

Bed Bugs:

The Unwanted Guest

By **STEPHEN DOGGETT**

Remember in the late 1990's how a little event was set to cause major havoc? All computers were going to shut down, world financial markets were set to collapse and world anarchy was soon to reign. So it came, the clock ticked over from 1999 to 2000, and then, absolutely nothing, and so the 'Millennium Bug' was relegated to a quirk of history and soon forgotten.

Yet, around this time began the re-emergence of a little insect pest, one thought long relegated to history, and since the start of 2000 it has become so common that in some parts of Australia it is almost impossible to find accommodation facilities without them. Unfortunately, this little insect has a preference for blood, with guests being the usual victim, and getting rid of this pest is both challenging and expensive. In fact, it is likely that the accommodation industry is losing tens to possibly hundreds of millions of dollars in combating this six legged blood sucker. Thus it appears that a millennium bug did arrive after all, although in this case, they are better known as Bed Bugs.

Bed bugs are generally the responsibility of the Executive Housekeeper. Knowledge required includes the proper identification of an infestation, knowing how to ensure that infestations are properly controlled, how to prevent bed bugs becoming established in the first place, and even how to pacify angry guests who have been bitten. If poorly handled, infestations can spread to adjoining rooms, patronage can be lost forever and the facility could face expensive litigation. By knowing how to best defeat bed bugs, the Executive Housekeeper can help prevent severe profit losses. Thus the focus of this article is on bed bugs and their control, and attempts to answer the most commonly asked questions.

What are bed bugs? Bed bugs are insects and are related to the aphids and cicadas that appear in the garden; the difference being that bed bugs have developed a predilection for blood. The adult bed bug is around 5-6mm in length and up to almost 1 cm when fully engorged with blood. They are flat and round in



body shape with deep dark red colouration, becoming almost black when full of blood. There are five juvenile stages, which range from 1-4mm depending on the stage and are cream in colour when unfed. The development time of the lifecycle at 22°C is around two months, the adult female can lay up to 500 eggs throughout its life, and populations can become abundant in a short time.

Why are bed bugs such a problem? Bed bugs, as their name implies, invade beds where they bite the sleeping victim. The bite can be painful and restless sleep often results. During biting, the bed bug injects saliva and this can cause various skin reactions such as the development of small indistinct red spots. Often these develop into large wheals, 2-5cm across, which are extremely itchy and very uncomfortable. In some cases hospitalisation may be required if a severe allergic reaction develops, and the costs are usually borne at the expense of the facility. Fortunately, bed bugs do not transmit disease and often the most severe reaction relates to the mental trauma of being bitten. For many there is still a social stigma associated with bed bugs and people are often horrified and disgusted after being bitten, and claim to feel "dirty and unclean". In such



circumstances it may become almost impossible to pacify upset guests and the Executive Housekeeper must demonstrate empathy in dealing with this challenging situation.

Without a doubt, the greatest impact of bed bugs is that of the financial burden they impose on the accommodation industry. Guests bitten may refuse to pay the tariff and are not likely to return. Some resorts have even refunded whole holidays when guests have been severely attacked. Control is expensive and costs of \$1,000 or more per room are not unheard of, especially in heavy infestations when multiple treatments and

inspections will be required. During treatment, the affected room needs to be closed for a minimum of seven to ten days as the eggs will hatch (the insecticides do not kill the egg stage) and guests may be bitten during this period. There are reports of rooms being closed for two to six months in difficult to control infestations. The latest threat to the accommodation industry is that of litigation. One company in the United States was recently fined approximately AUS\$500,000 after being found negligent when guests were badly bitten. Other court cases have followed and the hotelier rarely wins. As Australia is one of the most litigious countries in the world, it is just a matter of time before a facility is sued after a guest is attacked by bed bugs.

How bad is the bed bug resurgence? There are reports from all around the world about the resurgence of bed bugs. From the UK there are suggestions that infestations are quadrupling every year, while in the USA a ten-fold increase since 1999 has been noticed. In Australia some pest control companies are reporting over a 1,000% rise in the number of infestations being treated since 2001. Thus the industry is experiencing a true worldwide bed bug pandemic. The main reasons for the return of the bed bug have been linked to changes in pest control procedures. In the past motel rooms were routinely treated with residual pesticides to control pests such as cockroaches. These days, pest management is undertaken in a far more environmentally friendly fashion and now toxic baits are used for cockroaches and these do not impact on the bed bugs as did surface sprays. The insecticides employed these days are safer to humans although nowhere near as effective at controlling bed bugs as was DDT and other previously used residual chemicals. As bed bugs are principally spread via luggage, the worldwide increase in tourism has undoubtedly aided in the spread of the insect.

What are the signs of a bed bug infestation? Often the first indication of bed bugs comes from the guests after being bitten. It then becomes necessary to ensure that the bites are caused by bed bugs and not some other pest like bird mites, fleas, mosquitoes, or other blood sucking insect. Blood spotting on the sheets is often associated with bed bugs; this can be from bleeding at the bite site or from blood defecated by the insect, and may be noticed by housekeeping staff while changing the linen. This latter blood spotting (sometimes called 'Poo Spotting') appears as groups of small dark spots and will be seen on mattresses, bed side furniture or anywhere the bed bugs hide.

