

# pest

The independent UK pest management magazine

## Bedbug threat multiplies



**Issue 8**  
**March & April 2010**

Survey reveals  
rodent numbers



7

Termites on the  
menu in Paris



10

Keeping bedbug  
control on track



15

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28

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### pest

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As the industry's only independent magazine, **Pest** aims to deliver a mix of unbiased news, impartial advice and topical technical features. We are committed to being as inclusive as possible covering every sector of the pest management industry.

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## Contents

Industry news	4
Two new industry qualifications	6
Rodent numbers still high, says NPTA survey	7
Termite threat wake-up call	8
Bedbug special	11
Infestation reports rising rapidly in the Midlands	11
Bedbug management and control devices	14
Monitors monitor: pest controllers control	17
Finding bedbugs: are dogs better than people?	18
Chemical controls	20
Blowing hot & cold	21
Europe's bedbug challenge continues to grow	22
Bedbug news update	24
Take the <i>Pest Test</i> on bedbugs	26
It's AGM time – UKPCO and NPTA	27
Germany's busy flagship event	28
Products – what's new?	30
New literature	32
Do you have what it takes to be a PROMPT professional?	33
Diary dates	35

## Battle lines drawn once again

In this edition two key issues are addressed – each the subject of an on-going 'battle'.

The first concerns the legislators in Brussels who look as if they may, once again, threaten our industry. The culprit is the legislation in the pipeline to replace the Biocidal Products Directive which would result in the banning of anticoagulant rodenticides. Full details behind this madness are reported on page 7.

News of this potential ban emerged at virtually the same time as the publishing of the 2008/9 NPTA Rodent survey. Congratulations go to NPTA which has been quick off the mark to use the data to draw attention to the effects such a ban would cause. Typically, this survey is widely picked-up by the national and local press so providing a launch-pad with the general public for this campaign.

The second 'battle' relates to the on-going quest to manage and control the increasingly widespread problems caused by bedbugs. We have produced a special 16 page supplement drawing together the current geographic spread of the insect, along with the results of a survey which reviews the practical challenges faced by professional pest controllers. Uniquely, we have assembled the full range of management, monitoring and control techniques available, including the ever-growing range of monitors and other innovative devices. We trust readers will find this compendium useful.

*James Hall*

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## London's West End theatres infested with mice

A comprehensive survey undertaken in February by the performers' union Equity lifts the lid on West End back-stage conditions. Equity surveyed the working conditions in 24 of London's West End theatres. Nearly 350 performers and stage managers were surveyed who reported regular pest infestations – which included mice, rats and fleas. But mice seem to be the number one pest problem recorded.

When the actors were asked if there was evidence of pest infestations inside their dressing rooms 66% said yes, yet only 43% felt these infestations were dealt with quickly and effectively.

Comments from the performers included: "Our floors have been eaten by mice and they leave their faeces." Another added: "Mice, mice, mice. Quite often there is an unpleasant smell which usually turns out to be a dead one!" And perhaps the most worrying of all was: "I had tiny bite marks on my lipstick recently when I left the lid off."

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## Exosect secures over £2.25m funding

Exosect – the provider of environmentally-friendly, non-chemical Intelligent Pest Management solutions – has successfully secured over £2.25m of funding to support the launch of new products across the UK, Europe and the USA.

Martin Brown, managing director at Exosect, said: "This new investment presents a tremendous opportunity for Exosect to bring to market new products. Using our unique technology platform, we have developed a raft of award winning products to meet the increasing demand for intelligent and informed pest management solutions. The funding from MTI and Hygea, along with existing investors will significantly support our plans to pre-empt and fulfil this demand in both the UK and overseas markets."

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## British well represented at Italian conference

Several members from the British pest control industry could be spotted at the conference held on 24 & 25 March in southern Italy, organised by ANID – the Italian pest control association.

Kevin Higgins was there (left) representing the British Pest Control Association (BPCA), whilst Iain Turner was one of the speakers representing the National Pest Technicians Association (NPTA). Iain spoke on how technicians organised themselves in the UK and how NPTA differentiated itself from BPCA. There will be a full report in the next **Pest** magazine and also on the **Pest** website.



