Structural and Health Pests

Nuisance and Household Pests

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In all cases, follow the instructions on the pesticide label. The *PNW Insect Management Handbook* has no legal status, whereas the pesticide label is a legal document. Read the product label before making *any* pesticide applications.

The National Pesticide Information Center provides guidance in pest identification, control options, pesticides and contracting professional pest management services at http://npic.orst.edu/.

Nuisance and household pests—Ant

Many species, including
Carpenter ant (*Camponotus* spp.)
Moisture ant/cornfield ant (*Lasius* spp.)
Odorous house ant (*Tapinoma sessile*)
Pavement ant (*Tetramorium immigrans*)
Velvety tree ant (*Liometopum* spp.)
Thatching ant (*Formica obscuripes*)
Yellow ant (*Acanthomyops* spp.)

Pest description and damage Small, red to black. Constricted in midsection. When winged, forewings are larger than hind wings. Ants may establish nests outside, underneath the house, or in wall voids, etc. Control recommendations can vary with species; proper identification is important.

Management

Seal cracks and crevices where ant may enter structures. Entry points include window and door frames and pipe and wiring chases. Trim outdoor plantings away from the structure and keep landscaping materials such as compost or bark mulch from contacting the siding. Pesticide baits are the best way to combat ants in the structure, especially odorous house ants. Follow label instructions carefully. Be patient: baits may require several weeks to be effective. Over-the-counter pesticide sprays are highly repellent to ants and may scatter ants throughout a structure. Carpenter ants may not respond as well to baits; services of a licensed pest control professional may be advisable.

See also

Wood-infesting pests—Ant

For further information:

Ants/Integrated Pest Management/School IPM. Washington State University. https://schoolipm.wsu.edu/ants

Nuisance and household pests—Bean weevil

Bruchus rufimanus

Pest description and damage Adult beetle is about 0.125 inch long, dull, and grayish brown. Larval stage feeds in and destroys dry beans. Often first evidence of infestation is the appearance of exit holes in the stored beans. These weevils will not infest grains, cereals, or other stored products.

Management

Store beans and peas in insect-proof containers. Heating beans or peas to 130°F for 30 minutes prior to storage will kill all stages of beetles. When disposing of any product containing stored product pests, make sure to remove any infected items from the home entirely.

Nuisance and household pests—Bed bug

See:

Public health pests—Bed bug

Nuisance and household pests—Booklouse

Order Psocodea (formerly Psocoptera)

Pest description and damage Booklice (Psocids) are brownish yellow insects about the size of a pinhead. They prefer moist, undisturbed conditions.

Management

Eliminate entry points with caulk. Reduce moisture and increase light and air circulation. Fans and dehumidifiers are recommended. Apply labelled pesticides to cracks and crevices where appropriate.

For further information:

Booklice. Insect Advice from Extension. Pennsylvania State University. https://ento.psu.edu/extension/factsheets/booklice

Nuisance and household pests—Boxelder bug

Boisea rubrolineata

Pest description and damage About 0.5 inch long and dark color with red longitudinal lines on the back. Annoying when they cluster on and migrate into dwellings. Boxelder bug populations vary considerably from year to year depending on environmental conditions.

Management

Inside homes, insecticides have limited value and are not recommended. Use a vacuum cleaner to pick up bugs in building interiors. Prevent bug entry by repairing screens and caulking around windows and doors, screen soffit, corner trim and attic vents, etc. Sealing is best done during the summer months when the bugs are not present. Avoid smashing bugs as body fluids can stain fabrics or surfaces.

Insecticide treatment has not been very successful. Residual sprays (by a pest control operator) where bugs congregate on building sides and near the foundation may reduce entry indoors but will not eliminate the insects. A professional tree service may treat infested trees near the structure, though adult bugs can fly for several miles from their feeding sites.

For further information:

How to Manage Pests/Pests in Gardens and Landscapes/Boxelder Bug. University of California.
http://ipm.ucanr.edu/PMG/PESTNOTES/pn74114.html

Nuisance and household pests—Carpet beetle and hide beetle

Dermestidae

Pest description and damage These closely related beetles are about 0.125 inch long, brown, and oval. They feed on a wide variety of stored products: cereals, seeds, spices, tobacco, dried fruits and nuts, dried skins, feathers, and preserved animal products.

