

INTEGRATED PEST MANAGEMENT CHANGES PEST CONTROL

At Epson-Kowitz Pest Control, we know that our job is to protect the environment and yet control troublesome pests in and around your home. That's why we've adopted many methods in our pest control service. We believe this is a very intelligent approach to a complex problem. We call it Integrated Pest Management or IPM.

IPM puts together many pest control practices which prevent, suppress and eliminate pest problems.

These include physical, sanitation, mechanical and chemical methods. Our IPM techniques eliminate the requirements that support an insect population: food, shelter and water. In fact, removing just one of the requirements can disrupt the balance and help control pests.

That's where the term "integrated" comes in. It integrates many pest control methods into one service.

In order to protect the environment and your home at the same

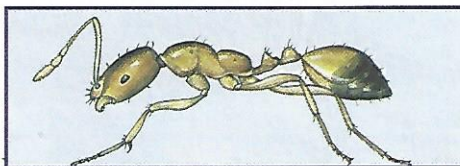
time, we may not use as much chemical as we used to. And we may be inspecting and monitoring more. In addition, we may ask that you help by disrupting the needs of the insects by removing harborages (sealing cracks and crevices), food (cleaning in "hidden" areas), and water (removing sources of moisture).

To learn more about the professional services available from Epson-Kowitz Pest Control, call us at 703-123-5555 or at 444-555-1111.

ANTS INVADe HOMES

They're everywhere. They eat almost anything! They have few natural predators. Ants. Those pesky creepy crawlies that produce bone chilling screams in home owners are among the most difficult-to-control pests in the world.

The National Pest Control Association says pest control experts list 27 common varieties of house-infesting ants in the U.S. In most cases, ants are merely a nuisance, but some species can cause damage. This damage includes



contaminating food, destroying seeds, damaging plants, and attacking and injuring (sometimes killing) animals, including humans. Fire ants, common throughout the south, attack and produce a painful sting.

Structural damage by insects is not limited to termites. Carpenter ants can

damage structures sometimes to a greater extent than termites. They can excavate wood and create smooth flowing tunnels, weakening a structure.

Ant control in a home depends on the species since their behavioral patterns, likes and dislikes often differ. Various insecticides and baits are available over the counter, however, their effectiveness is sometimes limited. Professional pest control companies employ and train technicians in this complex art of ant control.

PEST QUIZ

MATCH THE INSECT NAME
TO THE PICTURE.

SILVERFISH

1.

Characteristics:

Gunmetal. Wingless with flattened body

Size:

1/2" to 3/4"

Location:

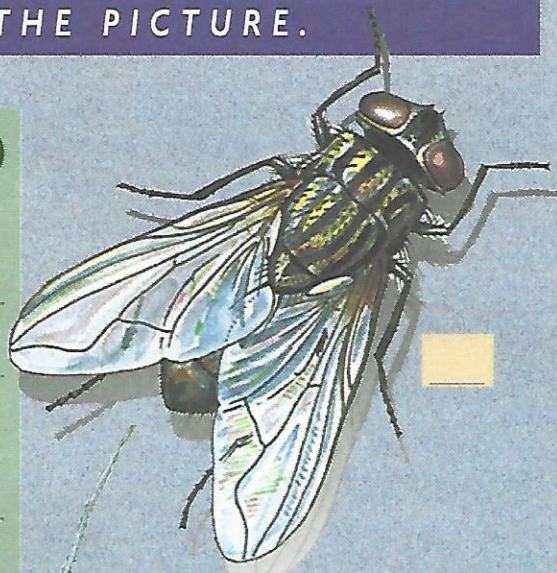
Cracks and crevices. Prefers moderate temperature and high moisture.

Food:

Glue, starched or pasted objects, paper and rayon, human foods.

Damage:

Damage to wallpaper, books, clothes, curtains and foods.



MOSQUITO

2.

Characteristics:

Small biting insect.

Size:

Up to 1/4"

Location:

Larvae develop in water. Adults found wherever animals are.

Damage:

Carry and transmit disease.

Read the description of each insect and then fill in the number from each insect in the box on the illustrations.

HOUSE FLY

3.

Characteristics:

Black/brown.