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## 25 years recognised

At a service staff meeting held earlier this year, Hampshire-based Rokill Pest Control, celebrated the completion of 25 years service by general manager Chris Turner. Chris (left) was presented with a certificate, by Rokill managing director Alec McQuin. He joined Rokill in 1984 as a service technician, having previously worked for the wildlife, storage and biology team at ADAS based in Reading and Lewes.

## London's China town is venue for PWIPM birthday meeting

Pictured at the first anniversary lunch of Professional Women in Pest Management in the UK (PWIPM) are speaker Pippa Codling (left) from Ecolab who talked about her experiences in the industry she loves, Killgerm's Sabra Fearon who chaired the meeting and speaker Sandra Edmeade-Walters. Sandra is principal environmental health officer for the London Borough of Tower Hamlets. She talked about the work she is involved in to ensure a 'safe' London Olympics, public health wise. The meeting took place in London's China town on 12 March and was generously sponsored by **Pest Control News**.



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## New glue board Code of Practice confusion?

An article in the 12 March 2010 edition of *Environmental Health News*, published by the Chartered Institute of Environmental Health (CIEH), could lead to confusion about glue boards. The headline 'CIEH calls for glue board ban' gives the impression that the code seeks to totally eliminate the use of glue boards. This is not the case. The proposal is for the restricted sale for glue boards. In his quote, Stephen Battersby, CIEH president says: "... (glue boards) should not be on sale to the general public." The Code had been produced by the recently created Pest Management Industry Alliance (consisting of the British Pest Control Association, the National Pest Technicians Association, the National Pest Advisory Panel and the UK Pest Controllers Organisation).

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## Stored product workshop in Spain

Insects Limited and Roca Defisan hosted the 9th Fumigants & Pheromones Conference and Workshop on 3-5 March in Valencia, Spain. Over 200 pest managers, representing 43 countries attended. Twenty international speakers shared their stored product experiences, new technologies and replacements for methyl bromide in structures and quarantine applications. The first day ended with a gala dinner where the attendees were entertained with Spanish food and flamenco dancers. The third day was spent in the busy Port of Valencia for a hands-on practical workshop.

Summing-up the event, David Mueller, conference organiser, said: "It made me smile to watch the groups from the various countries get together to exchange ideas and friendships."

The 10th Fumigants & Pheromones Conference will be in Indianapolis in May 2012.



Above: Dave Mueller (left) with Henrik Lange (centre) & Jose Roca  
Right: Valencia is famous for paella



## The benefit of a sense of humour

Cleankill, the Croydon-based pest control company, demonstrated it can see the lighter side of life when preparing their latest advert – as seen right.

The advert jumps on the back of the Iraq enquiry. Managing director Paul Bates said: "Pest controllers are well-known for having a sense of humour which is very important in our business."

The advert certainly seems to have created attention, as Cleankill had four new enquiries within two days of it appearing in a local paper, plus a number of customers commenting on it.



## Retirement of industry stalwart – Fiona Murphy

After 35 years in the pest management industry, Fiona Murphy has announced she is hanging-up her pest control hat in June and retiring.

A very well-known, and much respected figure, Fiona began her career at Pestoxin after graduating in Geology and Biology at Keele University in 1973. She later joined Erskine Pest Control which became Peter Cox, then Terminix and now Ecolab. Since 2000, she has been technical & people development manager, Pest Elimination UK & Ireland at Ecolab.

Fiona said: "The pest industry has given me a great career for the past 35 years largely because of all the wonderful people I have had the privilege to work with – both in the companies I have worked for and also with the industry organisations I have worked with. I have regularly said that I have the 'best job in the world' and I meant it."

Ecolab announced that with Fiona's departure, an additional role of training manager will be created. Until the appointment of her successor, Mark Williams, head of technical and support services, will look after Fiona's responsibilities.