Management

Locate and destroy the source of infestation. Place infested materials in the freezer for three or four days to kill pests, then discard. Thoroughly clean shelves and storage areas. Attachments for some types of vacuum cleaners are useful in removing food particles that may have become lodged in cracks. Clean surfaces with soap and water. Where freezing and vacuuming are not appropriate or adequate, treatment by a qualified professional may be required.

For further information:

How to Manage Pests/Pests in Gardens and Landscapes/Boxelder Bug. University of California.
http://ipm.ucanr.edu/PMG/PESTNOTES/pn74114.html

Nuisance and household pests—Cheese mite, grain mite, and mold mite

Includes
Cheese mite (*Tyrolichus casi*)
Grain mite (*Acarus siro*)
Mold mite (*Tyrophagus putrescentiae*)

Pest description and damage Very small, light-colored mites often with very long body "hairs." They may infest stored foods and other organic material such as grain, flour, cereals, dried fruits and vegetables, mushrooms, meats, pet food, cheese, paper, tobacco, molds, bird and animal nests, etc. These mites are usually associated with moist or damp conditions. Piles of brownish "mite dust" may appear on open shelving, around the base of flour sacks, or on the surface of foods. These piles consist of dead and living mites, cast skins, and feces. Prolonged contact with mite infested foods may produce a mild dermatitis, and other contact may cause bronchial asthma and dust allergies. Also, if mites are taken internally with infested food, stomach disorders can result.

Management

Moisture control is critical: reduce moisture and promote air circulation in storage areas. Store foods only in clean, dry areas. If necessary, use a dehumidifier to reduce relative humidity and prevent mold and mildew. Rotate food materials to remove the older items first. Avoid prolonged

storage and inspect bulk foods or feeds routinely. Place stored foods in containers with tight-fitting lids—ideally screw type. Periodically clean the storage areas, especially cracks, crevices, shelving, etc. When products become infested with mites, locate the source of infestation and eliminate it. Suspected mite infested foods can be supercooled (0°F for seven days in a deep freeze), superheated (140°F for 30 minutes in an oven using a shallow pan, or 5 minutes in a microwave), or securely wrapped and disposed of as garbage. If a pesticide is needed in the storage area, spot-treat cracks and crevices only to kill hidden mites.

Nuisance and household pests—Cigarette beetle and drugstore beetle

Includes
Cigarette beetle (*Lasioderma serricorne*)
Drugstore beetle (*Stegobium panicum*)

Pest description and damage Small (0.1 inch) beetle pests of stored products. May feed on any organic material, including grains, cereals, book binding and pages, and spices.

Management

Sanitation is critical: inspect all organic materials in the structure and dispose of infested materials. Insect growth regulators are effective for long-term management. Insecticides are not recommended, though fumigants are sometimes used by licensed professionals in commercial warehouses.

Nuisance and household pests—Clothes moth

Tineola bisselliella

Pest description and damage Yellow or tan and about 0.5 inch across the wings. Larvae are wormlike and may be encased in a silken tubes. Moths avoid light.

Management

Wash or dry-clean woolen clothes before storage. Soiled cloth is more likely to become infested than is clean cloth. Store woolens in containers with tight-fitting lids. “Moth balls” (naphthalene or paradichlorobenzene) are effective in tightly sealed containers; however, long-term exposure may have health effects for humans. Cedar chests may prevent infestations if chests are tightly fitted. Be particularly careful of woolen articles purchased overseas; these should be dry-cleaned before storage. Cold treatment (72 hours at –20°F) has been found effective. Do not spray clothing directly with pesticides.

For further information:

Clothes moth. National Pesticide Information Center. Oregon State University. http://www.npic.orst.edu/pest/clothesmoth.html

Nuisance and household pests—Clover mite

Bryobia praetiosa

Pest description and damage One of the larger mites; usually rust-brown to dull green with long front legs. They migrate into dwellings and are most troublesome in late fall or spring.

