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FOREST Pest LEAFLET

Pacific Forestry Centre

Pests found in and near the home

by Jane Seed

Introduction

The pests that can affect our forests and the forest products manufactured in British Columbia and Yukon may also occur in and near our homes. At times they may cause serious concern. Identifying these and other naturally occurring pests is one of the services the Pacific Forestry Centre provides to the public.

This leaflet describes some of the most common pests encountered in or near homes, and offers advice on preventing and controlling them. It is one of a series prepared to offer details about potential problems and solutions to those problems.

Please compare the illustrations and descriptions with the specimens and/or damage of particular concern. The accompanying illustrations are presented to aid identification only, and are not scientifically accurate in every detail. For a summary of the advice described in this publication, please see the "Summary of pest prevention and control methods" section on page 18.

The term "pest," as used in this leaflet, applies to those insects or other life forms that occur in sufficient numbers or frequency to damage property, affect our health, reduce amenity values, or simply concern us. These same organisms away from the home, or when few in number, may actually be innocuous or beneficial.

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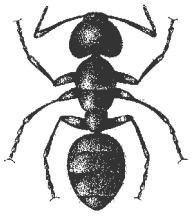

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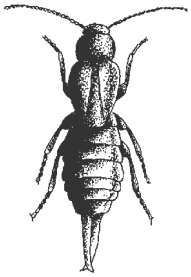

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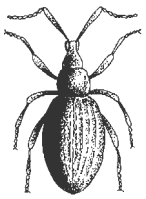

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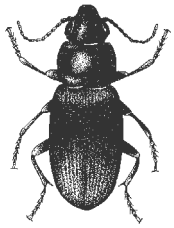

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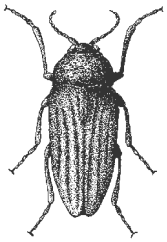

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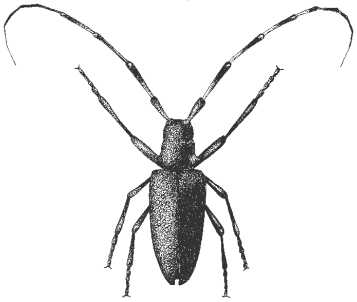

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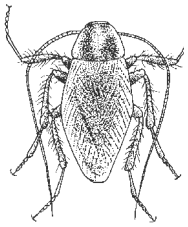

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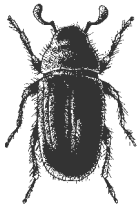

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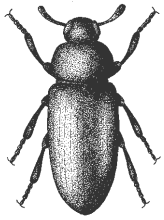

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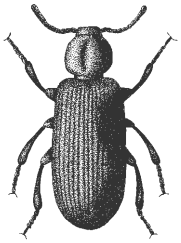

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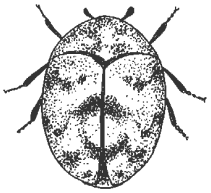

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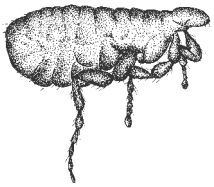

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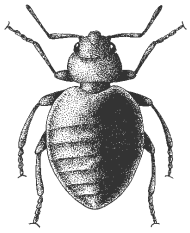

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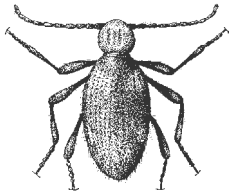

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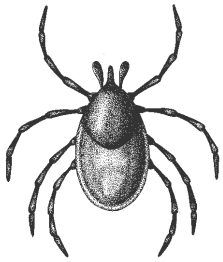

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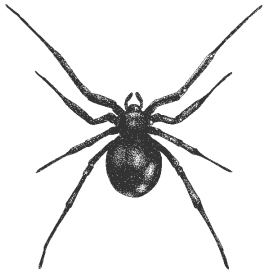

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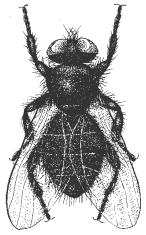

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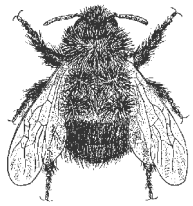

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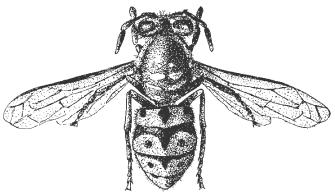

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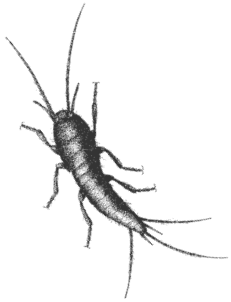

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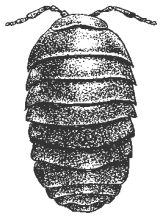

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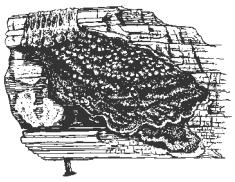

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Pests found in and near the home

Common House Pests

Ants

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Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)

Control Options
Care and upkeep of buildings (page 16)
Pesticide treatment
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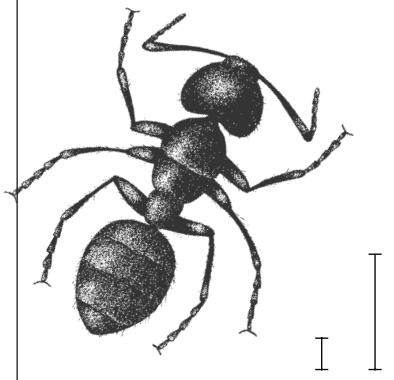


size range

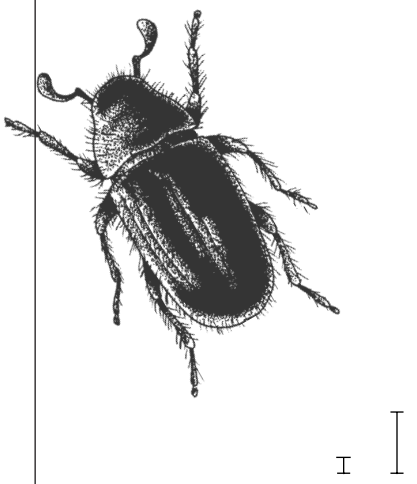
Ants are omnivorous and often invade homes to look for food or shelter. Carpenter ants severely damage wood structures by hollowing out the softer wood between annual growth rings. Common in the forest, they may also thrive in buildings, particularly when moisture or humidity problems persist. Carpenter ants do not eat wood, as termites do, but tunnel into it during nest construction.

Adults are somber colored, often black, and vary in size to more than 1.3 cm in length. They are generally smooth, with a thin neck and waist, have well-developed mouth parts and "elbowed" antennae. They may be winged or wingless. In spring or early summer, a reproductive stage with two pairs of membranous transparent wings appears. After mating, queen carpenter ants drop their wings and start new colonies. Legless larvae are cared for by workers; pupae are in light brown cocoons. Several other species of ants frequently invade homes, nesting in decaying wood (the cornfield ant, for example); others seek out spilled food (sugar ants, for example).

