



Bedbugs develop strong resistance to pesticides

» TIM BARLASS

Did you hear about the two bedbugs that met in the mattress? They were married in the spring. It's an Ellen DeGeneres joke but if you have ever been a victim of *cimex lectularius* and rows of terrible itching bites you'll know it's no laughing matter.

A new study to be published early in the new year conducted by the Department of Medical Entomology, Westmead Hospital and the University of Sydney reveals that the common bed bug in NSW has developed resistance to insecticides.

Report co-author Cameron Webb, medical entomologist with University of Sydney and NSW Health Pathology, says bedbugs don't discriminate about where they set up residence and that includes some top Sydney hotels.

"It doesn't matter to the bed bug whether it is a five star hotel or a backpacker's hostel, they still arrive in people's belongings and set up camp," he said. "The financial implications are far greater for the five star hotel.

"We know there has been evidence of a resurgence in bedbugs over the last decade and this paper shows that the local Sydney strains are resistant to insecticides which explains that resurgence."

The research compared the Sydney strain to a strain susceptible to insecticides. The study found that to exterminate the Sydney bed bug

compared to the susceptible strain it required 250 times as much of the insecticide bendiocarb, 370,000 times as much deltamethrin and 1235 million times as much permethrin.

It concluded: "The inability to control bedbugs with existing products and insecticides will necessitate a reconsideration of control methodologies and product regis-

tration processes employed against this resurgent pest. This research has significant operational implications for bed bug control and the registration process of new products in Australia."

Mr Webb said a similar problem existed with head lice with reports that they are also gaining resistance to some of the commonly used insecticides but more research was needed.

"When you are using products that contain an insecticide it provides an opportunity for insecticide resistance to develop inside the head lice populations," he said.

NSW Health advice is to put a conditioner on the hair and comb it with a head lice comb but he said it was easy to miss eggs and for the condition to spread in schools, especially in young girls.

The bed bug resurgence is also

happening in the US and features in a book *Unnatural Selection* by Emily Monosson, an American environmental toxicologist.

She says antibiotics, pesticides and pollution are all exerting intense selection pressure on all manner of things including gonorrhoea (new strains are more easily spread and resist treatment even with strong antibiotics) as well as bedbugs, different varieties of flu, and weeds in agriculture showing resistance to pesticides.

She writes of bedbugs "We almost had them beat only to face a pest that has managed to regroup and return with better defences. Yet ... too many others never slated for destruction - bees, damsel flies, frogs and songbirds - face extermination, if not extinction."

"We live in dangerous times with infectious diseases rapidly evolving beyond our medical reach returning

us to a pre-antibiotic age."

In the US, seven million pounds of antibiotics are used, she says. The appetite in Australia is similar. The National Antimicrobial Prescribing Survey released in November found 30 per cent of prescriptions were deemed to be inappropriate mainly due to unnecessary use of antimicrobials and incorrect duration of treatment.



**Not picky: Head lice
along with bedbugs
are becoming tough
to exterminate.**

