

IN THE WILD

## Scientist Finds Rare Blue Moth 130 Years After It Went 'Extinct'

"It was one of the most amazing moments of my life."

BY SARAH V SCHWEIG

PUBLISHED ON 12/14/2017

For 130 years, the only known specimen of the Oriental blue clearwing moth was the one caught in 1887 and preserved behind glass in a natural history museum in Vienna, Austria. It was considered a lost species, until a PhD student hiking in Malaysia earlier this year made a [stunning discovery](#).



Paolo Volponi & Marta Skowron Volponi

All kinds of clearwing moths have evolved to be masters of disguise. They have developed long scales meant to look like the furry bodies of bees to make predators afraid of eating them and getting stung. Such developments are known as [Batesian mimicry](#). And Marta Skowron Volponi, an entomologist from Poland's [University of Gdansk](#), knew how to see through such a cleverly evolved costume as she made her way through the Malaysian rainforest.

"They're difficult to locate and usually stay at the same spot only for several minutes," Volponi [explained](#). "That is why entomologists mainly collect them with the use of synthetic pheromone traps: a method that kills the insects and thus provides information about their morphology only."



Marta Skowron Volponi



Paolo Volponi

Volponi was in search of the *Heterosphecia pahangensis*, one kind of clearwing, to try to understand the lives and behavior of these moths.

"As part of my PhD project I am comparing flight trajectories of sesiids and their bee and wasp models," she said. "To do that, I had to film them in flight."



Paolo Volponi & Marta Skowron Volponi

After a long hike, she and her videographer reached a riverbank with many kinds of insects buzzing around. This is where male clearwing moths would gather to collect salt from between rocks to give to females as a gift during mating rituals.

Volponi remembered how she had just been thinking how difficult it is to spot clearwing moths in the wild when she looked down and saw one — but this clearwing wasn't like any other she'd ever seen: It was bright blue. "It's not *H. pahangensis*, which we came here for, it must be something new," she remembered. "I haven't seen anything like it before!"

But as soon as Volponi turned to show it to her videographer and turned back, the moth was gone. "I am convinced I have seen a very unique species (perhaps new to science?) and decide not to stop looking until I find it," she remembered.

She waited another hour or two, sitting on the riverbank, before she saw a flash of blue. "I call Paolo and he comes running with his bigger camera and we both manage to carefully approach the insect and film it simultaneously," she said. "It was one of the most amazing moments of my life."

Volponi had just rediscovered *Heterosphecia tawonoides*, or the Oriental blue clearwing, alive and well, a far cry from the 130-year-old faded specimen in the Vienna museum. And she's already discovering fascinating things about the moth's flight behavior, which seems to also mimic the flight patterns of bees and wasps the moth evolved to look like.

And she and other conservationists at [Global Wildlife Conservation](#) (GWC), an organization seeking to [rediscover several lost species](#), are determined to help the rare moth stay safe in the wild.



Paolo Volponi & Marta Skowron Volponi