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Author: Anderson, Alice

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LETTER TO EDITOR

The Decade of Bedbugs and Fear

Alice Anderson

Associate Professor and Acting Director, Environmental Health Sciences Program, Department of Health Education and Promotion, College of Health and Human Performance, East Carolina University.
Corresponding author email: andersonal@ecu.edu

Rolling Stone and *Time* magazine recently put the past summer's bedbug "crisis" into perspective in the United States (U.S.). Many of us have transferred our fear and anxiety of bioterrorism attacks or socialism into attacks of the "tiny" on our personal lives. Some of us have developed continual anxiety of potential bedbug infestation from travel contacts, visits from foreigners, visits from anyone with a suitcase or backpack, or packages arriving from major cities into our comparatively sanitary homes. A perceived conspiracy of a loathsome, sick group of bedbug-harboring travelers has begun to unravel our peaceful bite-free sleep.

The recent second-round of news on the bedbug infestation in 2010 in the U.S. was actually a continuation of bedbug infestations first identified in 2006. The U.S. bedbug infestations followed infestation increases in Australia and other parts of the United Kingdom (U.K.), although actual government reporting was low. News reporters in the U.S. do not usually mention the development of the international bedbug infestation trends, but bedbugs travelling along international trading and vacationing venues, quietly took root in places previously free from this pest. As bedbug and human populations grew in many countries, and as trade and travel have increased, bedbugs have been traveling unnoticed as well.

Another unnoticed change, decreased pesticide-use, occurred in the U.S. and other countries during the same time period. "Natural" pest control methods were promoted, while pesticides having residual control capabilities were being removed from pest control use. Bedbugs were increasing at the same time that use of the most effective pesticides was declining. International reporting on pest populations (including bedbugs) was poor—if there was any at all. Since the bedbug does not transmit infectious disease, no records of bedbug populations are recorded by World Health Organization (WHO), the U.S. Centers for Disease Control and Prevention (CDC),or other health organizations. Therefore, official government action was not seen as necessary until upscale hotels began identifying bedbug infestations and patrons began filing related lawsuits.

When basic population ecology is applied to the "astounding" and "horrifying" increase in bedbug infestations, a normal population curve emerges. Insects exhibit R-type reproduction strategies (large numbers of unattended eggs) where the young, including bedbugs, appear much like the adult, just smaller in size. All of the young developmental stages (including nymphs) feed on blood. When the more susceptible nymphs are not subject to

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residual pesticides or predators, their numbers may increase exponentially in a very short period of time. Typical living spaces of cabinet and wall cracks, bed headboards and electrical plates quickly become infested, and the young bedbugs must find a novel place to hide. Bedbugs prefer proximity to a human food source with a fresh human scent. Clothes worn on a nature-appreciation vacation, full of scent and thrown onto a bed, end up in a suitcase with cracks and crevices: a perfect bedbug living and breeding environment.

The affluent American and European desire for additional novel travel destinations during the last decade, and the exorbitant incomes some citizens had to fulfill these desires, gave bedbugs new travel opportunities as well. For example, if the most remote lodge in Nepal has guests from Europe, and if local Nepalese grateful to have a job meet in a room, pests traveling from desperately poor local homes to travelers via their suitcases is inevitable. The first bedbug (the "point source " in epidemiology) accidentally hidden or relieved of eggs in a suitcase, box or a crate destined for the traveler's home country, initiated a distribution trend. As bedbug populations increased throughout the world with a decrease in residual pesticide use, more and more "accidental travelers" were widely geographically distributed.

What was observed during summer 2010 was the approaching peak of a normal population boom. At the recent bedbug "summit" in Washington D.C., hotels and high-end businesses like Neiman Marcus in New York were closed down due to bedbug infestations in their buildings. Citizens have demanded that pesticide companies or the government, develop some pesticide to arrest the plague of bedbugs. Bedbugs are now a contributor to substantial loss of economic revenue, both nationally and internationally. While bedbugs do not transmit infectious disease, they do add to the fear of a weakened world economy and increased litigation. Perhaps, at last, last year's widespread concerns will bring some action. Fear of the tiny has a personal, but almost unseen source, ripe for new "green" remedies to proliferate, for new conspiracy theories to develop, for new prejudices to develop, for less government intervention, (or is it more government intervention?) to be initiated.

Reference

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