One morning in early December 2019, Jeff Kornelis of Blaine, Washington, stepped outside to take his dog for a walk. He looked down and noticed a wasp nearly the length of his pinky finger lying dead on his front porch. The wasp had a bright orange head, gigantic wings, and a tiger-striped abdomen. He’d never seen an insect like it.

Kornelis contacted state officials about the sighting. Entomologists, or insect scientists, from the Washington State Department of Agriculture (WSDA) drove three hours from their headquarters in Olympia to examine the huge bug for themselves. What they saw confirmed their worst suspicions: It was a dangerous Asian giant hornet.

Asian giant hornets aren’t supposed to be in northern Washington. They’re native to Japan, Korea, and other parts of eastern Asia. They’d never been found in the U.S. before. The scientists were alarmed because they knew the wasps, which prey on bees, could wreak havoc on local hives. They quickly hatched a plan to hunt down the hornet’s nest—and hopefully eradicate the rest of the insects before they reproduced and spread.

KILLER WASPS
Nobody knows how Asian giant hornets reached North America. They might have nested in packing material used to ship international cargo, says Todd Murray, an entomologist at Washington State University. Some people eat the wasps’ larvae, or immature young, as a delicacy. So the bugs also could have been smuggled over intentionally, adds Murray.

Asian giant hornets can grow up to 5 centimeters (2 inches) long—four times larger than a yellowjacket (see Humongous Hornets, right). When attacked, a giant hornet uses its extra-long stinger to inject toxic venom into its foe. “Because they’re so large, they can inject a large volume of venom,” says Murray. People have compared the pain of a giant hornet sting to having hot nails driven into their skin. Repeated stings have occasionally caused fatal allergic reactions in people, earning the insects the nickname “murder hornets.” But human deaths from the bugs are extremely rare. The real threat isn’t to people—it’s to honeybees.

In the fall, Asian giant hornet workers seek out beehives. They kill a few bees, chewing their bodies into “meatballs” that they carry back to the nest to feed their young. Then the hornets might swarm the hive and kill every bee inside. About 20 hornets can slaughter tens of thousands of bees in a matter of hours, says Murray. That’s a huge problem because honeybees are important pollinators. The bees carry pollen between plants as they feed, allowing the plants to reproduce. Approximately one-third of the food Americans eat comes from plants pollinated by honeybees. Food production could suffer if the Asian giant hornet becomes an invasive species—a non-native organism that spreads uncontrollably (see Other Invasive Species, p. 16).

ON THE HUNT
To prevent a giant hornet invasion, WSDA scientists asked the public to report sightings of the bugs. With help from local beekeepers, they set more than 2,500 traps to catch the wasps.
In September, WSDA entomologist Chris Looney visited a homeowner near Blaine who had found multiple dead hornets in his traps. Just as Looney was about to leave, a live hornet flew by. He caught it with a net. “I called everybody and said, ‘We found one! Let’s try to track it,’” he recalls. If scientists could follow the hornet, it would lead them right to its nest. The next morning, they tried gluing a wireless tracking tag to the hornet’s body. Unfortunately, that prevented it from flying. The next week, they tried again with another captured hornet. This time they tied the tag on with dental floss and fed the hornet berry jam for energy. It took off, and the scientists followed it for about 300 meters (1,000 feet). But the hornet flew so fast that it quickly moved beyond range of the device used to communicate with the tag, and the scientists lost the signal.

In October, the team caught more live hornets and tried longer-range tracking tags. One hornet chewed through the dental floss right after the scientists tied it on. Another nearly outflew them again. But as the scientists wandered the forested area where the insect had disappeared, their device picked up a faint signal from a tag. They followed the signal to a large tree. There, they heard a hornet buzz overhead and watched it fly into a crevice in the tree trunk. “We found the nest!” says Looney. If scientists could follow the hornet, it would lead them right to its nest. The next morning, they heard a faint signal from a tag. They followed the signal to a large tree. There, they heard a hornet buzz overhead and watched it fly into a crevice in the tree trunk. “They’d found the nest!” says Looney. “We were pumped,” says Looney. A crevice in the tree trunk. They’d found the nest!

Two days later, the WSDA team returned. They arrived at the nest before dawn, when the wasps would be less active. They put on protective goggles and face shields and zipped themselves into full bodysuits made of material so thick, even giant stingers couldn’t pierce it. They cut a small hole through the plastic wrap and then suctioned out the adult hornets. After suctioning out any remaining wasps, they sealed the nest with plastic wrap and then suctioned out the adult hornets.

Despite successfully eradicating this nest, the WSDA suspects there may be more out there. So, Looney and his team are staying vigilant, just in case. Luckily, no Asian giant hornets have been spotted outside of northern Washington so far. That means there’s still a chance to stop them—before they spread through the U.S.

How could the WSDA get the word out about the dangers of Asian giant hornets? Propose a plan to engage the public to identify and report the insects.