



Lawns are so – *Yesterday*

By Judy Preston



Yesterday, like, before we knew about Climate Change. In a world that is reexamining its use of limited resources with the collective eye toward amending harmful environmental practices, changing the unsustainable use of carbon-based fossil fuels, and evening the playing field for all residents of the planet, the American Lawn is on shaky ground.

We're fully ensconced in the Anthropocene, but we're not too late to leave a better footprint on the planet.

Lawn alternatives are becoming more common and creative, even though barriers still exist.

Nitrogen remains the greatest threat to Long Island Sound. As coastal residents, we have an outsized impact on coastal waters and the Sound: nitrogen fertilizer doesn't have far to travel. And nitrogen is the

According to the EPA, the run-off of nitrogen and phosphorus – two key ingredients in commercial fertilizers – into our water supply presents, "one of America's most widespread, costly, and challenging environmental problems."

fuel that creates low oxygen, or Hypoxia, at depth, as well as harmful algal blooms along the shoreline.

Hypoxia affects the abundance, distribution, growth, behavior, and fisheries landings of both mobile and bottom living organisms. It can increase the success of invasive species and the prevalence and intensity of the pathogen capable of devastating oyster populations.

The ideal weed-free lush and green American lawn requires water, fertilizer, pesticides, herbicides, fossil fuels, and electricity. The use of each of these components come with an

environmental cost that outweighs the usefulness of the final lawn product – what ecologist Doug Tallamy refers to as *"an ecologically dead status symbol."*

The Lawn is entrenched in the American psyche; it's not going to disappear overnight. But there are meaningful ways to reduce – toward ultimately eliminating – the harmful impacts of lawns.

The Better Lawn. If you have a lawn, start making changes slowly. Our yards have the potential to support butterflies, bees, and birds while also cleaning and cooling the air, rebuilding damaged soils, and reducing urban flooding by absorbing stormwater.



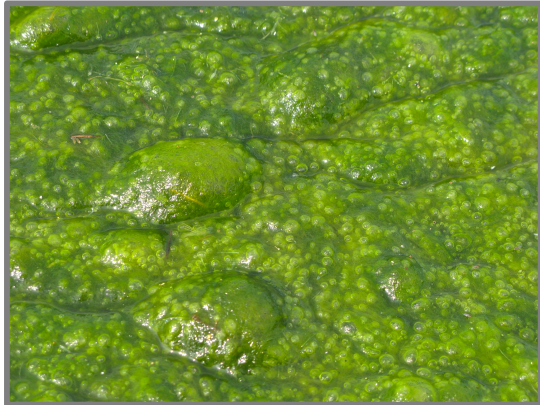
Mowing high can permit smaller plants, such as clover, to flower, providing a nectar source for pollinating insects.

Mow High, and Less. A 2018 study of lawns in Springfield, Massachusetts found that mowing every other week, instead of every single week, increased the number of bees and wildflowers visited. No Mow campaigns, such as "No Mow May" might be better suited to March or April in southern New England to avoid mowing lawn flowers that early pollinators need. The University of Minnesota suggests "Slow Mow Summer": mowing infrequently all summer long while reducing lawn spaces in general. Raising the height of your mower to at least 4" will encourage healthy grass roots. **Don't mow the weird parts:** Skip the steep hill, the tough corners, or start with an area that is out of sight. Author and native plant advocate Benjamin Vogt, from Monarch Gardens, warns: don't just let your lawn grow wild – invasive plants and trees will eventually appear.

According to the Natural Resources Defense Council, "Lawns consume nearly three trillion gallons of water a year, 200 million gallons of gas (for all that mowing), and 70 million pounds of pesticides."

Water Wisely. To maximize absorption, prevent heat stress and deter disease, water between 6 a.m. and 10 a.m. To conserve water, water when it's less likely to evaporate: between 10 p.m. and 6 a.m. (although when it's very humid, or the foliage remains wet, this can encourage fungal growth and moss).

Mid-afternoon – the peak hours of heat and sunlight – is the worst time to water both environmentally and for the health of your lawn; you can lose up to half of what you apply to evaporation. Watering at this time draws shallow roots to the surface where they are vulnerable to heat damage. Overwatering attracts fungi and disease, and the increased chance for soil compaction from foot traffic.



