



House mouse. G. Shulkin, wikimedia.org

## House Mouse Identification and Detection

The house mouse has a light-colored belly, and the rest of its fur color is variable: individuals may be light brown, gray, or even black. It has a body length of 2 ½ to 3 ½ inches, and an additional length of tail from 2 ½ to 4 inches long.

Identification of the house mouse itself is often unnecessary because it is active at night and rarely seen during the day. The presence of a mouse is usually detected by chewed materials, or more often by its fecal droppings. House mouse droppings are black and tapered on at least one end and are slightly larger than a grain of rice. Mouse droppings are often seen in windowsills, in cupboards under sinks, and where food is commonly eaten, stored, or prepared.

The house mouse (*Mus musculus*) is the most successful rodent pest in school environments. This mouse causes damage to structures and supplies with its chewing, and contaminates food stores and classroom supplies. Mouse droppings and urine—which are continually excreted as they move about—are able to transmit several types of viruses, bacteria, and parasites to humans (even long after the mouse itself is gone), and can trigger asthma in indoor environments.

The house mouse is generally regarded as a zero-tolerance pest in schools for the following reasons:

- They reproduce rapidly. Each female mouse averages five offspring per litter, and may have as many as ten litters per year. As little as eight weeks are needed for a house mouse to develop to a reproductive adult. Even with conservative calculations, that's a lot of mice!
- They are very mobile and can enter structures or move among rooms through spaces as small as a dime. They may use trees and wires to gain access to a structure's upper levels, and once inside, they often use wall voids and pipe pathways as a safe means of travel.
- They are not picky eaters. Coupled with its strong sense of smell, a house mouse can sniff out dried foods used for classroom art projects or long-forgotten crumbs in corners. The house mouse often chews through boxes and plastic bags to eat the snacks inside a teacher's desk or classroom cupboard, and may even eat items we do not consider food, such as glue and soap.
- They can vector bacteria and viruses in their droppings. Humans may become infected when contact with an open wound occurs, or breathe in pathogens when droppings are disturbed.

Rural school districts often have encounters with deer mice. While deer mice may occasionally be found indoors and are of a similar size to the house mouse, deer mice do not usually establish themselves inside school structures like the house mouse.

## CLEANING UP MOUSE DROPPINGS: SAFETY TIPS

Mouse droppings—whether fresh or old—may transmit viruses and bacteria. If cleaning mouse droppings is among your job duties, there are some important safety measures to keep in mind.

1. Mouse droppings should not be swept or vacuumed. Doing so can allow viruses and bacteria in the droppings to become airborne and inhaled.
2. Wear rubber or plastic gloves.
3. Wet the area with mouse droppings using a disinfectant (for example, a 10% bleach water solution). Disinfectants are effective against both bacteria and viruses if allowed to stand for 10 minutes.
4. Using a wet cloth or paper towel, wipe up the droppings and dispose of the droppings and paper towels in a trash bag. Throw the trash bag out immediately.
5. If using a washable cloth and reusable gloves, they can be cleaned in hot soapy water.
6. For an area with a large amount of rodent droppings (such as an outbuilding), wear a face mask with a HEPA filter.

## WHAT CAN YOU DO?

Teaching, administrative, and kitchen staff have an important role in helping to prevent house mouse infestations, and in helping facilities and maintenance staff address an existing infestation. Mice, along with other pests, are drawn by the availability of food, water, or shelter. Deny them these things to help prevent or manage infestations.

### TO HELP PREVENT AN INFESTATION, OR TO MANAGE AN EXISTING INFESTATION:

1. Report mouse droppings so that they can be cleaned up immediately and the area can be properly monitored for further house mouse activity.
2. Limit classroom and office food to a specific area that is cleaned daily.
3. Store food in hard plastic or glass containers with a tight-fitting lid. This includes desk and cupboard snacks, and kitchen food items that are not canned. For kitchens, these items may alternatively be stored in a refrigerator or walk-in cooler.
4. Clean up after meal times. Pay attention to wall bases, corners, and other undisturbed areas where food accumulates. In kitchens and pantries, sweep and mop underneath equipment daily.
5. De-clutter classrooms and offices. Consider recycling or discarding items you haven't used in three or more years. Install wire shelving to keep stored items off the floor so they cannot provide shelter or a source of food to mice.
6. Replace corrugated cardboard with clear plastic bins. Mice will nest in cardboard boxes or may chew the material to create a nest elsewhere.
7. Remove stuffed furniture such as sofas and overstuffed chairs; mice often nest in the furniture materials, or forage for food underneath cushions.
8. Report problems such as gaps below exterior doors, around pipes or windows, and leaking pipes.

## RESOURCES

- *New York State Integrated Pest Management, Cornell University: Evict and Exile Mice from Your Home.* <http://www.nysipm.cornell.edu/publications/evictmice/>
- *The National Pesticide Information Center (NPIC) provides objective, science-based information about pesticides and related topics to enable people to make informed decisions. To contact NPIC, call 1-800-858-7378 or visit <http://npic.orst.edu>.*

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Funding for this project was provided by grants from:

