

World's largest bee spotted for the first time since 1981

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(CNN) The Wallace's giant bee is as big as a human thumb.

That might be frightening to most people, but scientists were delighted when a team of researchers recently found it in Indonesia.

It's the largest bee in the world, and scientists feared it might be extinct -- until now.

One of the first images of a living Wallace's giant bee. *Megachile pluto* is the world's largest bee, which is approximately 4 times larger than a European

honey bee.

A group of researchers made a stunning "rediscovery" of the elusive critter and took the first photos and video of a living Wallace's giant bee on January 25.

The team -- composed of natural history photographer Clay Bolt, entomologist Eli Wyman, behavioral ecologist Simon Robson and ornithologist Glenn Chilton -- spent years studying the bee and slogged around in humid Indonesia forests for days before stumbling upon one. The rediscovery has renewed hope that more of the region's forests are home to the rare species. The [International Union for Conservation of Nature](#) classifies this species as "vulnerable" due to mining and quarrying. Only two other lucky fellows are documented to have seen it in person before. The first was British naturalist Alfred Russel Wallace, who discovered the giant bee in 1858 while exploring the tropical Indonesian island of Bacan. Entomologist Adam Messer became the second in 1981. The team went from termite nest to nest in the forests of remote islands known as the North Moluccas, Bolt said.

They had some information about the bee's habitat and behavior from Messer's paper, and they examined satellite imagery to become familiar with the terrain. They knew the Wallace's giant bee tended to be found in the lowland forest and tree-dwelling termite nests.

However, deforestation in Indonesia has ramped up in the past decade to pave way for agriculture. This meant the bee's natural habitat had been shrinking -- and with it, the chances of people seeing it.

They observed nests for about half an hour before moving onto the next. At times, they thought they'd encountered the giant bee, only to find out that it had been a wasp, Bolt said.

Iswan, the team's local guide, examines an arboreal termite mound

containing the first rediscovered Wallace's giant bee and her nest.

On the last day of a 5-day area search, the team's guide and interpreter spotted an interesting-looking nest about 8 feet off the ground. When Bolt climbed onto a tree to take a closer look into the mound, he saw a lone female Wallace's giant bee.

"It was a remarkable, humbling moment," Bolt said. After the team recovered from the initial excitement, they set out to photograph the bee in its natural environment.

They waited a couple hours for her to emerge from the nest, but she was camera shy.

Finally, the researchers decided to tickle the bee with a piece of grass, and she walked right out into a large tube. Once they released her from the tube, Bolt was able to capture the bee flying in front of the nest.

Robson, who studies animal behavior and evolution, said the bee they observed "wasn't very aggressive."

Only four years ago, Bolt and Wyman were dreaming about seeing a real Wallace's giant bee in the wild.

The two met while Bolt was on a shoot in New York. At the time, Wyman was working in the American Museum of Natural History and offered to show Bolt a Wallace's giant bee specimen.

"Eli and I began to talk about, 'Wouldn't it be cool to rediscover this in the wild?'" Bolt said.

So they started planning over the course of three years. In October 2018, the two were contacted by Robson and Chilton, who were on the same quest.

"We decided to join forces," Robson said. The first time they all met was at the Chicago airport.

When the team arrived at its first site, they found that the local residents had never seen -- or heard of -- what they were looking for. They even

spoke with a local birding guide, but came up with nothing.

"People couldn't believe we were there looking for a bee," Bolt said.

Now that they've found it, Bolt hopes to work with local conservationists and potentially turn the Wallace's giant bee into a flagship species for the area.

"With all the bad news coming out about things in the natural world, this (rediscovery) gives me hope," Bolt said.

Robson is optimistic that the bee will continue to thrive.

"There's still a lot of forest and there's time and good hope for the bee and its survival," Robson said.