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# service in ACTION

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Wasps and bees  
in the home area

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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 yellow jacket paper wasps. Yellow jackets, 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; paper wasp nests are abandoned at the end of the year. Insecticides sprayed into nest openings can eliminate problem nests. Problems with ground-nesting bees and wasps are best handled by altering the soil surface to make it unattractive to the insects.

insects are quite beneficial in their activities, particularly as predators of other insects and as pollinators. It is important to distinguish between the various wasps and bees, since their potential as problems and their control differs.

## Paper Wasps (Yellow Jackets, Hornets, Polistes Wasps)

Paper wasps are social insects that annually produce new nests of paper. These colonies are started in the spring by a single fertilized female wasp (queen). 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.

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This information provided by:

Wasps and bees can be a serious nuisance problem throughout Colorado, particularly late in the summer when certain yellow jacket wasps forage at garbage and outdoor food areas. In overall balance, however, these

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1. Whitney S. Cranshaw, Colorado State University Cooperative Extension entomologist and associate professor, and Robert G. Simpson, professor; entomology. 1/92. ©Colorado State University Cooperative Extension. 1994. Some recommendations change regularly. Please contact your Colorado State University Cooperative Extension county office for current recommendations.

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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. The wasps disperse as individuals and 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 yellow jackets, also are scavengers and can become a considerable nuisance around garbage and at 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 to honeybees.

#### **Yellow jackets**

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



Figure 1. Yellow jacket.

**Hornets** (*Dolichovespula* spp.) produce very large, grey nests in trees, shrubs or under external eaves of homes (Figure 2). The common bald-faced hornet is rather stout-bodied, dark colored, and marked with white stripes. Another common species of hornet is marked with yellow and resembles a large species of yellow jacket. Because of the large nest size and their conspicuous location, hornets often cause particular concern. However, rarely are people stung by hornets unless the nest is disturbed.



Figure 2. Bald-faced hornet.

**Polistes wasps** (*Polistes* spp.) make paper nests of an open-cell construction, typically under the eaves of buildings. Polistes wasps are slender and reddish-brown in color marked with yellow. The Polistes wasps are very beneficial predators of caterpillars 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 (Figure 3).

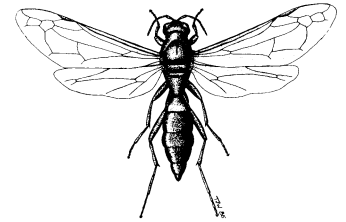


Figure 3. Polistes wasp.

#### **Control of Paper Wasps**

Many concerns with paper wasps occur late in the season when nests grow large and are more easily seen (Figure 4). 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, left alone, will break up after a season.

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

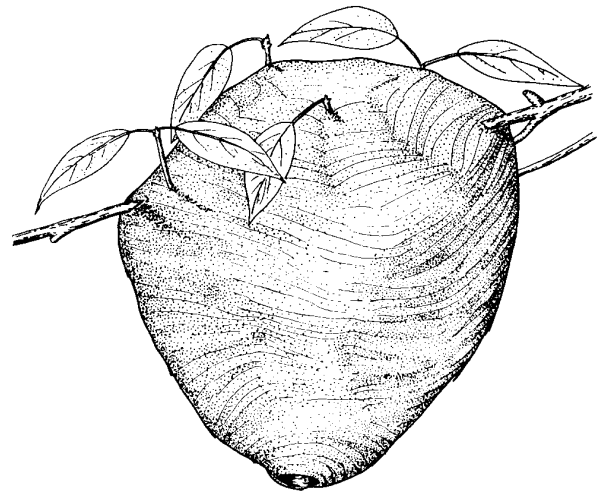


Figure 4. Paper nest typical of hornets and yellow jacket wasps.

Insecticides containing carbaryl (Sevin), diazinon, chlorpyrifos (Dursban) or propoxur (Baygon) are all effective for destroying a wasp colony. It is often 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, a person wearing light-colored clothing is less likely to be disturbing to the

defending insects. Also it is wise not to 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 yellow jackets may be 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 yellow jackets are very difficult to control unless the nest(s) can be found and destroyed. Yellow jackets may fly as much 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 yellow jackets. Problems can be lessened if all garbage and other attractive foods are not kept in an area to attract yellow jackets.

### **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 upon 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 do so 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 irrigation or establishment of a cover crop. The insecticides diazinon, Dursban and Turcam also are labelled for control of wasps in lawns.

### **Honeybees**

Honeybees are social insects that produce large colonies made of wax (Figure 5). Honeybee colonies typically last for many years at a single nest site, becoming semi-dormant 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



**Figure 5. Honeybee.**

pollination of plants. They frequently are confused with the nuisance species of yellow jackets. Honeybees can be most easily differentiated from yellow jackets by having a 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. In the cases 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 then be eliminated. If it is not, the wax and honey may melt and flow into interior areas of the building. It will also 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 removed from an insecticide-destroyed colony.

Professional beekeepers occasionally may agree to remove a honeybee colony. However, most beekeepers will not routinely do this because so many "bee" calls are false alarms (yellow jackets or hornets) and honeybee colony removal is very 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.

### **Other Bees**

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

**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 in shape and covered with black and yellow hairs.

**Carpenter bees** excavate tunnels in wood where they rear their young. Actual structural damage to the wood is rare and carpenter bees will not sting unless handled. Carpenter bees closely resemble bumblebees. Carpenter bees are not social, colony-producing bees.

Control of bumblebees and carpenter bees 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; they are fed pollen and nectar by the adult bees. These solitary types of 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 within 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 establishment of a vegetation ground cover can achieve this.

## First Aid for Stings

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

When stung by a honeybee, the stinger generally is left behind. Carefully remove it by scraping so that the small attached poison sac is not squeezed, which can force more venom into the wound. Other bees and wasps do not leave a stinger.

The sting site may be treated 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 numerous stings are received, oral antihistamines can reduce swelling and itching. Only take these with the usual precautions of 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.