

CREEPED OUT

By Johnathan Launder, CR, WLS, CMP

Global travel and restrictions against the use of DDT have allowed bed bugs to become world travelers with little danger of being eradicated. With little research done on modern pesticides, the result has been infestations of the unwanted guests.

Facts About Bedbugs

Cimicidae, or bedbugs, are small parasitic insects. The most common type is *cimex lectularius*. Bedbugs give people the creeps because they typically feed on human blood in the most private of areas—our beds. This has led to an increased public awareness of the insects. Bedbugs are in the news.

People associate insects with unsanitary living conditions, but we cannot assume that any environment is bedbug-free. Like hair lice, bedbugs do not necessarily gravitate to messy or poverty-stricken residences. Bedbugs have been found in high-end retail stores, hotels and residences across the country. They just need a food source and a great place to hide. They can also just hitch a ride to their next meal!

Because of the global resurgence of bedbugs, we have to deal with bedbugs as part of our business model. Let's look at some facts about bedbugs.

- 1 They are very small.** Typical adult bedbugs are 4-5 mm long and 1.5-3 mm wide. They are also very flat. This enables them to get into the tiny cracks and crevices they like to call home. Bedbugs like to live behind wall moldings, under tack strips, behind headboards, and in the piping of mattresses and box springs. They are so small that they have been found between the threads of a screw and the wood attached to it in furniture.
- 2 They adapt.** Bedbugs have developed chemical sensitivity. They will at times avoid treated areas, seeking alternative routes to their food or even a new home.
- 3 They aren't very hungry.** Bedbugs can live more than a year on one feeding. The residual effects of most chemical applications have very limited time frames. This can enable bedbugs to wait out their adversary.
- 4 They are travelers.** Bedbugs are fast. They will travel across a room and attach themselves to a person or luggage within minutes of entering a room. Bedbugs will also travel up to 20 feet from their nest at a time.
- 5 They are survivors.** Bedbugs can live in temperatures ranging from 14 degrees Fahrenheit to 112 degrees Fahrenheit. Bedbugs also have a high desiccation tolerance, meaning they can survive very low humidity levels.
- 6 They carry disease.** Bedbugs are known to carry more than 20 pathogens harmful to humans. However, researchers currently believe that they are not able to transmit diseases to their hosts while feeding. Health issues from bedbugs are mainly limited to itching and inflammation from the bites, infection from scratching or allergic reactions.

The Restoration Threat

These traits make bedbugs difficult to control physically and mentally for a client. Some of these attributes also make them very adaptable to travel. Travel is the key concern for a restoration contractor. Because of the bedbug's ability to move fast and hide in small places, you need to integrate bedbug inspection into your initial scope and inquiry when dealing with a loss.

Imagine carrying bedbugs from one house to another, or carrying them from a home to a hotel, or carrying bedbugs to your warehouse. You could accidentally infest another client. Imagine a Better Business Bureau complaint or a feature on the news about your company introducing a blood-sucking, pathogenic parasite into someone's home or business. They say there is no such thing as bad publicity, but I may have to disagree in this case.

How to Find Them

To prevent cross-contamination, you will need to incorporate inspection for bedbugs into your protocol during initial customer contact. This could be something as simple as an inquiry by office staff before responding to a loss. Check for hotel and apartment infestations at the Bedbug Registry: www.bedbugregistry.com. Just

remember to be respectful and courteous when discussing bedbugs.

Once on-site, follow these recommendations to find out if bedbugs are present:

