

Bed Bugs – A Serious Problem for Property Owners

By Douglas Stern, Managing Partner Stern Environmental Group

Bed bug infestations have increased exponentially over the past three years causing panic among homeowners, coop members and property managers. In New York City 1,800 bed bug complaints were received in 2004. By last year complaints had more than tripled, topping 7,000. Concern that 2008 will see even more bed bug activity prompted the city to recently sponsor educational seminars for residents and property managers.

The problem is not limited to New York City and other large metropolitan areas. In recent years the age-old scourge has cropped up in all 50 states. The nightly news, local newspapers and blogosphere are full of reports of bed bug infestations. Numerous websites dedicate themselves to pinpointing the latest infestation sites and warning buyers and renters to steer clear. Luxury hotels have been sued by irate guests. Bed bugs have been reported in the tony co-ops of the rich and famous, in fashionable condominiums, in luxury apartments, in college dorms and in upscale suburban homes. Noted bed bug authority Michael Potter, an urban entomologist at the University of Kentucky, calls bed bugs the pre-eminent household pest in the U.S., on a par with cockroaches and rats. “This is one serious issue,” he recently told the *New York Times*. “This will be the pest of the 21st century – no questions about it.”

“History is repeating itself,” Potter said, explaining that many American beds were crawling with bed bugs before World War II. After the war, the use of potent chemicals like DDT spelled the death knell for bed bugs in America and most industrialized countries; but they continued to flourish in many other parts of the world. With environmental consciousness came less powerful, but safer chemicals that have allowed bed bugs carried in on the clothing and suitcases of international travelers to dig back into American beds.

“If bed bugs transmitted disease, what’s happening would be considered a huge epidemic,” says bed bug expert Dini Miller, an entomologist at Virginia Tech. “Though bedbugs have been shown to harbor 28 pathogens temporarily — including HIV and hepatitis B — numerous studies have shown the pathogens fail to thrive in the host enough to spread disease to people,” according to an article in the July 16, 2007 issue of *U.S. News & World Report*.

While they don’t pose a health threat, bed bugs routinely throw people into a state of hysteria. About the size of an apple seed, bed bugs have flattened, oval, wingless bodies that are a light to reddish-brown in color. Feeding on human blood for 3 to 10 minutes at a time, the proliferate nocturnal pests carry a psychological punch out of proportion to their size. “They come in the dark; they feed on you; they scurry away when you turn the light on,” said Lynn Kimsey, director of the Bohart Museum of Entomology at the University of California-Davis. Their bites can raise itchy red welts that bedevil their victims. There are stories of people dumping gallons of insecticide on their mattresses and dousing themselves with bug spray before they go to sleep. “I have people who call me in tears. They’re in hysterics,” admitted entomologist Richard Pollack of Harvard University.

Bed bugs are tough to kill. They have a hard cuticle for protection, can live for more than a year without feeding, and hide in tiny cracks and crevices making it hard for exterminators to reach

them. Their eggs are tiny (about the size of a pin head), translucent and pearly white. Household insecticides won't kill bed bugs and can actually cause them to spread as they seek new harborage. In fact, Potter and University of Kentucky researchers are starting to find bed bugs that are resistant to the pesticides commonly used to kill them.

In laboratory tests these "super bed bugs" have survived commercial pesticides at more than 10 times the recommended dose. Researchers sprayed laboratory bed bugs and bugs from four different apartment colonies with pyrethroid insecticides, the most common professional insecticide used to kill bed bugs. When sprayed, the laboratory bed bugs, which had never been exposed to the insecticide, were decimated completely; however, there were few mortalities among the apartment bed bug populations. In fact, those insects were immune to sprays that were two to three hundred times the recommended dosage prescribed by the insecticide manufacturer.

Complicating matters, people often have trouble enduring pesticide treatments and the residues they leave. A revolutionary new bed bug eradication treatment, Cryonite, provides a safe solution. Popular in Europe and Australia but only recently introduced in the United States, Cryonite does not use chemicals or leave noxious or poisonous residues. Cryonite is a completely "green" solution to killing bed bugs. It's safe for people with sensitive skin, allergies, asthma, medical conditions, babies, young children, the elderly, even pets. A totally dry method of pest elimination, Cryonite leaves no liquid residue which allows for immediate use of the home or building after treatment.

The kryptonite of the pest world, felling even super bugs that are resistant to ordinary pesticides, Cryonite uses rapid freezing to kill bed bugs, cockroaches and most other insects. Unlike traditional pesticides, Cryonite kills bugs in *every* stage of development. Bugs can't hide from the pressurized carbon dioxide (CO₂) "vapor" that seeps into cracks, crevices and other hiding places. Cryonite works by applying thin layers of pressurized CO₂ "snow." As the CO₂ hits surfaces, it vaporizes, causing extreme instant cooling of any organism with which the gas comes in contact. In effect, it freezes the cells of insects, crystallizing the water in their cells on contact. The insect is instantly immobilized and it takes only moments for death to occur. Bugs cannot scurry away and escape Cryonite. The fast-freezing gas kills adults, nymphs and eggs alike, unlike pesticides which are impotent on eggs.

Encasements are another important weapon in the property owner's bed bug eradication arsenal. Encasements protect your investment in mattresses and box springs from bed bugs. If bed bugs occur, they can't get through the encasement to infect mattresses and box springs. If bed bugs are already evident, they and their eggs are trapped inside the encasements where they eventually suffocate and die. Bed bug-proof encasements are made with breathable materials that are impervious to bed bug bites but guarantee a comfortable night's sleep. Specially designed seams and zippers keep bugs from crawling in or out. Encasements are meant to remain on your mattress and box springs for as long as you own them, forever protecting your investment from bed bug infiltration.

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