

IPM IN SCHOOLS

September



House Mouse. (Photo by G. Shuklin.)



Deer Mouse. (Photo by unknown from Creative Commons.)



Size comparison of Norway Rat (top) and Roof Rat (bottom). (Photo by unknown from Creative Commons.)

The Problems with Rodents

Rodents are common pests in and around structures used by humans. Rats and mice can **contaminate stored foods** and cause expensive **damage to structures** by chewing holes in doors, walls, ceilings, and electrical wires. Rodents harbor pests such as **fleas, mites, tapeworms, and ticks**. In addition, rodents can **spread serious illnesses** such as [salmonellosis](#), [plague](#), [leptospirosis](#), or [Lyme disease](#), as well as [hantavirus](#) pulmonary syndrome, which is carried by Deer Mice.

Know Your Rodents

There are four common rodents that can be problem pests in the Pacific Northwest: **Roof Rats**, **Norway Rats**, **House Mice**, and **Deer Mice**. Mice and rats are more active at night, so often the only sign of rodents you will see are their **droppings**.

Rats range in overall length from 13 to 18 inches. Roof Rats are relatively slender and light with a tail *longer* than their body length. They like to nest in attics or ivy. Norway Rats are both stockier and heavier with a tail *shorter* than their body. They typically burrow into soft soils around buildings or rock walls.

The House Mouse is a frequent indoor pest throughout the US. House Mice average 6 inches long; Deer Mice are slightly larger. Deer Mice are common near wooded areas both in semi-urban and rural areas. They have larger eyes and ears, white bellies, and a dark strip of fur along the top of their tail. Young rats may be confused with mice but have large heads and feet compared to their body, while mice have comparatively small heads and feet.

What is Integrated Pest Management (IPM)?

[IPM](#) is a way to manage pests that focuses on prevention. IPM can achieve long-term pest prevention and control with minimal impact on human and environmental health. The key steps of IPM are: (1) **Inspect**; (2) **Identify** the problem or pest; (3) **Act** - take appropriate action; and (4) **Evaluate** the results. Pest prevention requires communication and education so that staff are aware of conditions that attract pests and know how to minimize them. Appropriate sanitation, proper food storage, clutter reduction, and minor changes to staff habits will minimize conditions that attract pests.

For more information, ask about your district's pest management plan and IPM policy.

What Can You Do?

A few simple steps will do a lot to help prevent mouse and rat infestations.

- 1. Report signs** of rodents in and around school buildings, including sightings of rats or mice, their droppings, damage to stored food, or chewed materials. Many schools that practice IPM will have log books available for you to record dates, times, and locations of pest sightings. If you see signs of a rodent infestation, avoid touching materials or breathing in dust. Isolate the area until facilities staff can [properly clean up](#) the debris. Learn more at <https://doh.wa.gov/community-and-environment/pests/rodents>.
- 2. Seal all (non-refrigerated) food** in jars, lidded tins, or heavy plastic containers. Cardboard and plastic bags are easily chewed into by rodents. This includes pet foods, food stored in lounges, kitchen areas, classrooms, and lockers, as well as foods and scented items used for arts and crafts.
- 3. Clean up food** spills and debris promptly. Splatters and crumbs around microwaves, refrigerators, sinks, drains, etc., attract pests. Always store food waste and food-contaminated trash in rodent-proof dumpsters or trash cans with tight-fitting lids or spring-closing doors. Empty and clean containers regularly.
- 4. Report structural problems** such as gaps around water pipes or electrical wiring, leaking faucets, and cracks or gaps around windows or doors, which may attract rodents or allow entry.
- 5. Reduce clutter** to remove potential hiding and nesting sites.

Prevention and Control

Prevention is the single-most important measure for effective rodent control. By reducing the availability of food and water and making building access difficult, you can help make your school less desirable to rodents.

- 1. Thorough food and trash sanitation** discourages insects as well as rodents.
- 2. Rats need water sources**, so leaking faucets, bird baths, and ponds should be eliminated where possible.
- 3. Repair, caulk, screen, or add door sweeps to any openings into buildings larger than 1/4 inch (pencil diameter).** This includes broken pipes and drains. Ceilings and upper stories should be examined and repaired as well - Roof Rats are excellent climbers.
- 4. Remove or trim ground cover** and other landscape plants to expose the ground and discourage rodent travel ways and rat burrowing. Trim overhanging branches near roofs or walls.



If good sanitation and preventive measures are not enough to keep out rats and mice, more aggressive controls may be needed. Physical control (trapping) is the next step, with chemical controls (usually baits in tamper resistant stations) as the last resort. Your school may have a professional pest control company provide this service. Physical and chemical control of rats and mice in school buildings may include various types of traps and bait stations, all of which should be enclosed for safety and emptied daily. Students and staff should be warned to avoid contact with traps, bait, and living or dead rodents.



Droppings of House Mouse (left), Roof Rat (middle), and Norway Rat (right). (Used with permission, University of California statewide IPM Program; photo by W. Gelling.)

More Information

- Washington Department of Health (DOH): Schools - Enhance Safe and Healthy Environments.
<https://doh.wa.gov/schoolenvironment>
Email: schoolehs@doh.wa.gov
- Environmental Protection Agency: Managing Pests in Schools.
<https://www.epa.gov/ipm/integrated-pest-management-tools-resources-support-ipm-implementation>
- The National Pesticide Information Center (NPIC) provides objective, science-based information about pesticides and related topics to enable people to make informed decisions.
<http://npic.orst.edu>
Email: npic@ace.orst.edu

Written in collaboration with:

Liz Dykstra, WA DOH
Alexandra Boris, WA DOH
Jennifer Snyder, UPEST