

The New York Times Reprints

This copy is for your personal, noncommercial use only. You can order presentation-ready copies for distribution to your colleagues, clients or customers here or use the "Reprints" tool that appears next to any article. Visit www.nytreprints.com for samples and additional information. Order a reprint of this article now.

August 7, 2010

This Bedbug's Life

By **MAY BERENBAUM**

Urbana, Ill.

I had been a professor of entomology for 15 years before I saw my first live bedbug. It crawled out of a plastic film canister that had been mailed to me by a distraught student in the Boston area who had no idea what it was. I was so thrilled to see a live bedbug, I showed it off to every graduate student I ran into that day: *Cimex lectularius* — a small, flat, wingless, brown ectoparasite that hides in cracks and crevices in human dwellings and emerges under cover of darkness to feast on human blood.

That was in 1995, and none of my students had laid eyes on *Cimex lectularius* either. A century ago, bedbugs were ubiquitous in New York — so much so that their presence in an apartment wasn't considered sufficient legal cause for withholding rent. Bedbugs, one judge remarked in an early 20th century lawsuit against a landlord, "can be dealt with by the tenant by processes known to all housewives." But with the midcentury advent of synthetic organic insecticides, these insects all but vanished from urban landscapes (and pretty much every other kind of landscape) in North America.

My Bostonian bug turned out to be one of many on the forefront of an unprecedented resurgence. Global travelers now bring in a steady supply from around the world, inconspicuously undeclared in checked bags and carry-on luggage. Today, bedbugs have been found in all 50 states, as well as Guam, Puerto Rico and American Samoa, and bedbug-related calls to pest control operators are escalating at a fantastic rate. From June 2009 to June 2010, there were more than 31,000 calls in New York City alone.

Now, bedbug-related lawsuits can lead to thousands of dollars in punitive damages for mental anguish, embarrassment or humiliation.

Everywhere New Yorkers go — theaters, stores, offices, schools, trains, ships, hospitals — bedbugs go, too, hidden in folds of clothing, bags, backpacks and purses. Getting rid of them has become more than any housewife could ever be expected to handle. Even professional pest control operators are struggling to keep up, because bedbugs have become, for the most part, resistant to the old pesticides that once were so effective, and relatively few viable

chemical alternatives exist.

We reserve a special kind of enmity for bedbugs because, though humans generally do not like being anywhere other than at the pinnacle of a food chain, there is a particular horror associated with being consumed while relatively helpless, asleep in what should be the security of one's own bed (or chair or couch). With bedbugs, it's personal — unlike cockroaches, ants, silverfish and other vermin that are attracted to our possessions, bedbugs are after us. And they're remarkably adept at circumventing our defenses: They not only attack while we sleep, but they also inject anesthetics, so as not to awaken us, and anticoagulants, so that in every 10-minute feeding they can suck in two to three times their weight in clot-free blood.

Bedbugs win neither praise for their sophisticated technique, nor very much respect for the fact that they don't carry diseases, as most bloodsucking human ectoparasites do. Although their bites can cause unrelieved itchiness, bedbugs take only blood and leave no pathogens behind. In contrast, lice spread typhus; mosquitoes carry the viruses that cause yellow fever, dengue, encephalitis and West Nile disease; ticks transmit the Lyme disease bacterium; and fleas can bring the bacterium that causes plague.

But lack of involvement in spreading disease is hardly an endearing attribute. In fact, precious few aspects of bedbug biology are endearing. They don't build their own houses or care for their young, and their sexual practices are bizarre even by insect standards: Because the female bedbug has no genital opening, the male inseminates her by using his hardened, sharpened genitalia to punch a hole through her abdomen. With no elaborate courtship ritual, males in a frenzied pursuit of sexual congress often blunder into and puncture the bodies of other males, occasionally inflicting fatal wounds.

To top it off, almost every aspect of bedbug behavior is mediated by airborne odorants, almost all of which are, when detected, repulsive to humans.

What, if anything, is there to like about a bedbug? They certainly like us; we probably have no greater admirers in the insect world. They like the way we live, unlike most vertebrates, in permanent homes. (Bats and birds, which also build homes, are hosts to several of the bedbug's close relatives.) Bedbugs do not discriminate among humans on the basis of race, creed or socioeconomic status, and they're happy with almost any interior decorating style; they are as happy in a French provincial nook as they are in a contemporary cranny. The bugs' climate preferences are essentially an exact match to our own, and a small wingless creature couldn't ask for a better traveling companion — airlines have opened a world of possibilities for a species that can't get very far on its own six legs.

Perhaps the one good thing about bedbugs is that they provide a rare point of agreement that transcends race, religion, culture, nationality, tax bracket and party. It may be one of the few remaining universal truths — urban or rural, red state or blue, everyone agrees it would be great if bedbugs would disappear once more.

May Berenbaum, the head of the entomology department at the University of Illinois, is the author of "The Earwig's Tail: A Modern Bestiary of Multi-Legged Legends."