To discourage the entry of ants, follow the general suggestions for building precautions, maintenance and sanitation (pages 16 and 17). As well, a number of insecticides are available on the market for controlling ants. Carpenter ant nest-building activity, indicated by extruded sawdust or the presence of a large numbers of foraging ants, or winged reproductives should be thoroughly investigated.

Bark beetles

Prevention Strategies
Construction of buildings (page 16)
Sanitation in the home (page 17)
Forest Pest Leaflets 13 (spruce beetle), 14 (Douglas-fir beetle), 72 (ambrosia beetle), 76 (mountain pine beetle)



size range

All bark beetles, except ambrosia beetles, are bark and cambium feeders in recently killed, dying or weakened trees. Ambrosia beetles attack the same material, but penetrate wood to a depth of 5-7.5 cm. Bark beetles and ambrosia beetles attack recently dead trees or logs with bark attached and are not a threat to wood structures. They may inadvertently be introduced into homes in firewood. If adults emerge they may be a temporary nuisance as they try to escape. Pinholes in wood or bark result from their activities, allowing entry of other organisms. Ambrosia beetle damage occurs on logs left in the forest or in dryland storage at a mill.

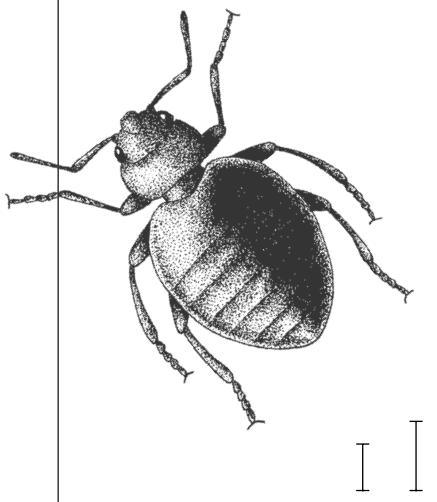
Bark beetles are minute to small beetles 2-8 mm long. They are compact, cylindrical and mostly brown, or black with a variety of striations and punctuations. Their antennae are short and clubbed. Adults build "galleries" along which small, white, elliptical eggs are laid. Larvae are small, white, legless, curved grubs with tan heads. Pupae somewhat resemble adults, but lack pigment until near maturity. The life cycle is completed in one year.

Since these insects are likely to be present only if they are introduced with unseasoned building materials or firewood, following the suggestions on page 16 would prevent unwanted introductions. Bark beetles will not continue activities in a building after completing their life cycle.

Bedbugs

Prevention Strategies
Sanitation in the home (page 16)

Control Options
Sanitation in the home (page 17)
Pesticide application
Licensed pest control operator



size range

Bedbugs are found primarily in human habitations. They require a meal of blood from mammals or birds between each molt and have a special affinity for humans and their habitations.

These nocturnal bugs are small, 6-9 mm long, oval, flat, tough and wingless, but are elongated and swollen when engorged with blood. They are brown, rust-red or purplish. Females may deposit 50-200 yellowish white oval eggs in the cracks of buildings or furniture. Incubation requires 5-10 days and insect maturity requires about two months. Maximum egg laying occurs at about 22°C and ceases below 10°C. Adults may live a year without food.

To determine whether or not bedbugs are present, examine bedding, especially the tufts and rolled edges of mattresses, for the insects or their cast skins and excrement. Humans may suffer itching and welts from bites, although the actual bite is generally painless. Bedbugs are not considered to be disease carriers in North America, but possible infections should receive medical attention.

The sanitary precautions listed on page 17 can help in the detection and reduction of bedbug infestations. A spray may be required and should be repeated at six-week intervals until the bugs are eradicated. Large infestations may require the services of a professional exterminator. Since bedbugs can be picked up in clothing, bedding and luggage in the course of travel, these items should be checked before storing.

Bees

Prevention Strategies
Construction of buildings (page 16)
Care and upkeep of buildings (page 16)
Sanitation outside the home (page 17)

Control Options
Pesticide application

size range

Important pollinators and honey producers, bees are beneficial insects. They are not household pests except, on rare occasions, when they swarm or take up residence in or near buildings.

Adults vary in size from less than 6 mm long to 20 mm or more. They are typically black, with shades of brown, tan, yellow or orange. Their body is hairy with two pairs of long, narrow membranous wings and a curved, barbed sting. Eggs are deposited in cells (single or multiple) in nest sites in soil, wood, hives and buildings.

The building and sanitary precautions suggested on pages 16 and 17 will exclude most bees. Swarming honey bees may best be handled by a person familiar with bees. Bees can be approached most safely when the temperature is low in late evening or early morning. If stung, persons sensitive to bee stings should seek medical assistance immediately. (See also Hornets).

Buprestid beetles or flatheaded wood borers

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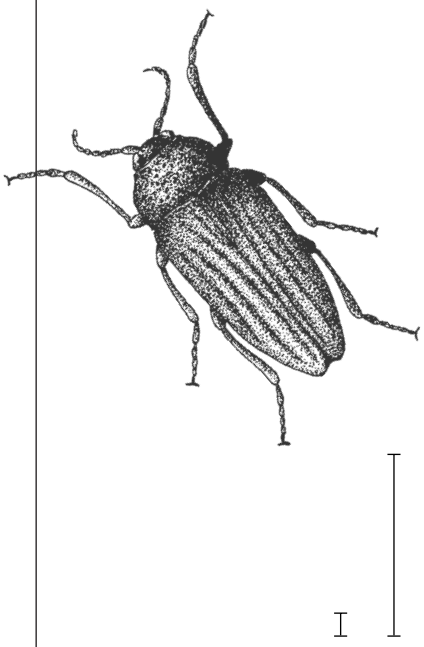
Construction of buildings (page 16)
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)



size range

Most buprestid beetles are primarily forest insects; the larvae tunnel and feed in dead or dying trees. Once established in wood, the larvae may continue to develop for many years. (The golden buprestid can take more than 50 years to mature in seasoned wood; see Forest Pest Leaflet No. 68.) Oval emergence holes damage surfaces, and larvae weaken structural members with their tunnels. Various flatheaded borers may be found in firewood, furniture, flooring and other wooden items, as well as in structural timbers.

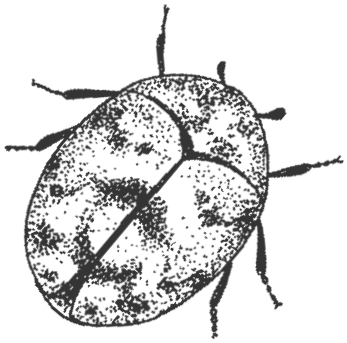
Adults are 3 mm - 24 mm long, compact, smooth, polished and variously marked or indented. Color patterns may be dull or bright, and often metallic. The thorax and abdomen are closely joined, with the head partially set into the thorax, and body somewhat flattened and slightly tapered and pointed at rear. Golden buprestid adults are iridescent green or blue and up to 2 cm long, with wing covers bordered with coppery gold. Larvae are creamy white, almost legless, long and slender. They are conspicuously segmented, with small mouth parts and a broadly expanded and flattened thorax. Eggs or pupae are seldom found. Galleries are oval in cross section and often sculptured. Generally, oval emergence holes in wood surfaces denote flatheaded borers; adult roundheaded borers (longhorned beetles) chew round emergence holes.

