

INSECT INSIGHTS

Make Documenting Insects Part of Your Contribution to Citizen Science

by Danae Wolfe

Gardening has long been celebrated as a way to beautify your home landscape and support wildlife. But what if your garden could do more than just provide beauty and sustenance? What if it could also contribute to scientific research and conservation efforts? In this article, we're diving into community science programs that can place your garden, however modest, at the center of scientific discovery and exploration.

COMMUNITY SCIENCE

Community science is a collaborative approach to science that empowers individuals to actively participate in research and data collection by contributing observations, insights, and experiences to a wide range of projects. By connecting professional researchers with the general public, community science mobilizes the collective power of volunteers, enabling them to make meaningful contributions to our understanding of the natural world and the complex challenges it faces. And you can do it all from the comfort of your own garden!

Here are five community science programs to consider as you continue on your journey toward supporting insects and other wildlife in your home garden.

Journey North

Journey North is a community science program that tracks the progress of seasonal changes as they sweep across North America. Gardeners involved in Journey North can record the first blooms in their gardens, the return of specific migratory bird species, or the emergence of certain insects. These observations help researchers understand how climate change and other environmental factors influence the



Kids can get involved in community science by making observations in the garden.

timing of these events. By contributing to Journey North, you can become part of a continent-wide effort to unravel the intricacies of nature's schedule, also known as phenology. Learn more at journeynorth.org.



Journey North is a community science program that tracks seasonal migrations of species like monarch butterflies.

The Lost Ladybug Project

Gardeners adore ladybugs (aka ladybeetles) for their voracious appetites for pests, but native ladybugs have experienced population declines in the last 20 years. The Lost Ladybug Project engages gardeners and nature enthusiasts in the search for ladybug species that were once common but are now rare or disappearing. Participants are encouraged to photograph and document ladybugs they spot and add them to the project's database. The Lost Ladybug Project helps scientists monitor and understand changes in ladybug populations and distribution over time, information that is vital for developing strategies to conserve these beneficial insects. Learn more at lostladybug.org.

iNaturalist

In the digital age, a smartphone can be a powerful tool for both nature enthusiasts and scientists. iNaturalist allows gardeners

and others to document and share their observations of plants, animals, insects, and other species. The platform connects curious nature lovers with expert scientists and researchers, with researchers confirming identification of species and using data to track species distribution. These observations can be used in research projects, conservation efforts, and even in the discovery of new species. By contributing their observations to iNaturalist, gardeners can actively participate in creating a comprehensive snapshot of local biodiversity and how it might shift over time. Learn more at inaturalist.org.

Bumblebee Atlas

North America is home to 46 species of bumblebees. Unfortunately, many of these species are in decline. The Bumblebee Atlas program invites gardeners to track bumblebee populations so scientists can better understand and track species distribution, population shifts, and habitat associations. The data collected can also help researchers understand where conservation and habitat restoration efforts are needed to support declining species. Learn more at bumblebeeatlas.org.

Firefly Watch

For years, gardeners and homeowners in general have noted seeing fewer and fewer fireflies in their neighborhoods. Firefly Watch is hoping to change that by harnessing public fascination with these bioluminescent insects to gather



Need help identifying something? Seek by iNaturalist is a mobile app that makes it easy to identify species in the garden with just the snap of a photo.

data on their populations. Gardeners can participate by observing firefly activity in their own yards and recording their sightings. By becoming part of Firefly Watch, gardeners can contribute to the understanding of firefly behavior and the factors that might be impacting their populations, such as light pollution and habitat loss. Learn more at massaudubon.org/programs-events/community-science/firefly-watch.



Firefly Watch is a program that invites gardeners to observe and track firefly populations.

GET THE KIDS INVOLVED

Community science can be a powerful tool for bridging the gap between theoretical classroom learning and real-world experiences, transforming children from passive recipients of knowledge into active participants in scientific discovery. By observing ladybugs, documenting bumblebees, or tracking the emergence of fireflies, kids can engage in genuine scientific inquiry. This hands-on experience can spark curiosity, encourage children to ask questions, and foster a view of one's backyard as a dynamic laboratory for learning. Most importantly, as children witness the impact of their contributions on wildlife conservation and environmental research, they develop a sense of empowerment, knowing that their actions hold the potential to drive positive change for nature.

As your garden becomes a center of learning and discovery, invite the children in your life to help you make scientific observations. With just a few simple tools, like hand lenses, binoculars, and cameras, they'll be making observations and discoveries in no time. And you might be surprised at how quickly they become voices for environmental protection and sustainable practices in your community. In a world facing complex ecological challenges, nurturing the next generation of environmentally conscious citizens is critical, and backyard community science programs offer an effective avenue to achieve this goal.

In short, gardening for pollinators and other insects takes on a new dimension when paired with community science. Through these initiatives, you can become more than just a cultivator of plants; you can become a steward of the environment, a partner in research, and an advocate for conservation. Your garden is not only a sanctuary for plants and animals but also a living laboratory that can help us better understand and protect the intricate web of life that surrounds us. ■

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