

# The Garden's Defense Army: Beneficial Insects

By Jose German-Gomez

We welcome the bees to our gardens with joy, admiring their tireless work. Everyone knows how valuable bees are to the garden and how they contribute to the ecosystem. But while bees play an essential role as pollinators, **they are not the only beneficial garden insects in your garden.**



*Hoverflies often mimic the color patterns of wasps and bees, to fool predators into thinking that they are threatening! However, hoverflies are incapable of stinging and are totally harmless.*

Besides pollination, beneficial insects have other important ecological functions, such as acting as predators of insect pests. **They form a free army defending your garden from predators.**

According to the Smithsonian Research Center there are around 200 million insects for each person! That is a lot of bugs. Of course, in the immense population of insects there are some "bad" bugs that can be destructive: crop pests destroy billions of dollars' worth of food every year. A single locust eats its own body weight daily, and some diseases are transmitted to humans by certain insects. However, **only about 1% of insects are harmful.** Many others play a very important role in our survival.

As a gardener and urban farmer, I know we need insects more than they need us. Our food chain depends on their work, but we have been brainwashed by the chemical industry into thinking all insects are bad and we need to kill them.

## Three reasons we need insects:

1. **Insects are the foundation of the food web**, feeding birds, fish, reptiles, amphibians, and mammals. Those annoying gnats and mosquitoes provide food for bats, fish, and birds. According to the Audubon Society about

96% of the world's birds are insect eaters. And insects are not just for the birds; approximately two billion people worldwide include insects in their diet.

2. **Insects' role in pollination is crucial to most gardens and agriculture.** Their value is incalculable. Pollination by bees and other insects is the key to ensuring that our diets are diverse with abundant vegetables and fruits. The insects gather nectar and pollen for food, in the process fertilizing plants so they can form fruit and set seed. According to the USDA, insects pollinate about 80% of all flowering plants and 80% of agricultural crops. Specific interactions have evolved over time, so certain plants can only be pollinated by certain insects. Figs depend on the fig wasp for pollination, and bottle gentian, a beautiful native flower, relies on bumble bees.
3. **Predator insects keep harmful insect populations in check.** For example, one wasp can eat two pounds of other insects in a 2,000 square foot garden. Spiders eat 400-800 billion tons of insects a year! A ladybug is a voracious aphid eater, consuming up to a thousand aphids during its larval stage, plus several hundred more as an adult.

## **Some of the most beneficial insects in our gardens:**

### **1. Bees**

Bees usually top the list of beneficial garden insects. They pollinate your plants, enabling more flowers (and vegetables) to grow.

### **2. Lady bugs**

Also known as lady beetles, they feed on pest insects, such as **aphids and mealybugs**. Their larva, known appropriately as aphid lions, have especially voracious appetites.

### **3. Hover Flies**

Hover flies, aka syrphid flies, are a common sight in the garden. Many are mistaken by gardeners as being a bee or a wasp due to their mimicking coloration pattern of black and yellow stripes on their abdomens. But these stingless pretenders are important beneficial insects in the garden; feeding on the likes of aphids, thrips, immature leafhoppers, and other small, soft-bodied plant pests. They are one of the first beneficial insects to become active in the spring and get an early start helping to suppress those early aphid populations on certain ornamentals and vegetables.

#### 4. Solitary Wasps

Solitary wasps are carnivores that keep insect populations in check by capturing other invertebrates to feed their young. Unlike social wasps like hornets and yellowjackets, they are totally harmless; building individual nests either above or below ground.

#### 5. Lacewings

Both adult lacewings and their larvae eat aphids, caterpillars, and other garden pests. While they sometimes take nectar from flowers, they will not harm your plants.

#### 6. Moths

Often overlooked in favor of their showy butterfly cousins, **moths are second only to bees as pollinators**. When other pollinators have settled down for the night, the nocturnal moths are doing their invaluable work. Moths are also a key part of the food web for birds, mammals, and other insects.



*Beneficial thread-waisted wasps prey on many pest insects.*

**“Gardening for life” is a holistic approach in which soil, plants, animals and humans coexist. Recognizing other creatures’ roles in maintaining our ecosystems and letting them share “our” space is the least we can do to support our local environment. Let’s welcome pollinators and other beneficial insects to our gardens.**

*Photos: Karalyn Lamb*