

Should I wait to clean up the garden in order to help conserve insects?

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Is this statement fact or fiction? “Wait to clean up your garden until temperatures consistently reach 50°F or higher, in order to help conserve insects.”

The claim:

Many butterflies, bees and other pollinators overwinter in the dead leaves and hollowed out stems of last year's plants. If you clean your garden prematurely, you will literally be throwing away this year's butterflies, bees and other beneficial pollinators.

The verdict: Mixed

Terrestrial insects overwinter in a variety of habitat types that can be generally classified as:

- Protected: beneath the soil.
- Partially exposed: within vegetation or underneath leaf litter.
- Exposed: above the ground, on vegetation or other surfaces.

It is true that if you destroy an insect's habitat while it is overwintering, that it is highly unlikely to survive into the next season. However, the typical maintenance and cleanup tasks for spring gardens (such as pruning berries in March or cutting back ornamental grasses in April) are unlikely to broadly harm insect pollinators, with the possible exception of cavity-nesting bees.

Soil nesting bees

Across the globe, most bee species nest in protected sites beneath the soil. For gardens located within ultra-urban landscapes, such as New York City, less than half of all bees are soil nesters. In more suburban gardens, a majority of bees are soil nesters.

For most gardens, unless you are tilling the soil as a spring garden chore (which we don't advise, due to the negative effects of soil tilling on soil structure), most bee species should not be harmed by spring garden chores.

Cavity nesting bees

In urban gardens, bees that nest above ground in stems and other cavities are more common than they are in non-urban sites.

One of the most common bees (about 10%) of the 2,100 specimens that we found in Portland-area gardens is the small carpenter bee, *Ceratina acantha*. This bee nests in pithy stems, including native and cultivated *Rubus* (caneberry)



Does the timing garden clean-up affect bees? COURTESY OF OREGON STATE EXTENSION

and *Sambucus* (elderberry) species, and many introduced species (including *Brassica*, *Daucus*, *Foeniculum and Rumex*). *Ceratina acantha* is thus able to nest in the pithy stems of across many plant families (including carrots, mustards, buckwheats, roses and elderberries), although they seem to prefer stems that are 5–8 mm in diameter.

Research from Portland State University shows that these bees emerge in April in the Portland metro region. Thus, for cavity nesting bees in urban gardens, waiting until May to clean up garden debris that includes pithy stems would allow any overwintering small carpenter bees to successfully emerge and start their own nests in the spring.

Butterflies

Although it is possible that urban and suburban gardens offer suitable habitat for butterflies, few studies have looked at butterfly overwintering in different types of garden habitat. Studies that have counted butterflies in gardens have found that the vast majority are the ubiquitous, non-native cabbage white butterfly, *Pieris rapae*.

This butterfly is reported to overwinter in bark and crevices above the soil. Thus, typical gardening cleaning tasks are unlikely to harm the most dominant butterfly in urban and suburban gardens.

ley Community Action Agency to acquire property for a veterans homeless shelter.

\$6.3 million for Salem Area Mass Transit District to purchase zero-emission busses.

\$1.4 million for improvements on North Fork Road. Much of the road was damaged in the wildfires, and it has been closed to traffic since.

\$1.2 million for public safety radio system repairs and upgrades in a remote area between Gates and Detroit.

\$2 million for economic development in the Opal Creek Wilderness.

\$250,000 to Mano a Mano Family Center for workforce development.

The over \$5 million for housing for veterans and homeless is hoped to make an impact on the homeless population in the area.

Mid-Willamette Valley Community Action Agency executive director Jimmy Jones said the COVID-19 pandemic, Labor Day wildfires of 2020, ice storm of February 2021 and heat dome of June 2021 have increased the number of homeless people in the area.

“This investment will allow us to keep our wildfire homeless sheltered, and eventually take more than 100 homeless residents off the streets of Salem, reducing our unsheltered homeless population by 10%,” Jones said.

Among the other appropriations were \$449,000 for an online professional certification program for structural engineers, focusing on building with wood including mass timber, through Oregon State's College of Forestry.

It also continues funding for Oregon State University's program on forest product innovation at \$1 million per year, including research on mass timber products and building systems.

“Mass timber buildings have enormous potential to replace more carbon-intensive traditional construction in the fight against climate change, all while supporting local timber jobs and driving the thinning projects which are critical to forest resiliency and preventing megafires,” Merkley said.

The University of Oregon also received \$800,000 for its center for researching wildfire smoke.

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Temperature thresholds for insect emergence?

I tried to find the source of the suggestion that gardeners wait until it is 50°F or higher before cleaning up garden debris. The closest suggestion that I could find is a study of bat foraging in Wisconsin. This study found that bat foraging strongly coincided with insect emergence in spring, which sharply increased at 50°F.

However, it should be noted that 78% of the insects captured in this study were flies, and almost all of the flies captured were aquatic. These, obviously, would not be disrupted by spring garden maintenance, unless you are cleaning and disrupting a garden pond or stream.

What you can do to conserve garden insects

One of the best things you can do, if you want to conserve insects in the garden, is to set aside a portion of your garden that is left unmanaged, as perennial habitat.

The larger the space you are able to set aside as unmanaged habitat, the more insects you will be able to host in your garden.

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Keep in mind, however, that habitat set-asides will provide space for the insects that are generally desirable in a garden (such as pollinators), but may also provide space for insects that are less desirable (such as herbivores that can become garden pests).

To learn more about how you can protect pollinators in your garden, via pollinator-friendly garden designs and maintenance practices, check out Enhancing Urban and Suburban Landscapes to Protect Pollinators. Experiment, and do what works best for you.

The mere fact that you're *thinking about* and are *aware of* the importance of insect conservation in the garden is a huge step in the right direction.

Millions

Continued from Page 1A

biggest challenges for its completion is costs. The development is receiving \$1 million to pay for infrastructure costs like water, electricity, sewer, roads and sidewalks for the entire development.

“Without this funding, we would have a substantial delay in construction while fundraising to cover the cost,” said North Willamette Valley executive director Kari Johnsen.

“Our goal is to raise enough money to build five homes per year, and have the estimated \$2.1 million project completed at the beginning of 2026. We have a long way to go to raise enough money to complete the project, but our goal is to keep construction going and get families into homes as soon as possible.”

Johnsen said the cost of materials for building homes has skyrocketed to \$250,000 per home from \$100,000 in the past year.

The money from the federal government helps to keep the project moving forward.

“The funding that Senators Wyden and Merkley helped secure is making this project possible,” Johnsen said.

Among the appropriations in the bill are:

\$34.8 million for the Army Corps of Engineers to build fish passages at dams in the Willamette Valley, including Detroit and Cougar dams. The Corps of Engineers agreed to build the passages as part of a legal settlement in 2008, but is still in the design and engineering of the projects.

\$500,000 for the Detroit Lake Foundation's project to build a new community center in Detroit. The previous city hall was destroyed in the wildfires of 2020, and contractors have joined with the foundation to construct the new one, including using the gym from the old Detroit High School.

\$2 million for Center for Hope and Safety's HOPE Plaza Housing and an economic development project.

\$2 million for the Salem YMCA's Veteran Housing project.

\$2 million for Brian's Place, a program through Mid-Willamette Valley Community Action Agency.

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