

IN THE GARDEN

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A Smarter Fall Cleanup

We now know that an overly aggressive approach to cleaning up in autumn can damage the environment. So what's a responsible gardener to do?



When we mow over, shred or vacuum up leaves, or rake them away from the tree they fell from, we diminish the potential good that the leaves and their various inhabitants — all essential players in the food web — can do.

By Margaret Roach

In the fall, it used to be you cleaned up every last leaf like mad. It was considered good garden sanitation. But now we know otherwise: That's bad for the environment, killing beneficial insects that love all the leaf litter, which keeps them warm during the winter, and interrupting the food web.

If we arm ourselves with power tools and aim to skip no section of the garden and leave no debris behind, we risk making a place that's too tidy for the good of its inhabitants. Part of the environmental benefit of making the landscape in the first place could be erased. Except in the vegetable beds, where pest and disease pressures call for a more

forceful hand — or where the remains of a sickly ornamental plant may need teasing out here and there — when it comes to cleanup, less is often more effective.

So how do you make a responsible plan that acknowledges both ecology and your horticultural goals? Maybe it's better to think of fall garden cleanup as an editing job — not some wholesale, wall-to-wall regimen like vacuuming the living room.

Becca Rodomsky-Bish, of the Cornell Lab of Ornithology, and Margaret T. McGrath, a Cornell plant pathologist (both serious home gardeners beyond their day jobs), shared advice about how to proceed.



Faded plants left standing all winter can play a critical role in the overwintering of beneficial insects, as well as birds and mammals. These plants may contain seed or fruit (like these crab apples), or offer hiding places during the off-season.

The Case for a Messier Cleanup

Within or below the leaf litter that accumulates in the autumn, so much unseen life exists. Given the chance, it will weather the off-season there.

“If you clean up every leaf pile in the landscape, you’re not only removing or destroying overwintering insects,” said Ms. Rodomsky-Bish, the project manager for the annual citizen-science project [Great Backyard Bird Count](#) and a passionate habitat-style backyard gardener. “You’re also removing insulation for insects burrowed in the ground

that rely on the leaf litter to survive harsh winter temperatures — like so many species of ground-nesting bees.”

Instead, she suggested, “Let’s be a little bit messier.”

Messier, because the litter is critical habitat for various insects and other arthropods, like bumblebees that provide pollination services. It offers pupation sites for caterpillars of many moth species that [birds rely on](#) to feed their young. Detritivores — like millipedes that recycle plant debris — shelter beneath it for the duration, as do some spiders that contribute extensive pest control to our environments.



Moths in various life stages, like this caterpillar of the giant leopard moth, search for overwintering spots to tuck into for winter, places that are more abundant in a garden with a looser fall cleanup regimen.

When we mow over, shred or vacuum up leaves, or rake them away from the tree they fell from, we diminish the potential good that the leaves and their various inhabitants — all essential players in the food web — can do.

Faded plants left standing all winter can play a critical role, too. They may contain seed or fruit, or offer hiding places for spending the off-season or reproducing, as the pithy stems of goldenrod, blackberry and elderberry (favored by some mason and carpenter bees) do.

This year, in particular, it's urgent, Ms. Rodomsky-Bish said, as droughts, wildfires and other climate-related events are believed to have driven migratory birds off course, before they had time to replenish their fat stores, and [even to their deaths](#).

Identify Where Things Can (and Can't) Remain Looser

Nature's example — letting everything lie where it falls, or where the wind blows it — is the inspiration, but it may not prove feasible for every square foot of the garden.

While many gardeners have reduced mowed turf in the name of biodiversity, most still have some lawn. Allowing leaves to mat it down all winter risks damaging the grass. Either mow over the leaves (if there's just a thin layer), returning their organic matter to the soil, or rake and move them to the garden's perimeter or to vegetable beds where they can serve as mulch.

You may want to be tidiest along the front walkway and other high-traffic spots where slick leaf buildup isn't practical or looks too messy.

Other little nods to horticulture: In beds where early blooming minor bulbs like winter aconite (*Eranthis*), crocus or snowdrops might not be able to push up through heavy leaves, rake those spots now; in the spring, you won't be able to do any raking until after the bulbs flower. And leave little pockets of open soil beneath the spots where you hope biennials and self-sowing annuals will grow; mulch will stifle their success.



Around ornamental plants with a reputation for harboring diseases that can survive in fallen debris — think peonies, roses or fruit trees showing signs of trouble — move spore-filled material away from the immediate area.

