

Threatened Georgia pollinators face a new foe: The voracious 'bee hawk'

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Asian hornet (*Vespa velutina*), Portugal. Credit: Wikimedia Commons, [CC BY-SA 4.0](#)

Just after 7 a.m. on Tuesday, Barry Hart was working in his bee yard in deep South Georgia when his phone buzzed with a text message from a

fellow beekeeper.

It was a link to a Georgia Department of Agriculture (GDA) news release with a troubling subject line: "Discovery of yellow-legged [hornet](#) confirmed in Georgia for the first time."

Hart, who owns Hart Honey Farms in Fargo, has been in the honeybee business since the mid-80s. When he read it, he said he got out of his truck and thought, "Well, this could be the nail in the coffin right here."

The announcement—that a species of aggressive, bee-eating hornet native to Southeast Asia has been found on U.S. soil for the first time—has set off alarm bells among scientists and some in the state's beekeeping industry.

The yellow-legged hornet, *Vespa velutina*, is smaller than the Northern giant hornet, another invasive Asian species that arrived in Washington state in 2019, which has been dubbed the "murder hornet" for its appetite for killing bees.

The newest invader is similar in size and appearance to other species already found in Georgia, but it has distinctive yellow tips on the ends of its legs. Experts say it is the insect's aggressive behavior that really sets it apart from lookalikes. Yellow-legged hornets are known to launch wave after wave of dive bomb attacks on honeybees as they exit their hives, earning them the nickname the "bee hawk."

Only two live specimens have been found, both on the same property near Savannah. The GDA says it is working diligently to track and eradicate the insects. So far, no colonies have been located.

If the hornet is able to gain a foothold—as it has done in Europe—entomologists warn it could put more pressure on bees and

other pollinators in the state, whose populations are already in decline from a host of factors. And if the pest succeeds in raiding bee hives, it could cause major damage to Georgia's agricultural economy.

Blueberries, watermelons, cantaloupes, squashes and cucumbers all rank among Georgia's most valuable food crops, and all rely on honeybees and other pollinators to ensure bountiful harvests. All told, Georgia's pollinator-dependent crops are worth an estimated \$430 million annually, said Keith Delaplane, a honeybee expert in UGA's Department of Entomology.

Georgia is also home to a robust beekeeping industry that helps stock apiaries around the country and ships insects to farmers in other states to pollinate their crops.

Hart, who maintains 5,000 hives on land just north of the Georgia-Florida border, trucks his bees as far away as the almond orchards of California. Beekeepers have been battling pests and parasites for years, he said, wondering how much more they can take.

"We're used to dealing with this kind of stuff, but we don't need anything to tip us over the edge right now," he said.

Fishing for hornets

UGA scientists and state officials say they're not sure exactly how yellow-legged hornets arrived in Georgia, but invasive insects and other pests have been known to hitch rides in shipping containers. The hornets have already spread to Europe, the Middle East and parts of Asia where they are not native.

Given the proximity of the site where the hornets were discovered to the Port of Savannah—one of the country's busiest ports—UGA's Delaplane

said his "best educated guess" is that the insects came over on a container ship.

Now that they are here, the process of hunting them down is underway.

On Tuesday, Georgia Agriculture Commissioner Tyler Harper said his department's team of invasive pest specialists is developing a plan to track down the insects in consultation with UGA and the USDA.

Delaplane, who is advising the GDA, said he believes the hornets found are part of a larger colony, and that finding it is key. Their nests can contain as many as 6,000 of the insects.

While yellow-legged hornets attack and feed on bees, one of their favorite foods is rotting fish. Delaplane, the GDA and others are developing plans to put out feeding stations stocked with fish or other putrid meat. When the hornets come to feed, spotters can track them visually as long as possible and then move the stations to where they were last seen. Eventually, that should allow them to find the nest's location.

Lessons learned

As Georgia tries to contain any possible spread, it is learning from others who have battled yellow-legged hornets and other pests.

About four years ago, Chris Looney, the entomology lab manager for the Washington state Department of Agriculture, and his colleagues found themselves in a situation similar to the one facing Georgia. In 2019, several "murder hornets" were discovered in Washington.

Looney said his agency used a combination of radio transmitters and public outreach to locate and trap the pests. And while "murder hornets"

have not officially been declared eradicated from Washington, a citizen survey last year did not locate any of the insects. None have been spotted so far this year, either.

Looney said his department has been contacted about the discovery near Savannah and is sharing information with Georgia officials.

It's possible Georgia's fight against the hornets' invasion has the same trajectory. But there are also reasons to believe it may not, Delaplane said.

Delaplane said the first is that Europe—which has dealt with yellow-legged hornets since the mid-2000s—has failed to fully eradicate them.

The second is that the hornet is an even more ruthless honeybee killer than the larger "murder hornets" that plagued Washington.

"This guy is bad news for honeybees," Delaplane said. "It's a relentless predator and we have nothing like it in this country."

'Death by 1,000 cuts'

The hornets' arrival has the potential to compound the problems already facing bees and beekeepers.

For years now, the industry has been battling another invasive pest that arrived from Asia: the varroa mite. Estimates vary, but the parasite is thought to have killed hundreds of thousands of bee colonies and led to billions of dollars in losses.

At the same time, [climate change](#) is shifting the distribution of the plants that bees rely on for food, while rampant pesticide use, habitat loss and other human activity are also contributing to their decline.

"All of this is really hammering the bees, Delaplane said. "It's a death by 1,000 cuts."

Like other hornets, the yellow-legged hornet can sting humans and pets, a serious health threat for those with anaphylactic reactions to stings. Some stings can be fatal, but deaths are extremely rare. Delaplane says the insects pose a much greater risk to agricultural interests.

Still, beekeepers are hopeful that the yellow-legged hornet won't spell disaster for their industry.

About 130 miles northwest of where the hornets were spotted in Washington County, Georgia, Karen Palmer, the owner of Honey Please, which specializes in bee removals and raising honeybees, said she has faith in the bees' resilience.

"Maybe it's just my personality, but I'm not one to believe the hype," Palmer said. "I need facts and I'm the kind of person that needs to see for myself."

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