

DIFFERENTIATING FLORIDA NATIVE WASPS FROM YELLOW-LEGGED HORNET: A COMPARISON GUIDE



DIVISION
of
PLANT INDUSTRY

Vespidae is a family that contains some of the most recognizable and frequently encountered wasps. Many species are social and form nests that vary in size from a few individuals to many thousands. At rest, the wings are folded along the length of the body, giving them a dark and slender appearance.

Three subfamilies can be found in Florida: Eumeninae (potter wasps), Polistinae (paper wasps), and Vespinae (hornets and yellow jackets). The Eumeninae are solitary wasps that often

use clay to build nests for their offspring. Polistine wasps are social and form nests with open cells, and these are commonly encountered on the undersides of eaves or other human-made structures. These are best identified by the straight to gently arched profile of the abdomen near its anterior end.

In Florida there are three native species in the subfamily Vespinae: the southern yellow jacket (*Vespula squamosa*), the eastern yellow jacket (*Vespula maculifrons*), and the bald-faced hornet (*Dolichovespula maculata*). Species in this subfamily have a blocky, abrupt anterior end of the abdomen that differentiates them from the paper wasps. These wasps tend to aggressively defend their nests and are well known for their painful stings. The invasive *Vespa velutina*, yellow-legged hornet, is also in the same subfamily Vespinae and can be mistaken for Florida's native species.

Wasp Subfamilies

Vespidae (eastern yellow jacket)	Polistinae (paper wasp)	Eumeninae (potter wasp)

Yellow-Legged Hornet

Vespa velutina
(yellow-legged
hornet), Georgia

Vespa velutina
(yellow-legged
hornet), Taiwan



Native Hornet and Yellow Jackets

*Dolichovespula
maculata* (bald-faced
hornet), Florida

Vespula squamosa
(southern yellow
jacket), Florida







Vespula maculifrons
(eastern yellow
jacket), Arkansas

Vespula maculifrons
(eastern yellow jacket),
Florida (pink color form)



(images not to scale)

COMPARISON OF VESPIDAE WASPS

Yellow-Legged Hornet		Native Hornet and Yellow Jackets			
<i>Vespa velutina</i> (yellow-legged hornet), Georgia	<i>Vespa velutina</i> (yellow-legged hornet), Taiwan	<i>Dolichovespula maculata</i> (bald-faced hornet), Florida	<i>Vespula squamosa</i> (southern yellow jacket), Florida	<i>Vespula maculifrons</i> (eastern yellow jacket), Arkansas	<i>Vespula maculifrons</i> (eastern yellow jacket), Florida (pink color form)
					

HEAD

The front of the head is solid orange in *Vespa velutina*. The top of the head and the area above the antennal insertions can vary from orange to black. In Florida's native vespines there are patches of black along the center line, above the insertions of the antennae, and at the top of the head.



THORAX

All the native Floridian vespines have markings of lighter color on the posterior part of the the thorax. *Vespa velutina* collected in Georgia have a thorax that is entirely dark. The native distribution of *V. velutina* in Asia is very large and contains a variety of color patterns and some of these include bright colors on the shoulders and posterior part of the thorax.



ABDOMEN

The abdomen of Florida's yellow jackets, at the anterior end, has black bands intruding or mixing into the brightly colored bands. The anterior end of the abdomen is a solid dark color or with straight bands in *V. velutina* and the bald-faced hornet.