One worry voiced by some gardeners, Ms. Rodomsky-Bish said, is that less scrupulous cleanup creates a habitat for ticks, creatures of the leaf litter. So here's a compromise: Don't cart away bagged leaves; instead, move them away from areas near the house that you frequent most. Establish looser outer spaces that can accommodate leaf litter, a small brush pile and a gentler overall management style.

The Social Pressure to Be Tidy

In neighborhoods where a manicured front lawn with not a leaf in sight is the norm or even dictated by the homeowners' association code, there could be pushback.

An alternative: "I love the look of edge mowing, which we use at [Cornell Lab of Ornithology's](#) visitor center," Ms. Rodomsky-Bish said, referring to the practice of mowing a strip of turf adjacent to paths, sidewalks and roadways, so looser areas are set off inside these groomed swaths. "It's a very effective way to minimize cleanup, but still create this beautiful space that looks at once maintained and natural."



Fruits of tomatoes, peppers and eggplants that show signs of anthracnose fruit rot should be removed from the garden, as the fungal disease can survive in debris.

In the Vegetable Garden, Use a Firm Hand

Know your enemy, advised Dr. McGrath, an associate professor at Cornell's Long Island Horticultural Research and Extension Center, in Riverhead, N.Y. That's the first tactical step toward vegetable-garden health.

When she talks to gardeners about disease management, she stresses the importance of removing diseased crop debris when the disease is caused by a pathogen that can survive winter in it. Not all can.

"I am especially concerned about fungal tomato pathogens such as anthracnose, Septoria leaf spot or early blight surviving," Dr. McGrath said, "along with various bacterial diseases. So that debris goes out to the municipal compost with other yard waste my husband and I don't want to compost or chip."

Although she has the ability to distinguish one pathogen from another (if you don't, [her web page for gardeners can help](#)), Dr. McGrath's practice in her own vegetable plot is a thorough cleanup. "Personally, I like a clean vegetable garden, so I remove everything in fall," she said. "By the next season, you will want a clean planting area anyway, unlike in your ornamental beds."

Best practice: Remove diseased or fallen foliage as it occurs throughout the season — and also any tomato, eggplant or pepper fruit showing signs of [anthracnose fruit rot](#).

"Those fruits, or affected tissue removed from a salvageable one, really shouldn't go in the compost unless a gardener knows they have a good and long compost process," she said.

In some cases — with certain bacterial speck, spot or canker of tomatoes, for instance — pathogens can survive the winter on stakes and cages.

"Hose them off to remove debris and soil, then disinfect with a bleach-and-water solution of 1:9 dilution," Dr. McGrath said. The gear needs to soak in disinfectant for 10 to 30 minutes.

Sanitation is the organic gardener's best tool for insect pest reduction, too. Thorough cleanup, pulling plants and removing them to a distance can reduce overwintering opportunities for common opponents — that includes squash bugs; Brassica pests, such as various cabbageworm species; and cucumber and bean beetles.

A thorough cleanup, however, doesn't mean leaving the soil bare, Dr. McGrath noted. Be sure to promote soil health by keeping the surface covered. She keeps hers mulched year-round. Use grass clippings or leaves that you've moved off the lawn. Or make some

“straw” mulch, as she and her husband do, by chipping the remains of ornamental grasses in the spring after they’ve been cut down.



Cross-striped cabbageworms are one vegetable-garden pest that a thorough fall cleanup can help keep in check. Cleaning up all Brassica debris reduces their overwintering opportunities.

Weed While You Work

And as you go, you should also make notes. Look around critically: Document what worked and what didn't, on paper or with photos. Take particular notice of how rich, or lacking, your fall-into-winter garden is in habitat-supporting elements like fruit- and seed-bearing native shrubs (and messiness), and look for spots where you can raise those quotients later.

Also: Are some plants overrunning one another and in need of dividing, either now or in spring? Is a soil test indicated in a bed where plants underperformed? Labs usually aren't as busy in the fall.

Bring inside or stash tender plants that won't survive outside ([like this](#)). Weed until the ground freezes, targeting seed-laden weeds. If there are dead branches in out-of-reach trees and shrubs, make a date with an arborist; winter will make them worse.

What about messy birdhouses? "Let your nest boxes stay filled with nesting material all winter," Ms. Rodomsky-Bish said. "In a really bad storm, they might be appealing as shelter."

Clean them out just before birds come investigating, in early spring.

And with spring in mind, she said, here's another important reminder: The commitment to the ecological element of your smart cleanup must continue then.

Rushing to start gardening too early risks squandering your fall efforts. Cornell ecologists recommend waiting until after at least five consecutive 50-degree days, giving your garden's inhabitants a chance to awaken and move along, beginning the cycle again.