I N S E C T S E R I E S

HOME & GARDEN

Wasps and Bees in the Home

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Quick Facts...

Most bees and wasps are highly beneficial as predators of pest insects or as pollinators.

Nuisance problems with stinging insects most commonly occur with various species of yellowjacket paper wasps.

Yellowjackets, hornets and polistes wasps make nests of paper. Honeybees and bumblebees make nests with wax. Other bees and wasps nest in holes in the ground or natural cavities. Some hunting wasps make mud nests.

Only honeybees produce a permanent colony.

Wasps and bees can be a serious nuisance problem throughout Colorado, particularly late in the summer when certain yellowjacket wasps forage at garbage and outdoor food areas. In overall balance, however, these insects are quite beneficial in their activities, particularly as predators of pest insects and as pollinators. It is important to distinguish between the various wasps and bees, because their potential as problems and their control differ.

Paper Wasps (Yellowjackets, Hornets, Polistes Wasps)

Paper wasps are social insects that annually produce new nests of paper. A single fertilized female wasp (queen) starts the colony in the spring. The colonies are very small early in the season, as the queen alone has to perform all of the chores involved in building the colony and feeding the developing young.

Late in the season, the size of the colonies rapidly increases as more wasps are raised to assist in colony development. The nest is abandoned in fall and is not reused the following year. Only the new queens survive. They disperse as individuals to seek protected areas to overwinter.

Paper wasps primarily feed on insects and can be one of the most beneficial insects to the gardener concerned with plant pests such as caterpillars. However, some paper wasps, in particular a few species of yellowjackets, also are scavengers and can become a considerable nuisance around garbage and outdoor events where food is served. All of the paper wasps are capable of producing a painful sting but do not leave the stinger behind as do honeybees.

Yellowjackets (*Vespula* spp.) are banded yellow or orange and black and are commonly mistaken for honeybees (Figure 1). Yellowjackets typically nest underground in rodent burrows. Occasionally nests can be found in dark, enclosed areas of a building, such as a crawl space or wall void. Among the yellowjackets are a few species that can become serious nuisance pests, particularly late in the season when large numbers are present and scavenging. Almost all bee stings actually involve yellowjackets.

Hornets (*Dolichovespula* spp.) produce very large, gray nests in trees, shrubs or under external eaves of homes. The common bald-faced hornet is rather stout-bodied, dark, and marked with white stripes. Another common species of hornet is marked with yellow and resembles a large species of yellowjacket. Because of the large nest size and their conspicuous location, hornets often cause particular concern. However, hornets rarely sting people unless the nest is disturbed.

Polistes wasps (*Polistes* spp.) and the western paper wasps *(Mischocyttarus flavitarsus)* make paper nests of an open-cell construction, typically under the eaves of buildings. Polistes wasps are slender and reddish-brown marked with yellow. Polistes wasps are beneficial predators of caterpillars

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Figure 1: Yellowjacket.

Figure 2: Paper nest typical of hornets and yellowjacket wasps.

The common western yellowjacket is attracted to the chemical heptyl butyrate, which is included as the lure in many wasp traps. These are commonly available through nurseries and garden catalogs.

and do not scavenge garbage. They often enter houses in the fall, seeking a place to hibernate. They rarely sting at this time unless handled.

Control of Paper Wasps

Many concerns with paper wasps occur late in the season when nests grow large and are more easily seen (Figure 2). If the nest is not causing a problem, the best solution is to wait until it is abandoned in the fall. The nest can be safely removed in the winter or, if left alone, will break up after a season.

Active nests causing problems can be destroyed with an insecticide. Insecticide applications are best made during late evening or cool periods in early morning when the wasps do not readily fly.

Insecticides containing carbaryl (Sevin), diazinon, chlorpyrifos (Dursban) or propoxur (Baygon) are all effective for destroying a wasp colony. It often is desirable to include a rapid knockdown type of insecticide (pyrethrins, resmethrin) to reduce problems with flying wasps. These mixtures commonly are found in the various wasp and hornet sprays.

When approaching a colony, wear light-colored clothing because it is less likely to disturb the defending insects. Also, do not wear loose-fitting clothes that may inadvertently trap wasps.

Apply insecticides directly into the nest entrance. In most cases, a single application should destroy the colony, although newly emerging wasps will continue to be produced for about one week after the application.

Some ground-nesting yellowjackets are best controlled with a dust type of insecticide that can be tracked into the colony.

All paper wasp nests are most easily destroyed if located in early summer when they are small.

Nuisance problems with scavenging yellowjackets are difficult to control unless the nest(s) are found and destroyed. Yellowjackets may fly as far as 1,000 yards from the colony, so the nest often is almost impossible to find. There is no other simple means to avoid these problems with scavenging yellowjackets. Problems can be lessened if all garbage and other attractive foods are not kept where they can attract yellowjackets.

