

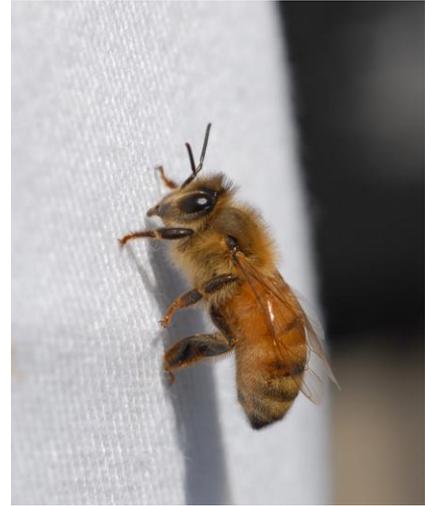
## IS IT A BEE, WASP OR HORNET?

By Becky Miller-Cripps

Bees and wasps are very active during the summer. For a simple identification tip, look at the wings: honeybees have two distinct sets of wings on each side of the body. The true wasps can readily be distinguished by their wings, which are folded fan-like down the middle.

How are wasps different from bees? Wasps do not collect pollen, store food or make honey; bees do. Bee nests are made of wax; wasp nests are made of paper or mud. Wasps can sting more than once; bees sting only once.

Only a few of the very large number of wasp species in California live a social life. These species are referred to as social wasps. Some social wasps are predators for most or all of the year and provide a great benefit by killing large numbers of plant-feeding insects and nuisance flies; others are exclusively scavengers. Wasps become a problem only when they threaten to sting humans. In California, yellowjackets are the primary pests among the social wasps.



*Honey bee on beekeeper suit*

### ***Yellowjackets***

The term yellowjacket refers to a number of different species of wasps. Included in this group of ground-nesting species are the western yellowjacket, *Vespula pensylvanica*, sometimes called the “meat bee,” and seven other species of *Vespula*. These wasps tend to be medium sized and black with jagged bands of bright yellow (or white in the case of the aerial-nesting *D. maculata*) on the abdomen, and have a very short, narrow waist (the area where the thorax attaches to the abdomen).



*Adult western yellowjacket*

### ***Paper Wasps***

Paper wasps such as *Polistes fuscatus aurifer*, *P. apachus*, and *P. dominulus* are large (1 inch long), slender wasps with long legs and a distinct, slender waist. Preferring to live in or near orchards or vineyards, they hang their paper nests in protected areas, such as under eaves, in attics, or under tree branches or vines. Each nest hangs like an open umbrella from a pedicel (stalk) and has open cells that can be seen from beneath the nest. Larvae sometimes can be seen from below. Most species are relatively non-aggressive, but



*Adult yellow-legged paper wasp.*

they can be a problem when they nest over doorways or in other areas of human activity, such as fruit trees.

### ***Mud Daubers***

Mud daubers are black and yellow, thread-waisted, solitary wasps that build a hard mud nest, usually on ceilings and walls, attended by a single female wasp. They belong to the family *Sphecidae* and are not social wasps but may be confused with them. They do not defend their nests and rarely sting. During winter, you can safely remove the nests without spraying.



Adult mud dauber

### ***Bald-Faced Hornets***

The large, black and white bald-faced hornet, is not a true hornet; hornets belong to the genus *Vespa*. Bald-faced hornets are more closely related to wasps called yellowjackets. Bald-faced hornets build colonies inside large enclosed carton nests that hang from trees, bushes, low vegetation and occasionally from buildings. A single mated queen starts a new nest each spring by laying eggs inside a small carton nest. The eggs turn into larvae and the queen feeds these larvae until they become pupae and then workers. It is the workers that gradually expand the size of this nest until it is larger than a basketball by the end of the summer season.

This hornet is the largest endemic yellowjacket in North America and it can build nests containing hundreds of individuals. The single queen is deep inside the nest protected by a retinue of loyal workers.

Bees, of course are our primary pollinators. However, wasps and hornets also visit flowers at times, and accomplish some pollination. One variety of fig is entirely pollinated by wasps. But wasps and hornets play a more important role in controlling many pest insects.

Did you know that bumblebees are protected by law in Great Britain; bumblebees and hornets are both protected in Germany? They have a mission—we just get in the way.

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