Since buildings do not provide suitable conditions for adult flatheaded woodborers to mate and oviposit, their presence depends on the introduction of infested material into the building structure or contents. See the general suggestions on building, sanitation and maintenance on pages 16 and 17. The presence of these beetles, unless related to damage (for example, when they are found emerging from woodwork), is a temporary nuisance.

Carpet beetles

Prevention Strategies
Sanitation in the home (page 17)

Control Options
Sanitation in the home (page 17)



size range

Several kinds of carpet beetles cause damage to clothing, blankets, rugs and furniture. They feed on articles containing wool, feathers, leather, fur or other items of animal origin. The black carpet beetle can also live on cereal products and other plant material. Much of the damage to clothing attributed to clothes moths is actually caused by carpet beetle larvae.

Adult dermestids are small, oval beetles, 3-6 mm long, with short, clubbed antennae. They are generally black or dull colored. Larvae are usually brown and covered with long hairs.

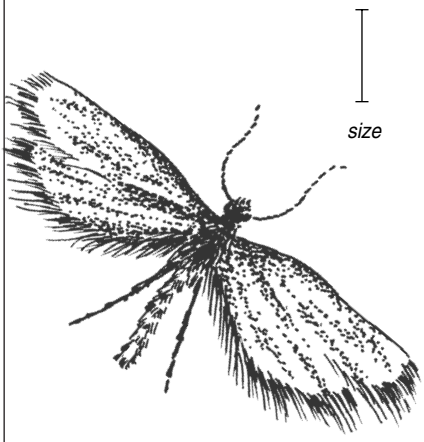
The larder beetle is a little over 6 mm in length. It is black, with a light brown band across the base of the wing covers, and feeds on a variety of stored foods, including meat and cheese. The varied carpet beetle is mostly mottled with a grey, rust and black zigzag pattern; larvae are yellowish brown and clothed with long brown hairs. The larvae feed on woolen fabrics and dried animal products. The black carpet beetle is dark brown or black. The larvae feed on wool, wool and synthetic fabric blends, silk, and sometimes damage nylon. Dermestid larvae; may occur throughout the house; the adults are often found at windows.

To prevent this pest's occurrence see the general suggestions on sanitation in the home (page 17).

Clothes moths

Prevention Strategies
Sanitation in the home (page 17)

Control Options
Sanitation in the home (page 17)
Temperature treatment (page 17)
Dry cleaning
Licensed pest control operator



Clothes moths live on materials of animal origin such as wool, hair, feathers, fur and dead insects. Clothing, carpets or furniture, may sustain severe damage from an infestation. The moths are widely distributed, and are particularly attracted to human habitations.

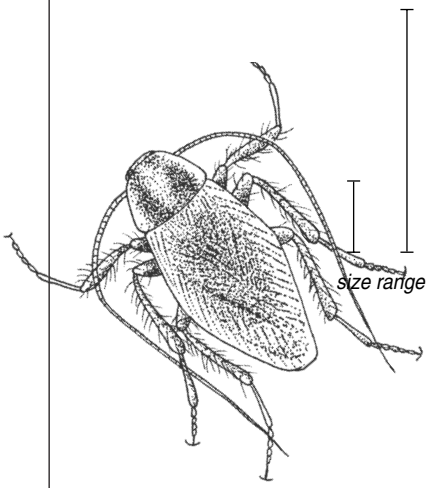
Several species are known. Adults have a wingspread of 1.2 cm or less. Casemaking clothes moths are grayish yellow or dark buff with dark spots on the fore wings; larvae are white with pale brown heads. The larvae live in tube-like shelters of fabric strands. Webbing clothes moths are pale buff or straw colored and their larvae spin silken threads as they move. Clothes moths deposit eggs on potential larval food surfaces.

Sanitation is most important as a control measure. Susceptible materials should be stored in moth-proof containers. The insects may be killed by being exposed to sub-zero temperatures or temperatures above 45°C. Severe infestations should be treated by dry cleaning or handled by a licensed pest control operator.

Cockroaches

Prevention Strategies
Sanitation in the home (page 17)

Control Options
Sanitation in the home (page 17)



Cockroaches prefer dark, secluded, warm, damp places, and are scavengers of foodstuffs and other organic materials. They have a disagreeable odor and pollute foodstuff with their excrement. They may also spread disease organisms; salmonella has been found to be infective in cockroach pellets for more than six months.

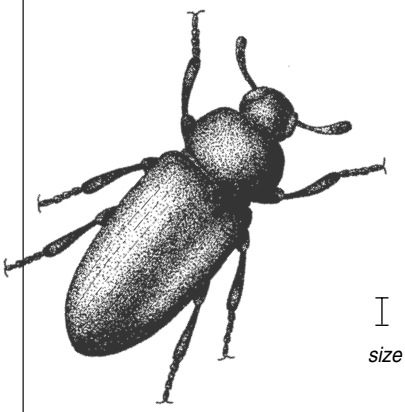
Cockroaches are flat, oval, light to dark brown or black, and have two long, whip-like, many-jointed antennae. The German cockroach, up to 1.3 cm long, is dark brown to black; the oriental cockroach, up to 2.5 cm long, is dark brown; the brown banded cockroach, up to 1.3 cm long, is pale gold to black; the American cockroach, up to 3.2 cm long, is reddish brown. Cockroaches develop from wingless nymphs to fully winged adults. Eggs are laid in packets attached to the female abdomen until shortly before hatching. Cockroaches may require as much as one year or more to complete a life cycle.

Prevention is the best approach to the cockroach problem. Good housekeeping and sanitation generally prevents or eradicates these pests.

Darkling beetles

Prevention Strategies
Sanitation in the home (page 17)
Sanitation outside the home (page 17)

Control Options
Sanitation in the home (page 17)
Sanitation outside the home (page 17)



size

Darkling beetles are mostly scavengers that feed on dead or decaying vegetation, although some feed on cereals, flour, dog food, dried fruit and living plants.

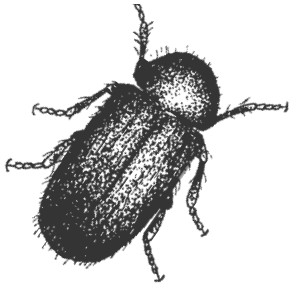
Confused flour beetle adults are oblong flat, reddish brown, and about 3 mm long. They move rapidly when disturbed, but cannot fly. The larvae resemble wireworms. Measuring up to 5 mm long, they are brownish white with a darker head and a pair of slender processes on the posterior.

