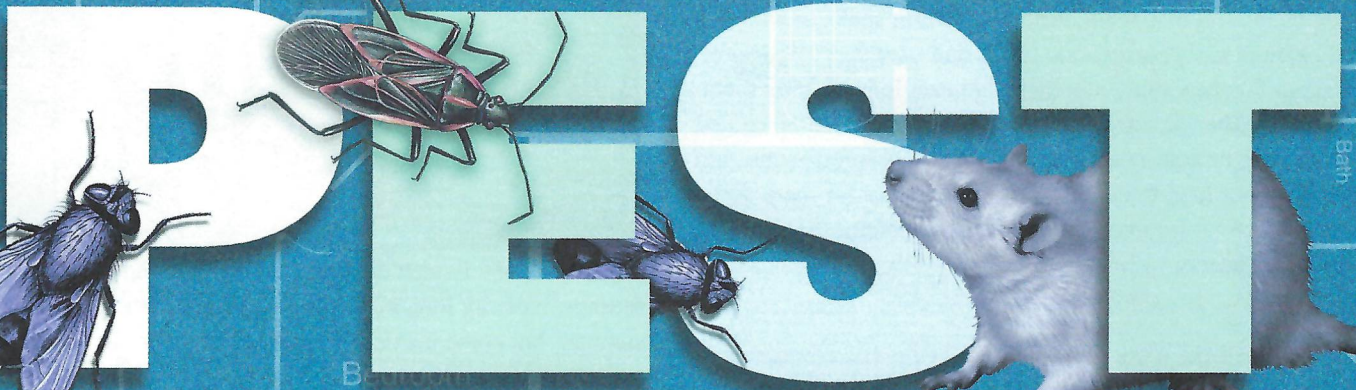




PIED PIPER PEST CONTROL PRESENTS...



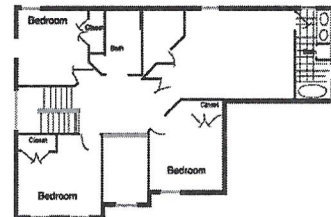
Gazette

Keeping the Cold Out Keeps the Pests In

When winter winds blow or storms rage outside, most of us are glad to have a nice warm house, with doors and windows that close tight, keep the cold out and the heat inside. We insulate, cover vents and caulk all the cracks to seal out the cold as much as we can. This effort to seal even the tiniest openings has the added benefit of keeping outdoor pests from coming indoors. We call this exclusion, and it is an important part of an effective Integrated Pest Management (IPM) strategy for our homes. On the other hand, any pests that were already inside, or that we bring in after we have "sealed up the

house for winter," will also be sealed in with us. They will be protected, too, from those natural fluctuations in temperature and humidity (moisture) that might have affected them and helped keep their populations in check before.

Examples of the kinds of pests which may have already been inside your home may include ladybird beetles, flies, carpet beetles, certain bugs or small rodents which came in before you "winterized" the house. Some which may have been brought in later could include clothes moths, silverfish



and any of several stored products pests.

If you have problems with any such "Shut-In" winter pests, we can help you identify, survey for and control them using an Integrated Pest Management (IPM) approach. Call us today.

PESTS THAT CAME IN BEFORE IT GOT COLD

On the first warm day of winter, you suddenly notice 20 or more greenish-colored flies, or several dozen ladybird beetles flying around inside one of your south-facing or west-facing windows. Or, maybe you get up a bit late one bright, sunny week-end day in December and one or two big brownish or brown-and-orange insects fly slowly across the room to a window, while making a loud buzzing sound. What are these and what can you do about them? These are most likely one of the "overwintering" pests described below. The best control measure for all of these is to exclude them before they come in, but it is already too late for that. They are already inside, and keeping the cold out is helping keep them in.

