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# Leave The Leaves!

By Justin Wheeler on 6. October 2017

One of the most valuable things you can do to support pollinators and other invertebrates is to provide them with the winter cover they need.

Besides providing the right plants, and protecting your garden from pesticides, one of the next most valuable things you can do to support pollinators and other invertebrates is to provide them with the winter cover they need in the form of fall leaves and standing dead plant material. Frequently however, this is the hardest pill for gardeners to swallow.

It may be habitual, a matter of social conditioning, or a holdover of outdated gardening practices from yesteryear—but for whatever reason, we just can't seem to help ourselves from wanting to tidy up the garden at the end of the season—raking, mowing, and blowing away a bit of nature that is essential to the survival of moths, butterflies, snails, spiders, and dozens of arthropods.

That's why this year—and every year—we are making the case for leaving the leaves and offering input on what to do with them. Read on!





## Must Love Leaves

While monarch migration is a well-known phenomenon, it's not the norm when it comes to butterflies. In fact, the vast majority of butterflies and moths overwinter in the landscape as an egg, caterpillar, chrysalis, or adult. In all but the warmest climates, these butterflies use leaf litter for winter cover. Great spangled fritillary and wooly bear caterpillars tuck themselves into a pile of leaves for protection from cold weather and predators. Red-banded hairstreaks lay their eggs on fallen oak leaves, which become the first food of the caterpillars when they emerge. Luna moths and swallowtail butterflies disguise their cocoons and chrysalises as dried leaves, blending in with the "real" leaves. There are many such examples.





The red-banded hairstreak is one of many butterflies that depend upon leaf litter as part of their life cycle. (Photo: John Flannery / Flickr)

Beyond butterflies, bumble bees also rely on leaf litter for protection. At the end of summer, mated queen bumble bees burrow only an inch or two into the earth to hibernate for winter. An extra thick layer of leaves is welcome protection from the elements. There are so many animals that live in leaves: spiders, snails, worms, beetles, millipedes, mites, and more—that support the chipmunks, turtles, birds, and amphibians that rely on these insects for food.

It's easy to see how important leaves really are to sustaining the natural web of life.

## Leaves and Lawn

According to a [2005 NASA estimate](#), there are around 40 million acres of lawn in the continental United States – making turf grass the single largest “crop” we grow. This disproportionate ratio of lawn to garden is the main reason we rake, mow, and blow. To mimic the natural ecosystem an animal needs, a layer of leaves needs to be at least a couple of inches thick. While this would be too much of a good thing for turf grass to handle—research has shown that lawns actually benefit from a thin layer of leaves, and the rest can be piled up around ornamental trees, shrubs, and perennials [to no ill effect](#).

If you must keep your lawn clear of leaves—try opting for raking or using a leaf vacuum to capture whole leaves, rather than shredding them with a mower and make a leaf pile in a corner of your yard. More on that below.

Better still would be to reduce your overall lawn footprint, replacing it instead with wildlife-supporting plantings that can be future repositories for fall leaves.



This suburban landscape features perennials and ground cover that support wildlife and require no mowing or raking. (Photo: Xerces Society / Matthew Shepherd)

## To Shred or Not to Shred

Many organic gardeners opt for shredding their fall leaves for use in compost piles. While this is certainly a more environmentally friendly practice than bagging leaves and sending them to the landfill—shredded leaves will not provide the same cover as leaving them whole, and you may be destroying eggs, caterpillars, and chrysalis along with the leaves. We suggest that leaves in garden beds and lawn edges be left whole. Where space allows, consider creating a leaf pile and allowing it to break down naturally, or add the leaves gradually to your compost pile over time. Such efforts will keep critters safe and allow you to benefit from the rich garden gift that falls from the trees above.



## Free Mulch!

Another reason to leave the leaves is for the many benefits they provide to your landscape. Leaves provide valuable organic matter and build up healthy soil. Fallen leaves have the same weed suppression and moisture retention properties of shredded wood mulch—and they're free! Where mulch is desired as a decorative element, what could be more seasonally appropriate than a pile of brightly-colored fall leaves?



Fallen leaves have all the properties and benefits of expensive wood mulch—and they're free! (Photo: Xerces Society / Justin Wheeler)

## The Bottom Line

You gave them flowers and a place to nest. You tended your garden and avoided pesticides. Don't carry all

of that hard work out to the curb. Simply put, when we treat leaves like trash—we're tossing out the beautiful moths and butterflies that we'll surely miss and work so very hard to attract.