Algal blooms are one of the many consequences of excess fertilizer contaminating waterbodies. While nitrogen is responsible for hypoxia in Long Island Sound, phosphorus (which is now regulated in Connecticut) can produce freshwater algal blooms.

Be Frugal with Fertilizer. The runoff of nitrogen and phosphorus fertilizer into local waterways and ultimately our coastal waters have been characterized as “One of America’s most widespread, costly, and challenging environmental problems” by the EPA. The transfer of nitrogen-rich waters from suburban lawns to The Sound is largely invisible – it is carried in stormwater, emptied into coastal storm drains or receiving streams, or infiltrated into the ground where whatever is not absorbed by plant life can join ground water. That makes the judicious application of these fertilizers very important! So, apply fertilizer ***only if needed, only what is needed, to where it is needed, at reduced rates, and never on hard surfaces or before a big rain.***

Some Useful Guidelines

- Apply ***one half to one third less fertilizer than recommended;*** maximum 2lb/1000sf for a lawn that is 10 years or older; up to 3lb/1000sf for a lawn that is less than 10 years old
- ***Don’t use it all*** if you don’t need it
- Leave your clippings on the lawn. 46 to 59% of applied N ends up in clippings, reducing the need for more added nitrogen by 25 – 40%
- ***Apply no more than twice a year:*** after spring green-up and no later than October 15th (when the ground freezes the grass can’t absorb any fertilizer)
- The ***best*** one-time application is mid-September through mid-October
- ***Slow release*** fertilizers are best (they feed the soil); ***organic*** is preferable to petroleum-based inorganics, but remember: too much fertilizer is too much fertilizer, whether it’s organic or inorganic

Focus on healthy soil that can buffer your lawn from heat and drought stress. Organic matter from compost (3-5%) or leaf mold will nurture an entire below-ground ecosystem of beneficial soil organisms that can sustain healthy lawns and gardens (and reduce thatch).

Pesticides, Herbicides. As tempting as they are, ***don’t use combination weed and feed products that claim to solve all your lawn’s problems.*** One size does ***not*** fit all; treat only those lawn patches that need specific management.



To find out more about the impacts of pesticides on non-target insect populations, visit the Xerces Society for Invertebrate Conservation. They provide free, science-based information and webinars on YouTube.

Pesticides work in many ways to kill weeds and insects. A lot of attention has been given to systemic pesticides, such as those referred to as “neonics” (Neonicotinoids) that are absorbed by the entire plant. This makes the entire plant toxic to any visiting insect – both good and bad.

Safer for local waterways and the food web, **homemade weed killers** that use horticultural vinegar, salt, dish soap, and even boiling water can be effective when used correctly. **Corn gluten meal** is an organic herbicide that will prevent crabgrass seeds from germinating. Paul Tukey, author of *The Organic Lawn Care Manual*, claims: “The best defense against weeds is a bag of grass seed.”

These pesticides in particular have been linked to the decline of important pollinating insects.

Update Your Toolbox. Lawn mowers, weed whackers, leaf blowers, pesticides, herbicides, and fertilizers: they’re all powered by or made from fossil fuels (unless you’re using organic). Typically using two-stroke engines, this equipment is also highly polluting. Alternatives do exist, including increasingly powerful electric equipment.

Good or Bad Insects? We tend to lump most insects as bad, and as counter intuitive as it may seem, a diversity of “bugs” is better. It enables nature’s predator/prey relationship to prevent only a few insects from dominating, while providing essential food for our local wildlife. Only 5% to 25% of bugs are pests in the yard; if you can accept a little damage you will be supporting a healthy food web.

The New Lawn Alternative



This grass-like native understory is Pennsylvania Sedge (*Carex pensylvanica*) and is often a component of alternative lawn grass blends.

Different Grasses. There’s a lot to know about how to grow and manage a grass lawn. If you want one, be sure to do your homework. Most common turf grasses, including Kentucky bluegrass, are native to Europe and not well adapted to our New England environment, making them more dependent on the supplements that make them problematic to the environment.