Confused flour beetles are either introduced into homes with infested material, or attracted there by the presence of available food and an appealing environment. They are best discouraged by sanitary and other precautionary measures.

Deathwatch and drugstore beetles

Prevention Strategies
Construction of buildings (page 16)
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)

Control Options
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)
Heat treatment (page 17)
Licensed pest control operator



size range

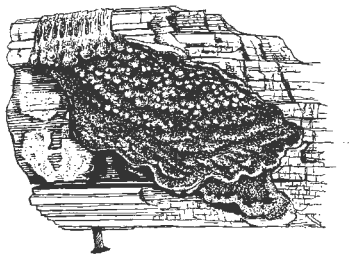
Most species of anobiid beetles feed in dead wood (such as tree limbs) or lumber products. They produce small circular holes 2mm or less in diameter. The drugstore beetle feeds in a variety of dried material, including drugs, spices, seeds and foods of all kinds. Deathwatch beetles are common in forests, but are also often found in homes. The Pacific powderpost beetle and dry-rot beetle are very destructive to structural timbers in buildings. True powderpost beetles cause similar damage (page 12), but are less of a problem in this region than in subtropical regions.

Anobiid adults are small, cylindrical and elongate, typically 2-6 mm long. They are tan to black in color with wing covers that are generally striated and covered with fine, dense hairs. Oval, whitish eggs are laid in wood crevices or in emergence holes. The larvae are yellowish white and nearly hairless, with light brown heads. They pupate in silken cocoons.

Members of this beetle family are common and likely to inhabit any suitable environment. Earth floor crawlspaces, garages or porches provide an ideal environment for deathwatch beetles. To minimize drugstore beetle damage to food products, the suggestions on page 16 should be followed to discourage the pest's entry into buildings. An expert should be sought if damage to buildings has already been found. Beetles in small articles may be killed by heating the articles to 60°C or more.

Prevention Strategies
Construction of buildings (page 16)
Care and upkeep of building (page 16)
Use of wood preservatives

Control Options
Construction of buildings (page 16)
Care and upkeep of buildings (page 16)



Dry rot

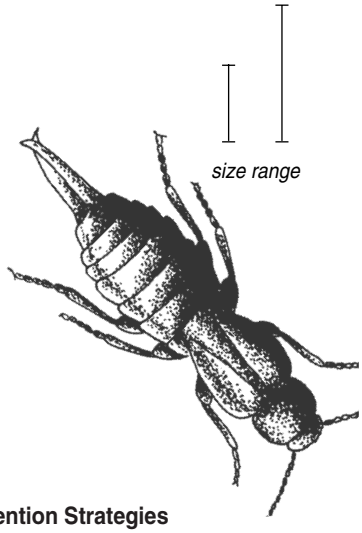
Dry rot is caused by several species of wood decay fungi. The fungi use the components of wood as a food source, causing the wood to become structurally unsound. Areas of wood softened by dry rot may also act as entrance points for termites, carpenter ants or other insects, and may cause covering paint to blister and peel.

Signs of dry rot include the crumbling of wood into brown cubes, evidence of fungal growth in the form of long hyphal strands (stringy growths of fungal tissue) and felt-like sheets of fungal tissue that may be several meters long. In addition, spore-producing structures forming a leathery layer of pores on the underside of decaying material may be present. In undisturbed areas, dust-like accumulations of spores may be seen, and decayed wood may sound hollow when tapped.

All dry rot fungi require a moisture source to grow. However, they may appear to be active in relatively dry areas because they can conduct moisture up several stories in a building by means of the hyphal strands. Situations that may lead to dry rot include:

- contact of untreated wood with soil
- use of wet or green lumber in construction
- condensation from poor ventilation or seepage in crawl spaces
- condensation or water leakage in walls
- condensation on groundline slab foundations
- lack of moisture barriers
- leaky water pipes or drains
- persistent spilling, spraying or improper drainage of water

Precautions should be taken to avoid the above conditions during construction. Older buildings should be checked at least annually, and repaired or upgraded as necessary. Wood is at greatest risk to dry rot when it is in contact with soil and subjected to prolonged moisture. If these conditions are unavoidable, exposed wood should be treated with preservatives before being used. Materials damaged by dry rot may have to be replaced if they are unsound. Once conditions encouraging dry rot have been eliminated (that is, the moisture source and high humidity have been removed and good ventilation provided), further decay should then be halted.



Prevention Strategies
Sanitation in the home (page 17)
Sanitation outside the home (page 17)

Control Options
Sanitation in the home (page 17)
Sanitation outside the home (page 17)
Traps
Commercial baits

Earwigs

Earwigs are nocturnal scavengers, defoliators and predators, attacking a wide variety of plants and insects. They commonly feed on damaged fruits and vegetables, newly expanded foliage and small insects or insect galls. Accumulations of garden debris often harbor large numbers of earwigs.

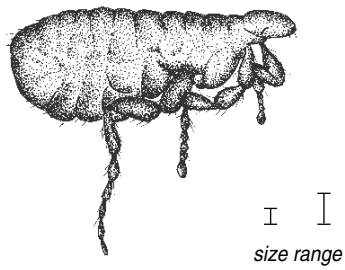
Earwigs are medium sized (1 - 1.7 cm), elongate, and dorsally compressed. They are smooth, shiny, and dark brown to black, with wings that fold in such a way as to make the insect appear wingless. They have biting mouth parts and well-developed legs. The abdomen terminates with a conspicuous pair of pincers. The young nymphs resemble adults. Adults overwinter and lay pearly white spherical eggs in underground nests in the spring. Adults tend the young nymphs. There is probably one generation per year.

Traps, consisting of a tin can with food for bait and crumpled paper as a hiding place, may be set out. Commercial baits are also available. Trapped earwigs should be destroyed. Pet food should not be scattered around. The general sanitation precautions (page 17) will help prevent earwig infestations.

Fleas

Prevention Strategies
Sanitation in the home (page 17)
Sanitation outside the home (page 17)

Control options
Sanitation in the home (page 17)
Pesticide application



size range

There are many species of fleas; most, however, are specific to one or a small number of host species, which includes birds, animals and humans. Fleas are biting parasites and may carry many diseases. They commonly inhabit nests, beds and the surroundings of nesting birds and mammals. Flea larvae feed on animal or vegetable debris; the adults feed on blood.

The adults are minute to small (2-4 mm) insects, wingless and laterally compressed, with long legs adapted for crawling or jumping. They have piercing or sucking mouth parts. Larvae are worm-like and have a well-developed head and mandibles. Eggs are generally laid on the host and drop into the nest or bedding materials of the host. Egg-to-adult development usually takes about five to six weeks.