Cluster Flies

The 20 or more shiny, greenish flies buzzing around by your window are probably Cluster flies, and every autumn they become pests of homes, schools and commercial buildings throughout much of the U.S. Cluster fly larvae parasitize (feed inside) a common species of earthworms during the summer. As fall approaches, the last summer generations of adults emerge from the soil and look for a nice, warm place to hibernate, i.e. your attic, wall voids or windowsills. These hardy little insects can travel more than a mile for a suitable overwintering site. They emerge in the spring to breed and lay eggs on the soil surface near the earthworms which the larvae

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then infest. Overwintering cluster flies are the most troublesome because of their sheer numbers. They become active again during any warm spells in winter and again in early spring, and try to find openings to go back outside. The best thing a homeowner can do is vacuum them up, remove the vacuum bag, seal it in a larger plastic bag, and put that bag in your normal trash. For heavy infestations, you may need our help to do on-going surveillance for these and possibly to treat for any secondary pest problems that occur, like carpet beetles or booklice.

Ladybugs

About the time of the first frost, Ladybugs (Ladybird Beetles) may come into your home through any crack, crevice, open window or hole. They come in and remain inactive until spring and do not cause any big problem except for their presence, sometimes in great numbers. They become active when it gets warm again and try to find their way back outside, where they continue their very helpful work of eating lots of other insects, especially several kinds of major plant pests. They may become active during any warm periods during the winter, and often fly to windows or lights. Some kinds of Ladybugs, like the common, wide-spread Asian Ladybug, can come into a house literally by the thousands. That can be very disturbing to people living in the house. The best thing to do when they become active in the spring is to help them get outside again, alive. The suggestions above can be used against these beetles, and we can help you.



Bugs

Several plant-feeding true bugs sometimes come into houses in large numbers. These include the Boxelder Bug, the Western Conifer Seed Bug and several different "stink bugs." Infestations of these bugs are a direct result of their building up a large population on their host plants near the home they came into. Some of them will fly to outside lights at night, then come in unnoticed when a door or window is opened the next morning. Most of these are large enough to be noticed soon after they come inside. The suggestions above can be used for these pests, and we can help control these too.

Small Rodents

This time of year, several kinds of small rodents, most often the common House Mouse or various "field mice," will start trying to come into our homes or may already have come in and establish nests for stored food for the winter, such as corn, acorns, nuts or other seeds.

These furry little creatures can do a lot more harm than just being a nuisance. They often chew holes through food packages, walls, boxes, furniture, and even electric wiring. Several wild rodents which come into homes in the autumn or winter spread strains of Hantavirus which can kill people. The biggest source of this virus is the very wide-spread, yet harmless-looking Deer Mouse. Wild and domestic rodents have been reported to harbor and spread



as many as 200 human diseases. In many urban and suburban settings, Norway Rats may live mainly outdoors in spring and summer, but come inside in the fall and winter. In warmer coastal and tropical areas, Roof Rats may live mainly outside during wetter seasons and move inside during drier seasons.

They eat and contaminate our food and chew up and mess up our homes. House Mice have recently been shown to give off quite a lot of an allergen (called Mouse Urinary Protein, or MUP) in the hundreds of tiny micro-droplets of urine they deposit every night as they travel throughout their territory. They may interrupt our internet access and even start fires by chewing electric wires. National fire protection authorities estimate that more than 1/5 of the "fires of unknown origin" in the U.S. are caused by rodents gnawing matches or wiring. A few of these pests may even bite us, or our pets.

