

The Most Identifiable Time(s) of the Year

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March and April bring with them many things: the first tantalizing 60-degree afternoons; the inevitable spillover of every stream, pond, and river into our increasingly muddy pathways, driveways, and yards; and, happily, the first springtime hints of green.

Daffodil leaves shoot upward. Crocus petals unfurl. Snowdrops burst into bloom.

I am always ecstatic to find these first hints of the warming season, the harbingers of flower-filled gardens, easier outdoor access, and all things green, green, green. That ecstasy is, however, tinged with a bit of guilt when I remember what exactly I'm looking at: daffodils from Asia; crocuses from the Middle East; snowdrops from Europe. In short, plants that originated very far from

Connecticut – and, as such, plants that have very little to offer our native ecosystem's birds, bugs, and overall biodiversity.

Luckily, early blooming garden flowers like these aren't particularly harmful to our local ecosystems. I'd personally argue that having some of these innocuous non-natives is actually quite beneficial, if only for the joy they bring to the early spring months that are, overwhelming, very brown.

It is another, more pervasive sort of spring greening that has me worried. This time of year, as our bulb flowers spring forth, you'll also notice a green tinge spreading through the undergrowth of the woods. While it feels innately positive to begin seeing that color of growth, look a bit closer: you will not find any bursting buds or bright new leaves on native saplings, shrubs, or vines. You will find them, instead, on invasive species: barberry from Japan, privet from Asia, or maples from Europe. Plants that originated very far from Connecticut, and plants that are actively harming many of our native species.

The problem with these non-native, early-leafing plants is that they are adapted to different climates than our natives. Many are generalists, meaning that they thrive under a wide variety of conditions like our increasingly early, warm spring weather and unexpected heat or floods, all of which our native species are having trouble adapting to. Many are also unpalatable to our native animals, meaning that herbivores like white-tailed deer will preferentially chomp up native saplings while leaving invasive shrubs alone.

These issues are made worse by the unique phenology of the invasive species. *Phenology* is the study of timing: when during the day an animal is active, or when during the year it hibernates or emerges. While the phenology of most of our native plants has long been adapted to the historical climate of New England, the phenology of most invasives is different: natives wait to leaf out until late April or



Non-native Coltsfoot (*Tussilago farfara*), blooming March 12

May, when they long ago learned that the danger of frost would be past, while invasives largely begin leafing as soon as the warm temperatures hit in March. The reverse happens in the fall: most natives drop their leaves around mid-October to avoid any damage incurred by still having heavy, leaf-laden branches during early snowfalls, while most invasives hold onto their leaves long into November to take advantage of a climate that now only rarely allows such autumnal blizzards.

Altogether, the phenology of the invasive species gives them a huge advantage: [a 2020 study](#) of eastern forests found that this timing difference can provide invasives with up to 77 more leafy days per year than their native counterparts. While that discrepancy tends to decline as you move north – the difference here is probably closer to 30 days per year – there is evidence that the additional energy gathered by invasive species during that extra month of photosynthesizing provides them with a significant competitive advantage.

The early leaf-out of invasive plants has other costs, as well. Thick invasive undergrowth [limits the regeneration of native trees](#), [increases the tick population](#), and [prohibits the growth of native spring ephemerals and other understory plants](#) that rely on early spring sunshine.

But here's the upside: if this list of negative impacts bothers you as much as it bothers me, you'll hopefully want to do something about it. And if you are stumped on what exactly *you* could do, there is absolutely no easier time of the year to learn due to one simple fact: right now, most invasive plants are green and most native ones are not. Cutting back or removing those invasives has huge and long-lasting benefits, from allowing native trees to regrow and provide habitat for nesting birds, to allowing spring ephemerals to bloom and provide food for early pollinators, to keeping our forests healthier for years to come.

If you have not done this sort of work or tried your hand at plant identification before, this can still feel quite intimidating. It is not, after all, a hard and fast rule that everything green or blooming in the early spring is bad; take, for example, our native Red Maples or native Eastern Skunk Cabbage, which have just begun flowering in the canopy and forest floor, respectively. Some natives *are* adapted to take advantage of early spring conditions, and their strategy is simply being coopted by the incursion of non-natives.