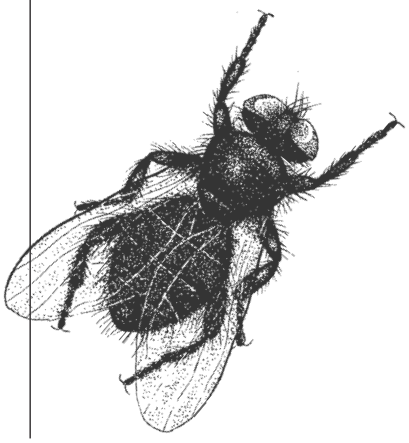
Primary control of fleas is probably best achieved by sanitation, weekly washing of pet bedding, and the restricted movement of pets. See also the general instructions on page 17.

To get rid of established infestations, advice should be sought from a veterinarian. Serious household infestation may require the services of a professional pest control operator.

Flies

Prevention Strategies
Construction of buildings (page 16)
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)
Sanitation outside the home (page 17)

Control Options
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)
Sanitation outside the home (page 17)
Pesticide application



Many families and genera exist and include parasites, predators, scavengers, gall makers and leaf miners. Larvae (maggots) may be found in such diverse substances as water, mud, excreta, carrion, flesh of animals or foodstuffs. Many species bite and take blood from humans, and may carry disease; but many others are beneficial.

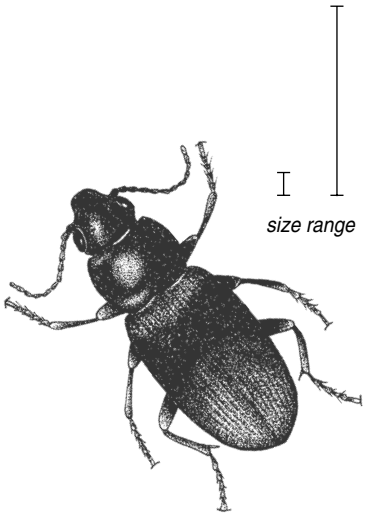
Adult flies are easily recognized by the single pair of membranous fore wings; the rear wings are vestigial. Larvae are usually cylindrical, pointed at the front, with an inconspicuous head. Eggs may be laid in clusters, as with blow flies, or deposited singly, as with parasites. Pupae are generally in a smooth, brown, ovoid case.

In addition to precautions listed on page 17, for controlling pests, it may be necessary to trace the source of a local fly nuisance. Numerous sprays are available, but they give only temporary relief if not used in conjunction with the remedial measures recommended here.

Ground beetles

Prevention Strategies
Construction of buildings (page 16)
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)
Sanitation outside the home (page 17)

Control Options
Sanitation in the home (page 17)



This is a large family of mostly predacious beetles. They are beneficial, but may invade buildings and become a nuisance.

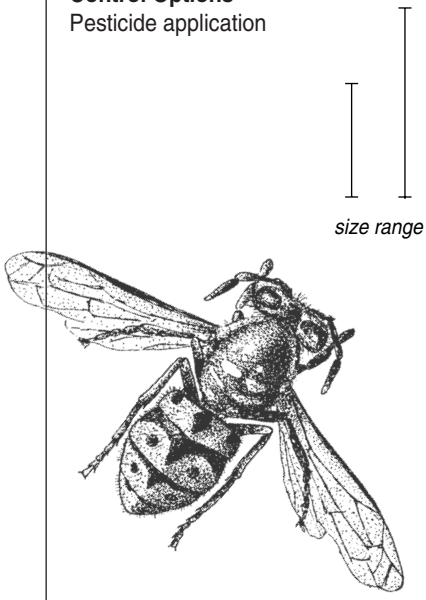
Ground beetles are small (less than 3 mm long) to large (more than 2.5 cm long). They can be smooth, punctate, rough or striated. Devoid of hairs, they are dull black, brown and reddish. Some are metallic blue or green. They have long antennae and large mandibles.

The general instructions for pest control (pages 16 and 17) should be followed.

Hornets, yellow jackets and wasps

Prevention Strategies
Construction of buildings (page 16)
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)
Sanitation outside the home (page 17)

Control Options
Pesticide application



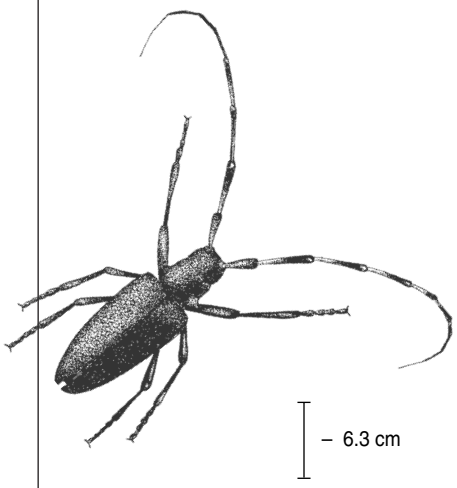
Hornets, yellow jackets and wasps are predators and scavengers often found around human habitations. Damage to fruit and other food is usually offset by predation on insects and other pests. Nests are constructed above or below ground, sheltered or in the open. Stings from any of these insects may be painful and hazardous to the victim.

Adults are medium to large, 1.5-2.5 cm long, and most are black with yellow or white bands. The head is as wide as the thorax, and the mandibles are strong. Adults have two pairs of long, membranous wings and a conical abdomen. Generally there are three castes: workers, queens and drones. Eggs are deposited in cells and develop into legless white grubs which are fed by workers. The eggs pupate in the same cell. Wasp colonies die off in the fall; only young queens overwinter.

The general suggestions for control (pages 16 and 17) apply to hornets, yellow jackets and wasps. Commercial sprays and lethal traps are also available. Control measures should be carried out at night, when all insects are home and at their least active state, and protective clothing should be worn. Since all but young queens die each winter, and these usually seek shelter elsewhere, nests that are not a hazard need not be removed. Anyone suffering severe reactions to stings should seek medical treatment immediately.

Longhorned beetles or roundheaded wood borers

Prevention Strategies
Construction of buildings (page 16)
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)



size range

Most cerambycid larvae, known as roundheaded wood borers, bore and feed in dead or dying trees. Larvae may be in firewood, uncured lumber or similar items brought into homes. Here they may develop to the adult stage and emerge. Emerging adults produce characteristic round emergence holes in the wood and bark. Conditions in the home are unfavorable for further activity by these beetles, and they are not considered a hazard there.

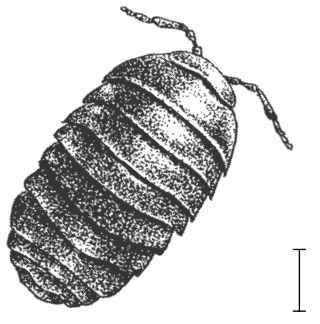
Adults, known as longhorned or sawyer beetles, are medium to large (1 - 6.3 cm), elongate, and somewhat flattened or cylindrical. Their antennae are generally (but not always) longer than the body. They have powerful mandibles, claws and long legs. Eggs are laid on, or inserted in the bark. Feeding galleries are round in cross-section. Larvae are fleshy and segmented, with a long, straight sub-cylindrical shape. Legs are minute. The body is generally off-white, with a darker head. The head is small with powerful mandibles and the prothorax (immediately behind the head) is enlarged. The ponderous borer is the largest local species, reaching 6.3 cm in length in the adult stage, and its larvae may be 10-13 cm long. Most species have a one-year cycle, although some may take three or more years. Adults fly and lay eggs during the summer months.

