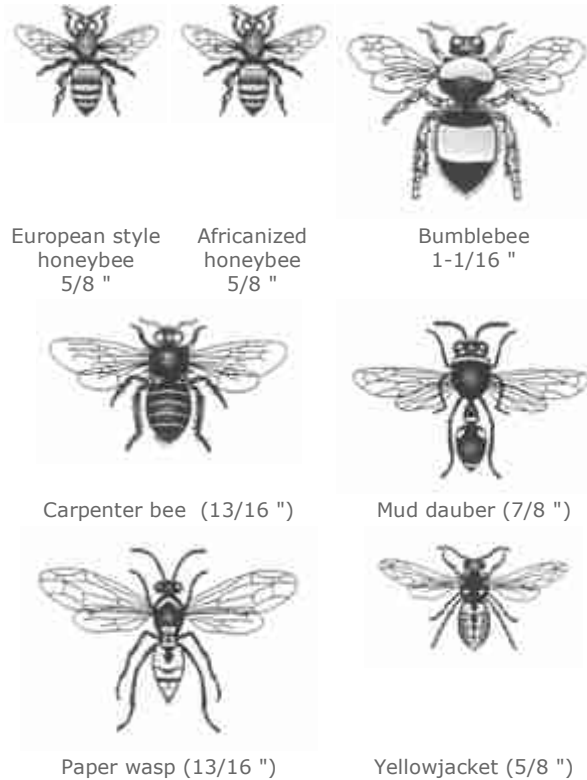


Wasp

Bee and Wasp Identification Chart



Yellow Jacket Wasps

These social wasps live in colonies which number thousands of individuals. These beneficial insects would not anger or threaten us except that they have adapted themselves to living very closely with us. They take advantage of us by sometimes nesting in the wall spaces and attics of our homes where they can go unnoticed all season. They leave the nest area flying outdoors in search for food. However, in the fall, when food becomes scarce and the temperature outdoors cools, they frequently find their way into the living areas of the home. Then they become a health threat to the home's occupants and must be controlled.

Don't press this alarm... Never squash a Yellowjacket wasp near the nest. A

dying yellowjacket releases an alarm pheromone, or smell, that alerts other wasps. In less than 15 seconds, yellowjackets within a 15-foot radius will come to the victim's aid. The yellow jackets and hornets belong to the family Vespidae. The yellow jackets are in the subfamily Vespinae. They consist of four genera: "Provespa, Vespa, Vespula and Dolichovespula."

In the north temperate zone, wasps undergo an annual cycle. Only queens mated in the fall survive. They spend the winter in protected places such as under bark, stones, shingles and in abandoned rodent nests. In the spring, these queens establish a colony laying from 10 to 20 eggs. Since there are no workers present to help her raise her brood she alone has the burden of foraging for food, feeding the young and collecting wood from which she manufactures the paper use in nest construction. With the production of these first brood of workers, the queen gives up all her duties except that of egg laying. She remains in the nest and the workers forage for food and wood, feed the young and enlarge, repair and defend the nest.

Mud dauber wasps

These wasps got their names because they construct "nests" or brood chambers from mud. These clusters of mud are attached to the walls of buildings. The female mud dauber collects spiders which she stings and paralyzes and then places inside the mud chambers. She then deposits an egg on one of the spiders and leaves and closes the chamber. The young larval wasp hatches and feeds on the spiders provided. It later pupates and changes to an adult wasp which emerges from its mud chamber.

People become concerned when they find the clusters of mud on their homes. If the mud nests have holes in them it means the wasps have completed their life cycle and have left. Control is not necessary since mud daubers rarely sting and are beneficial in getting rid of unwanted spiders.

Paper or Umbrella Wasps

(Polistes) (Family Vespidae)

Polistes wasps commonly have been called paper or paper-making wasps. This name is not appropriate since yellow jackets and hornets also construct nests of paperlike material. Ebeling (1975) proposes they be called umbrella wasps because their nest has the shape of an upside-down umbrella. Nests are usually small (when compared to yellow jacket or hornet nests), containing up to about 250 wasps. The nest consists of a single comb with no paper envelope around it.