Increasingly, a hearty blend of cool-season hard and fine fescue grasses is used to make a “no-mow” mix that thrives in sun but will tolerate partial shade. These “eco-lawns” create a dense, green lawn that requires less mowing – usually once in the spring and then again in the fall. Once established, this type of lawn requires less water and fertilizer while forming a dense carpet that inhibits weeds. It still needs to be mown

high, and especially at the end of the season may need to have excess clippings removed to prevent smothering. Check for sources locally or online from nurseries that specialize in native plants, such as Prairie Nursery.

“When you calculate the savings derived from reduced need for mowing, fertilizers, irrigation, etc., I’ve been finding that the cost of converting a conventional lawn to a more sustainable mix can be paid back in as little as three years.” – Tom Christopher, garden writer and sustainable lawn advocate

Tapestry Lawn. This alternative to a grass lawn incorporates low lying plants, many of them flowering, that provide resources for native wildlife, including insects that are essential for pollination and the food web. Once established, the density and diversity of plants used in a Tapestry lawn can also improve the soil. In general, this alternative is less time consuming once established, and requires far fewer inputs associated with unsustainable resource uses.



This “lawn” combines purple violets (important to fritillary butterflies) and interstices of grass.

There are a variety of plant options, ranging in heights depending on your objectives. There is no set recipe for a Tapestry Lawn, but it is important to remove your existing lawn (and weed seeds), and initially group plants together. Benjamin Vogt, from Monarch Gardens, suggests: *“Think three, five, or seven of a kind depending on the scale of the site (use larger masses for larger sites).”* Many of these plants will move about from year to year as they re-seed naturally.

Tapestry Lawn Sampler: wild strawberry (*Fragaria virginiana*), bluets (*Houstonia caerulea*), American self-heal (*Prunella vulgaris* subspecies *lanceolata*), arrowhead violet (*Viola sagittata*), barren strawberry (*Geum fragarioides*), blue-eyed grass (*Sisyrinchium angustifolium*)

Maintenance is generally low if you choose the right native plants for the conditions that you have; this includes clean-up before the growing season, and some trimming with a string-trimmer or mower. Although eco-friendlier, the tapestry lawn, unlike its grass counterpart, will not accommodate a lot of foot traffic.

Diversity is key. To generate the most positive impacts on your local environment you don’t have to plant a full wildflower meadow. Diversify the plants in your lawn to benefit wildlife – get away from a monoculture of anything. Adding some variety, especially native plant species, to your lawn will help support nearby wildlife.
– Benjamin Vogt, Monarch Gardens

The Not-Lawn Alternative

Sharing Your Space with other animals by providing the resources they need can take many forms, from setting out a bird feeder to replacing your lawn with a native meadow or a more complex assortment of native plants, including trees and shrubs.

Feel free to think big, but start making changes slowly with the objective of reducing lawn space, or other high maintenance areas, in favor of more complex and beneficial alternatives. Although no landscape is without the need for maintenance, once established, native plants require far fewer inputs, and their contribution to a healthy environment makes them a better choice.

Creating Wildlife Habitat from lawn area. The objective is to increase the diversity of plants and provide food, water and cover for a myriad of wildlife – including insects. Many resources exist with details about how to start converting your yard into a more environmentally friendly and sustainable landscape (see RESOURCES).

These include creating or enhancing a flower bed with native flowering plants that can provide critical resources to a large assortment of pollinating insects including bees, wasps, beetles, moths and butterflies. By far the largest number of bees that pollinate our flowers (and food) don't live in hives but are solitary ground occupants. Leaving or creating bare ground or patchy vegetation in your yard, or among your garden plants, is a good start toward providing critical habitat for an important contributor of the wildlife food web.

Once you have an idea – consider these:

- **Choose a variety of plants** that provide resources for wildlife: native flowering plants for insects, shrubs or trees that produce seeds, nuts or berries
- **Layer your plantings** to include perennial flowers, low shrubs, mid-story shrubs – perhaps surrounding a specimen tree. These aggregations of plants provide many resources for animals, especially birds
- **Group plants together** rather than as isolated individuals: clustering in groups helps the soil and enhances the visual impact of your landscape
- As tough as it might seem, **leaving a dead tree standing** (out of harm's way), **or on the ground**, or generating piles of varying sized branches and twigs is a remarkably important resource for insects, amphibians, reptiles and small mammals



This meadow replaced a lawn at a commercial business in Old Saybrook, Connecticut.



