

"I've had fans come and knock on my door. I'm usually polite, but I'm usually very direct and say, 'It's not cool that you come here uninvited.'"

— Gary Allan

My 1999 Ford Ranger was due for its annual inspection this past month. It doesn't get used much, mostly to take trash to the county dump or to move bee hives, and I was pleased that the battery wasn't dead when I took it to the inspection station. When I opened the driver-side door to allow the inspector to do his thing, I noticed a very small, active paper wasp (*Polistes* sp.) nest right behind the door hinge, within the body of the truck, well protected and hidden from sight. That was highly unexpected, yet a reminder of how easily certain insects can travel up and down America's motorways without much risk of detection.

Yellow-Legged Hornets (YLH, *Vespa velutina*) were first found in the US near Savannah, Georgia, in 2023, and have been the subject of an intensive "seek and destroy" mission over the past three years. However, they are now well established and their range is expanding. At the end of June, we were dismayed to learn that YLHs have spread into North Carolina, probably hitchhiking on something like a 1999 Ford Ranger! Reports of findings were first confirmed in Matthews (near the North Carolina/South Carolina border, east of Charlotte) and then in mid-August in High Point.

Following the pattern that occurred in Europe beginning in 2004, it is likely that a single YLH queen, in an overwintering, dormant state, arrived at the Port of Savannah hidden in cargo from Asia.² Unlike the Giant Asian Hornet that made the ultimately fatal mistake of



Characteristics of the head and abdomen of the 3 castes of yellow-legged hornet individuals. Note the YELLOW FACE, THIN YELLOW LINE near the base of the abdomen and YELLOW in the endmost sections of the abdomen. The YELLOW color may be more ORANGE. Not shown here are the distinctive YELLOW LEGS. (Photos: Márcia Santos, INIAV).¹

¹ Diéguez-Antón et al., "Management of honey bee (Hymenoptera: Apidae) colonies under yellow-legged hornet (Hymenoptera: Vespidae) pressure", **Journal of Integrated Pest Management**, Volume 15, Issue 1, 2024, 43, <https://doi.org/10.1093/jipm/pmae033>

² Rojas-Nossa et. al., "Worldwide distribution and invasion status of *Vespa velutina* (Hymenoptera: Vespidae), the yellow-legged hornet, in 2025", **European Journal of Entomology**, 123: 217–232, 2026 <https://ejc.cz/pdfs/eje/2026/01/22.pdf>



YLHs using "hawking behavior" to snatch honey bees out of the air. Dozens of foraging hornets can gang up on a single colony. Photo: Ana Diéguez Antón³

disembarking in Vancouver, British Columbia a few years ago, this invader landed in an environment that is ideal for the species to thrive: YLHs love lowland, temperate zones with high humidity.

The YLH experience in Galicia, Spain³ likely portends their spread here. They were found in 2004 in France. Two nests were then found in Galicia (a coastal province in northeast Spain, about half the size of North Carolina) in 2012; 17 in 2013; 930 in 2014; 6,094 in 2015; 13,304 in 2016; 26,054 in 2017; 27,384, in 2018; 23,748 in 2019; 28,775 in 2020 and 28,360 in 2021. Note that these numbers were in the presence of a seek-and-destroy campaign similar to that conducted in the US.

Things to know

Nests

YLHs have three distinct types of nests, very different in appearance. The Primary Nest is a small grey ball and is what we'll see in early spring. The Secondary Nest is enlarged from the Primary Nest as the colony expands. Typically basketball-sized, it looks similar to a European Hornet nest but the texture is very sloppy and bumpy. A Relocation Nest is created when the colony decides it has outgrown the original nest site. All of these nests are constructed quite

high in trees making them very difficult to spot. They can contain tens of thousands of YLHs at peak population.

Appearance

YLHs raised in Primary Nests are smaller than those raised later in the year in Secondary Nests. So don't base identification on a strict expectation of the size of the specimen. Also remember that there are THOUSANDS of different wasp species in the Southeast, and they all share many common characteristics. Identifying features of YLHs are the primarily black body, yellow/orange face, a thin yellow stripe near the base of the abdomen, yellow/orange tip of the abdomen and the namesake yellow legs. For reporting YLH sightings to the NC Department of Agriculture and Consumer Services, a good photograph from several angles is essential for the report to be useful.

Harm

YLHs harm honey bee colonies in several different ways, including the way they hunt for prey. They practice "hawking" behavior, where they hover in front of a bee hive entrance like a helicopter and pick honey bees out of the air. They then bite off the bee's head and abdomen, keeping the protein-rich thorax to feed themselves and their brood. Hawking isn't

³ Presentation by Ana Diéguez Antón, Postdoctoral Researcher, Xunta de Galicia, <https://www.youtube.com/watch?v=UX51DdijnEg>



Several photos of YLH show common identifying features: a yellow/orange face, thin yellow stripe near the base of the abdomen, yellow/orange tip of the abdomen and the namesake yellow legs. Photos: Rojas-Nossa et. al. (top left), Diéguez-Antón et al.⁵ (top right); North American Hornet Screening Tool https://idtools.org/hornet_screening/index.cfm?packageID=1099&entityID=2797 (bottom left).

unique to YLHs: dragonflies prey on honey bees using this same technique, but those are solitary insects, not members of huge colonies that send dozens of foragers to harvest bees from a single colony. And hawking isn't the YLH's only attack protocol. They will also overrun demoralized honey bee colonies.

Another extremely significant way that YLHs harm colonies is that colonies under intense predation pressure will experience "foraging paralysis" and refuse to forage. This impacts brood rearing and can ultimately result in colony starvation.