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## Pest controller fined re honeybee deaths

On 23 February 2010 at Ely Magistrates Court Magistrates Court following proceedings taken by the Health and Safety Executive, Russell Calne, a professional pest controller pleaded guilty to two counts of a 'failure to take all reasonable precautions' when using Ficom D (bendiocarb) when treating a feral bee nest. He was given a conditional discharge and ordered to pay £1,500 costs.

Mr Calne was called to treat a feral bee nest in the chimney of a family home. During two separate treatments he failed to follow the statutory instructions on the product label by not removing the honey-combs or blocking the entrance to the treated nest to prevent access by other foraging bees. Nor did Mr Calne check whether anyone in the immediate vicinity kept bees and following these treatments a neighbour's hives were badly affected, with numerous honey bees dying, leading to the complete loss of bees in one hive.



## Date for PestEx 2011 announced

The date for PestEx 2011 has just been announced by BPCA. It will be held on 13 & 14 April 2011 – the venue is once again going to be ExCeL in London's Docklands.



## Health and Safety ALERT

An article recently published in the *Cardiology Journal*\* suggests that the number of people killed in the UK each year by wasp stings could number in excess of 1000.

It now appears that wasp stings can trigger heart attacks in a number of susceptible people several days after being stung. This is known as

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## Two new industry qualifications

The Royal Society for Public Health (RSPH) has announced that, from July 2010, there should be two new qualifications for the pest management sector:

- The Level 2 Award in Pest Management
- The Level 2 Certificate in Pest Management

RSPH's Richard Burton explains: "Following extensive consultation with the industry both of these new qualifications are being submitted to the regulatory authorities for approval."

Readers may recall that the status quo was not an option as new government regulations meant that the old Level 2 Certificate in Pest Control could not continue in its present form.

The new Award in Pest Management is essentially the current Level 2 Certificate in Pest Control. It will be offered by all the existing RSPH approved centres and will provide the theoretical underpinning knowledge pest controllers require. It will consist of three units: vertebrate pests, invertebrate pests and health & safety/legal aspects. Assessment will be the same as for the existing qualification.

The new Level 2 Certificate will comprise the same three units plus there will be two 'technique' units. This will add a practical element to the training; something which many in the industry felt was missing from the old qualification. Adding in the extra units will also extend the size of the qualification so that it qualifies as a Certificate. The practical units will be assessed by the centres. However, centres will only be allowed to offer the new Certificate once their assessment procedures have been verified and approved.

RSPH is also keen to point out that there is no need for candidates to obtain the Level 2 Award before taking the Level 2 Certificate. The two are stand-alone qualifications that share some common units. "The Level 2 Certificate is intended for new entrants to the profession and should provide a sound basis for them," says Richard.



RSPH's Richard Burton

## Pesticide consultation

A consultation on how the EU's Sustainable Use Directive (SUD) should be implemented is underway. Interested parties have until 4 May to comment. Whilst the SUD will only apply initially to pesticides which are plant protection products, it is intended that it will be extended to biocides at a later date. The SUD promotes the use of Integrated Pest Management and alternative approaches or techniques such as non-chemical alternatives to pesticides. It covers such topics as training and certification of users and advisers, testing of application equipment as well as safe handling, storage and waste disposal. When it is applied to biocides, it seems likely that it will effectively close the loophole in UK legislation which currently exempts pest controllers from the legal requirement to hold a certificate of competence. Pest controllers are, of course, currently covered by the general legal duty to be 'adequately trained and competent'.

## Rodent numbers still high, says 2008/9 NPTA survey

The tenth National Pest Technicians Association's (NPTA) rodent survey report has just been published. "The survey confirms we're on a knife edge in keeping on top of rat and mouse populations across the country," said NPTA chairman, Peter Crowden. "What's more, new regulations being proposed by the EU (see panel below) would tip the balance by banning the anticoagulants we rely on for the overwhelming majority of current UK control."