Rethink your foundation plantings to create a diverse group of shrubs and small trees that provide hiding places and food for wildlife while also providing winter interest.

- ***Provide water:*** bird baths, water features, even stone depressions that collect seasonal rainwater can be lifesavers during dry spells
- Use a ***“green mulch”*** of low, spreading plants to cover the ground, or permit the fall leaf drop to stay in place around your plants. Many beneficial insects find refuge there, and will help incorporate that organic material into the soil as a source of nutrients for the plants
- Don’t be afraid to leave ***patches of bare ground*** (especially where there’s plenty of sun) for our native ground nesting bees: these solitary species are essential to the wildlife food web

TICK FEARS. *While ticks, and the Lyme disease they carry, remain a significant threat in the northeast, there are ways to reduce encounters while still maintaining an environmentally friendly yard. **Widen pathways** through your yard and gardens to avoid the need to brush up against vegetation where ticks “quest” by reaching out on leaf edges. **Attract mouse predators:** By increasing the diversity of plants and cover types in your yard you can welcome predators of the white-footed mouse, a vector for Lyme disease that ticks catch when feeding on the mice. **Shorter Plants:** Keeping your plants under 2-3 feet tall will still benefit pollinators but make your garden less attractive to ticks. www.TickEncounter.org [The Tick Project](#)*

Judy Preston is an environmental professional and award-winning educator whose community based conservation and ecological consulting emphasizes healthy, sustainable landscapes.

Selected Resources

Organizations

- [Xerces Society](#)
- [Pollinator Pathway](#)
- [Wild Ones](#)
- [Audubon](#)
- [Native Plant Trust](#)
- [Monarch Gardens](#)



Consider less lawn in favor of gardens as a means to enhance habitat for pollinators.

Books

- **The Organic Lawn Care Manual: A Natural, Low-Maintenance System for a Beautiful, Safe Lawn**, Paul Tukey
- **Teaming with Microbes: The Organic Gardener's Guide to the Soil Food Web**, Jeff Lowenfels, Wayne Lewis
- **[The Lawn: A History of an American Obsession](#)**, Virginia Scott Jenkins
- **Noah's Garden: Restoring the Ecology of Our Backyards**, Sara Stein
- **Bringing Nature Home: How You Can Sustain Wildlife with Native Plants**, Douglas Tallamy

Free Downloadable PDF's from the Internet

- **Gardening for Pollinators: Planning, Creating, and Maintaining a Pollinator Garden: A Five-step Guide**
https://www.nativeplanttrust.org/documents/1169/GardeningForPollinators_2023.pdf
- **Native Plants for Pollinators & Beneficial Landscapes**
<https://xerces.org/publications/plant-lists/native-plants-for-pollinators-and-beneficial-insects-northeast>
- **Habitat assessment Guide for Pollinators in Yards, Gardens, and Parks**
https://www.xerces.org/sites/default/files/publications/19-038_01_HAG_Yard-Park-Garden_web.pdf
- **Organic Pesticides: Minimizing Risks to Pollinators and Beneficial Insects**
https://xerces.org/sites/default/files/publications/13-053_web-print.pdf
- **New England Native Shrubs for Sustainable Landscapes**
<https://projects.sare.org/information-product/new-england-native-shrubs-for-sustainable-landscapes/>

- **Connecticut Native Trees for Beautiful Landscapes**

https://cipwg.uconn.edu/wp-content/uploads/sites/244/2013/12/CTNativeTree_List.pdf

- **Natural Lawn Care Techniques**

How to get a beautiful, green lawn without chemicals

<https://www.gardeners.com/how-to/natural-lawn-care-techniques/5065.html>

- **Lawn Maintenance and Climate Change**

Princeton student climate initiative

<https://psci.princeton.edu/tips/2020/5/11/law-maintenance-and-climate-change>



Let our natural landscapes inspire your plant choices: these native sedges are durable compliments to shrubs and perennials, and are becoming more available at nurseries.