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Ants and Plants

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Ants are often considered pests, especially when they are inside the home, but they are important beings in the insect world. First and foremost, they are great decomposers. We would be up to our eyeballs in dead animal and plant debris if not for the multitude of ants feeding on carcasses in the wild and even in the tamer urban areas.

I once watched a dead mouse, on the walkway of vacationing neighbor, be consumed by a constant stream of ants over the seven days I brought in her mail. Since the no one was home, I let the natural happen and just observed how long it took. All trace of the dead rodent was gone by the end of the week.

Ants help plants too. They form mutualistic relationships with plants to the benefit of both the ant and the plant. Violets, bloodroot, trillium and several other wildflowers depend on ants to spread their seeds away from the original mother plant. These plants have evolved to develop a fatty coating called an eliasome, which is the perfect food source for ants. Ants will carry the seed to an underground storage area, kind of like an ant pantry for the colony. There all the ants can eat the lipid rich outer part of the seed and then discard the actual, now naked, plant seed. The seed can then germinate and grow in its new location.

Another well-known ant and plant relationship is with peonies. Ants can be found on peony buds in the springtime. The flower buds are exuding sugar-rich droplets from a waxy coating that holds the buds closed. (Image by C. Quish)

Biologists have different opinions as to whether the buds would fully on their own or not without the ants chewing on the wax as they feed on the sugary exudate. The ants also act as guards, protecting the buds from detrimental insects that could otherwise damage the plant and flower buds.

Ants form protective relationships with aphids, guarding them from predatory insects like ladybeetles. The aphids exude honeydew, another rich sugary substance that the ants eat. Some ant species are even known to bring aphids underground into their nests.



Ants are also incidental pollinators. They will crawl all over flowers in search of a sugar source. Flower blossoms produce sweet nectar near sites of pollen production. The pollen gets stuck on the ants' body parts and eventually falls off onto the blossom of another flower often resulting in fertilization.

Ants are also nature's mini-rototillers. All of their digging and tunnel making creates pathways for air and water to reach further into the soil. Plant roots need oxygen as well as water to grow and develop, and ant tunnels can be vast and deep, benefitting plants. Ants will move soil grains from deep down areas and will deposit them higher up the soil profile, effectively relocating soil nutrients where plant roots are able to reach them.

Occasionally ants can damage plants in the garden by feeding on newly planted seed and tiny seedlings. It has been reported that sprinkling cinnamon over the seedbed will repel ants in the vegetable garden. Diatomaceous earth (DE) is a natural contact insecticide. It kills insects that crawl over its sharp edges by cutting into their cuticle and desiccating them. DE comes from dead sea-creatures called diatoms. DE has to stay dry to be effective. Reapply after a rain.

Another natural ant killing option is to mix borax half and half with apple jelly in several small bowls. The ants will love the sugar from the jelly and inadvertently ingest the borax, which they cannot digest and it will kill them. Ants will also take the mixture down into their nest to feed to other ants, knocking out much of the population. Boron can be toxic to animals, so keep from pets and wildlife. Funneling the borax/jelly mix into a narrow necked water bottle would keep out animals while letting ants have access is a good solution and this will keep rain out, too.

If you have questions about ants in your yard or on other gardening topics, feel free to contact us, toll-free, at the UConn Home & Garden Education Center at (877) 486-6271, visit our website at www.ladybug.uconn.edu or contact your local Cooperative Extension center.