Size:

Up to 1/2"

Location:

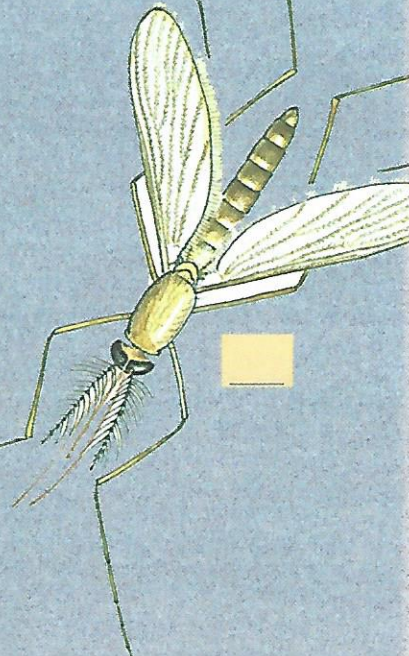
Anywhere in the world, especially near food.

Damage:

Carry and transmit disease.

Comments:

Sanitation play important role in control.



COCKROACH TRIVIA

The fastest recorded speed measured for the American cockroach is nearly 2.0 miles per hour, or nearly 75 centimeters per second! In the absolute sense, this is a much slower speed than many vertebrates are able to attain. In relation to body size, however, it is remarkably fast. If speed were increased proportionally, an American cockroach the size of a lion could run about 50 miles per hour.

Cockroach excrement and body parts are major allergens in house dust.

The German cockroach is not really German. In fact, the Germans call it the Prussian cockroach. It is thought to have originated in Southern Asia.

Most cockroaches are unlike the majority of insects in that their exoskeleton is coated not with a waxy layer but with a greasy one. Among other things, this characteristic enables cockroaches to slide into narrow cracks and crevices where even the human foot cannot reach them.

The Madagascar hissing cockroach has become a popular pet in some parts of the U.S.

Cockroaches are known assassins of their roommate, the bedbug.

In some parts of the world, roaches are profitably raised for chicken feed.

Among all the attributes of the city of Dallas, Texas, is the Cockroach Hall of Fame.

The world's largest roach (which lives in South America) is four inches long with a seven-inch wingspan.

A cockroach that has just shed its skeleton is white with black eyes. After eight hours, it has regained its regular coloring.

Cockroaches spend 75% of their time just resting.

There are 4,000 species of cockroaches worldwide.



Cluster flies can cluster in homes

Fall arrives. You open the windows to let the sweet air into your previously closed home, and alas upon lifting the window you find what appears to be several hundred “dead” flies. But wait, a few of them are beginning to move. They are not dead! You slam the window, hoping that none escape into your home!

What are these flies and why are there so many? And why do they appear to be coming alive?

What you see are known as Cluster flies and they become pests of homes, schools, hospitals, and commercial buildings throughout much of the United States. Cluster fly larvae parasitize a small earthworm known as *Allolobophora rosea* during the summer. Near fall, the adults emerge from the soil and look for a nice, warm place to hibernate, i.e. your attic or window sills. These crafty little insects will travel over a



mile for a suitable hibernation site.

Cluster flies overwinter and emerge from hibernation in the spring to breed and lay eggs on the soil surface near the small earthworms which the young infest.

Hibernation habits of Cluster flies are the most troublesome because of their sheer numbers. Stimulated by warm weather, they begin to become active again in early spring and seek openings to return to the outside.

If you notice Cluster flies in your home, call us and we'll most likely apply an exterior perimeter treatment which will help keep them out in the fall when they tend to look for likely spots to hibernate.

In the meantime, you can sweep or vacuum the flies from the window or attic and dispose of them. If you use a vacuum, remember to empty the bag when you are finished!

NIBBLERS ON THE LOOSE

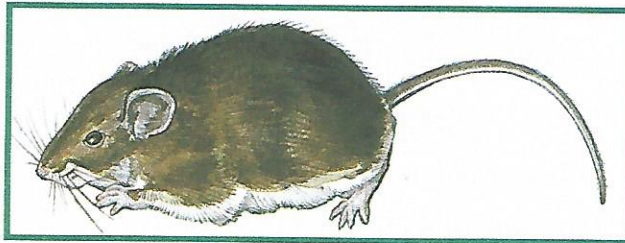
You haven't examined those boxes in your storage room in several years. Today's the day! You reluctantly open a box and find...eee gads! It looks like confetti! Something's been nibbling into the box and its contents. Mice!

