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THE PURDUE LANDSCAPE REPORT

In This Issue

Untangling the Vines: Identifying Bindweed, Morning Glory, and Honeyvine Milkweed

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Untangling the Vines: Identifying Bindweed, Morning Glory, and Honeyvine Milkweed

Few garden problems cause as much frustration as untangling vines. Sometimes the vines are beautiful climbers planted with intention. Other times, they creep in uninvited and smother everything in their path. Among the most common, and the most confusing, vines in Indiana are bindweed, morning glory, and honeyvine milkweed. To the untrained eye, they look similar: all are fast-growing vines with heart-shaped leaves. However, there are noticeable differences in their physiological traits (Fig. 1) and ecological value. Recognizing the distinctions can improve management and help strike a balance between aesthetics, control, and ecological benefits.

	Bindweed	Morning Glory	Honeyvine Milkweed
Life cycle:	Perennial	Annual	Perennial
Leaf Arrangement:	Alternate	Alternate	Opposite
Leaf Shape:	Arrowhead; outward pointing lobes	Large heart-shaped	Slender heart-shaped
Flowers:	Funnel (white/pink)	Funnel (color varies)	Small Clusters (greenish white)
Growth Habit:	~All climbing, creeping, twining vines~		

Figure 1. Chart comparing plant traits of bindweed, morning glory, and honeyvine milkweed. Credit: K. Mitchell

Bindweed

(Hedge bindweed: *Calystegia sepium*; Field bindweed: *Convolvulus arvensis*)

Bindweed is an aggressive vine with alternate, arrowhead-shaped leaves (Fig. 2) and small white or pink funnel-shaped flowers (Fig. 3). This perennial spreads readily from rhizomes (underground stems), forming vegetative colonies that become increasingly difficult to control. Hedge bindweed and field bindweed differ slightly in appearance, but both are aggressive invaders; in fact, field bindweed is listed as a prohibited noxious weed in Indiana. Cultural control methods, such as cultivation or light exclusion, can take 3 to 5 years to achieve eradication. The best results often come from combining these approaches with carefully timed herbicide applications.

Figure 2. Bindweed leaves are arrowhead-shaped with the basal lobes pointing outwards. With an alternate leaf arrangement, each node has only one leaf. Credit: K. Mitchell

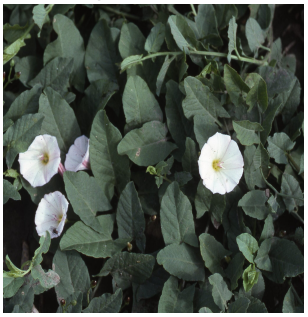

Figure 3. Bindweed has white or pink funnel-shaped flowers. Field bindweed flowers (shown here) are typically less than an inch. Hedge bindweed has slightly larger flowers that can be 1 to 3 inches. Credit: Purdue Weed Science

Purdue Weed Science

Morning Glory

(*Ipomoea spp.*)

Morning glories are a familiar vine often planted intentionally for their large, colorful flowers. Unlike bindweed, morning glory is an annual and dies off in winter. However, its abundant seed production allows it to return year after year. A single vigorous vine can produce hundreds of colorful, funnel-shaped flowers (Fig. 4) resulting in over a thousand seeds which may remain viable in the soil for decades. Morning glory will become weedy if left unmanaged. Thoughtful containment and regular deadheading can help to keep it under control.

Figure 4. Morning glory produces colorful, funnel-shaped flowers that can be 2 to 4 inches. Credit: K. Mitchell

Two types are most often seen (Fig. 5):

- **Common morning glory (*Ipomoea purpurea*)** has large, heart-shaped leaves and showy, funnel-shaped flowers in a wide variety of colors.
- **Ivy-leaf morning glory (*Ipomoea hederacea*)** has leaves with three distinct lobes that resemble ivy, and its smaller flowers are typically light blue or purple with white.

Figure 5. Ivyleaf morning glory (left) has leaves with three deeply divided lobes. Common morning glory (right) is typically grown as an ornamental and has large, heart-shaped leaves. Both have an alternate leaf arrangement. Credit: K. Mitchell

Honeyvine Milkweed

(*Cynanchum laeve*)

Honeyvine milkweed has slender heart-shaped leaves like bindweed, but unlike bindweed, this native vine provides ecological value as a food source for monarch caterpillars. It's easily distinguished from morning glory and bindweed by its opposite leaf arrangement (Fig. 6), small clusters of greenish-white flowers (Fig. 7), and long seed pods, typical of the milkweed family, that release hundreds of windblown seeds. While beneficial to pollinators, honeyvine can overwhelm a home landscape and should be contained to naturalized areas or pollinator gardens.

