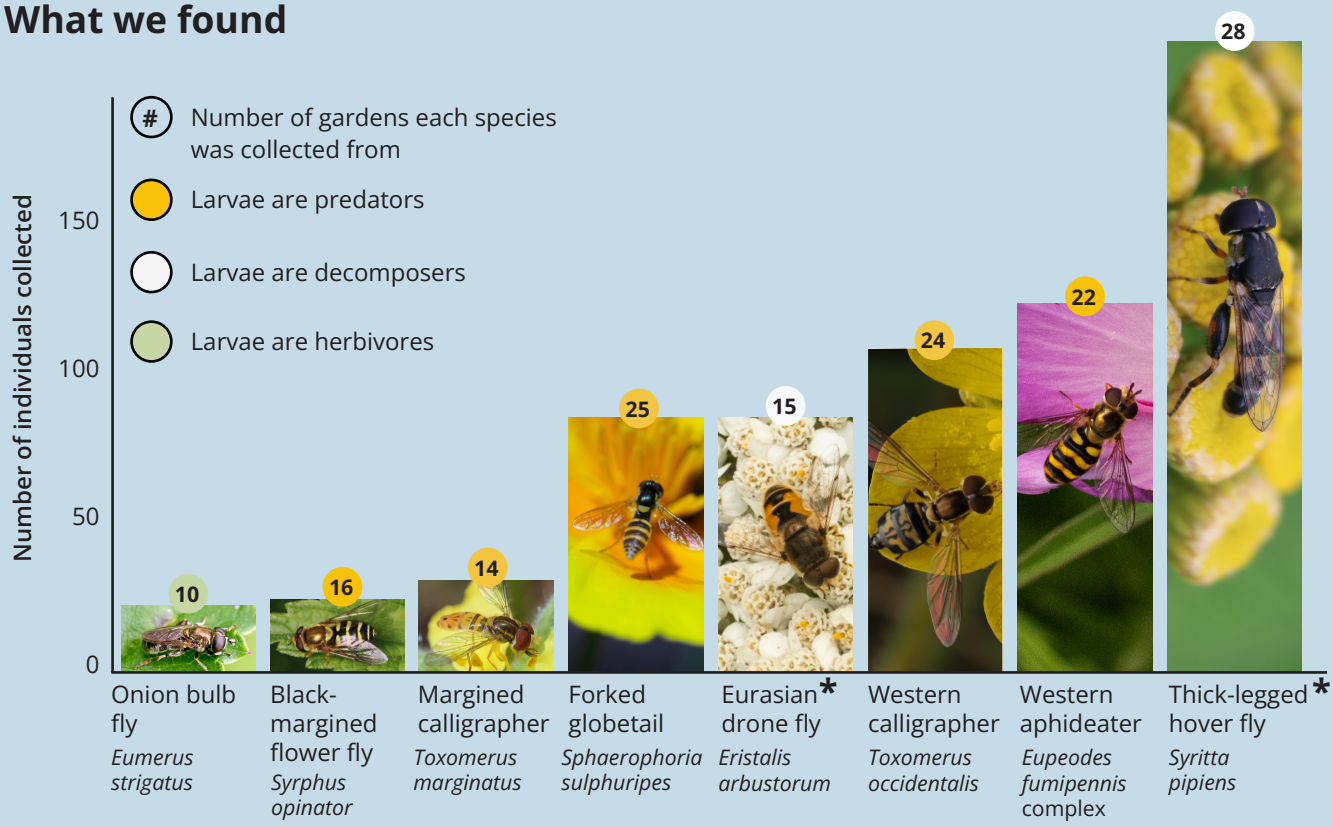
GARDEN ECOLOGY LAB BRIEFS
A joint effort of 10-Minute University™ and Oregon State University's Garden Ecology Lab

Common Hover Flies in Oregon Gardens

Our research

Hover flies, also known as flower flies or syrphid flies, belong to the fly family Syrphidae. During their adult stage, they are important pollinators, visiting flowers to consume pollen and nectar. Many hover flies are beneficial predators as larvae, but some are decomposers or even plant pests. As a group, they are understudied compared to other pollinators. We surveyed 30 gardens across Corvallis and the Portland metro region to identify hover fly species found in Western Oregon gardens. All gardens were privately owned, except for 2 demonstration gardens managed by Master Gardeners, and 2 community gardens. Over one season (2024), we visited gardens multiple times to collect hover flies. Here, we report the most common species found across our garden surveys.

What we found



* = Non-native species
Photo credits, left to right: Tina Ellegaard Poulsen, @Quillipede, Elliot Ariel, Mr. Satterly, Devon Johnson, @Quillipede, Devon Johnson, Jackson Kusack.

We collected 792 individual hover flies and identified them to 28 unique species. Within gardens, the hover fly species richness (number of species) ranged from 2 to 15. Of the most abundant species, all but 2 were native to Oregon (*Eristalis arbustorum* and *Syritta*

pipiens). Half of the most common species were predators (insectivores) at the larval stage, feeding on other insects. Two were decomposers (detritivores), which feed on decaying matter. Only one of the most common species was an herbivore, the onion bulb fly, which are considered minor garden pests, feeding on various bulbs.

How does this relate to your garden?

Hover flies are unique from other pollinators because they provide gardeners with mutliple services: pollination, pest management, and nutrient cycling! Insectivorous hover flies often feed on common garden pests, including aphids, thrips, and scale insects. Aphideaters, for example, can feed on hundreds of aphids during their larval phase, helping to suppress infestations. Decomposers help break down compost and leaf litter, which can benefit garden soil health.

Hover fly communities help reduce or eliminate the need for insecticide applications, while also providing pollination and decomposition services in gardens. Like other pollinators, hover flies benefit from reduced maintenance and disturbance in garden spaces, such as leaving leaf litter and woody debris for overwintering. They are sensitive to competition, and may leave a garden to forage elsewhere if there are not enough flowers available. Trees can provide shade to heat-sensitive hover flies, while also providing floral resources for adults and leaf litter for larval development. For other recommended plants, refer to our brief entitled 'Garden Plants for Hover Flies'.

Additional Information

• Pizante R, Acorn JH, Jiménez IP, et al. 2025. Treed field borders net-export over 82,000 more hoverflies per km every week into canola crops than herbaceous field borders, regardless of mass-flowering crop bloom. Agriculture, Ecosystems & Environment. 377:109271. https://doi.org/10.1016/j.agee.2024.109271

• Johnson, D. 2022. The Underappreciated Syrphid Fly. Garden Ecology Lab Blog. https://blogs.oregonstate.edu/gardenecologylab/2022/08/23/the-underappreciated-syrphid-fly/

• See our other brief on hover flies by visiting the "For Gardeners" page from gardenecology.oregonstate.edu

Master Gardener™ Advice

• Contact your local extension office for Master Gardener advice, or look for Master Gardeners at local farmers' markets.

• For more 10-Minute University™ handouts, videos, and the class schedule, visit cmastergardeners.org.

This Garden Ecology Lab brief was created with support by members of the Garden Ecology League and Garden Ecology Circle. To learn how you can support garden research and outreach, scan the QR code.