Where should I inspect for bed bugs? The first place to examine is on and around the mattress, as this is where people are most often bitten. Close attention should be paid to the seams, beading, under buttons, labels and corner protectors, particularly in the darker areas of the mattress close to the wall. For an ensemble, the base is more likely to harbour the bugs than the top mattress and the bugs will even be under the material that covers the ensemble base. In even moderate infestations, bed bugs will hide in the bed frame, the slats,

bedside furniture, room furnishings and under carpet. During an inspection for bed bugs, the aim should be to find all harbourages and, as the insect can hide in any object in a room, the inspection may be both time consuming and challenging.

So, how are bed bugs controlled? Detailed control procedures are beyond the scope of this document; however, the author of this article in conjunction with the pest control industry has recently produced a Code of Practice for the Control of Bed Bugs Infestations in Australia, and this very comprehensive document can be downloaded for free from www.bedbug.org.au. Effective control relies on both non-chemical and chemical means. Non-chemical methods include vacuuming and steam, although it is impossible to completely eliminate an infestation without the use of insecticides. This means that a professional pest manager must be employed; unfortunately, there are many horror stories of poor pest control. In one case where an infestation became established in a staff accommodation block attached to a Sydney Hospital, what should have cost around \$500 blew out to around \$50,000, all due to poor pest control procedures! Thus you should never go for the cheap fly-by-night operator, and while this does mean that a professional with experience is expensive, they can save your business a lot of money in the long run.

In that case how should I choose a pest controller? There are several pest controllers on the working party that cooperated to develop the Code of Practice, and these individuals were selected for their professionalism and experience in bed bug control and are a good starting point. Otherwise look for renowned and reputable companies. Ask other hoteliers whom they have successfully used. Enquire as to what guarantee the company is willing to offer. Ask the pest controller about their treatment program, as follow up inspections are an essential part of the bed bug control strategy. Check the local consumer affairs association to see if there have been any complaints brought against the company. Ask the company if they belong to a professional association; in Australia, this is the Australian Environmental Pest Managers Association. Request proof of training such as attending courses where bed bugs were included as a topic. Finally, insist that the pest controller abides by the Bed Bug Code of Practice.

Perhaps one of the most important aspects of bed bug control is that it should be a cooperative effort between the pest manager and the housekeeper. The pest manager will usually require that electricity is turned off, beds and bed heads dismantled, furniture moved and the room kept vacant during the treatment process. If this cooperation cannot be ensured then control is almost guaranteed to fail.

Is it possible to prevent bed bugs? No, as indicated above, the worldwide bed bug pandemic is impacting Australia just as much as other countries and it is impossible with current technologies to prevent bed bugs from being brought into an establishment. However, minimising their impacts is achievable

and reducing the risk of litigation should be the aim of all Executive Housekeepers. Training of housekeeping staff in recognising bed bugs is essential as these staff are at the 'coalface' and can be the first to notice an infestation. Dead bugs should be kept preserved, digital images taken and infested mattresses kept for training purposes (treated and sealed of course!). All housekeeping staff should be trained and the Executive Housekeeper must maintain records of training.

Housekeeping and maintenance is important in minimising bed bug infestations. There must be a regular regimen of vacuuming of all areas of a room, especially around skirtings and under lounges and sofas. The contents of the vacuum bag should be sealed and discarded, and the vacuum cleaner should be confined to the one location when not in use. For larger establishments, vacuum cleaners and cleaning trolleys should be confined to one floor or to a certain section of a floor. Bed bugs can be transferred via cleaning trolleys and isolating the trolleys to an area should help contain this possibility. A minimum of items should be brought into the room, for example cleaning trolleys need to be left outside and used sheets and bedding sealed in plastic bags (or alginate bags) before being taken outside and placed into linen hoppers. Any crevices on the cleaning trolleys should be sealed with a caulking agent. Clean and used linen should be kept separate and both should not be transported to and from rooms via the same trolleys. If linen is washed by outside contractors, the dirty and clean linen should not be carted in the same vehicle. Cracks and crevices in a room must be kept to a minimum.

Certain types of beds tend to be more conducive to bed bug infestations. Ensemble bases provide many harbourages and are difficult to treat; likewise for wooden framed beds and those with wooden slats. Bed bugs find it difficult to climb smooth surfaces and so metal framed beds can help contain an infestation.

A documented process for handling bed bug infestations should be established. This should include the date when the infestation was first detected or reported by the guest, the date when the pest controller was contacted, and the dates of the inspection, treatment and when the infestation is declared eradicated. A documented paper trail can provide immediate evidence that the facility is being responsible in handling infestations.

What does the future hold for bed bugs? Unfortunately, the future is all too clear; the bed bug problem is going to get much, much worse. Infestation rates are rising in an alarmingly exponential fashion, and there are no signs of any downward trend. Also, there is unlikely to be any miracle 'cure' in the foreseeable future as research into control strategies is currently non-existent. Always remember that every time a guest is bitten, so are your profits and so the Executive Housekeeper must ensure that 'best practice' standards are maintained as per the Bed Bug Code of Practice. ■

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