- 1 Ask.** This is one of the quickest and easiest ways to find out. If you do not want to deal with bedbugs at all, it is the best way to eliminate your exposure.
Check their feeding grounds. Start in a bedroom, preferably the one that gets the most use.
- 2 Check mattresses and box springs.** First remove the bedding. Start by checking the mattress piping. Look for blood spotting, eggs and nymphs. Nymphs are translucent. Adults and nymphs can be found singularly, but will tend to congregate once a colony is established. If one or two are discovered, remove the mesh covering on the bottom of box spring as the bedbugs will colonize inside.
- 3 Scrutinize cracks and crevices.** Again, bedbugs love tiny spaces. Even scientists who study bedbugs are amazed at the small spaces where they can hide. If bedbugs are discovered, carpet will need to be pulled back and tack strips may need to be removed. Switch plates and outlet covers will need to be removed, and furniture will need to be disassembled to find all of them.
- 4 Inspect adjacent rooms/units.** If bedbugs are discovered in a bedroom or apartment/hotel room, all adjacent rooms or units will need to be inspected. Bedbugs like to travel through wall cavities via outlet covers or duct runs.
- 5 Set up monitors.** Many pest control professionals use monitors in place of a visual inspection. Currently, two types of monitors are used—moat-style interceptors that trap bedbugs and devices that use heat and carbon dioxide to attract bedbugs.
- 6 Call in the pros.** If a customer confirms bedbugs before you enter a building, call a professional immediately. Pest management professionals are the best-trained and most qualified individuals to inspect and treat for bedbugs. Don't make this recommendation without confirmation. It is costly and can be offensive to a client if bedbugs are only suspected.

If bedbugs are found, make sure you do not take them with you when you leave. You may want to perform the initial inspection while wearing protection similar to a Tyvek suit. Bedbugs show up well on these suits and they offer fewer areas to hide. They can be removed and disposed of on-site if an infestation is found. There are many reasons to wear a protective suit related to water, fire and mold damage; it should not upset a homeowner.

Getting Rid of the Suckers

New research is underway to find ways to eliminate bedbugs. Treatment options include heat, freezing, chemical pesticide applications, physical removal, diatomaceous earth and other methods. It is important to become familiar enough with these procedures and products to talk intelligently to a client about their options.

- 1 Heat.** Bedbugs will die after seven minutes of exposure to a temperature of 115 degrees Fahrenheit or above.
1 Cold. Bedbugs will die after 15 minutes of exposure of -26 degrees Fahrenheit.
- 2 Chemical treatment.** Many new chemicals are emerging to deal with the pests. You can search for products that have been registered with the Environmental Protection Agency at <http://cfpub.epa.gov/oppref/bedbug>. Other choices are natural and synthetic pyrethrins, or inorganic materials, such as diatomaceous earth, silica and boric acid. Many of the chemicals with proven efficacy require a license for application. Chemicals also have a limited residual effectiveness. Be leery of miracle products.
- 3 Encasement.** Encasement is a cost effective and green option but is not very practical. It is difficult to encase large items, and items need to be stored long enough for the bedbugs to die before being opened. Remember,
- 4 bedbugs can live longer than a year on one feeding.**
- 5 Hygiene.** While bedbugs aren't attracted to unsanitary conditions, they do like to hide in cracks and crevices. Removing clutter and waste reduces places for the insects to live.
- 6 Vacating.** Vacating an area removes the food source for the insect. However, it is impractical because the occupants must vacate for very long periods of time.
- 6** It is also important to build relationships with qualified local pest management professionals before you need their services. Improperly treated bedbug infestations can lead to cross-contamination.

Because of bedbugs' chemical sensitivity, they are often driven to unaffected units in multi-use multifamily dwellings if the adjacent units are not treated at the same time. Treat units above, below, and to either side of affected units in unison. It is also recommended that several methods of treatment be used at the same time. For example, a pest management professional may choose to use vacuuming, chemical application and heat treatments together. Follow-up treatments and inspections are also part of the protocol. It may take months for complete eradication of heavy infestations.

As with all aspects of our business, educating the customer will be the best tool for dealing with bedbugs.

Ultimately, they will be happy if you can help remove these pests or prevent infestations with early detection.

Because of the amount of time restorers spend in buildings, you cannot ignore the possibility of exposure or contamination. It is not a question of if you will come in contact with bedbugs, but when. Some restoration contractors are taking steps to become licensed pest management professionals. Others are choosing to refuse work if bedbugs are present. In the ever-changing landscape of restoration, you will need to decide which path you will take.

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Resources:

A code of practice for the control of bedbug infestations in Australia (3rd edition), May 2010 by Stephen L. Doggett
<http://medent.usyd.edu.au/bedbug>

National Center for Healthy Housing, What's working for bedbug control in multifamily housing: reconciling best practices with research and the realities of implementation:
http://www.nchh.org/portals/0/Contents/bedbug_report.pdf

United States EPA bedbug information:
<http://www.epa.gov/bedbugs>