The house mouse is the number one household rodent pest in all parts of the country, urban and rural areas as well. The meaning of the word “rodent” is “to gnaw” and rodents are well equipped to carry out this activity. Sharp, constantly-growing upper and lower pairs of chisel-like incisor teeth are their gnawing equipment. Mice are notorious nibblers, eating very little at one time, but they can chew what looks like a lot of materials when preparing a nest.

The house mouse can produce 8-10 litters each year and each litter contains five to seven young mice. Within 21 days, the young are active outside the nest and within 42 days are sexu-

ally mature and ready to reproduce. This exceptionally short life cycle explains why seeing one mouse (or a sign of a mouse) suggests that several are hiding behind the scenes.

Mice aren't long-distance travelers. They stay very close to their nest if food and water are present and, contrary to what you may have heard, they eat very little only about 1/10 of



an ounce a day. Their preferred menu includes seeds, grains and generally any food materials they contact. When they do move about, it's usually under the cover of night.

You may notice signs of mice in your home during the fall when they naturally enter to escape cooler

weather. You can take several precautions to prevent mice from entering your home.

① Be sure all screens and doors fit tightly and that there are no gaps.

Check the space under the door as well. A mouse can enter a hole only 3/8" across!

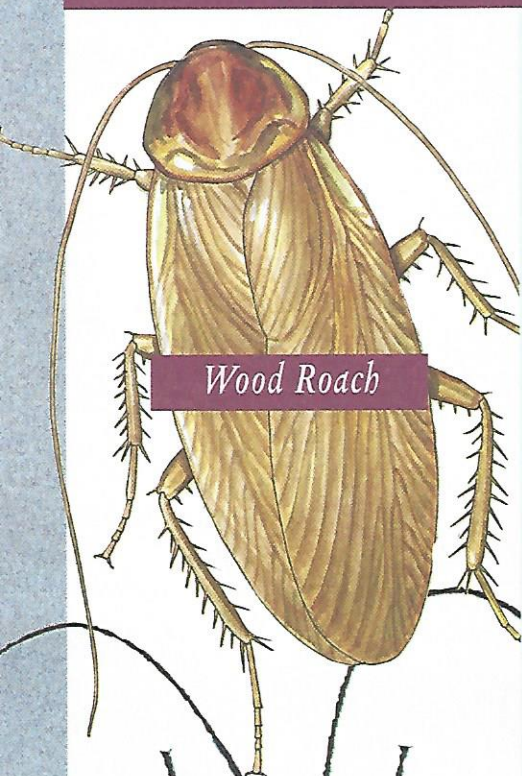
② Eliminate any grain materials from your storage area or house. This includes fall door decorations containing wheat or corn that you may have stored.

③ Keep shrubbery and vegetation trimmed away from the house to remove natural pathways into your home. Plants serve as shelter and food for these culprits.

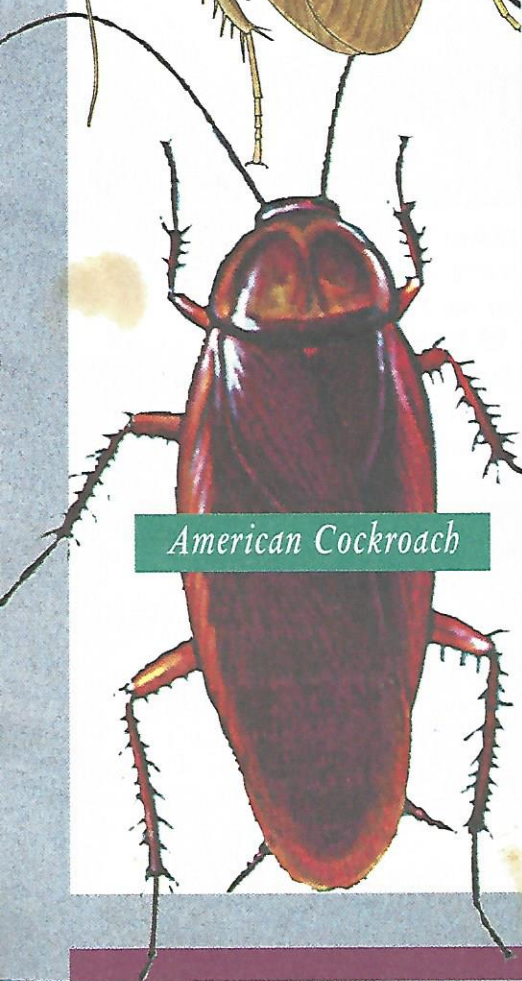
④ Seal up any holes on the outside of the building that may allow mice to enter. This includes points where utility lines enter the structure such as conduits for water, electricity, air conditioning, drain pipes and vents.