You can help prevent these problems by:

1. Cleaning up thoroughly and often any spilled food, garbage, pet food or grain which might attract rodents. Don't forget those fall decorations hung on doors or walls, and don't leave food or water out in a pet's dish overnight.
2. Keep all garbage in tightly-closed, metal cans and keep the cans and area around them clean as well.
3. Clean up and remove all trash and rubbish, especially near your buildings.
4. Be sure all outside doors, windows and vents fit snugly and are kept closed, especially at night. A mouse needs only a 3/8-inch crack or hole to get inside.
5. Seal up any hole or crack in the outside of any building that is big enough for a rodent to enter. Pay special attention to places where wires, pipes or other utility lines enter a building.
6. Keep plants and shrubs trimmed back at least 12 inches from the outer surface of any building. These can provide rodents food, shelter and an easy way up to higher entry points. Rodents climb very well.
7. In urban settings, trim back or remove any extensive plantings of low-growing shrubs, especially Taxus or Junipers. Norway rats have a strong tendency to establish extensive outdoor burrows under these two types of shrubs.

Call us today so we can help you detect, survey for and eliminate rodents from your home.

PESTS THAT NEED LOTS OF MOISTURE THAT MAINLY LIVE INDOORS

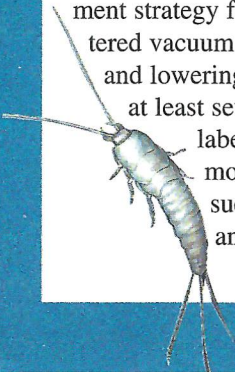
Many pests need fairly moist and warm conditions to live and reproduce. Your tightly-sealed, heated house in winter often provides exactly the set of conditions several common pests need. Modifying those conditions, especially by reducing moisture, or relative humidity (RH) level can seriously stress, and even kill, large numbers and percentages of such pests. Two examples of such pests are given below.

House Dust Mites

House Dust Mites are 1/64 inch long, oval, whitish mites which feed on human skin flakes. They can only live and reproduce in a narrow range of temperature, relative humidity (RH) and with an adequate food supply (skin flakes). Ideal conditions are about 86°F (30°C) and 75-80% RH. The best places for them to build up are in seams of mattresses, upholstered furniture, pillows and similar places where the micro-habitat and food supply are good enough. The cast skins and fecal mater of these mites causes true allergies in many people, possibly seriously affecting 50-80% of the asthmatics in the U.S. The best control strategies for these mites is a combination of: regular cleaning (usually at least once weekly) of all typical habitats in the home of an affected (sensitive) person using a HEPA-filtered vacuum; encasing pillows, mattresses and upholstered furniture in plastic covers; removing carpeting and drapes from the person's home, and lowering the moisture level (RH) to less than 50% for at least several days. There is currently no residual insecticide labeled for use against these mites. However, we can help you with surveillance and management of these mites.

Silverfish

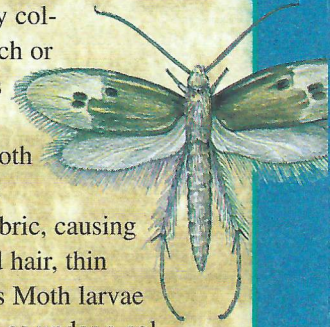
Silverfish are small, relatively slender (1/2 – 3/4 inch long as adults), carrot-shaped crawling insects covered with gray and silver-colored scales, and with two long antennae and three long bristle-like tails. They can only live in warm 72-80°F (25-30°C) and a moisture level of 75-97% RH. They are active at night and hide in cracks, behind baseboards, inside book bindings or under layers of paper. They eat proteins, paste and starches. At least one species, the Four-Lined Silverfish, can digest cellulose. They are found world-wide, and once they have been introduced into a suitable warm, moist habitat with enough food, they grow and multiply rapidly. These can damage books (bindings), other papers and have even been reported to damage rayon fabric. The best management strategy for silverfish should include using a HEPA-filtered vacuum on all infested sites, removing all old rubbish, and lowering the moisture level (RH) to less than 50% for at least several days. Treatments with a properly-labeled insecticide, as a last resort, may eliminate most of the pest population quickly. If you have such pests, call us for help with survey, control, and preventive measures against them.