Management

Use a vacuum cleaner; avoid crushing the mites. An outdoor perimeter foundation spray by a pest control operator may be necessary in extreme cases.

Nuisance and household pests—Cluster fly

Pollenia rudis

Pest description and damage Resemble houseflies but with a hint of gold color behind the head. They enter houses in the fall and may congregate on the ceiling or at windows. Larvae of cluster flies are earthworm parasites. They do not reproduce inside structures and, if not controlled, will die on their own.

Management

Control is similar to that of houseflies. Seal window and door edges to prevent fly entry. Keep window screens in good repair. Aerosol space sprays may be effective, but will only affect the flies currently in the treated area. An outward-facing fan placed near an open window or door will create a positive air current and reduce the likelihood that flies will enter at that location.

For further information:

Cluster flies: noisy but harmless. Oregon State University Extension Service. https://extension.oregonstate.edu/families-health/healthy-homes/cluster-flies-noisy-harmless

Nuisance and household pests—Cockroach

Includes
American cockroach (*Periplaneta americana*)
Brownbanded cockroach (*Supella longipalpa*)
German cockroach (*Blattella germanica*)
Oriental cockroach (*Blatta orientalis*)

Pest description and damage Cockroaches are 1 to 1.5 inches long with long, thin antennae, brown to black, with or without strips or bands on the

upper surface. The young look like small adults. The German cockroach is the most common roach around human habitation. It is 0.625 inch long at maturity with two dark streaks behind the head. The brownbanded cockroach is similar but with two transverse straps across the wings. The Oriental cockroach is about 1 inch long and very dark brown to almost black. They are very common in moist areas, such as basements, and will commonly come into homes that have slab floor construction. They will traffic along pipes within the structure and sometimes will be seen in the upper floors of a building. The American cockroach is large (1 to 1.5 inches) and reddish brown, most often found in basements or areas associated with high moisture.

Roaches move rapidly, live in cracks and crevices, avoid light, and are extremely successful at exploiting dwellings and food. German roaches can be brought into a structure in cardboard boxes or used appliances. Studies have indicated that roach allergens are a significant contributing factor in childhood asthma. It is best not to let a roach infestation continue without addressing it.

Management

Proper identification of the species of cockroach is key to successful management.

German cockroach

Good sanitation is the most important factor for controlling cockroaches. Baits are one of the best products for homeowner use. Baits come in a variety of active ingredients. Place baits under sink, undersides of drawers, along baseboards, near water heaters, and under or near appliances and other places where roaches will most likely infest. Use of over-the-counter sprays, foggers or "bombs" are not recommended as they scatter the roaches throughout the structure and into adjacent units in multifamily dwellings. If baits do not provide the desired control, it is best to consult with a knowledgeable pest control company.

Oriental cockroach

These roaches thrive in excessively moist conditions. Remove any fallen leaves or compost around the perimeter of the structure. Sealing around pipes and wires will help to keep them from entering a structure or using basement pipes to travel to other locations within it. A perimeter pesticide treatment can help keep roaches from entering a structure, but this should only be done after the above-mentioned control measures have been implemented.

For further information:

Cockroaches. National Pesticide Information Center. Oregon State University. http://www.npic.orst.edu/pest/roach.html

Nuisance and household pests—Cricket

Includes
Field cricket (*Acheta assimilis*)

Pest description and damage Dark brown to black jumping insect, 0.75 inch long. Female has a spear-shape ovipositor. Occasionally, they contaminate food and damage clothing.

Management

Treatment outdoors is not recommended. Inspect around the outside of the structure to locate possible entry points, and carefully examine around the foundation, ground level windows, and doors. Minimize hiding places (wood piles, bricks, brush, compost, and fallen leaves) near the structure. Keep grass and weeds mowed. Inside, crickets can be caught with glue boards located in corners of rooms. Baiting glue boards with cornmeal is also effective.

Nuisance and household pests—Earwig

European earwig (*Forficula auricularia*)

Pest description and damage About 0.625 inch long, light to dark brown, with light-color legs and a pair of pincers on the rear. They feed on young plants and decaying organic matter and occasionally damage clothing.