These active ingredients are currently used in virtually every one of the 465,000 annual rat and mouse treatments reported by the Local Authorities responding to the NPTA 2008/9 survey. As well as underlining the scale of continuing local authority-organised rodenticide treatments, the survey report highlights the fine line the country is treading in keeping the lid on rat and mouse infestations.

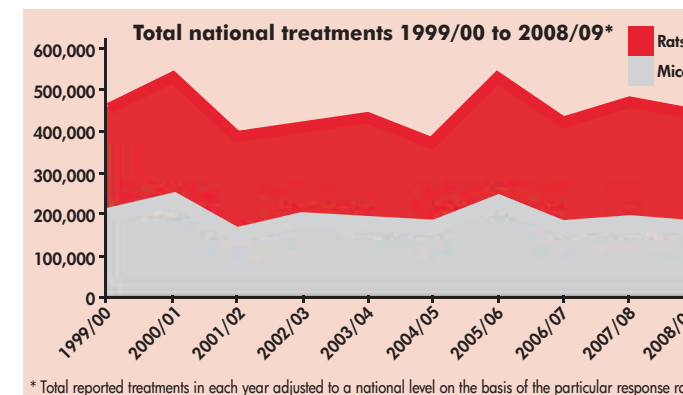
While reported treatments show a welcome fall from the previous year's record level overall, both London and the Midlands recorded double digit year-on-year increases in rat treatments – almost 40% up on 2007/8 in the case of the capital.

The analysis of comparative figures for the past decade suggests total local authority treatments are at an almost identical level to 10 years ago, with regular surges every two to three years.

"Even with the highly effective rodenticides currently available to the industry, we are clearly only just keeping rats and mice at bay," observed Peter.

According to the report, the progressive withdrawal of free rodent control services over the past 10 years has caused an increasing number of infestations to be excluded from local authority reporting each year. This means that the real scale of the national problem has almost certainly grown very substantially in this time.

The survey also confirms that only a minority of local authorities are currently providing rodent control services completely free of charge – around four in every 10 in the case of rats and half this number



\* Total reported treatments in each year adjusted to a national level on the basis of the particular response rate

for mice. However, it also shows the majority still provide free services to some groups of residents and over three quarters retain their own direct control capacity.

Despite intensive budgetary pressures, around one in every 10 of those currently offering free services has re-introduced them having previously charged. "Enlightened local authorities like these are setting a hugely valuable example for the majority in living up to one of their most important statutory responsibilities," noted Peter.

For the future Peter wants to see local authority and private sector pest controllers take a far more co-ordinated, better planned and, above all, less reactive approach to rodent control nationwide. At the same time, he says policy makers and advisers need to be aware of the extent to which modern lifestyles are increasingly playing into the hands of the rats and mice, and act to address this by better management of wild bird feeding, domestic waste and home composting, in particular.

The single most vital thing everyone has to do in the coming few weeks however is to persuade EU policy makers of the critical importance of anticoagulant rodenticides. "Fail to do this and we can give up the idea of any effective rat and mouse control in most situations for the foreseeable future," he said.



NPTA chair Peter Crowden



Dr Alan Buckle

## Anticoagulants under threat from Brussels again!

New regulations from Brussels are threatening to leave the UK defenceless against rats and mice. The culprit is legislation in the pipeline to replace the Biocidal Products Directive (BPD).

Dr Alan Buckle vice-chairman of the Cefic Rodenticides Working group agrees with NPTA's Peter Crowden that something must be done.

"Rodenticide manufacturers spent many years, and millions of pounds, getting these products through the BPD review. All anticoagulants have dates set for admission onto Annex 1 of the BPD, meaning they can continue to be sold. But, just when we thought the future was clear, the European Commission has come up with another threat," he says.

How has it come to this? For many years, manufacturers have

fought to stop the Commission labelling all anticoagulants as teratogenic – in other words 'toxic to reproduction'. All have studies conducted which show they are NOT teratogens. But the Commission, prompted by Nordic states, is bent on ignoring these studies. This is because there is an exception, warfarin is a teratogen, and the Nordics believe that all the other anticoagulants must be as well, in spite of the industry studies to the contrary.