Fabric Pests

When you get out your winter clothes and find there are holes or "thin" spots where the fur or wool liner of a coat looks "worn." If you look close enough, and there are little "worms" or tiny oval beetles crawling near those holes or spots, then you have a fabric pest. There are several common, widespread insects that eat natural fibers. Most common are the clothes moths and carpet beetles. Similar "bald" or "thin" spots or small holes in natural fiber carpets can also be caused by these. The two most common clothes moths and a common carpet beetle are discussed below.

Clothes Moths are small buff-to-gray colored moths with a wing span of 1/2 inch or less. The two world-wide pest species of these, the Webbing Clothes Moth and the Case-Making Clothes Moth, both lay their eggs on or near natural fabric materials and the larvae feed on the fabric, causing all their damage in the form of clipped hair, thin spots and holes. The Webbing Clothes Moth larvae make silk tubes in hidden places, such as under a collar, near where they are feeding. Case-Making Clothes



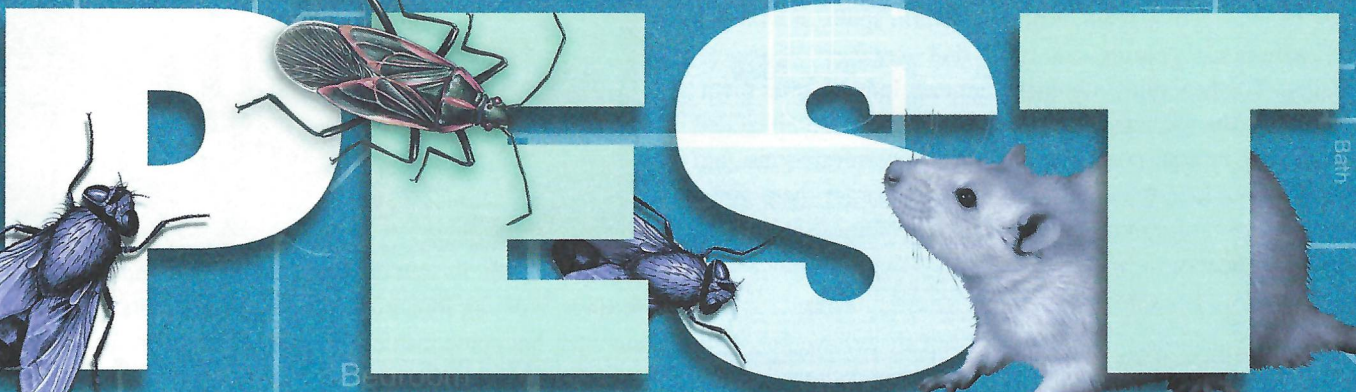
Moth larvae carry their small cigar-shaped silk case with them as they crawl around feeding on the fabric. They will usually feed from under or behind the material, usually doing quite a bit of damage before they are noticed. When full-grown, the larvae leave the fabric and find cracks or crevices, like under a molding or behind a baseboard, often quite a distance away from their feeding sites to pupate. Adult moths do not have functional mouthparts, are weak fliers and live only 2 – 3 weeks.

Varied Carpet Beetles are small, hard-bodied, oval beetles about 1/16-1/8 inch long. Their body is black covered with a pattern of two zigzag bands of white scales bordered by yellow scales across the back. The underside of the body is covered with grayish yellow scales. Their head is concealed from above and has a median simple eye. These are found worldwide. Adults are strong fliers and mainly feed on a wide variety of outdoor flowers, pollen or plants. They may come into houses or businesses and deposit their eggs on nearly any natural animal or plant materials on which the larvae then feed. Often they select fabrics such as wool, cotton or as their name indicates, carpets which contain natural organic fibers. The adults do not eat fibers and usually die in 13-44 days, before finding their way back outdoors.

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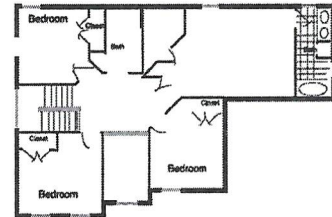
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