

# New technology decodes chemical messages sent by bed bugs

December 5 2012

---

Bed bugs exchange specific chemical signals corresponding to particular behaviors, and researchers have now combined two unusual technologies to sniff out these signals in a matter of seconds. The results are published December 5 in the open access journal *PLOS ONE* by Ole Kilpinen and colleagues from Aarhus University, Denmark, and reveal previously unknown aspects of bed bug lifestyles and mating behaviors.

Previous studies of bedbug chemical signals have been based on the collection and analysis of volatile chemicals they secrete over a period of time.

In this new research, the authors tracked the changes in secreted [volatile compounds](#) using video imaging and improved gas analyzers, and found distinct increases in different chemicals depending on the bugs' activity.

For example, they found that two compounds were emitted as defense from unwanted mating attempts by both female and male bugs.

They also found large variations in the chemicals secreted by the bugs in individual emissions, which the authors suggest emphasizes the need for such real-time tracking technology rather than testing samples collected over long periods of time.

**More information:** Kilpinen O, Liu D, Adamsen APS (2012) Real-Time Measurement of Volatile Chemicals Released by Bed Bugs during Mating Activities. *PLoS ONE* 7(12):e50981.

[doi:10.1371/journal.pone.0050981](https://doi.org/10.1371/journal.pone.0050981)

Provided by Public Library of Science

Citation: New technology decodes chemical messages sent by bed bugs (2012, December 5)  
retrieved 25 April 2024 from

<https://phys.org/news/2012-12-technology-decodes-chemical-messages-bed.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.