Figure 6. Honeyvine milkweed has slender, heart-shaped leaves in an opposite arrangement (two leaves per node). Credit: K. Mitchell

Figure 7. Honeyvine milkweed has clusters of small, greenish-white starlike flowers. Credit: K.Mitchell

Correct identification is the first step toward effective management. Though bindweed, morning glory, and honeyvine milkweed are all fast-growing vines, they have key differences in their physiological traits and ecological value. Proper identification determines whether you are eradicating noxious weeds, containing ornamentals, or conserving natives where appropriate.

Quick Tips for Identification

1. Leaf arrangement:
    - Alternating leaves (only one leaf per node) – bindweed or morning glory
    - Opposite leaves (two leaves per node) – honeyvine milkweed
2. Flowers:
    - White or pink funnel-shaped (~1 to 3 in) – bindweed
    - Colorful funnel-shaped (2 to 4 in) – morning glory
    - Small, greenish white clusters – honeyvine milkweed
2. Seed pods:
    - Tiny capsules – bindweed or morning glory
    - Long pods with silky seeds – honeyvine milkweed

Resources

Purdue University, Dept of Botany & Plant Pathology. *Noxious and Invasive Weeds and the Weed Laws in Indiana*. Purdue Extension, March 2021.

https://ag.purdue.edu/btny/purdueweedscience/wp-content/uploads/2021/03/indiana_noxious_and_invasive_weeds_and_weed_laws.pdf

University of California – Statewide IPM Program). *Field Bindweed*. University of California ANR, Oct. 2011.

https://ipm.ucanr.edu/home-and-landscape/field-bindweed

Purdue University, Dept of Horticulture & Landscape Architecture. *Honeyvine Milkweed*. Purdue Facts for Fancy Fruits, Aug. 2023.

https://fff.hort.purdue.edu/article/honeyvine-milkweed/

Marssonina leaf spot and blotch of Poplar

(John Bonkowski, jbonkows@purdue.edu)

Aspen, cottonwood, and poplar are all names for the fast-growing *Populus* tree species. Used widely for building materials, these trees are often located around ponds, riverbanks, and sloping areas toward water bodies (especially cottonwood). Cottonwood flowers produce little white tufted seeds that float through the air which a lot of people love (my kids included), unless it lands in their mouth. These beautiful trees are susceptible to a fungus that can cause significant damage under the right conditions: *Marssonina* (newer name is *Drepanopeziza*).

There are three species of *Marssonina* that can infect *Populus* – different tree species may only be susceptible to one of the *Marssonina* species. The fungi cause the same kind of disease and develop similarly on the host. *Marssonina* can infect the leaves, stems and seeds of *Populus*, which can lead to large amounts of leaf loss during wet weather, girdled stems and dieback, and aborted seeds. Since seeds can carry the fungus, the seed will take it with it to where it lands and can become infected immediately after germinating. It is common to see high disease severity in the canopy, but unless there is significant leaf loss (up to 70% defoliation) it may not reduce plant vigor. Leaf lesions typically develop as small black to brown dots or flecks which expand in size as time goes one. As the disease progresses, large areas of the leaf will become necrotic, creating odd dead blotches, potentially killing the majority of the leaf blade.

The fungus produces asexual spores in a small black pustule on the upper surface of the leaf which will eventually burst and release the spores during humid weather early in the spring. *Marssonina* will continue to produce spores and cause disease the whole season, creating repeat infections on the same tree. Symptoms tend to start lower in the canopy and ascend up the tree as the season progresses. The spores are spread by water splash, so rainfall will help spread this fungus in the landscape.

For trees planted in native landscapes, this disease will likely be inevitable and may make the foliage look less than stellar. That being said, removing leaves that drop or at the end of fall will reduce total inoculum for future seasons and can reduce total disease long-term. Similarly, trees that are stressed will typically develop increased disease severity, so if you are seeing large amounts of leaf spots or leaf loss, I would recommend employing stress mitigation strategies to keep the tree happy and healthy (fertilizer, mulch, irrigation as needed, etc.). If a tree appears to develop significant disease every year and has reduced limb growth, you may consider removing the tree if you are concerned it may die early and replace with a resistant clone, as disease susceptibility can vary greatly between clones of the same species.