Management

Outdoors, eliminate hiding places such as plant debris, mulch, and boards from around foundation. Infestations can be reduced by simple trapping: roll up a newspaper, secure it with a rubber band, and place it in areas where earwigs regularly appear. Place these traps in the evening and dispose of them in the morning. In severe cases an exterior treatment may be necessary, but should only be done after conditions favorable to earwigs have been addressed.

Nuisance and household pests—Elm leaf beetle

Pyrrhalta luteola

Pest description and damage They cause no damage in homes, but are annoying when they migrate into dwellings.

Management

Remove from indoors using broom or vacuum cleaner. Make sure to empty vacuum cleaner and dispose of bag contents outdoors.

Nuisance and household pests—Flea

Includes
Cat flea (*Ctenocephalides felis*)
Dog flea (*Ctenocephalides canis*)
Human flea (*Pulex irritans*)

Pest description and damage Fleas are nest parasites, moving between the host animal and the host's nest. Eggs are laid and larvae develop in the nest. Adults can survive long periods without a blood meal. Larvae do not feed on blood. Fleas may transmit disease and internal parasites (tapeworms).

Management

See also:
Public health pests—Fleas

Preventive treatments for pets include systemic hormones (Lufenuron/Program) and insecticides (Fipronil/Frontline) and nonsystemic insecticides (imidacloprid/Advantage). Pets should first be shampooed, then treated with a quality flea-control product. Consult a veterinarian to determine which flea product is best for your pet.

For house infestations, thoroughly vacuum nesting areas (pet beds, rugs, furniture, etc.). Laundering machine-washable items is advisable, whenever possible. Treat infested areas, such as carpets and baseboards, with a product labeled for interior treatment for fleas (usually linalool, permethrin or pyriproxyfen). Commercial applicators may use Premise (containing imidacloprid). It is particularly important with flea products to read and follow label instructions carefully and to observe cautions because the application is inside the home. Total release aerosols ("bombs") or aerosol space sprays are not recommended, as the pesticide does not reach the area where fleas reside.

For further information:

Fleas: treatment and prevention. Oregon Veterinary Association. https://www.oregonvma.org/care-health/companion-animals/fleas

Nuisance and household pests—Flour beetle and mealworm

Includes
Confused flour beetle (*Tribolium confusum*)
Red flour beetle (*Tribolium castaneum*)

Pest description and damage Small, dark to light brown or reddish brown, hard-shelled insects about 0.125 inch long. They breed and feed in flour, cereals, and condiments.

Management

Thoroughly clean shelves and storage bins. Inspect all food containers and discard those found to be infested. Dry pet food, nuts, and dried fruit often are infested. Store food only in containers that can be closed tightly. Do not store food items in thin plastic bags such as supermarket produce bags. Do not store food longer than 2 months unless frozen.

Nuisance and household pests—Flour moth

Angoumois grain moth (*Sitotroga cerealella*)
Indian meal moth (*Plodia interpunctellaanag*)
Mediterranean flour moth (*Ephestia kuehniella*)

Pest description and damage Medium-size moths, roughly 0.125 to 0.75 inch wing tip to wing tip, gray or reddish brown. Moths flying in homes are often the first sign of infestation. Full-grown worms are 0.5 inch long and white or sometimes pinkish or greenish. Larvae feed on cereals, nuts, dried fruits, pet food and/or treats, bird seed (both wild and domestic) and other products.

Management

Thoroughly clean shelves and storage bins. Inspect all food containers and discard those found to be infested. Store food only in containers that can be closed tightly. Do not store food items in thin plastic bags such as supermarket produce bags. Do not store food longer than 2 months unless frozen. If pet birds are present in the home make sure to clean cage often and store feed outside the home or in a sealed container.

Nuisance and household pests—Fruit fly (vinegar fly)

Drosophila spp.

Pest description and damage Small, yellowish flies found around decaying vegetable matter.