Call us today to help eliminate rodent problems from your home.

Slimy. Disgusting. Ugly. Creepy. Cockroaches!



Wood Roach



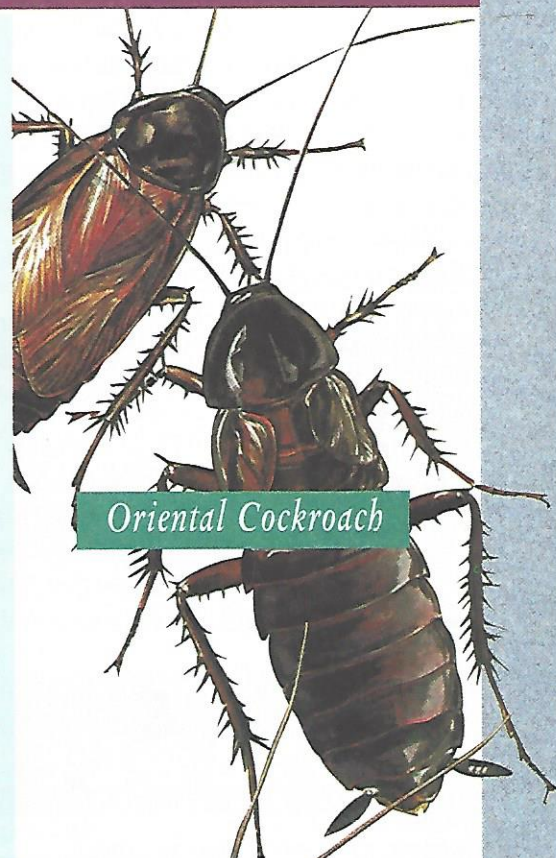
American Cockroach

No one wants 'em. Yet they've persisted for more than 350 million years despite man's attempts to get rid of them. Without control, one pair of German roaches can expand to more than 2 million in less than a year.

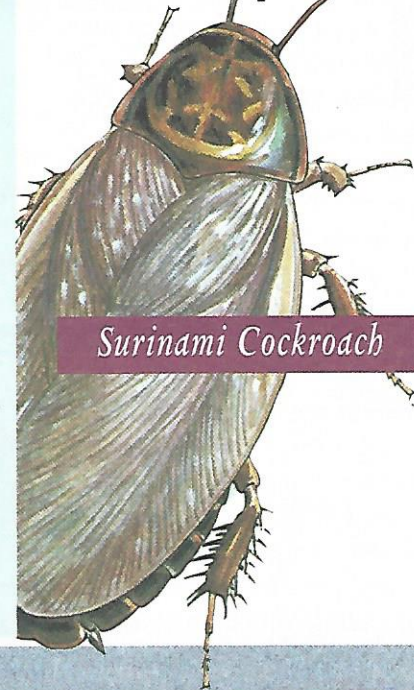
Roaches are found in every part of the U.S. They like nearly any area humans like especially where food, moisture and warmth are abundant. Cockroaches prefer darkness and crawl into amazingly small crevices as small as the thickness of a dime! An adult cockroach can live for a month without food as long as water or moisture is present.

Roaches carry and spread diseases. It's not unusual for bacteriologists to find salmonella bacteria (which causes food poisoning in humans) on the bodies of cockroaches. Additionally, cockroaches are believed to spread viruses and their presence can cause allergic reactions for many people, especially asthmatic children.

What can you do if you find cockroaches in your living environment? The most important method of cockroach prevention and control is sanitation. Even a few crumbs that slip down beside a stove, for example, can serve as a gourmet dinner for several cockroaches for some time.



Oriental Cockroach



Surinami Cockroach

A-1 Pest Control

3636 S Nettleton Springfield Mo. 65807