I promise, however, that there is an invasive removal strategy that is right for you. Some management is as simple as pulling out a tiny, easily distinguishable herb by hand whenever you see it beside a trail. Wherever you are in your plant identification or trail maintenance skills, there is work you can do to help protect our forests from invasive species – and this is the easiest time of year to do it, because invasives never stand out more!

As a starter guide, I've laid out a few of our most common, most easily identifiable invasive species below. Take a look at the list and see if you can recognize any of these culprits on your next stroll outdoors; if you'd like, try out the [iNaturalist app](#) to get confirmation on your identifications. With a problem as sprawling as invasive species spread, community action is essential to gaining any traction; every garlic mustard seedling you can pull out of the ground and hopeful sapling you free from a bittersweet vine helps.



Native Skunk Cabbage (*Symplocarpus foetidus*)

Beginner: Herbs – Easy identification, no tools needed!



Garlic mustard (*Alliaria petiolate*)

Spring identification: Understory herbs with a 2-year life cycle, green on the forest floor all winter. Later in the year, grow to around 2 ft tall with a stalk of small white flower. Edible (though not very yummy), with a distinct garlicky smell when crushed.

Problems caused: Reproduces voraciously and can form dense mats that nothing else can grow through; documented to cause particularly big problems for spring ephemeral flowers and other low-growing herbs. Possibly allelopathic (meaning their roots produce chemicals that prohibit the growth of other plants)

How to remove: Grip plant around the base and pull! They have a big taproot which you should try to get out as well.

Other notes: Individuals are easy to remove, but getting rid of a population is a project! Generally, given how long garlic mustard seeds can persist in the ground, one area requires about 3 years of consistent removal to eradicate a population.

Narrowleaf Bittercress (*Cardamine impatiens*)

Spring identification: Like garlic mustard, basal leaves tend to remain green through the winter; extensive growth of leaflets in the early spring makes them even more identifiable. Leaves are long and deeply toothed. Later in the year, grow to around 1 ft tall; topped with white, four-petaled flowers that transform into slender, ballistic seedpods.

Problems caused: This is a pretty new invasive species, so all we know right now is that it spreads extremely rapidly (one plant can produce 5,500 seeds!) and densely over the forest floor and seems to outcompete natives.

How to remove: Pull out by the root! Generally very easy to weed.



Intermediate: Shrubs – Easy

identification, clippers, saw, or shovel required
Japanese barberry (*Berberis thunbergii*)

Spring identification: Short, woody shrubs with thin, pokey thorns. Leaf out in early spring with light green to dark purple oval-shaped leaves. Often retain some red, ovular berries from the previous fall. Blooms with drooping, pale yellow flowers in late spring. Distinctively yellow roots.

Problems caused: The primary botanical culprit of increasing tick populations. Dense stands of barberry increase the moisture level of the undergrowth and form networks for rodents, which promotes the growth and spread of tick populations (and, consequently, Lyme disease). Heavily excludes native plants and can alter soil chemistry and nitrogen levels.

How to remove: Young plants are easily pulled out by hand (with gloves to avoid thorns!). Established plants are difficult to remove completely due to ease of regeneration and thorns. Carefully cut back with clippers to manage, dig out at base to remove completely. Note that dug out plants (especially roots) often need to be burned or otherwise destroyed to prevent regrowth.

Other: This is among our top 3 most problematic species in CT! Barberry stands fill the undergrowth of nearly all forests that have been disturbed within the last hundred years, prohibiting growth, regeneration, and causing a huge number of issues.

Privet (*Ligustrum* spp.)

Spring identification: Tall, woody shrubs. Leaf out early with small, oval, greenish shoots. Branches are thin and usually have many short, pokey twigs. Sometimes maintain overwintered dark berries.

Problems caused: Stand-forming. Replaces other shrubs and trees.

How to remove: Cut at base. Remove roots if possible.