Management

These flies require a source of decaying vegetable matter: locate the breeding site. Destroy breeding media, clean infested areas, store new fruit in the refrigerator whenever possible, and bury culled fruit or vegetable matter. Aerosols containing pyrethrum can be used indoors. If garbage disposal is in the home and fruit flies persist after following the above suggestions, consult with a plumber to make sure the disposal is functioning properly.

Nuisance and household pests—Grass bug

Includes
Arhyssus spp.

Pest description and damage Gray, somewhat larger than lygus bugs. They frequently migrate into dwellings, where they are an annoyance.

Management

Screen doors and windows. Vacuum bugs that get inside.

Nuisance and household pests—Ground beetle

Numerous species of the family Carabidae

Pest description and damage Black beetles, 0.5 to 1 inch long. They do no damage.

Management

Ground beetles are beneficial insects. Control is not recommended. If they are abundant, it may be due to an infestation of other insects.

Nuisance and household pests—Grass weevil

Trachyphloeus bifoveolatus

Pest description and damage Small, light-color insects that migrate into dwellings. Usually a problem in the fall and early spring.

Management

Grass weevils are difficult to control with chemicals. Dispose of beetles by vacuuming or sweeping.

Nuisance and household pests—House centipede

Scutigera coleoptrata

Pest description and damage Short brown body with 15 pairs of very long legs. Fast moving and very fragile.

Management

House centipedes are predatory and, thus, are beneficial. Remove accumulations of materials near the house that provide hiding places. Continuing infestations may indicate a household insect problem, since these are their principal food. Look for insects such as cockroaches, attic flies, boxelder bugs, elm leaf beetles, and others. Controlling these insects may be the key to eliminating the centipedes.

Nuisance and household pests—House fly

Musca domestica

Pest description and damage Nuisance pests that breed in garbage, etc., and can build to intolerable numbers if not controlled.

Management

Inspect and repair window and door screens. Keep garbage in tight containers. Remove all breeding areas, including plant and animal refuse. Where fly populations are high, fly traps can be effective indoors and outdoors—if properly placed. An outward facing fan placed near an open window or door will create a positive air current and lessen the likelihood that flies will enter at that location.

Nuisance and household pests—Lady beetle

Multicolored Asian lady beetle (*Harmonia axyridis*)

Pest description and damage Rounded with high arching back, usually orange with black spots. In the fall, they may invade houses in large numbers. Biting is occasionally reported, but these bites carry no health effects.

Management

Inspect outside of house for entry points. Seal cracks and crevices with caulk. Ensure tight seals on windows and doors. Concentrate efforts on south and west sides of structures. Repellent pesticides can be used on the outside of structures, but timing is critical to effectiveness. Use of insecticides indoors is not recommended. Beetles found indoors should be vacuumed. Avoid smashing beetles as body fluids can stain fabrics.

Nuisance and household pests—Millipede

Includes
Julus spp.
Orthomorpha gracilis

Pest description and damage Millipedes vary in length up to 2 inches. They are dark, hard shelled, wormlike, and slender with many legs. They cause no damage in the home. Millipedes prefer moist conditions and feed on decaying organic matter. They may migrate into homes and become a nuisance.

Management

Reduce moisture and organic matter from near building entrances. Trim shrubs to promote air circulation and drying near foundation. Reduce mulch thickness and watering schedules. Keep mulch at least 6 inches away from structures. Under wet conditions, millipedes may move toward foundation to avoid wet soil, and control may become difficult. When necessary, using a pesticide labeled for millipedes may help. Be sure to read and follow product label and cautions. Treatment should only be performed after excessive moisture and harborage conditions have been corrected. Products containing cyfluthrin or carbaryl are usually applied.

Nuisance and household pests—Pillbug and sowbug

Includes
Armadillium vulgare
Porcellio laevis

Pest description and damage Light to dark gray, oval, hard shelled, with seven pair of legs. Pillbugs ball up when disturbed, sowbugs do not. Both may do damage in the home, but they feed primarily on decaying organic matter.

