

Rare footage of a new clearwing moth species from Malaysia reveals its behavior

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The new shiny-blue species of clearwing moth, *Pyrophleps ellawi*. Credit: Marta Skowron Volponi & Paolo Volponi

[Unique footage](#) of a new species of clearwing moth has been recorded in a primeval rainforest in Peninsular Malaysia revealing the behaviour of this elusive insect.

Clearwing moths, which are day-flying insects belonging to the Sesiidae family, imitate bees and [wasps](#). Apart from the common [species](#) considered as agricultural pests, these moths are known mainly from old museum specimens, stored on pins in forgotten drawers. In the wild, they are elusive creatures, rarely spotted and, hence, poorly studied.

Marta Skowron Volponi from the University of Gdansk, Poland, a PhD student specialising in entomology, teamed up with nature filmmaker and photographer Paolo Volponi, associated with the ClearWing Foundation for Biodiversity, to find these intriguing insects. The results of their studies were recently published in *ZooKeys*.

In their search for clearwing moths, they went deep into the virgin Malaysian jungle, where elephants, tigers, tapirs and other charismatic Southeast Asian animals roam, while dealing with the intense heat, humidity and countless blood-suckers.

In the end, however, their effort was worth it: on a bank of a crystal clear river, during the hottest hours of the day, the researchers discovered a new species of clearwing [moth](#) displaying behaviour known as mud-puddling.

"Mud-puddling is the process of sucking-up liquids in order to gain essential nutrients, such as salt or proteins", explains Marta. "It has only recently been observed in clearwing moths and, similarly as in other Lepidopterans, it seems to be restricted to males".

The newly discovered species was named *Pyrophleps ellawi* in honour of Marta and Paolo's Malaysian friend EL Law who supported the team during their expeditions and who has a deep affinity for nature.

Curiously, rather than resembling a butterfly's relative, the new moth looks like an insect from a whole different order. It mimics potter wasps.

"It has a slender body, long legs and transparent wings with a blue sheen in sunlight, similarly to some species of potter wasps", says Marta.

Furthermore, while observing the moth in the wild, the authors noticed that it does not only look like a wasp - it also flies like one.



The new species of clearwing moth sucks up fluids from pebbles on a river bank.
Credit: Marta Skowron Volponi & Paolo Volponi

"There were potter wasps in the same area. In flight, the two insects were impossible to distinguish, they would always confuse us!"

The new species seems to be quite rare. During the authors' three expeditions to Malaysia, they managed to see only eight individuals with each of them seen on a different day.

"So there we were: on our knees on a sandy beach, in the middle of the jungle, trying to film the 1.5 cm moth", Marta recalls. "We didn't have much time: a single clearwing would come around 2:00 PM and stay for several minutes only. We knew that once it flew away, we would not get another shot".

"Could it be that their rarity is the reason why the behaviour of clearwing moths is practically unknown and why there are still [new species](#) waiting to be discovered?" the researchers wonder.

More information: Marta Skowron Volponi et al, A new species of wasp-mimicking clearwing moth from Peninsular Malaysia with DNA barcode and behavioural notes (Lepidoptera, Sesiidae), *ZooKeys* (2017). [DOI: 10.3897/zookeys.692.13587](https://doi.org/10.3897/zookeys.692.13587)

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