While the idea is to "leave the leaves" permanently—for all of the benefits mentioned above—if you do decide you need to cleanup the garden and remove the leaves in spring, make sure you wait until late in the season so as not to destroy all the life you've worked to protect.

In the past gardeners may have worried that fall leaves, matted down by snow or rain, would have a negative impact on their perennials. In reality, a thick layer of leaves provides additional insulation against bitter cold weather, and can protect newly planted perennials when frost-heave may expose tender roots. Anyone who has spotted fragile spring ephemerals popping up in the woods knows that all but the frailest of plants will burst through the leaf litter in spring without trouble.

## Further Reading

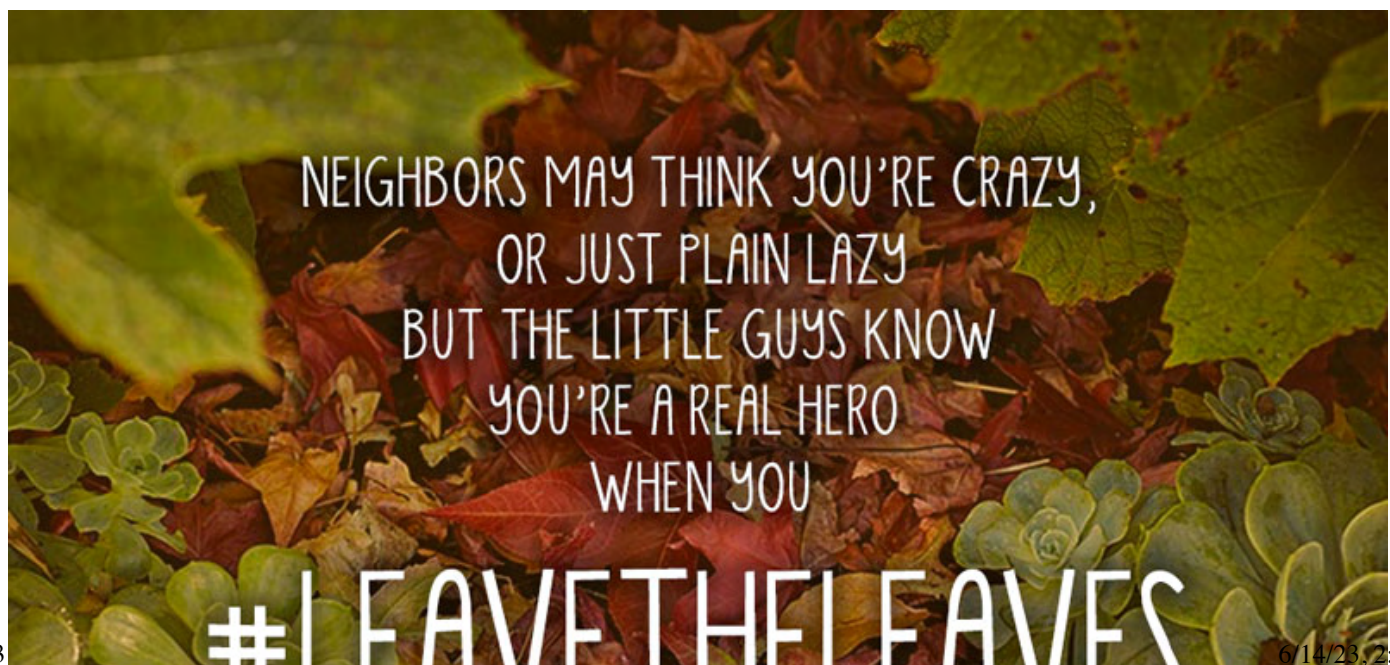
Read a more recent blog about [Leave the Leaves to Benefit Wildlife](#)

Learn more about [Nesting & Overwintering Habitat](#) for pollinators and other beneficial insects

Wondering what to do in spring? [Don't spring into garden cleanup too soon!](#)

## Spread the Word!

We've created these graphics to help spread the word—leave the leaves, the animals need them. Feel free to share these on social media with the hashtag #leavetheleaves!







At the end of summer, bumble bee queens burrow just below the soil to wait out winter. Give them the extra protection they need.