Controls are seldom necessary if attention is paid to the type of building and sanitary precautions listed on pages 16 and 17.

Pillbugs and sowbugs

Prevention Strategies
Construction of buildings (page 16)
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)
Sanitation outside the home (page 17)

Control Options
Construction of buildings (page 16)
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)
Sanitation outside the home (page 17)



size

Pillbugs and sowbugs feed on decaying vegetation under organic debris or under objects on damp ground. They may invade damp basements, crawlspaces and potted plants, and are nuisances but not injurious pests.

These crustaceans, more closely related to shrimps and crayfish than to insects, look somewhat like miniature armadillos. Sowbugs possess two tail-like appendages and, unlike the pillbug, are unable to roll into a tight ball.

Control or prevention of pillbugs and sowbugs can be achieved if the listed sanitary precautions (page 17) are followed.

Powderpost beetles

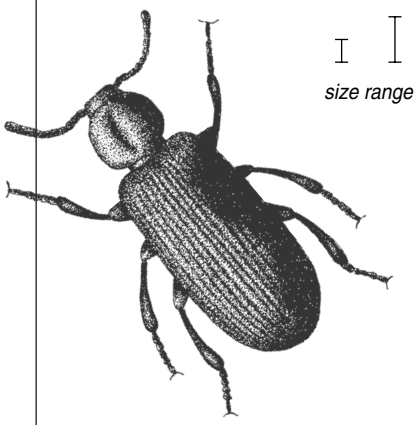
Prevention Strategies
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)

Control Options
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)
Heat treatment (page 17)
Licensed pest control operator

Powderpost beetles produce small circular holes in wood products, similar to those holes made by deathwatch beetles (page 7), but unlike deathwatch beetles which prefer softwood products; powderpost beetles prefer hardwood or bamboo. Hardwood lumber, flooring, furniture, tool handles, packing cases, wood trim, panel boards, and even woven baskets and matting are often damaged by these pests. Hardwood carvings or bamboo articles of tropical or subtropical origin frequently harbor powderpost beetles.

The beetles are brown to black, with elongate 3-6 mm long bodies. They have a prominent head with large eyes, a well-developed thorax and slender legs.

These pests may be excluded through sanitation measures (page 17) or, if found in small articles, killed by heating the infested materials to 60°C. Infested flooring should receive treatment by specialists, or be replaced.



Silverfish and firebrats

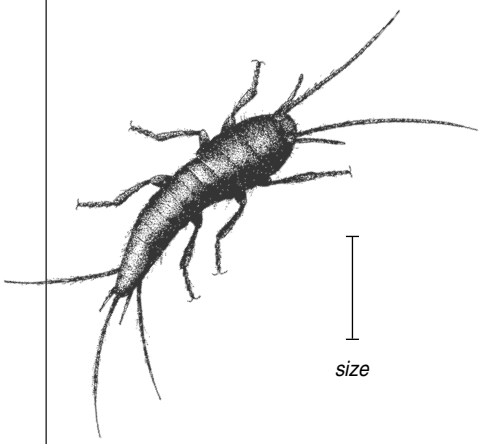
Prevention Strategies
Sanitation in the home (page 17)

Control Options
Sanitation in the home (page 17)

Silverfish thrive in warm, damp, dark areas; firebrats prefer very warm places, such as near radiators or in bakeries. Both commonly feed on starchy material, such as paper sizing, bookbindings, wallpaper, starched fabrics and starchy foods.

They are slender, wingless, scale-covered insects about 13 mm long, with slender antennae and two or three tail-like appendages. Silverfish are uniform silver or pearl grey; firebrats have dusky markings. The young nymphs resemble adults and require 3-24 months to mature.

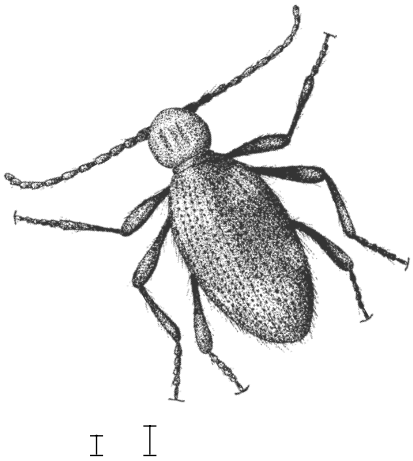
Frequent airing and brushing of clothing and general sanitary precautions (page 17) will help to discourage these pests.



Spider beetles

Prevention Strategies
Construction of buildings (page 16)
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)

Control Options
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)



size range

Spider beetles are a small family of scavengers that feed on dried animal and plant material. Commonly found in homes and out buildings, they are primarily pests of stored food products. Before pupating, they have been known to bore about 6 mm into wood. Insulation is also a common pupation site.

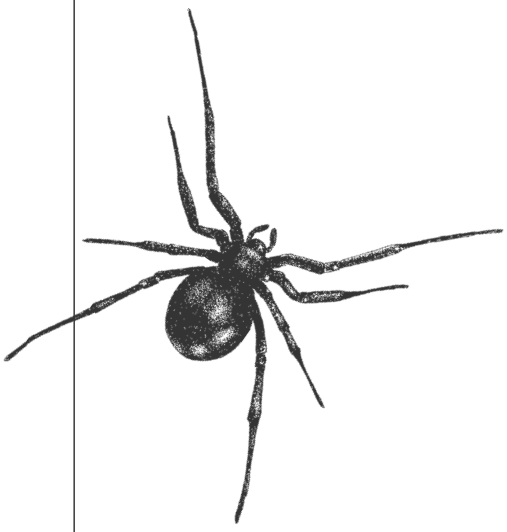
Adult beetles are small (2-4 mm), somber, oval or cylindrical beetles. The head and thorax are much narrower than the rest of the body, giving the beetle a resemblance to a spider. The head is visible from above. Antennae are long and thin.

The sanitation and general precautions outlined on page 17 will keep these pests at a minimum.

Spiders

Prevention Strategies
Construction of buildings (page 16)
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)
Sanitation outside the home (page 17)

Control Options
Sanitation in the home (page 17)



Although spiders are not insects, their general appearance and habits are similar to those of some insects. Most spiders feed on insects.

The large, brown or black hairy spiders occasionally seen running about the floors in homes are harmless to humans.

The black widow spider is poisonous but rarely lethal. It occurs in the southern Interior and southeastern Vancouver Island and is normally a country dweller, preferring to spin webs in dark, dry places such as empty rodent burrows or under rocks. Wood piles, old buildings, houses and trash piles are usual habitats.

