

Dating in a jungle: Female praying mantises jut out weird pheromone gland to attract mates

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Female *Stenophylla lobivertex* with protruded pheromone gland. Credit: Christian J. Schwarz

It isn't only myriads of currently unknown species that await discovery in

the Amazon rainforests. As a new study by German scientists at the Ruhr-University (Bochum) and the Bavarian State Collection of Zoology (Munich), published in the open-access peer-reviewed scientific *Journal of Orthoptera Research*, concludes, it seems that so do plenty of unusual behaviors.

"When I saw the maggot-like structures peeking out from the back of the praying mantis and then withdrew, I immediately thought of parasites that eat the animal from the inside, because that is not really uncommon in insects," says Frank Glaw, a reptile and amphibian expert from the Bavarian State Collection of Zoology, who discovered the unusual phenomenon.

However, it took specialists in this particular animal group to solve the riddle. Although the experts had seen nothing like this in [praying mantises](#) before either, they pointed out that there are other species of mantises, in which mostly unfertilised females release pheromones from a gland in the same part of the body (between the 6th and 7th tergite), in order to attract mates. The Y-shaped organ, which can stretch up to 6 mm in length, is in fact an advanced pheromone gland, which the insect controls with the help of hemolymph.

"We suspect that *Stenophylla lobivertex* can release the pheromones with the protrusible organ more efficiently and in a more targeted manner than other praying mantises," says Christian J. Schwarz, entomologist at the Ruhr-University.



Enlarged view of the protruded, Y-shaped pheromone gland in a female *Stenophylla lobivertex*. Credit: Christian J. Schwarz

"This can be very important, especially for rare [species](#) with a [low population density](#), so that males can reliably find their females."

Stenophylla lobivertex is a very [rare species](#) and lives hidden in the Amazon rainforests. Discovered only 20 years ago, the bizarre-looking and well-camouflaged animal has only been spotted a few times, and apparently only mates at night in the darkness.

More information: Christian J. Schwarz et al, The luring mantid: Protrusible pheromone glands in *Stenophylla lobivertex* (Mantodea: Acanthopidae), *Journal of Orthoptera Research* (2021). [DOI:](#)

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