Management

Eliminate moist areas where the sowbugs and pillbugs occur. This may mean altering the lawn watering schedule. They are most often found around sidewalks, house foundations and other moist outside places. Drying can be accomplished by removing organic matter, such as grass clippings, leaf litter, and bedding mulches from moist areas. Properly ventilate basements and crawl spaces. Eliminate entry points into structures with caulk. Seal cracks around basement doors and windows with weather stripping. In some cases a perimeter treatment with a pesticide labeled for sowbugs or pillbugs may be necessary.

Nuisance and household pests—Scorpion

Burrowing scorpion (*Anuroctonus phaiodactylus*)
Forest scorpion (*Uroctonus mordax*)
Northern scorpion (*Paruroctonus boreus*)
Stripe-tailed scorpion (*Paravaejovis spinigerus*)

Pest description and damage Olive to brown, about 1 to 4 inches long, with four pair of legs, a tail with bulbous stinger, and a pair of pincers. They can inflict a painful, hornet-like sting.

Management

Outdoors, eliminate hiding places such as debris, trash, lumber, and wood and rock piles from around the house. Close entry points to structures. Reduce accumulation of moisture: provide run-off areas for rain water and use gravel rather than organic mulches adjacent to the building foundation. During dry weather, scorpions can be trapped by spreading wet burlap bags around buildings. Exterior application of a pesticide registered for scorpion control may be appropriate.

Nuisance and household pests—Silverfish

Lepisma saccharina

Pest description and damage Slender insects about 0.375 inch long, wingless, grayish silver or mottled gray, with two long antennae and three long filaments at the tail. They prefer starchy food including paper, paste, and starched clothing. These insects are commonly seen in homes that have wood shake roofs, and they prefer a warmer climate, such as found in attics. Very tolerant of high temperatures.

Management

These insects can be associated with damp conditions in basements, bathrooms, or warehouses. Reducing humidity often eliminates the problem. Do not store cardboard boxes directly on concrete floors. Household insecticides are effective if the infestation is not manageable by other means. Replacing wood shake roofs with non-wood roofing material may be advisable. In some cases, silverfish problems should be handled by a professional pest control company. Insulation treated with borates can be applied over the existing insulation in attic spaces to provide additional control of silverfish. A non-chemical way of trapping silverfish is to apply masking tape to the exterior of a glass jar, this will allow the silverfish to climb up into the jar. Place two to three tablespoons of dry oatmeal in the jar. Silverfish entering the jar cannot climb up the smooth interior. The oatmeal must be replaced every few weeks to avoid other stored product pests from infesting the oatmeal, which can lead to an infestation elsewhere in the home.

For further information:

Silverfish and Firebrats. WSU Extension Community Horticulture Fact Sheet #87.
https://s3.wp.wsu.edu/uploads/sites/2053/2015/09/87SilverfishFirebrats.pdf

Nuisance and household pests—Spider

Pest description and damage Eight-legged animals of varying sizes and colors. Spiders are predators of insects: some spin webs but some—the hunters—chase and catch their prey. All spiders use venom to subdue their prey, but the effect of their venom on humans varies widely, from inconsequential to irritating to serious. Three spiders in the Pacific Northwest—the black widow and two species of sac spider—can inflict serious injury if trapped or disturbed. If bitten, seek professional medical attention promptly.

See also:

Public health pests—Spider

Management

In the home, prevent spider and other arthropod infestations by sealing cracks and using tight fitting screens. Gaps under doors are good entryways for spiders. Inspect potted plants before bringing them indoors. Vacuum regularly and reduce clutter such as boxes, old furniture and papers that are not moved for long periods of time. Outdoors, wood piles, old boards, or other debris may harbor spiders. Wear gloves when handling firewood. Be cautious when entering unused areas like old barns, crawl spaces, attics, etc. Knock down webs whenever possible, and keep dense vegetation trimmed away from the building. Household pesticides labeled for spiders are commonly available. Successful treatment for spiders, even by a professional, generally only lowers the population around the structure but does not eliminate spiders completely. Glue traps can reduce spider

populations indoors: place them where spiders are frequently seen.

For further information:

Spiders. Washington State Department of Health. https://www.doh.wa.gov/CommunityandEnvironment/Pests/Spiders

Nuisance and household pests—Springtail

Collembola

Pest description and damage A small insect approximately 0.125 inch or less long; can be gray, pink, blue, or black. They often are found in large numbers in moist situations.

