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Pest Check

Scientists Find How Density of Ants Relates to Ecosystem

Scientists at the University of Exeter found that ants have two great effects on the environment, by being both 'ecosystem engineers' and predators. The scientists studied the impact of different combinations and densities of black garden ants (*Lasius niger*) and common red ants (*Myrmica rubra*). They found the ants affect the nutrients within the soil as they move the soil for colony construction and the ants prey on a wide range of other animals, including larger animals. These scientists found that a low population of ants within an area, increased the diversity and density of other animals, particularly herbivores and decomposers. However when the ants were at higher populations, they had no or opposite effects on the presence of other animals. This demonstrates the possibility that ant predation could cause a decrease in other animal species, which could have a negative effect on the ecosystem.



Photo by Bart Drees, Professor and Extension Entomologist, Texas A&M University.

Catnip: Repellent of Blood Sucking Flies?

Scientists have proven that catnip is 99% effective in repelling the blood-sucking stable fly that attack horses and cows, which was published in February 2011 in *Biology and Nature*. Stable flies not only bite, but they can also transmit diseases. Cattle that have many stable flies biting them, tend to produce less meat and milk, have trouble reproducing, and can develop fatal diseases. These scientists made pellets composed of catnip oil, soy, and paraffin wax, and then spread the pellets in a cattle feedlot. Within minutes, the pellets repelled the flies away, with the repellency lasting for around 3 hours. The scientists are now working on making the repellency last longer, which could protect livestock both in feedlots and in pastures.



Adult stable fly. Photo by Sonja Swiger, Assistant Professor and Extension Entomologist, Texas A&M University.

Crane Flies Are Out and About

Now is the time where we begin to see crane flies become a nuisance as they enter into buildings. Sometimes these flies are called “mosquito hawks” but unlike mosquitoes, these adult flies do not feed. These flies are large in size with long legs and they are only alive long enough to mate and lay more eggs for the next generation. Even though crane flies are not medically important, they are a nuisance when they enter homes and other buildings in large numbers.

The larvae of crane flies are gray in color and cylindrical in shape. These larvae are usually found in layers of decomposing leaves or in compost piles. They have chewing mouthparts and feed on organic matter. The larvae are considered beneficial, since they are decomposers.

Usually no control is needed since the adults are only found for a couple of weeks out of the year. The best advice is to keep doors and windows closed as much as possible to prevent them from entering buildings.



Adult Crane Fly. Photo by Bart Drees, Professor and Extension Entomologist, Texas A&M University.

Spring Weather Means Attack of the Aphids!

Aphids are small, soft-bodied winged or wingless insects about 1/25 to 1/8 inches in length. They can vary in color from black, green, yellow to even pink. Some aphids lay eggs, while others give birth to live young that can develop into adults in 7 to 8 days. Aphids have piercing-sucking mouthparts that remove phloem from the plant, causing distortions in young leaves and stunting new growth. They can also feed on flower buds, which can cause deformities.

Since aphids feed on phloem they excrete honeydew. Honeydew is a shiny, sticky waste product that collects onto lower lying leaves. Once deposited, the honeydew is a nice food source for sooty mold which will begin to grow on the underlying foliage. Sooty mold will inhibit photosynthesis, so its growth can potentially cause harm to the plants.

Some Control Options

Some Non-Chemical Control Options: Conserve beneficial insects, such as spiders, praying mantids, assassin bugs, lacewings, lady beetles and parasitic wasps in the landscape. Also spraying water streams is effective to dislodge aphids from plants.

Some Chemical Control Options: Insecticidal soaps and oils can be used to effectively control aphids as contact insecticides. Other residual foliar insecticides containing such active ingredients as permethrin, cyfluthrin, carbaryl, deltamethrin, pyrethrins and tebufenozide or systemic insecticides such as those containing imidacloprid or acephate can be used to effectively control aphids.



Photo by Bart Drees, Professor and Extension Entomologist, Texas A&M University.

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