidal soap.

At this point in the season, there is usually no need to spray trees for warm season spider

mites. Because most spider mites will winter on trees and shrubs, these mite infested trees can be targeted for a spray of oil during the dormant season. It is important to note that plants with two spotted spider mites will not benefit from an oil spray because they winter in the ground cover. Also, be sure not to spray oil on shrubs with waxy blue leaves. This wax often protects plant leaves from strong winds and sun in the winter.

More Management tips

Be sure to watch our new 5 minute video for quick tips on how to recognize, scout for and treat spider mites in [English](#) or in [Spanish](#). For more details on managing spider mites please visit PurduePlantDoctor.Com.

For more information on specifics see our bulletin on [managing spider mites in the urban landscape](#).

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