Other: Privet, or *Ligustrum* spp., is not a single species but a whole genus; it's a pain to identify them down to species, but luckily you do not have to! All the privets we have around here look quite similar, and all are invasive.



Multiflora rose (*Rosa multiflora*)

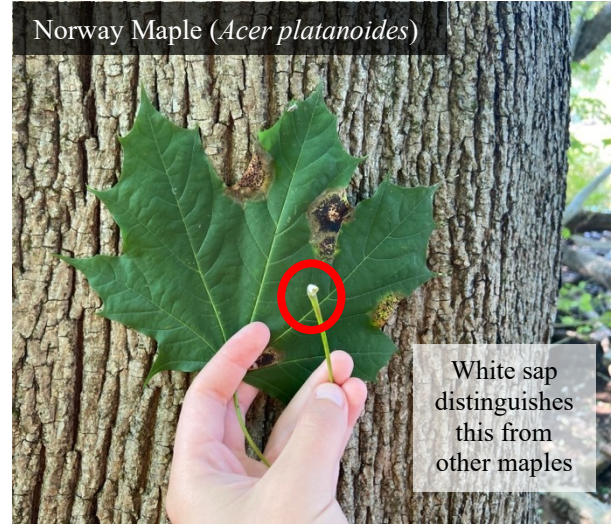
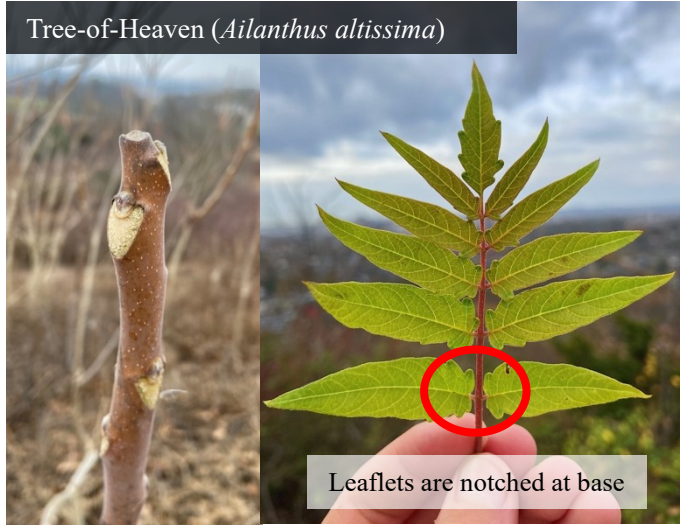
Spring identification: Green, rambling shrub with distinctive recurved thorns (this is the most reliable identifier). Extremely early leaf out, even compared to other invasives; always has short tufts of greenish purple leaves by March. Later in the season, distinguishable from other roses by leaflets' tufted stems (though you don't need to worry about this unless you're really into plant ID!) and fragrant bunches of white to pink flowers.

Problems caused: Forms dense, thorny thickets that exclude other species. Not eaten by anything I know of.

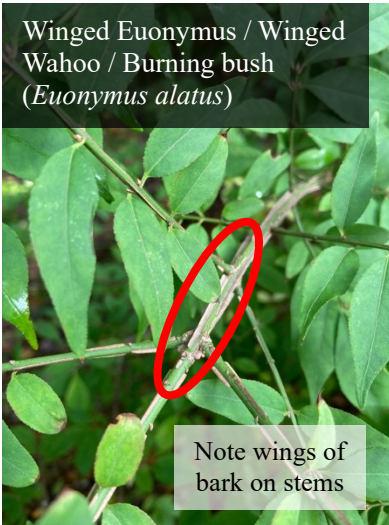
How to remove: Difficult due to thorns and resilient regrowth, but can be carefully cut back with clippers or dug out at the base.

Advanced: Other Species – These are invasives that don't leaf out quite as early in the spring and might be harder to identify; many also require more tools or complex strategies to remove. There are way too many for me to give a complete list ([UConn provides a good one here!](#)), but these are a few good ones to know.

TREES:



SHRUBS:



VINES:

