Heating the exterior of suitcases may decrease the spread of bed bugs through luggage

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New research indicates that brief heat treatment is a promising way to decrease the spread of bed bugs being transported on the outer surface of luggage.

When soft-sided suitcases with male bed bugs on the outside were exposed to an air temperature of 70-75oC, it took only six minutes to kill all of the bed bugs, even those that had concealed themselves under zipper flaps or decorative piping. During heating, only one bed bug (out of 250 total) moved into the luggage (through a closed zipper). Also, at room temperature, only three percent of bugs placed on the outside of the suitcases had moved inside during a 24-hour period.

"Heat has attracted a lot of interest as a control method for bed bugs because it is effective and environmentally benign, but it can take a lot of time for heat to thoroughly penetrate a piece of furniture or a suitcase and increase the temperature at the location of the hidden bed bugs inside," said Dr. Catherine Loudon, author of the Pest Management Science article.

"Bed bugs located on the outside of luggage are one of the few cases in which they are somewhat peripherally constrained and therefore more vulnerable to a quick exposure of heat."

More information: Catherine Loudon. Rapid Killing of Bed Bugs

(Cimex lectularius L.) on Surfaces using Heat: Application to Luggage. *Pest Management Science*. DOI: 10.1002/ps.4409

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