Another Commission initiative will make it illegal in Europe to sell a chemical that is a 'CMR', that is Carcinogenic, Mutagenic (gene altering) or toxic to Reproduction. This sounds reasonable and, sensibly, the Commission has provided a get-out clause for products where there are 'no suitable alternative substances or technologies'. But incredibly all rodenticides and insecticides used in pest control will NOT be permitted to use this get-out clause!

So, if we are to effectively control rats and mice and protect peoples' health across Europe, it sounds as if we are in for another fight.



# Termite threat wake-up call



© Dr Reiner Pospischil

To date the UK has only had one recorded brush with termites – the world's number one structural pest. However, this is not the case for mainland Europe, as delegates at a recent conference in Paris discovered.

More than 70 delegates from over 50 companies representing all sectors of the European pest control industry gathered at the first European termite market conference held on 4 February in Paris. It was organised by PestBusiness.com, with the help of exclusive sponsor – the leading French distributor – Edialux. Those present soon realised that termites could no longer be thought of as a non-European problem. With a new pest threat comes opportunities – the opportunity of a new market awaiting those brave enough to exploit it.

Opening the conference, Rob Fryatt of Xenex Associates declared: "Termites are a growing and spreading pest across Europe. As organisers of this event, we felt the moment was right to address this insect and to bring together an array of experts from around the world to help us explore the biology of this pest, the market and the technologies available for its management."



Organisers and speakers Rob Fryatt, left, and Rod Parker

The other joint organiser, Rod Parker of Agricultural Information Services, explained that this rapidly growing and expanding market is valued, within Europe, at over £14 million at ex-manufacturer level. And it is predicted to grow to £20 million by 2012. So far, 75% of the market is in France, but Spain and Italy are fast developing and there are soon likely to be significant additional markets in countries such as Greece and Turkey.

So what has caused this rapid growth in the market? The expansion is due to a number of factors coming together all at once. Not surprisingly, first of all is the spread of termite infestations across Europe, perhaps in part caused by global warming. Second,

as is the case with several other public health pests, is the consumer's growing awareness of the problems they cause, coupled with their increasing intolerance of such problems. At the same time these factors are, accompanied by a sharp rise in the disposable income of consumers, so providing the means to purchase



The European termite market is worth over £14 million and expected to rise to £20 million by 2012

treatment for a pest they may have been prepared to live with 20 years ago.

Again, as echoed in other pest control market sectors, consumers have become increasingly environmentally aware. The historic termite slab treatments of 'pour pesticides round the house' are no longer acceptable. At the same time, changes in pesticide regulations have virtually eliminated the use of organochlorines such as chlordane which was used mainly by builders in the pre-construction phase. New active ingredients have been developed including fipronil, imidacloprid and chlorfenapyr. At the same time the means of application has switched to a much more technical and preventive approach – and that is also a higher value approach.

Also new to the market is a whole range of monitoring, detection and baiting systems along with physical non-chemical systems such as Termimesh. As Mr Fryatt concluded: "The market has switched from simple

curative pest control to a more sophisticated preventative, higher value pest management and monitoring/detection approach. With this has come increased professionalism and specialisation by those pest control companies undertaking the work." This, it turned out, was to be a theme echoed by several of the subsequent speakers.

Steve Broadbent, technical director of Ensystex – the manufacturer of the Exterra Termite Baiting System – gave an excellent presentation outlining the evolution and biology of termites. Like lots of other insect pests, they have developed an extensive array of species, each one adapted to its local environment. What is fascinating is that, as an order of insects, despite their appearance and some of their behavioural characteristics resembling ants, they are in fact more closely related to Blattodea (cockroaches). The fact they are often referred to as 'white ants' just confuses things further.

However, their behaviour is similar in certain respects to ants. Their usual means of establishing a new colony is to develop winged alates, but under stress, or when setting up entirely new infestations, the colony will, just like certain ant species, bud (divide) off and establish colonies with neotenics.

