



PEST MANAGEMENT



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The Pest Bulletin

Pests Invade in Fall

Now and during the months ahead our weather starts a gradual change, causing changes in pest problems as well. Some of the fall-invading pests in our area have already begun looking for food indoors, or a more protected place to spend the winter. Unfortunately, homes and other buildings are exactly what many of the fall invaders are looking for.

Some common fall invaders:

Rats and mice are like a "pest from hell"—who wants them? These have been multiplying outdoors all season, and now are searching more aggressively for ways to get indoors.



Ladybugs, particularly the spreading multi-colored Asian lady beetle pictured at left, can become a major invader. This insect was introduced to control crop pests, and then starting unexpectedly becoming an indoor pest. Some people are allergic to this beetle when it invades in large numbers.

Wasp and yellowjacket queens overwinter in protected places and start new colonies in the spring.

Ant colonies are huge this time of year, and some species become

constant invaders.

Many kinds of crickets invade homes in the fall, sometimes in large numbers

Other common fall invaders include stink bugs, boxelder bugs, cluster flies, clover mites, elm leaf beetles, root weevils, cockroaches, millipedes, and centipedes.

It's during these months ahead that our professional pest management services are especially important to protect you and your pets, as well as your home and belongings, from pests that can cause either damage or can sting, bite, or spread diseases.

Zika Virus Update



The Zika virus that is transmitted by mosquito bites continues to spread rapidly in Central and South America. Most recently the Bahamas was added to the list where Zika is being actively transmitted. Puerto Rico has already had almost 9,000 people infected with Zika.

In the U.S., there have been hundreds of cases of Zika, but in the beginning they were all people who caught the virus from infected mosquitoes while they were visiting other countries. Recently cases of local transmission in two Florida locations started appearing: first in the Wynwood neighborhood of Miami, and then Miami Beach. The Centers for Disease Control and Prevention is expecting the virus to start showing up in other areas.

Part of the difficulty in containing this virus is that only 20% of infected people show any symptoms, which most

commonly include fever, rash, joint pain, and red eyes. So a person can become infected during their travels, show no symptoms, be bitten when they come back and pass the virus on to the mosquito, which can then transmit it when it bites someone else.

If a pregnant woman becomes infected, the virus can cause various birth defects, including microcephaly, a condition where the baby's head is abnormally small. Recently the first case of sexual transmission of the virus from a person that was infected but showed no symptoms was documented. The Food and Drug Administration has new guidelines that all blood donated in the U.S. must be screened for Zika.

Take precautions to avoid being bitten by mosquitoes, especially when you travel to Zika areas. Visit cdc.gov for more information, and ask us about mosquito services we provide.

Pest Prevention Tip of the Month

Dense shrubbery flush with the ground provides shelter and hiding places for rats, mice, and other rodents. Pruning out branches near the ground eliminates this and reduces "rodent curb appeal." A good height to clear up to is about 18 inches off the ground.



Thank you for your business and referrals!

Zika Mosquitoes Notes



Aedes aegypti

The Zika virus can only be transmitted by two species of mosquitoes in the U.S., but these are widespread in the southern half of the country and have been found north as far as southern Minnesota and New Hampshire. These two mosquitoes, both in the genus *Aedes*, only fly short distances and generally stay within a *300 foot range*.

A person commonly becomes infected by traveling to a place where Zika-infected mosquitoes bite them. When they come to the U.S. and are bitten by one of our two species of mosquitoes that can transmit the disease, they pass the virus on to the mosquitoes, which then start infecting anyone they bite in their local area.

Mouse Meningitis

When we think of diseases associated with mice, we generally think of Hantavirus, Salmonella, and other diseases. But as we enter the busy rodent season people need to be aware of another mouse-borne disease. Called "mouse meningitis" by some, its full name is *lymphocytic choriomeningitis*, or LCM for short. The virus that causes this disease is *lymphocytic choriomeningitis virus*, or LCVM.

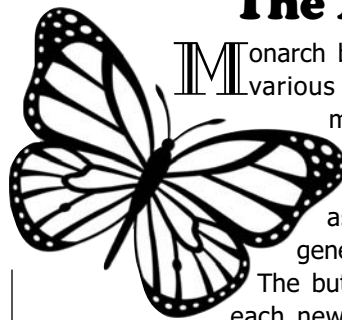
Like Hantavirus, people can get LCM when they are exposed to fresh urine, droppings, saliva, or nesting materials from infected mice. Only the common house mouse carries the virus (although pet hamsters can catch it from house mice). The Centers for Disease Control and Prevention estimates that about **5 percent** of house mice in the U.S. carry LCVM virus. The virus occurs throughout the country. Once mice are infected, they remain infected for their entire life and can continue to infect people and other mice.

Although mice never show any signs of the illness themselves, infected people start off with "flu-like symptoms", then the disease starts to have neurologic symptoms.

Pregnant women who become infected with the virus can pass the virus along to their baby, who may suffer serious consequences, including mental retardation.



The Amazing Monarch



Monarch butterflies are starting their annual migration to various warmer areas of the country, as well as the mountains of central Mexico.

These amazing creatures migrate south in the fall, with some populations traveling as far as 4,580 miles. In the spring, it takes several generations of the butterflies to cover this distance.

The butterflies mate and lay eggs along the way, with each new generation of adult butterflies continuing the journey north along the migratory route.

How do they keep flying in the right direction? It turns out that monarchs use two completely different navigation systems, depending on whether it is a sunny or cloudy day. When the **sun is shining**, monarchs navigate by the sun and use a *time-compensated sun compass*.

Until recently, scientists were stumped about how monarchs navigate on **cloudy days** with no sun to navigate by. It turns out that monarchs use geomagnetic clues—they use a sophisticated magnetic inclination compass system, using the angle of the Earth's magnetic field to guide their movement. This is similar to that used by much larger-brained migratory vertebrates such as birds and sea turtles.

But the new research shows that the navigation system monarchs use on cloudy days uses light as well as geomagnetic cues. Monarchs have special cells in their antennae that can detect ultraviolet light, and since that light penetrates clouds, it is a cue that they can use even on cloudy days.

In effect, on cloudy days monarchs use a very sophisticated *light-dependent magnetic inclination compass*. It turns out that these beautiful butterflies have a navigational system that is truly amazing!

Where are Bed Bugs Being Found?

A survey last year found that most bed bug infestations are being found in apartments, condominiums and homes. But bed bugs are also being found in the following places, listed in order from the most to the least often infested:

- Hotels & Motels
- Nursing Homes
- Office Buildings
- Schools & Day Care Centers
- Hospitals
- Doctor's Offices
- Trains, Buses, & Taxis
- Retail Stores
- Movie Theaters



Drones Battle Tsetse Flies



Ethiopia is using drones to help in the control of tsetse flies. These flies spread the dreaded sleeping sickness, a disease that starts with exhaustion and fever, and can lead to death if left untreated. The sleeping sickness parasite is transmitted by the flies when they feed on the blood of humans and animals in Sub-Saharan Africa.

Airplanes have been the main method of spreading sterile male tsetse flies. When the laboratory-bred males mate with wild female tsetse flies, no eggs are laid, and the populations of the flies are gradually reduced with repeated releases of the sterile flies.

The unmanned drones will be able to fly lower and longer than airplanes, and each flight can cover 40 square miles and release 5,000 sterile male flies.