Management

Eliminate moist breeding areas inside the house. Inspect home to make sure there are no plumbing leaks. Eliminate moisture, especially excessively moist conditions under the building. Remove leaves, mulch, etc., from around foundation. In some cases it is necessary to have the interior of the home treated in conjunction with eliminating excessively moist conditions.

Nuisance and household pests—Strawberry root weevil

Otiorhynchus ovatus

Pest description and damage They cause no damage in homes but are annoying when they migrate into dwellings.

Management

Remove from indoors using broom or vacuum cleaner. Make sure to empty vacuum cleaner and dispose of bag contents outdoors.

Nuisance and household pests—Tick

Dermacentor spp.
Ixodes spp.
Ornithodoros spp.

Pest description and damage Ticks are blood-feeding ectoparasites. Some transmit disease to humans.

Management

Keep grassy and weedy areas trimmed to reduce harbor for tick hosts. Tick populations on a property can be evaluated by dragging a white cloth through vegetation. Ticks will attach to the cloth and can be seen easily against the white background. The reservoir tick host, which carries Lyme disease, is the white-footed mouse (deer mouse). Several products are available that attract mice to feeding stations where they may be treated with an insecticide.

Ticks attached to humans or pets should be removed promptly. Remove ticks immediately by grasping between thumb and index finger and pulling straight out. Do not twist. Wash area with soap and water. Apply antibiotic ointment. Watch for any redness or swelling. If irritation persists, contact a physician. Repellents containing diethyl toluamide (DEET) are effective; use the lowest effective concentration—usually less than 30% DEET. Follow label instructions carefully. Around the outside of the home, tick populations can be reduced by using residual insecticides. Follow label instructions. For tick control on pets, consult a veterinarian.

See also:

Public health pests—Tick

For further information:

Ticks. Washington State Department of Health. https://www.doh.wa.gov/CommunityandEnvironment/Pests/Ticks

Nuisance and household pests—Wasp (yellowjacket)

Vespula spp.

Pest description and damage Bee-like insects with yellow and black, or white and black, bands on abdomen.

Management

Some professionals in the PNW collect wasps to be used in the manufacture of allergy injections. Once a nest has been treated, it cannot be collected for this purpose. Before attempting to treat nests on your own, contact a pest control professional to inquire whether a collector is in your area. Wasp nests should be treated in evening when wasps are less active with a pesticide formulated specifically for wasp nests. Do not treat nests with any household chemicals or common fuels such as bleach, gasoline, or diesel; these products are more toxic than most labeled pesticides. Commercial pest control operators should be contracted to do this work if you are subject to severe reactions to wasp, hornet, or yellowjacket stings.

See also:

Public health pests—Wasp and bee

For further information:

Bees and Wasps. Washington State Department of Health. https://www.doh.wa.gov/CommunityandEnvironment/Pests/BeesandWasps

Purchasing Pest Management Services

Do not be alarmed if you learn or suspect that structural pests may be attacking your home; it will not collapse or be destroyed. Pest management

should be considered merely as another repair that may be necessary to maintain your house in sound structural condition.

Do not rush into purchasing pest management services. Damage usually develops slowly. Presence of these pests in a house seldom constitutes an emergency. Any additional damage done over a few weeks or even a few months makes little difference. You always have ample time to purchase service wisely and at your convenience.

Purchase service from a reliable firm. Select a pest management service with the same care and discrimination you would exercise in choosing any other service. Deal only with reliable firms that have an established place of business.

Questions to ask before hiring a pest management professional

- ✓ Are you properly licensed with the state department of agriculture? *Ask to see their license.*
- ✓ Can you provide a list of references? *Most companies will be happy to share their success stories with you.*
- ✓ Will I receive a written report of your findings, proposed treatment, and costs? *Obtain at least three estimates and compare services.*
- ✓ What are the terms of your service agreement? *Understand the provider's obligations and yours, too.*

For further information:

Selecting a Pest Control Company. National Pesticide Information Center. http://npic.orst.edu/pest/selectpco.html