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# LIVING

# Winter tenants

*A sure sign of winter is the arrival of various species of insects and mammals looking for shelter in all the wrong places*



**OUR  
CHANGING  
SEASONS**  
Drew Monkman

In many homes and cottages in the Kawarthas, the arrival of various insect and mammal visitors in the fall is as much a sign of winter as the first snowfall. In addition to time-honoured guests like deer mice, bats and cluster flies, ladybugs have now joined the ranks of animals looking for a place to get through winter.

Ladybugs have gathered a lot of attention since the arrival of a species known as the 19-spotted, or Asian ladybird beetle. This non-native beetle was particularly abundant in 2001, when huge numbers of aphids, a key food source, descended upon the province. With so much food available, ladybug numbers proliferated. By late winter 2002, it became apparent that many of these Asian immigrants had taken up residence in our homes. This is a unique trait of the Asian ladybug. In their native Asia, they seek out white-coloured cliffs in the fall to overwinter. Lacking many such cliffs here, they are often attracted to the west and south sides of light-coloured buildings. The beetles usually start moving to these sites in October. By crawling under siding and into cracks around windows, they may eventually make their way into the attic or wall voids. Even though they are often exposed to sub-zero temperatures, they are able to survive quite nicely in a state of dormancy.

When insects are inactive during the winter months, no matter what the stage of the life cycle they happen to be in, we call this dormant condition diapause. It is a state of suspended animation during which development ceases entirely. Entry into diapause is generally controlled by day length rather than environmental conditions such as temperature. During the fall, the cells in the insect's body synthesize glycerol, a substance similar to the ethylene glycol we put in our car radiators. Since glycerol also acts as an antifreeze, a tiny caterpillar's body can fall to below -30 C without the tissues freezing solid. In fact, if you touch the larva at this temperature, it is still pliable. The glycerol prevents water crystals from forming within the cells. If they were allowed to do so, the crystals would expand, rupture the cells and kill the insect.

On warm, late-winter days, the ladybugs sometimes awaken from diapause and become active, often moving into the home's living quarters. Fortunately, they do not reproduce indoors and will soon die. However, they can secrete a strong-smelling liquid that can stain light-coloured surfaces. In the wild, this liquid serves to drive off predators.

Cluster flies, too, are drawn to human habitations in the fall. Slightly larger than a housefly, they survive the winter by jam-



Doug Sadler, special to The Examiner



Rick Stankiewicz, special to The Examiner



Doug Sadler, special to The Examiner

**Clockwise, from top: A big brown bat; a white-footed mouse; and two Asian lady beetles. Note the prominent 'M' shape behind the head.**

ming themselves into the cracks of window sills and siding of cottages, houses and other buildings. On mild, sunny, late-winter days, the flies often come out of diapause and try to move to where it's warmest, namely inside. If successful at gaining entrance, they then congregate in large "clusters" on window panes, and buzz crazily. Also a non-native species, cluster fly larva parasitize earthworms.

Even some mosquitoes sometimes end up in our homes. Adult, pregnant females of the genus *Culex*, a variety often seen in fall, frequently overwinter in damp, cool locations such as basements. You will sometimes find them sitting quietly on your bathroom wall in the middle of winter. *Culex* is a genus that has been associated with the West Nile virus.

For many of us, the arrival of mice in the fall is another a typical sign of the changing seasons. In the Kawarthas, we have two very similar species that may show up as guests — the deer and the white-footed mouse. With their large, dark eyes and big ears, you have to admit they are quite cute, no matter what your feelings are

about mice.

However, these species are extremely difficult to tell apart. They both have brown backs, whitish undersides and 10-centimetre-long bodies. Both of these closely-related species live mainly in rural areas, although you do find them in much of suburban Peterborough.

Deer and white-footed mice are active all year. They store food for the winter season, as much as squirrels do. Nuts, seeds, berries and insects are their usual nourishment. In the outdoors, these mice construct nests in stumps, under logs, in hollow tree cavities, or in abandoned bird nests. However, they often enter houses, garages, sheds, and stored campers during the colder months, gaining entry through holes as small as a shirt button. Unfortunately, they can do significant damage to foodstuffs and furnishings. Because they build nests, they can ruin upholstery, mattresses, clothing and paper documents.

Deer mice can also be carriers of the hantavirus. This virus can cause life-threatening illness if inhaled. The virus is carried in the

airborne particles of rodent urine, droppings or saliva. It is therefore best not to vacuum mouse droppings but rather to wet the area with a disinfectant and then carefully wipe up the mess up with a wet cloth.

Another mouse species you may encounter is the house mouse, a species of European origin. It has a pointed snout and large ears with hair. Its fur is grayish to light brown on top, light brown (not white) on the underside. Scales show on the tail.

Late fall and winter is also a time when people sometimes come across a bat in their house. These are usually a species known as big brown bats.

Typically, the animal has tried to overwinter in a cool area such as the attic. When in hibernation, this hardy species can lower its heart rate, body temperature and metabolism to a fraction of normal levels and in this way use up its body fat much more slowly. However, if it enters hibernation with insufficient body fat, or is somehow disturbed, it may wake up before the winter is over.

It is critical that a hibernation site be cool, but with temperatures

that remain above freezing. If a bat is disturbed too often during its winter dormancy, it will use its fat reserves at too great a rate to make it through the entire winter. It will rise from hibernation on warm winter days, and make brief "cleansing" flights outside. Even though big brown bats are still a common species, the population is decreasing because of human disturbance, the killing of bats, especially when they accidentally fly into people's houses, and loss of summer roosting habitat such as attics in old buildings.

## What to watch for this week

If you're a birder, watch for arctic gulls such as the glaucous, and Iceland gulls turning up at the Bensfort Road landfill and sometimes at Little Lake. These species often appear at the landfill all winter long, whenever the temperature is around 0 C for more than a day.

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