



The Connecticut Agricultural Experiment Station

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## PRESS RELEASE

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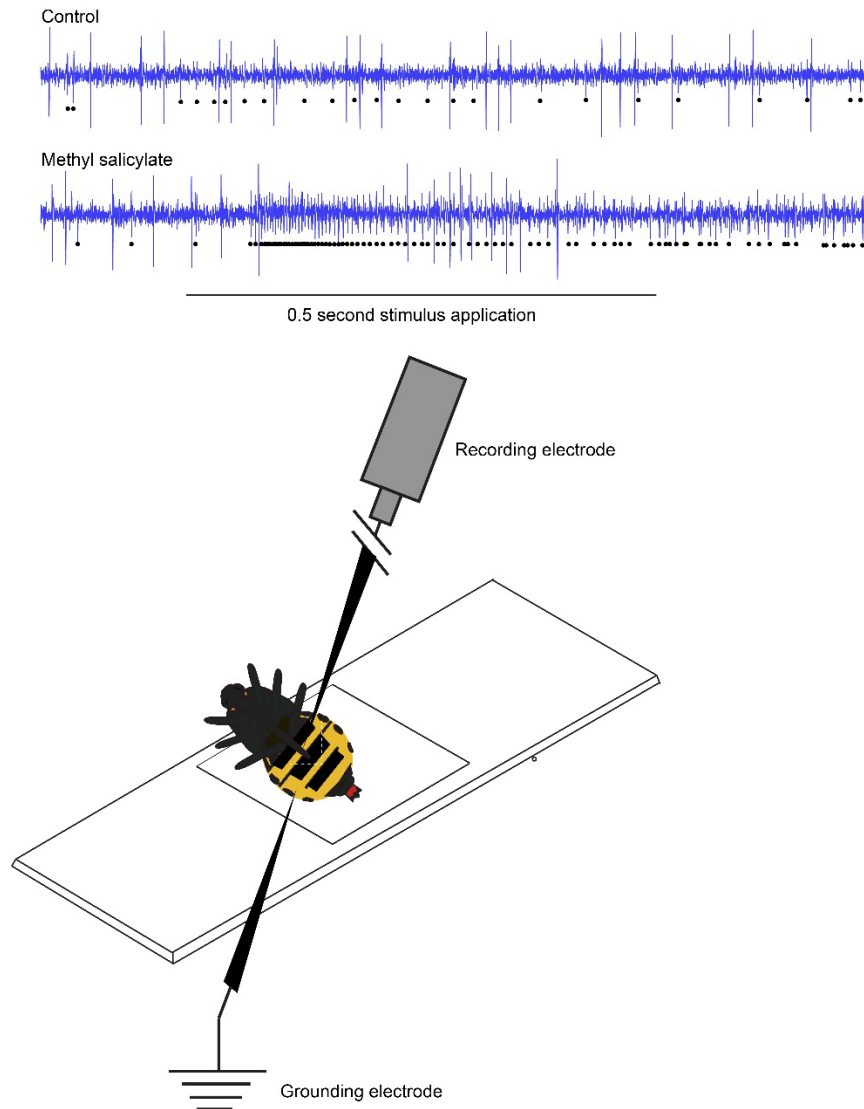
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## CAES Scientists Develop a New Method to Identify Odorants Spotted Lanternflies Use to Find Host Plants

**New Haven**— Scientists at The Connecticut Agricultural Experiment Station (CAES) have developed a groundbreaking method to identify the specific odorants spotted lanternfly utilizes to locate its host plants, aggregate, and mate. According to Dr. Jason C. White, CAES Director, “This advancement is expected to play a crucial role in mitigating the spread of this invasive insect, which poses a significant threat to ecosystems, agricultural sectors, and residential areas in Connecticut and 17 other states.”

“Using state-of-the-art technology in electrophysiology, we inserted an electrode into the olfactory neurons of spotted lanternfly to measure their responses to various odorants for the first time to our knowledge,” said Dr. Hany Dweck, CAES Chemical Ecologist. “This knowledge will not only aid in the development of targeted attractants or repellents but also contribute to the overall effort to protect our ecosystems and agricultural resources from this insect.”

Dr. Dweck added "We have documented the steps of this method in a protocol now published in *STAR Protocols*. This will serve as a valuable resource for researchers and pest management professionals aiming to help mitigate the impact of spotted lanternfly."



**Figure Legend:** The responses of spotted lanternfly female to control and methyl salicylate, an odorant identified from the tree of heaven, the most preferred host plant by spotted lanternfly. Dots indicate the neuron, which is excited by methyl salicylate (lower trace) but not by the solvent control (upper trace). The bar indicates when the stimulus is applied and for how long.

**Journal Reference**

Dweck H. K. M. (2024). Protocol for Single Sensillum Recording from Labial Olfactory Sensory Fields in Spotted Lanternfly. *STAR Protocols*. <https://doi.org/10.1016/j.xpro.2024.103469>

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