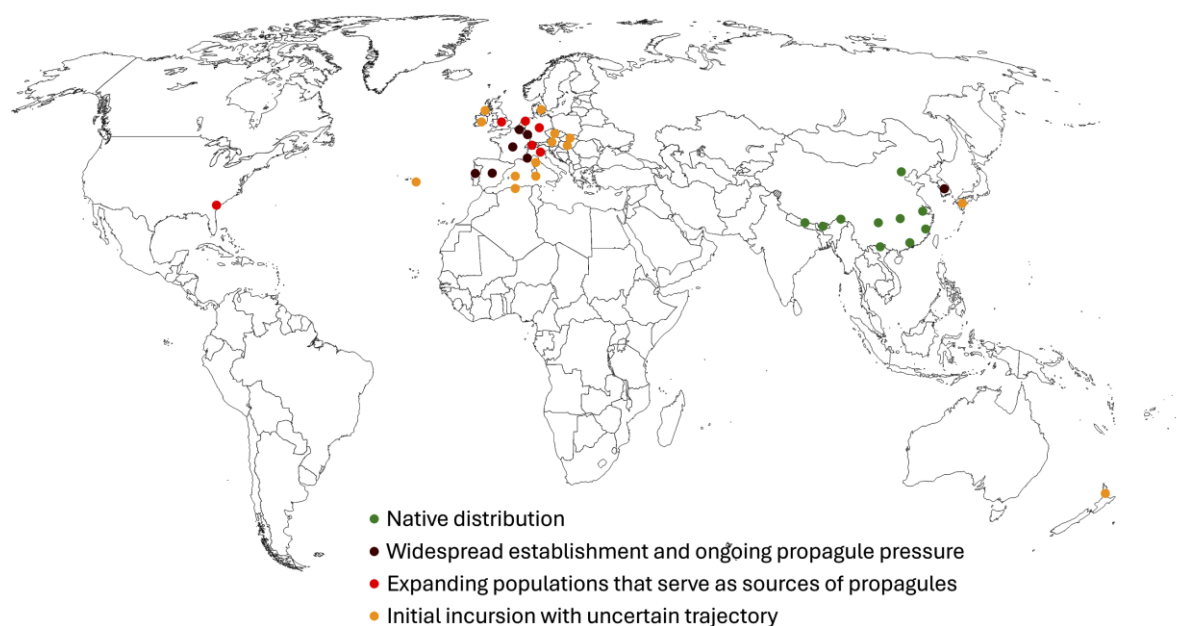
What can we do?

In this early stage of invasion into North Carolina's Piedmont, NCDA&CS Apiary Services needs beekeepers as well as Normal People to report YLH encounters so they can assess where the hornets are and how they are spreading. (The first NC report came from a homeowner who had a strange visitor to his hummingbird feeder, while the first report in Denmark was from a YLH falling into someone's beer.) NCDA&CS Apiary Services has [DIY trap plans](#),

reporting instructions and a link to make reports on-line.

Apart from being useful for reporting purposes, traps could perhaps be effective as a part of YLH Integrated Pest Management (IPM) in early spring and fall if they were to catch foundress queens before they have a chance to build a new colony. Going further, the Europeans have experimented with various entrance baffles and similar devices. All of them have serious disadvantages with respect to risking harm to the very colonies we are trying to protect. For example, queen excluders at the hive entrances do prevent YLHs from overrunning the hive but carry a very real risk that the colony can suffocate as drones are trapped behind the entrance. My personal opinion is to take a "wait and see" approach to employing any such equipment, letting somebody else discover all the disastrous things that can happen and then relying on research- and experience-based advice from our friends at NCSU and NCDA&CS Apiary Services.

At this point, we know that the very best defense is to keep our colonies healthy and strong. Ways to do that include being vigilant regarding Varroa mite management, not being timid about combining weak colonies with



Spread of YLHs outside of their native territory. Source: Rojas-Nossa et. al.²

strong ones and keeping a watchful eye out for any signs of distress or predation.

No answers here

This is just a brief introduction to our newest honey bee pest. We'll know more next year and even more the year after that. What research⁴ tells us so far is,

"Vespa velutina is a generalist predator that preys on a wide diversity of prey, including honey bees, other bees, flies, wasps, spiders, lepidopterans, and grasshoppers. However, because honey bee colonies contain thousands of potential prey in a fixed location, they are frequently targeted when hornet colonies become large, resulting in honey bees comprising a high proportion of the ca. 11 kg [24.25 lbs.] of prey captured over the season by a *V. velutina* colony. Foraging hornets can weaken honey bee colonies, suppress foraging activity, and increase colony mortality."

For now, perhaps the most important thing to know is that this pest is here to stay. But just as YLHs haven't ended beekeeping in Europe,

Country	Year	Country	Year
Rep of Korea	2003	Luxembourg	2020
France	2004	Rep of Ireland	2021
Spain	2010	Czech Republic	2023
Belgium	2011	Hungary	2023
Portugal	2011	USA	2023
Japan	2012	Austria	2024
Italy	2014	Slovakia	2024
Germany	2014	Algeria	2025
Monaco	2015	Denmark	2025
Great Britain	2016	New Zealand	2025
Netherlands	2017	Northern Ireland	2025
Switzerland	2017		

they won't end it here. We've faced far worse scourges and the future likely holds threats even worse than this one! Our response has always been to educate ourselves on the nature of the problem and develop plans of attack to turn the menace into a manageable annoyance rather than a disaster. Then work those plans. Take a deep breath and let's get started!

Randall Austin is a NC Master Beekeeper who keeps a few honey bee hives in northern Orange County, NC. He can be reached at s.randall.austin@gmail.com.

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⁴ Rojas-Nossa et. al.