A good account of the life cycle of Polistes is given by Evans and West-Eberhard (1970). Mated females over winter in sheltered areas. All females are potential queens -there is no worker caste. Which one actually becomes the queen, or nest initiator, seems to depend on which one begins laying eggs and building cells first. The other females take the subservient role of foraging for food and feeding the young. Evans and West-Eberhard (1970) consider why one female becomes the dominant egg layer when more than one female begins laying eggs at the same time. It seems a contest is begun with females laying eggs and eating the eggs of the other, replacing eaten eggs with those of her own. The one which out-eats the others become the dominant female.

Nests are often built under the eaves of homes and while these wasps are not particularly aggressive, their closeness to living areas threaten many people. Nests are easily destroyed by spraying at night. Knocking down the nest without spraying is worthless since the wasps will only rebuild it.

European, Brown or Giant Hornet

(Vespa crabro)

The term hornet popularly refers to wasps that are of large size, exhibit aggressive behavior and are thought to have a potent sting. Scientifically, however, the term hornet refers only to members of the genus *Vespa*, described by Spradbery (1973). The only representative of *Vespa* found in North America is *Vespa crabro*, commonly known as the European, brown or giant hornet.

This hornet was introduced into the eastern United States and became established in the New York area in the 19th century. Presently it occurs in 30 states from the eastern United States as far west as Louisiana and the Dakotas. This wasp normally builds its nest in hollow trees, but it will also be found in wall spaces and attics of houses. If someone reports seeing a wasp flying at night, it is probably this hornet. These hornets are large, up to 1.4 inches long, and brownish colored with orange stripes. They are frequently seen in the late fall (as late as November).

The Bald or White faced 'Hornet'

(*Dolichovespula maculata*)

This insect is known as the bald or white faced "hornet". Scientifically is not consider to be a hornet. This large wasp is widespread, having been found in 46 states, Alaska and Canada. Its coloration is black and white. Their nests are found in trees or shrubs and they become very large by summer's end. The size of the nest, number of individuals in a wasp colony and the length of time activity continues after the summer depends on the species considered.

Velvet Ants

IN THIS *F@STSHEET*
BIOLOGY
MEDICAL IMPORTANCE
CONTROL
FOR MORE INFORMATION



Velvet ants are not ants at all, but a specialized group of insects belonging to the wasp family Mutillidae. Mutillid wasps can be found in Texas during the summertime in both urban and rural habitats. They are often referred to as velvet ants because the females are wingless, antlike and often covered with a velvety "fur". Most kinds of velvet ants are black or brown and they may be strikingly ringed or marked with red, yellow or orange. They range in size from about one-half, to one inch-long and are frequently found outdoors in dry, open areas. Male mutillid wasps are winged and are more wasp-like in appearance.

Some of the larger species of velvet ants, such as *Dasymutilla occidentalis*, are occasionally referred to as "cow-killers" because of the painful sting that the female can inflict. This species and some others are capable of producing a "squeaking" sound when trapped or disturbed. Other species of velvet ants are also common in Texas, including the gray velvet ant and the thistle down mutillid, *Dasymutilla beutenmulleri* and *D. fulvohirta*.

BIOLOGY

Knowledge about the biology of velvet ants is scanty, but those that have been studied are mostly parasites on ground-nesting bees and wasps. A few species are known to attack beetles and flies. Females spend much time in sandy areas searching for nests or aggregations of hosts. When a suitable host (e.g., a bee or wasp pupa) is found, the female lays one to two eggs inside its body. Upon hatching, the young feed on the host and devour it. Velvet ants spend the winter inside the nest of their hosts in a pre-adult (prepupal) stage. There is usually only one generation a year.

MEDICAL IMPORTANCE

People are most likely to receive a sting from a velvet ant when walking barefoot in infested areas. The intensity of pain and reaction to the sting will vary according to the sensitivity of the person stung; however the sting is usually much more painful than a bee sting. Velvet ant stings should be cleaned and disinfected like a bee sting. Ice packs and pain-relievers should be applied as necessary. Because velvet ants usually travel alone and are not social, a person is unlikely to receive multiple stings. As with any stinging insect, if the sting victim experiences a generalized rash or difficulty breathing (signs of an allergic reaction) they should see a doctor immediately.

CONTROL

Effective control measures for velvet ants are limited. The best steps for dealing with a velvet ant "problem" are 1) educating children not to handle these insects and 2) wearing proper footwear in infested areas. Velvet ants have very hard bodies and are difficult to crush.

Author:

Michael Merchant, Ph.D., Urban Entomologist, Texas Cooperative Extension

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