Fig 1: Populus sp. with significant leaf loss due to Marssonina leaf spot. Photo credit: PPDL

Fig 2: Aspen wit thinning tree canopy due to Marssonina infection.

Fig 3: Necrotic flecks and dots associated with early infection by Marssonina. Photo credit: PPDL

Fig 4: Leaf necrosis and twig dieback caused by Marssonina.

Fig 5: Severely leaf necrosis of an aspen tree caused by repeat infections by Marssonina. Photo credit: PPDL

A false sense of autumn

(Beth Hall, hall556@purdue.edu)

The last week has caused many to struggle with whether to turn the heat on inside. Mornings have been quite chilly, and I am guessing several readers may have also struggled with the decision to wear a jacket as they started their workday. These are tough decisions, no doubt. Several data sources have suggested we have had at least 2 weeks of consecutive below-average daily mean temperatures. While not a record, this is certainly noticeable! Perhaps we are hoping those tomato plants will produce just a few more tomatoes. Is it mum season, already? The good news – for those not quite ready to say goodbye to warm days, not needing coats, and garden delights – is warm temperatures are expected to return. Daily high temperatures are already in the 80s and Indiana is likely to see temperatures in the mid-90s by next week. There is significant confidence that this warmer-than-normal temperature trend is likely to continue through most of September. Average high temperatures typically range from 75°F – 85°F in mid-September and 70°F – 75°F in late September, so keep in mind climate outlooks are all relative. Indiana is not likely to experience triple-digit heat waves over the next few weeks, but nighttime low temperatures are likely to fight for temperatures warranting a sweater or jacket.

There's been a noticeable lack of precipitation with Indiana receiving well below-normal precipitation throughout the state over the past 30 days except for the northwestern counties. This has led to expansion of both *Abnormally Dry (D0)* and *Moderate Drought (D1)* areas across the state (Figure 1). Unfortunately, both forecasts and climate outlooks suggest this below-normal precipitation pattern is likely to continue for a while. Over the next 7 days, very little precipitation is expected across much of Indiana (Figure 2). This below-normal precipitation pattern is likely to continue through most of next week. After that, climate outlooks are favoring near-normal precipitation through September 24th.

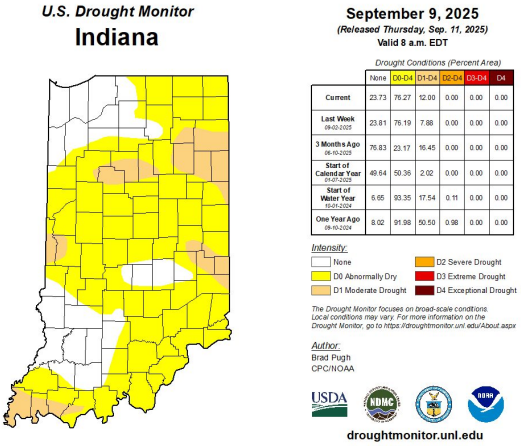

Figure 1. U.S. Drought Monitor status for conditions as of Tuesday, September 9, 2025.

Figure 2. Total precipitation amounts forecasted for September 11-18, 2025.

Regarding first frost or even hard frost, we are still too early in the calendar year to worry about this being an extensive risk. Very localized, low-lying areas may be susceptible, but the climatological average date of the first hard freeze (28°F) is often not until mid-to-late October (Figure 3). With temperatures expected to warm again, widespread hard frost is not anticipated prior to October.

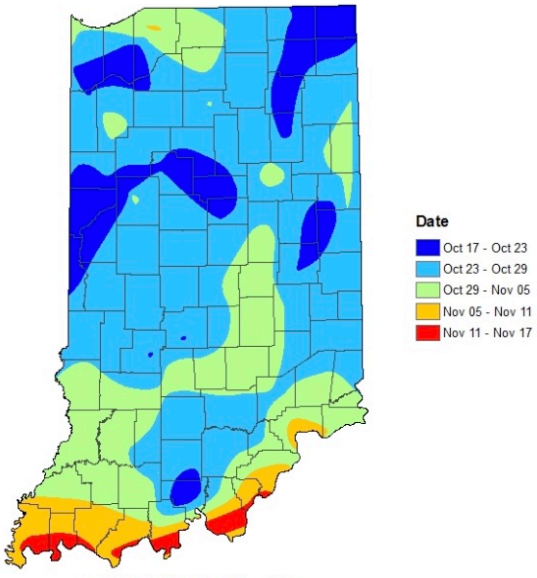

Figure 3. Average date of the first fall frost where temperature first reach or drop below 28°F.