



Large Invasive Hornets

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Introduction

The northern giant hornet (NGH; *Vespa mandarinia*; Fig. 1) was first found in North America in 2019, when individual NGH were seen in the upper northwestern Washington state and across the border in British Columbia, Canada. Individual NGH were seen in 2020 and several nests were destroyed in 2021. No NGH or its nests were found in 2022 or 2023. To date, no NGH have been found outside of this small area of Washington state and British Columbia.



Figure 1. A northern giant hornet (Hannah Royals, USDA APHIS PPQ, Bugwood.org).

Previously known as the Asian giant hornet, the media quickly dubbed this species the “murder hornet.” Numerous insects suspected of being NGH have been submitted to Cooperative Extension since 2019. The vast majority of these suspect insects examined by the Insect Identification Lab have been the European hornet (*Vespa crabo*), which has been present in the US since the 1980s. Other insects confused with NGH include the eastern cicada-killer (*Sphecius speciosus*) or baldfaced aerial yellowjackets (previously known as baldfaced hornets, *Dolichovespula maculata*). This fact sheet serves to help people recognize and identify these stinging insects.

Northern Giant Hornet

Native to Asia, NGH is a concern for beekeepers as these predatory hornets preferentially hunt honey bees. They are large, stout hornets (Fig. 1) that can measure up to 4-5 cm (1.5-2”) long. While NGH has a powerful sting, it’s not as dangerous for most people as the media has depicted it unless a person is highly allergic to wasp venom or receives numerous stings.

European Hornet

Native to Europe and Asia, European hornet is well established in the eastern US and has been known from Virginia since the 1980s. This species is frequently mistaken for NGH, and people often confuse the two insects based on pictures found online. European hornet measures about 2.5 cm (1”) long and has multiple “drip” markings on the mostly yellow abdomen (Fig. 2) not seen on NGH (Fig. 1) or the other insects featured in this factsheet. For more information, see our factsheet on [European hornet \(VCE Pub 2911-1422\)](#).



Figure 2. A European hornet (Hannah Royals, USDA APHIS PPQ, Bugwood.org).

Eastern Cicada-killer

The eastern cicada-killer is a native predator of annual cicadas. They are large wasps measuring about the same size as NGH (about 4-5 cm or 1.5-

2”) (Fig. 3). These solitary wasps make tunnels in soil where they drag cicadas and lay eggs on the parasitized prey.



Figure 3. An eastern cicada-killer (Hannah Royals, USDA APHIS PPQ, Bugwood.org).

Baldfaced Aerial Yellowjacket

The baldfaced aerial yellowjacket previously known as the baldfaced hornet. A native species, baldfaced aerial yellowjacket build large paper nests in trees, under eaves, and similar sites. This wasp measures about 2.5 cm (1”) long and is largely black with yellow markings (Fig. 4). For more information, see our factsheet on [baldfaced aerial yellowjacket \(VCE Pub 3006-1449\)](#).



Figure 4. A baldfaced aerial yellowjacket (Hannah Royals, USDA APHIS PPQ, Bugwood.org).

Yellow-legged Hornet

The invasive yellow-legged hornet (*Vespa velutina*) was reported from the Savannah, Georgia, area and across the state line in Jasper County, South Carolina, in 2023. No yellow-legged hornets have been found outside of this area to date. It has not been found in Virginia. They measure about 22 mm (0.9”) long and are mostly black to dark brown with some yellow bands on the abdomen (Fig. 5). The

dark head and thorax are covered with dark, velvety hairs unlike common paper wasps. Yellow-legged hornets also prey on honey bees and are a concern for beekeepers.



Figure 5. A yellow-legged hornet (Hannah Royals, USDA APHIS PPQ, Bugwood.org).

Some Quick ID Tips

Your specimen is not a NGH if it: measures about 2.5 cm (1”) long or smaller; has “drip markings on the abdomen (Fig. 2); and/or has any black or brown on the head.

If your specimen measures 4-5 cm (1.5-2”) long, compare it to the eastern cicada-killer. The dark bands on the abdomen of NGH are more uniform (Fig. 1) than those on the eastern cicada-killer (Fig. 3). The eyes of an eastern cicada-killer take up more of the face and have even inner edges (Fig. 6). The “lip” above the jaws is evenly curved. The eyes of a NGH are kidney-shaped with a notch on the inner edge (Fig. 7). In addition, the “lip” of a NGH is scalloped above the jaws.



Figure 6. Face of eastern cicada-killer. Blue circle shows the even inner edge of the eye. Red ring shows the even curve to the “lip” above the jaws (original photo by Hannah Royals, USDA APHIS PPQ, Bugwood.org).

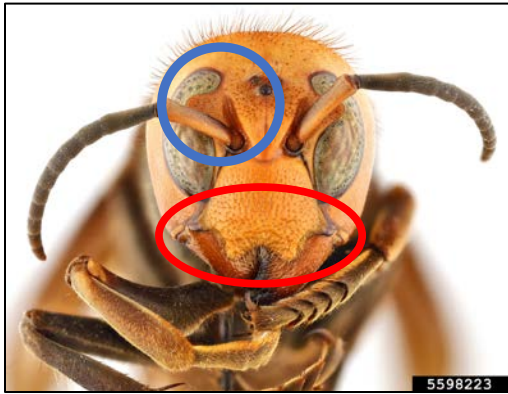


Figure 7. Face of a northern giant hornet. Blue circle shows the notched inner edge of the kidney-shaped eye. Red ring shows the fluted edge of the “lip” above the jaws (original photo by Hannah Royals, USDA APHIS PPQ, Bugwood.org).

If you still feel that you have a suspect wasp or hornet after following the identification tips found in this factsheet, contact your [local Cooperative Extension office](#) to have it identified.

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