

A Wake-Up Call on Bedbugs

By: Nicholas Kusnetz

Ray Lopez remembers the first report of bedbugs he received. It was March of 2003 when a woman called the New York community worker complaining in Spanish of chinchas. Lopez had been helping people in the East Harlem neighborhood with pest infestations for years, but he had never heard the word before.

"I did some quick searches and I made the connection that it was a bedbug," said Lopez, who runs the environmental health program for Little Sisters of the Assumption Family Health Service, a community-based organization. "The only thing in my mind was the saying, 'Don't let the bedbugs bite.' I didn't know anything else beyond that."

Since then, he's visited apartments in hundreds of buildings across East Harlem to help people control infestations. Bites can cover the body and cause painful irritation. Severe reactions lead to welts and possibly anemia. But even a mild case can turn a person's life upside down, because of sleepless nights followed by frenzied days of trying to eliminate the menace. And these cases are growing exponentially. The bugs are arriving in offices and institutional buildings. Media reports are up. Federal and city agencies are beginning to form task forces. The blood-sucking parasite even made its way onto a recent episode of NBC's *30 Rock*.

In New York, confirmed violations — likely a fraction of the whole picture — shot from 82 in 2004 to more than 4,000 last year. There are no reliable national statistics, but the National Pest Management Association says calls to pest control companies across the country rose 71 percent from 2000-2005 and have continued to rise at a similar rate since. A bill in Congress that would provide money to states to help with inspections claims the number of infestations climbed 500 percent in the last few years. Bedbugs, it turns out, are very hard to control.

Cimex lectularius, the most common bedbug species, poses some vexing problems to exterminators and public agencies. The apple-seed-sized insect is nearly flat before it feeds and can fit in just about any crack. They hide in walls, furniture, piles of clothing, almost anything that provides a dark place to pass the day. Because they are so elusive, exterminators often miss parts of a colony. In apartment buildings, the parasite can crawl up the wall to the next unit. Or they can latch onto the old

shirt you bring to the Salvation Army. They are what entomologists call communicable — we spread them and they even spread themselves.

Furthermore, because they feed on blood only, they can't be lured with poisonous bait as can ants or cockroaches; no matter how clean you are, you can't remove their food source. Finally, the most effective insecticides, such as DDT, were taken off the market years ago because of the danger they pose to public health. The insects are now developing resistance to the pyrethroids that exterminators use most commonly.

The problem seems to have caught government and researchers off guard, said Jody Gangloff-Kaufmann, a specialist at New York State's Integrated Pest Management program.

"I think a lot of people didn't recognize this was a problem that was going to explode," she said.

Gangloff-Kaufmann said that New York City and many counties simply don't have the money to deal with the problem. Across the country, local and federal agencies have been slow to address the spread of bedbugs, with only a handful of cities providing coordinated responses. New York created an advisory board last spring that began meeting in September. Lopez is a member of the board and said they are still in the fact-finding stage; it will be months before they offer recommendations. One place they could look to is Franklin County, Ohio, which includes much of Columbus.

After watching bedbug cases rise out of control in Cincinnati, Paul Wenning knew it was only a matter of time before the parasites arrived in Columbus. As a special projects coordinator for Franklin County's health department, Wenning called a summit in November 2008 that led to the creation of an interagency task force. The idea was to get ahead of the bugs and teach people how to prevent infestations before they had them.

It turned out he was too late. One ZIP code in his county had four known cases of bedbugs in 2007. By this year, he said, the number had climbed to 233. But the Central Ohio Bedbug Task Force has since established one of the few coordinated policy responses in the country and the state is on the offensive. Citing current treatment methods as inadequate, Ohio's Agriculture Department recently asked EPA permission to treat homes with propoxur, a highly toxic insecticide used on crops and in flea collars.

Wenning said the task force's primary role is still education. They've produced a Web site with information on how to help prevent and treat bedbugs. There are links with guidelines for social service and health workers. There's a page for schools that includes a form letter to send to parents in the event of an infestation. This basic coordination and availability of information is one of the best things governments can do, experts say.

Franklin County agencies have also agreed to treat the problem as a public health threat, he said, allowing them to force landlords to treat their buildings and bring property owners to court if they refuse to act.

Because the bugs have not been shown to spread disease, many health agencies do not take a leading role to control infestations. If tenants refuse entry to an apartment, housing agencies may not be able to compel treatment, while a health department may have the authority to enter a dwelling with or without consent. Wenning and others argue that the stress and anxiety that infestations cause, not to mention secondary infections that can invade scratched bites, should put the bug under a health department's authority.

Federal agencies are beginning to respond as well. The Environmental Protection Agency held a summit last spring and is now organizing an interagency task force that includes the Centers for Disease Control, the Department of Housing and Urban Development, and other agencies. In an e-mail message, an EPA spokesman said the task force is now meeting regularly.

"The task force will help us coordinate our messages, research, and other efforts on bed bug control on a federal level," the spokesperson wrote. They are working on a Web page that will provide information to the public, but there is no release date yet.

How did we get to such a frantic point?

We've been living with the creatures ever since our ancestors ventured into caves thousands of years ago, where the bugs were living and feeding off bats and other animals. The word "bug" itself may have been first used in reference to bedbugs, evolving from the Middle English word *bugge*, or "an object of terror."

But after World War II, widespread use of highly toxic, residual pesticides nearly wiped them out in the developed world. By the mid-1990s, entomologists had troubling finding live samples for research. But sometime in the late 1990s and early 2000s, bedbugs began to come back.

There is some disagreement on the cause of the return, but there were most likely two driving factors. The most lethal pesticides had been taken off the market years earlier -the EPA banned DDT in 1972 — so residual levels of these chemicals had dissipated. Also, more people were traveling to more far-flung corners of the world, and they likely began to bring the bug to areas where it had been eradicated.

And by this point, bedbugs had become nothing more than a quizzical part of a rhyme that grandma would tell before tucking you in to bed. People simply weren't aware of the bugs, so they weren't aware of how to prevent them either. Things may be changing now, Wenning said.

"There's been a shift in public awareness," he said. A 30 Rock mention says it all.

Ray Lopez, for his part, last year was named a Community Health Leader by the Robert Wood Johnson Foundation. Money from the grant — \$105,000 for the project, \$25,000 for him — is going toward his bedbug program.

While education is critical, there is consensus that concerted efforts are needed on the part of public agencies across the country, from county health departments to the CDC, to update laws and regulations and come up with a coordinated response. In New York, for example, it is often not clear whether the tenant or the landlord is responsible for treating an infestation, said Ray Lopez. Wenning said a step as simple as requiring thrift stores to wash their clothes before sale could make a big difference.

Another problem is that even though bedbugs can affect people of all incomes, they tend to become a real problem in poor neighborhoods. Tenants often do not have the money to hire an exterminator and fear retribution from a landlord if they report the problem. New York's advisory board is examining the creation of a fund that would help poor people pay for extermination, but without such a fund, people often apply insecticides themselves, sometimes with disastrous results.

"We see a lot of people overusing pesticides," Lopez said. He's had cases where people were admitted to the emergency room after treating their own apartments.

While government is beginning to step in, public officials face an uphill battle. A single bug can live months or even a year without feeding. It can lay hundreds of eggs in its lifetime. And bugs are developing resistance to the only tools we currently have. Wenning said that until federal and state governments begin to organize a better response - for example, researchers in Connecticut are looking at

using a fungus to treat the bugs - and until we develop and approve better treatment methods, there is little that people like him can do.

"I don't look for it to get any better," he said. "If anything, I look for it to get worse."