Yellow-legged Hornet (*Vespa velutina*)

Pest Fact Sheet

CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE


Yellow legged hornets (image by: Gerd Crocoll).

Introduction: The Yellow-legged Hornet is an aggressive predator of bee hives and represents a potential threat to honey bee production in California. This pest has not yet been detected in state but is present in the United States.

Distribution: This wasp is native to south-eastern Asia and is now widespread and invasive in Europe. Recently it was found in the United States in South Carolina and Georgia (APHIS).

Description: This wasp (15-25 mm length) is larger than any of the social wasps known from California. The body, including the wings, is mostly black with yellow markings on the face, tip of the abdomen, and legs. The yellow face contrasts with the mostly black head. There are no yellow stripes or patches on the top of the head or thorax in this wasp.

The largest and darkest social wasp in California (Bald-faced Hornet, *Dolichovespula maculata*) has the head and thorax with at least a few distinct whitish line-like markings above. All the other social wasps in California have more extensive yellow markings and are smaller-bodied (~10 mm length). Our largest mostly black wasps (Tarantula hawks, *Pepsis spp*.) usually have orange wings and never have a yellow face. Some harmless horntail wood wasps (Siricidae) are similar in size and coloration, but they have a longer cylindrical abdomen without a narrowed "wasp-waist".

Vespa velutina was the most widespread and variable species in the genus *Vespa* even before its recent invasions. There are currently 13 recognized subspecies or color patterns spread throughout Asia (Ries *et al.* 2021). The subspecies that has spread into Europe, Korea, and the eastern USA is *Vespa velutina nigrithorax* from China. This sub-species may be raised to full species status with further research.


Vespa velutina
Head, front view

Biology: This is a social wasp that constructs paper nests above ground, often in trees or on buildings. A single nest can have over 1,000 workers. They are predatory on other insects, including native and domesticated bees (Otis 2023).

Prepared by Kevin A. Williams and Martin Hauser (December 2025); Plant Pest Diagnostic Laboratory (https://www.cdfa.ca.gov/

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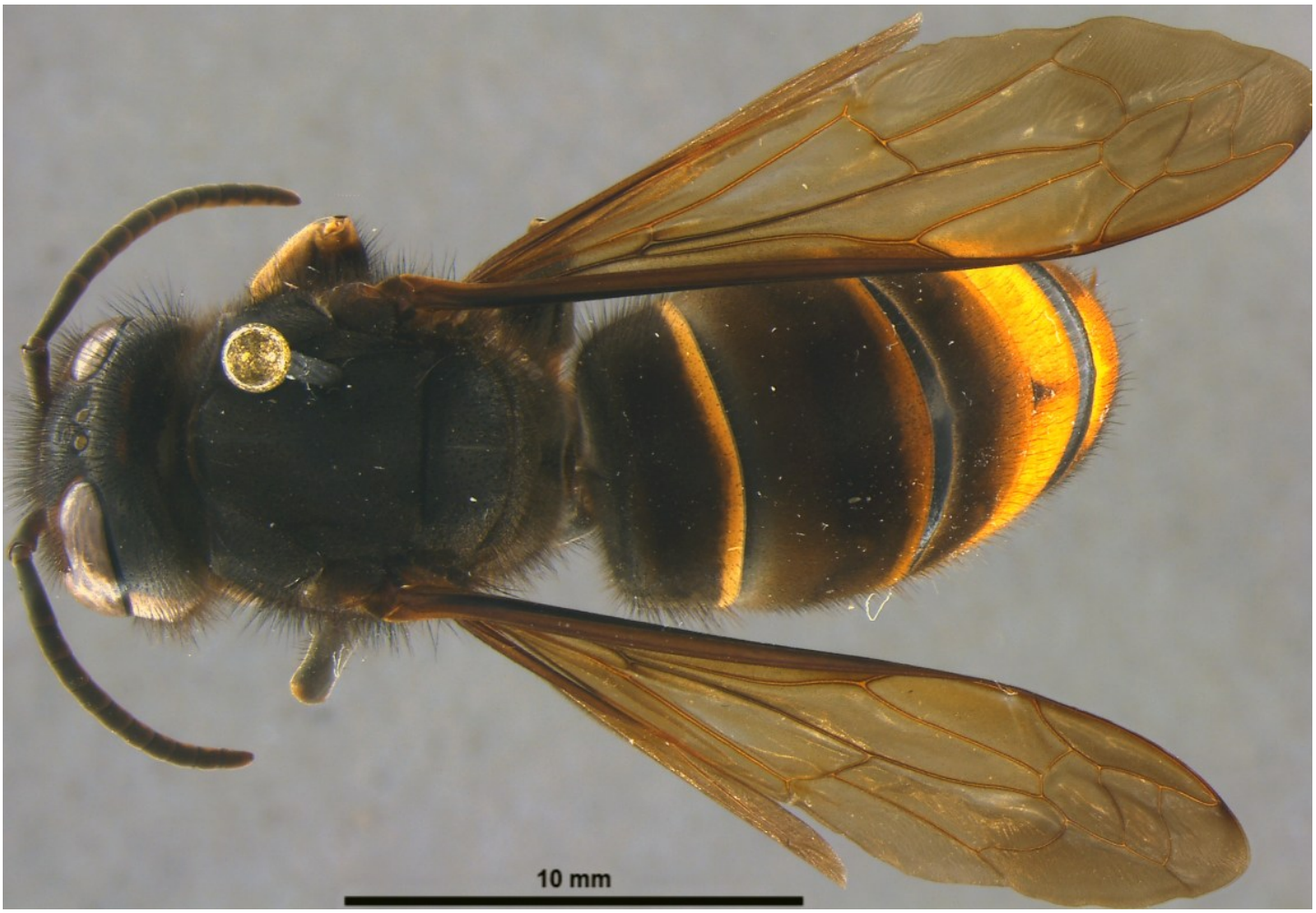
Pest Fact Sheet [cont.]

Hosts and economic importance: This species is widespread throughout its native range and can thrive in many different ecosystems. It has colonized most of temperate Europe, including many areas with similar climates to California. These hornets prey on bees and will seek out honeybee workers as prey and will often return to a colony and continuously eat workers. When enough workers are lost, the hornets may enter the hive and eat the brood and honey itself (Laurino *et al.* 2020). Even if the brood is not lost, the stress of worker loss can reduce yields of honey and reduce hive vitality through colder winter months. These hornet also sting in defense of themselves or their nests. Although the sting is not as harmful as the Asian Giant Hornet (*Vespa mandarina*), it can be quite painful and pose a risk of anaphylactic shock to some people.



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