There has been some success using baits and traps for yellowjacket control. The common western yellowjacket is attracted to the chemical heptyl butyrate, which is included as the lure in many wasp traps. These are commonly available through nurseries and garden catalogs.

One insecticide, a special microencapsulated formulation containing diazinon, is labeled for use in poison baits for yellowjacket control. This is mixed with some attractive food (tuna fish, cat food). Wasps then pick it up and return it to the colony where it may be fed to other members. Only fresh foods are attractive to yellowjackets, so replace the baits daily. Obviously, take great care to avoid accidental poisoning of pets and wildlife.

Hunting Wasps (Mud Daubers, Potter Wasps, Cicada Killers, etc.)

Various kinds of solitary hunting wasps can be found around homes or yards. These wasps feed on spiders or insects such as aphids, caterpillars and cicadas. The hunting wasps feed this prey to their young, which develop within nests constructed out of mud, in plant stems or in holes in the ground. The hunting wasps do not live in colonies but often may nest together in large numbers at a site.

The solitary hunting wasps often are rather fearsome looking but rarely sting and then only if handled. Most of these wasps are beneficial predators of pest species and do not require control. Insecticides listed for control of paper

wasps also will be effective against these wasps. Problems with cicada killers or other ground-nesting wasps can be permanently prevented by modifying the nesting site environment through regular watering or planting a cover crop. The insecticides diazinon, Dursban and Turcam also are labeled for control of wasps in lawns.

Figure 3: Honeybee.

The honeybee is an extremely important and beneficial insect due to its production of honey and other products, as well as pollination of plants.

Honeybees

Honeybees are social insects that produce large colonies made of wax (Figure 3). Honeybee colonies typically last for many years at a single nest site, becoming semidormant during the winter months.

Honeybees feed on nectar and pollen and do not scavenge garbage. The honeybee is an extremely important and beneficial insect due to its production of honey and other products, as well as pollination of plants. They frequently are confused with the nuisance species of yellowjackets. Honeybees are most easily differentiated from yellowjackets by their covering of hairs. Honeybees do leave a stinger attached to the skin if they sting.

Honeybees rarely cause problems in Colorado by nesting in homes. When bees do nest within the siding of a house, removal can be difficult and may require professional assistance. The colonies are easily destroyed by insecticide applications (Sevin, Baygon), but the wax and honey must also be eliminated. If not, they may melt and flow into interior areas of the building. This will attract rodents and wasps. The siding of the house may have to be removed to clean out the remains of a destroyed colony. Do not eat wax and honey from an insecticide-destroyed colony. Because previously used nests are attractive to new swarms, pack the cavity with insulation or other material to prevent reinfestation.

Professional beekeepers occasionally agree to remove a honeybee colony. However, most beekeepers will not routinely do this because so many bee calls are false alarms (yellowjackets or hornets) and honeybee colony removal is time consuming. Beekeepers more often are interested in collecting bee swarms, which may temporarily be found on bushes or trees during late spring and early summer. Most Colorado State University Cooperative Extension county offices keep lists of area beekeepers willing to collect honeybee swarms.

Other Bees

Several kinds of bees can be found in yards. Rarely do these bees sting and cause problems to people.

Bumblebees are social insects that annually establish new colonies started by single queens. Bumblebee colonies often are underground, but occasionally the bees nest in padding material, such as a mattress, or in grass clippings. Bumblebees are plump and covered with black and yellow hairs. Control of bumblebees rarely is necessary and the nests are soon abandoned. Insecticides useful for wasp control also can kill these bees.

Leafcutter bees and ground bees make tunnels within plant stems, rotten wood or in the ground. The young bees develop within these tunnels, where adult bees feed them pollen and nectar. These solitary bees do not form colonies but may nest together in a small area, particularly certain ground-nesting bees. These bees do not sting unless handled.

Occasionally large numbers will emerge or nest in a small area. Chemical controls recommended for other bees and wasps should ease the occasional problem. However, more effective control often results from modifying the soil used by the nesting bees. Regular watering of a nesting site or planting ground cover can achieve this.

First Aid for Stings

Localized swelling and pain are typical reactions to a sting by a wasp or bee. In most people, these symptoms gradually disappear within a few hours.

Honeybees generally leave the stinger behind. Carefully remove it by scraping without squeezing the small attached poison sac, which can force more venom into the wound. Other bees and wasps do not leave a stinger.

Treat the sting site with an antiseptic to prevent a possible infection. Cool lotions or compresses can help relieve pain and swelling. Crushed aspirin or powdered meat tenderizer also can help reduce the pain. If many stings are received, oral antihistamines can reduce swelling and itching. Take these with the usual precautions for these products.

A small percentage of the U.S. population, approximately 1 percent, becomes hypersensitive to bee stings and may suffer severe allergic reactions. This includes difficulty in breathing, dizziness, nausea and development of hives. These systemic effects from a sting may require immediate medical attention from a physician. An allergy specialist may advise a series of injections to lessen sensitivity.

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