The black widow spider is glossy black. Adult females often have a red “hourglass” marking on their underside. They may reach 3.2 cm in length with legs extended; males are much smaller. The web is an unorganized network across a convenient opening.

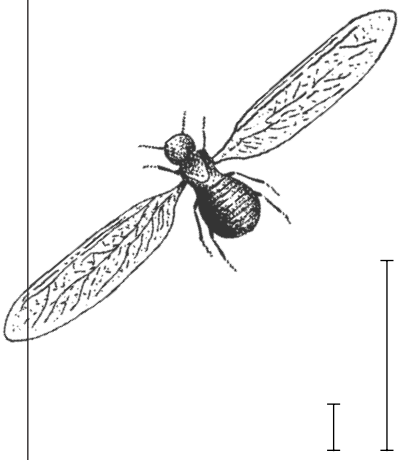
Anyone bitten by a suspected black widow should call a doctor. The offending spider should be caught if possible, and retained for identification. It should be kept in a vial or jar with no breathing holes, as it is capable of biting through a small aperture. Spider bites are very rare in British Columbia and are seldom lethal.

The general instructions for building and sanitation should be followed (pages 16 and 17). Spiders established indoors may be picked up with a vacuum cleaner, or scooped up with a glass and a sheet of paper and deposited outdoors.

Termites

Prevention Strategies
Construction of buildings (page 16)
Care and upkeep of buildings (page 16)

Control Options
Construction of buildings (page 16)
Care and upkeep of buildings (page 16)
Licensed pest control operator
Forest Pest Leaflet No. 57



size range

Pacific dampwood termites live and feed within wood that is in contact with soil or subject to continued high humidity. Old stumps, logs and other debris provide feeding sites in the coastal area, as do wooden structures if conditions are favorable. Feeding is concealed, so detection of weakened or hollowed-out timbers requires close examination of posts, beams and joists.

Termites resemble large ants or earwigs. They measure up to 2.5 cm in length. Worker termites are wingless, white to creamy, with no constrictions. They can be distinguished from ants in that they have straight antennae. Between head, thorax and abdomen, ants have noticeable constrictions and elbowed antennae. Soldier termites have enlarged mandibles and dark heads. The reproductive form is winged at first, but the wings are lost soon after the mating flight. Termite wings are about twice the length of the body, translucent and finely veined; ant wings are clear, with simple veining about equal to the length of body. The reddish brown adult of Pacific dampwood termites are commonly seen flying during evening in late summer, but this alone is not an indication of infested premises. Damaged structural materials, small brownish pellets near feeding sites (for example, on sills or plates), or discovery of feeding insects indicate the need for further investigation.

Western subterranean termites live in dead wood, roots, tree remains, plants, grasses or structures containing these materials. Feeding on the interior of wooden structures may cause these to weaken or collapse if left unchecked. Unlike dampwood termites, the subterranean termites extend tunnels in all directions in soil, or build shelter tubes from a moisture source to feeding sites some distance away. Concrete foundations may be crossed by tubes to reach wooden structures. Subterranean termites are smaller in size (6 mm-1 cm long than Pacific dampwood termites and adults are black.

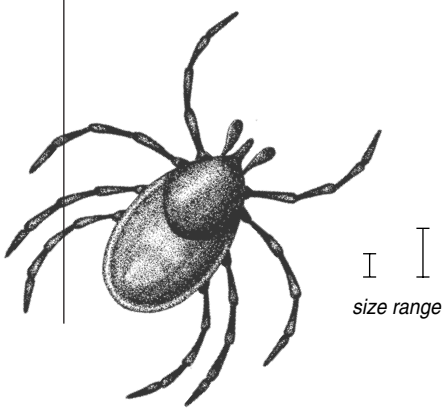
Reproductive adults have a brief flight period after late summer rains. Strong colonies may divide if food is available.

Prevention through proper building construction, corrective measures or sanitation is the best control. Eradication of established colonies requires thorough treatment (page 16).

Ticks

Prevention Strategies
Protective clothing
Repellent products

Control Options
Examination of clothing and pets



size range

At least 20 species of ticks occur in British Columbia and Yukon, normally feeding on birds and animals and sometimes on humans. Most ticks are specific to a particular host. They may be carried indoors on pets but do not stay there. Feeding on humans or animals may cause tick paralysis or rocky mountain spotted fever (rare in British Columbia). Ticks have also received high-profile coverage as carriers of Lyme disease. Recently, the bacterium causing Lyme disease has been confirmed in deer ticks in the Fraser Valley and on Vancouver Island. Although risk of infection is likely very low, persons living and visiting in these areas should be aware of this confirmed fact. The Ministry of Health advises that precautionary measures are recommended, and further information on local situations can be obtained at all B.C. Public Health Units.

Ticks are small, less than 6 mm long before feeding, and flat and leathery. They have a small but prominent head and a rounded brown or gray body. After feeding, they may resemble a swollen raisin. Immature stages have six legs; mature stages, eight legs. Ticks are generally active from about March to June,

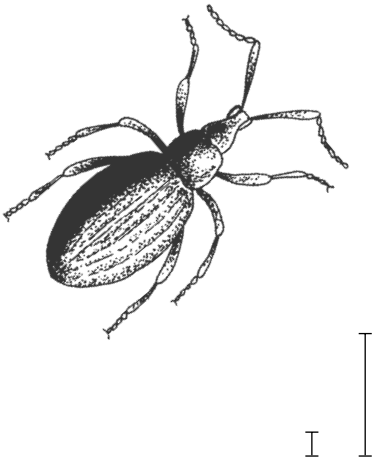
waiting on plants or trees for a passing host. The remainder of their time is spent in the ground. Full development may take three or more years.

Vigilance and careful examination of one's clothing and body after possible exposure helps prevent establishment of this parasite. Attached ticks should be removed. Pets should also be examined. Control measures are impractical, but some repellent preparations may be helpful.

Weevils or snout beetles

Prevention Strategies
Construction of buildings (page 16)
Care and upkeep of buildings (page 16)
Sanitation in the home (page 17)

Control Options
Sanitation in the home (page 17)
Heat treatment (page 17)



size range

Most weevils are root feeders, wood borers, cambium feeders, stem borers or terminal borers on a wide range of trees, shrubs and agricultural plants. Granary and rice weevils are grain feeders. The damaging stage of weevils is the larva, although adults of a few species eat vegetation. Only grain feeders normally complete a life cycle in stored products within buildings. Often carried into buildings in host material, many species complete their development there and emerge as adults, constituting a nuisance but not a hazard. Strawberry root weevils and black vine weevils commonly enter buildings to overwinter and leave again in early spring. Only food or plants may be damaged.

Adults are hard-bodied beetles, 3 mm-1.6 cm long. They are cylindrical and elongate, and may be striated, punctate, scaly, hairy or shiny. Their color is usually dull gray, brown or black, but may be bright with a metallic sheen. The head is extended to a prolonged snout, and antennae are distinctly elbowed, with a club at the end. Larvae are robust, curved, generally near-white grubs with wrinkled bodies; the well-developed head is often tan colored. Pupae superficially resemble adults but lack pigment, and are generally found at larval feeding sites. The life cycle may take four months to a year or more.

