

## INSECT INSIGHTS

### Nature's Gardeners: Celebrating Ants

by Danae Wolfe



Drawn by sweet nectar, ants—like these carpenter ants (*Camponotus castaneus*)—are often attracted to flowers, but rarely cause direct damage to blooms.

When it comes to the diverse array of beneficial insects in our gardens, ants may not always be the first creatures that come to mind. In fact, we often view ants as just the opposite of beneficial. But with their complex and intricate societies and tireless work ethic, ants play essential roles in our gardens.

Worldwide, there are over 15,000 known species and subspecies of ants. Despite their small size, they've become one of the most successful and abundant insect groups on the planet, outnumbering humans 2.5 million to one. Taxonomically, ants are in the order Hymenoptera along with bees and wasps. They live in highly structured colonies, where each member has a specific role to play, using pheromones to coordinate their activities and job duties.

#### BENEFITS OF ANTS

Ants are found in diverse habitats worldwide, and all play important roles in keeping the world's ecosystems—and our home gardens—healthy. Underground ant tunnels create channels in the soil, improving aeration and water penetration. This facilitates root growth and nutrient uptake by plants, contributing to overall plant health. Improved soil structure also allows for better drainage and reduces the risk of waterlogging, which can be detrimental to plant roots.

Ants also help to break down organic matter in the soil by collecting and consuming dead insects, fallen fruits, and other decaying material, effectively recycling nutrients back into the environment. Many species prey on insect larvae, aphids, caterpillars, and other small insects, keeping pests in check and maintaining a balanced ecosystem,

which can minimize the need for chemical pesticides. And ants that actively collect and store seeds help plants to colonize new areas by transporting seeds.

#### COMMON GARDEN ANTS

Understanding common ant species can provide valuable insights into their behaviors and the benefits they provide. It can also clue you into when management strategies might be needed to control their populations. Here are some of the most common species you might encounter in the garden.

#### Carpenter Ants (*Camponotus* spp.)

Carpenter ants are large ants known for nesting in decaying wood. While they can occasionally cause damage to wooden structures, they play an important role in decomposition, particularly in forest ecosystems where they aid in nutrient recycling.

#### Fire Ants (*Solenopsis* spp.)

Fire ants are small reddish-brown ants. True to their name, they are notorious for their painful sting. Unlike many species of ants that bite, fire ants use their mandibles to grasp prey, then sting from their abdomen. Despite their ability to pack a painful punch, they're an important predator of pests, including termites, ticks, and boll weevils.

#### Odorous House Ants (*Tapinoma sessile*)

Also known as sugar ants, odorous house ants are tiny brown ants that are found throughout most of the continental U.S. Common household pests, they forage for honeydew produced by aphids and other sugary foods including floral nectar. While they may be considered a nuisance indoors, they help with soil aeration and nutrient recycling in the garden.



Harvester ants can aid in seed dispersal during their foraging activities.

### Harvester Ants (*Pogonomyrmex* spp.)

Known for their large colonies and foraging activities, most North American species of harvester ants are found in the dry, sandy soils of the western U.S. While the ants are largely seen as seed predators, they sometimes drop or lose seeds on their way back to the nest, helping to disperse plants to new areas.

### Immigrant Pavement Ants (*Tetramorium immigrans*)

Immigrant pavement ants are one of the most commonly encountered ants in the United States. Hailing from Europe, these small ants were introduced to the U.S. in the early 19th century and thrive in human-modified environments. Though non-native and sometimes considered invasive, immigrant pavement ants



Several ant species have a symbiotic relationship with aphids where the ants protect and “farm” aphids in return for a share of their sweet honeydew excretions.

help to aerate soil, disperse seeds, and recycle nutrients. They can also serve as an important predator in crop fields.

### MANAGING ANTS

Ants provide numerous benefits to the garden, but you might find yourself in a situation where you’ll need to control their population. After all, no one wants to step on a fire ant mound when out weeding! But before deciding on the best management tactic, spend time observing ant activity in your garden to determine whether intervention is necessary. Small ant populations that do not pose a threat can usually be left alone.

If control is needed, try using diatomaceous earth to create natural barriers around your home or garden. Diatomaceous earth, which is available from most garden supply retailers, is a natural product composed of fossilized remains of algae. It works by dehydrating and killing insects and other arthropods that come into contact with the fine powdery material, which has microscopic razor-sharp edges that damages their exoskeletons. Be sure to wear a mask when applying diatomaceous earth to avoid inhaling particles.

If ant populations become more problematic, consider using ant baits. Baits work by utilizing a combination of attractant food sources like sugar or honey, and slow-acting toxic substances that ants carry back to the nest. In severe cases where ants pose a threat to people or structures or infest the garden despite management efforts, it may be necessary to seek professional assistance from pest control experts who can provide more targeted solutions.

Despite their small size, ants play many roles in the world. By understanding their benefits and implementing effective management strategies, when necessary, we can coexist with these tiny gardeners and reap the rewards they bring to our gardens. ■

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