# LEAVE THE LEAVES





Caterpillars of fritillary butterflies  
overwinter in fall leaves - so please

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[xerces.org](https://xerces.org)

Photo by John Flannery / Flickr

Though dressed for winter - woolly bear  
caterpillars burrow beneath fallen leaves for  
extra protection. Don't blow away their cover!

# LEAVE<sup>THE</sup> LEAVES





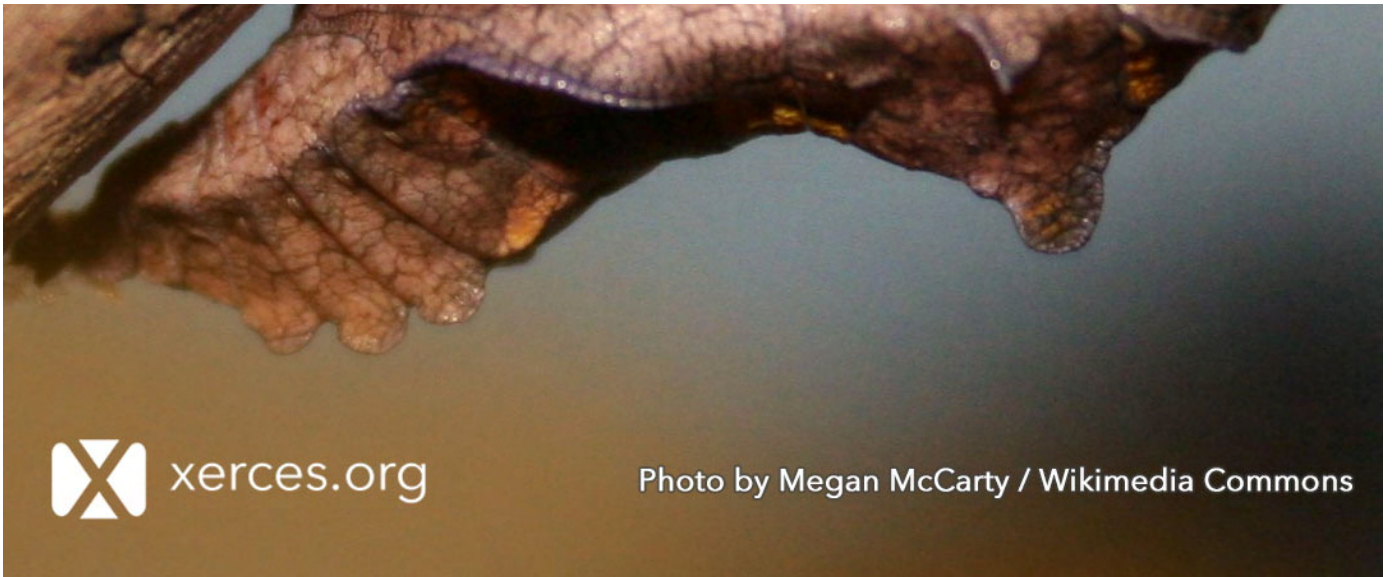


Many butterflies and moths overwinter as chrysalis or cocoons disguised as dried leaves. Don't blow away their cover!

LEAVE THE  
LEAVES







The beautiful luna moth overwinters as a cocoon in fall leaves. Don't toss out this treasure!

# LEAVE THE LEAVES







Photo by woodleywonderworks / Flickr

The red-banded hairstreak lays its eggs on fallen oak leaves - which become the first food for hungry caterpillars when they hatch.

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Photo by John Flannery / Flickr

Protect plants and build better soil  
with nature's free mulch! Just...

# LEAVE<sup>THE</sup> LEAVES





## Further Reading

[Learn more about where and how bees and other invertebrates overwinter.](#)

[Sign the Pollinator Protection Pledge!](#)

[Learn more about the Xerces Society's Pollinator Conservation Program.](#)

## Authors

Justin Wheeler

Xerces Contributor





Justin was formerly the Xerces Society's Web and Communications Coordinator, managing the website, blogs, and social media. As a Penn State Extension Master Gardener, Justin provides education and outreach to his community on a range of gardening-related subjects such as sustainable and pollinator-friendly gardening practices. He lives in State College, Pennsylvania.

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Tel: (855) 232-6639

Main Office: 628 NE Broadway, Ste. 200, Portland, OR 97232 USA • Mailing Address for Donations: P.O. Box 97387,  
Washington, D.C. 20090-7387

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