Adherence to the general rules for sanitation (page 17) will usually prevent weevils from entering buildings. To kill weevils in stored products, the material should be put in an oven at 60°C until the heat has completely penetrated it, and then left for an additional hour.

Prevention and control of pest-related problems

When discussing a particular pest people usually ask: “What is it?” “What does it do?” and “What can we do about it?” The first two questions are usually easy to answer; the third is more difficult. Prevention and control of pests by means other than pesticides is generally desirable, but not always practical. Before selecting a pesticide, however, several other questions should be answered:

Do you know the identity of the pest? Does it need to be controlled? Many insects, for example, are known to be harmless or even beneficial; others are a temporary occurrence.

Can the pest be excluded or discouraged? Insects and other arthropods require food and shelter. Favorable environmental conditions are therefore likely to attract them. Change these conditions and the problem may be eliminated.

If control measures are taken, might you destroy beneficial insects or other organisms, or endanger humans? Are you prepared to take all necessary precautions to prevent personal injury and pollution of the environment? Pesticides treatments are seldom, if ever, a permanent remedy to these problems.

On the other hand, pesticides may be the only solution when a quick “knock-down” is needed. If this is the case, the name and habits of the target pests should be known before any registered pesticide is purchased or applied, to minimize hazards and achieve maximum effectiveness. Pesticides are toxic and should be used cautiously. Follow label directions carefully. In cases of severe infestation inside the home, a certified pest control operator should be consulted. Professional advice may also be available at local government offices having specialists in human or forest health, agriculture (horticulture), and pesticide management.

A. Construction of buildings

The following precautions will help to discourage pests.

Buildings should be soundly built. Pay special attention to:

Foundations: they should be concrete or masonry with no wood in contact with the ground. Only pressure treated wood should be in contact with soil.

Basements and crawl spaces: they should be dry and ventilated. Earth floor crawl spaces should be sealed with a 6 mil polyethylene vapor barrier and preferably a skin coat of concrete.

Windows, doors, vents and other openings: they should be screened.

Interiors: floors, ceilings and walls should be free of cracks or crevices.

Unseasoned or “used” lumber: it should be clean and free of decay, insects and insect damage.

Building sites: they should be well drained and away from garbage dumps and unkempt agricultural or industrial plants. Nuisance areas may produce pests faster than one can control them.

B. Care and upkeep of buildings

Check and repair all buildings periodically, particularly areas where high humidity occurs or moisture is trapped.

Alter older buildings, if necessary, to eliminate areas of potential pest problems. Most alterations are less expensive to do than is work to repair damage caused by insects such as termites.

Check and repair existing paintwork, and consider painting wood not yet painted. Paint discourages some insects and, in the process of getting the work done, the homeowner may note pest-prone defects.

C. Sanitation in the home

Keep food stuffs in insect-proof containers. Do not let “spills” accumulate in crevices and cracks, under cupboards, and in other hard-to-reach places. Regular vacuum cleaning will effectively “capture” many pests.

Dispose of infested food or treat it with heat (temperatures around 60°C kill most insects).

Treat pet foods as carefully as you would human food. Don’t accumulate old clothing, packing cases, etc.

Store firewood away from buildings. It may harbour insects which can emerge in the house or basement.

Clean pet cages and bedding weekly. Pets should not be allowed to roam freely in the home, as some of their parasites might infest carpets, bedding, and upholstery.

Do not allow mice, rats, birds and other animals indiscriminate freedom in dwellings.

Expose bedding, curtains and carpets to bright sunlight periodically (once or twice annually). Many pests, if present, can be killed this way.

Dispose of as much adhering dirt and debris as possible before bringing vegetables, bulbs and other plant matter into the house or basement.

D. Sanitation outside the home

Keep grass, shrubbery, stored materials, and debris away from foundations and the walls of buildings. Such materials provide shelter or entry routes for insects and rot fungi.

Keep grounds clear of debris. Boards, containers and loose stones on the ground provide shelter for insects.

Keep drainage troughs and pipes clean. Poorly drained ground should be rectified, if possible.

Prevent birds and wasps building nests in or on houses.

Avoid keeping uneaten pet food on porches and patios. It provides sustenance for pests.

Keep garbage cans clean. Compost bins should be tightly constructed to exclude flies, rats and other pests.

Keep your pets from wandering freely through the neighborhood, and prevent straying around your home and yard.

Try to ensure that the plants and topsoil you obtain come from sanitary sources. Such material introduced from outside areas, sometimes in contravention of regulations, may introduce pests.

Summary of pest prevention and control methods

For many of the pest problems listed, a pesticide treatment may be required. Other options, however, as outlined on pages 16 and 17, should also be considered when the best treatment is being decided. These options are summarized in the following table and include:

A. Construction of buildings
B. Care and upkeep of buildings
C. Sanitation in the home
D. Sanitation outside the home
E. Use of a registered pesticide (**RP**) best applied by a certified pest control operator (**CPCO**)

When options **A** to **D** are not possible, and especially when the problem is urgent or serious, use of a registered pesticide (option **E**) may be advisable.

Pest	Prevention	Direct Control
Ants	A, B, C	B, E (RP, CPCO)
Bark beetles	A, C	—
Bed bugs	C	C, E (RP, CPCO)
Bees	A, B, D	E (RP)
Buprestid beetles	A, B, C	—
Carpet beetles	C	C
Clothes moths	C	C, Temperature treatment CPCO
Cockroaches	C	C
Darkling beetles	C, D	C, D
Deathwatch beetles	A, B	B, E (RP, CPCO)
Dermestid (see Carpet beetle)		
Drugstore beetles	C	C
Dry rot	A, B, wood preservatives	A, B
Earwigs	C, D	C, D, E (RP)
Firebrats (see Silverfish)		
Flatheaded woodborers (see Buprestid beetles)		
Fleas	C, D	C, E (RP, CPCO)
Flies	A, B, C, D	B,C, D, E
Ground beetles	A, B, C, D	C
Hornets, yellow jackets, wasps	A, B, D	E (RP)
Longhorned beetles or roundheaded wood borers	A, B, C	—
Pillbugs and sowbugs	A, B, C, D	A, B, C, D
Powderpost beetles	B, C	B, C, Heat treatment E (RP, CPCO)
Silverfish and firebrats	C	C
Spider beetles	A, B, C	B, C
Spiders	A, B, C, D	C
Termites	A, B	A, B, E (RP, CPCO)
Ticks	Protective clothing	Examination of clothing and pets
Weevils or snout beetles	A, B, C	C, Heat Treatment

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* A copy of this news release is available for study at the library of the Pacific Forestry Centre in Victoria, British Columbia.

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Additional Information

Additional copies of this and other leaflets in this Forest Pest Leaflets series, as well as additional scientific details and information about identification services, are available by writing to:

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