In the UK we did have a brush with this insect pest in the 1990s. The unintentional importation (thought to be in a pot plant brought back from the Canaries) and subsequent establishment in 1998 of



Termites can either be subterranean or builders of mounds, which, in Australia, can become enormous and contain estimated termite populations of a million or more

subterranean termites (eventually identified as *Reticulitermes grassei*) in two adjoining properties in Saunton, North Devon provided definitive evidence of the ability of at least one genus of termite to survive in the UK climate. The government launched a termite eradication programme costing £190,000. Treatment was followed by extensive monitoring, with the all-clear given in May 2009. However, recent tests have detected a 'localised pocket' of the insects. Further treatment is now underway.

Fortunately, or unfortunately depending on your point of view, despite their active advance across Europe the industry experts agreed that it seems that the UK is to be saved from a mass termite invasion. The English Channel provides a useful physical barrier and, even with the predicted affects of climate change, the UK is deemed too cold and too wet. At least our climate does have a few advantages!



Despite their appearance and some of their behavioural characteristics, termites are more closely related to cockroaches than ants

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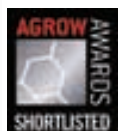
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# Bedbug special

16 pages on the UK's fastest growing pest problem



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## Infestation reports rising rapidly in the Midlands

Although reports of bedbug infestations have risen dramatically, there is no data readily available quantifying this increase. One company – London-based Bed-Bugs Ltd – has attempted to do just this.

Initial, ground-breaking research and mapping of bedbug infestations by Bed-Bugs Ltd was undertaken during 2008 in London. This brought new insight and previously unseen detail into the spread of bedbugs. New research covering the English Midlands has just been completed.

This latest round of research in the main Midlands conurbations was undertaken throughout 2009. Councils were asked, under the Freedom of Information Act 2000, to supply data, by post code, indicating the number of infestations reported to them over the last five years. Combining the two surveys, over 60% of the councils approached were able to supply at least partial numbers. Data has now been received from 22 councils in London, with the balance from the Midlands. A further 10 could only provide information for the more recent years.

The results from the Midlands, not surprisingly, almost exactly mirror those from London. For example between 2003 and 2007, the number of bedbug infestations reported to Local Authorities increased more than threefold. Worryingly though, it appears that the rate of increase in the Midlands is faster, and becoming more so, as the rest of the country plays 'catches up' with the capital.

As Bed-Bugs Ltd managing director David Cain explained: "This is a real breakthrough in the fight against bedbugs. Mapping on this micro level has given us a hitherto unseen view of exactly where bedbugs are being found. We have been able to both confirm certain theories and also discount others about how this pest is

spreading geographically. What is especially worrying about these latest figures though is the rate of increase we are now seeing outside London."

### Mass deprivation and population density

In the study, the maps produced from the survey (see page 13 overleaf) showing both the total numbers of bedbug infestations and the rates of increase within each Local Authority were compared to maps showing areas with high indices of mass deprivation and also population density. The results were not entirely surprising, but do give a clear warning against over-simplifying the problem – trying to compare apples with oranges and leaping to conclusions based on 'false positives'.

There was indeed a high correlation between mass deprivation/population density and the level of infestations but it was felt there is no direct link between them. Bedbugs are an exposure pest. When they hitch a ride they have no idea how clean a person is, how wealthy they are, nor how many people share the same property.

The problem is that people move around locally, nationally and internationally. This goes some way to explaining why infestations are on the increase in places such as Cambridge and Stratford. Neither location is especially deprived nor overcrowded but both receive large numbers of visitors from across the UK and internationally.

It would be entirely misleading and rather unfair though to 'name and shame' any individual councils as being 'the worst in the country'. It is becoming increasingly clear that each council has different factors contributing to its own particular situation, be it hotspots, corridors or a high number of visitors.

Some authorities started 2003 with very high infestation





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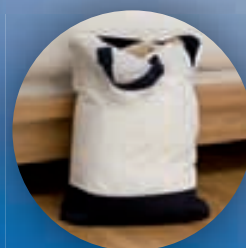
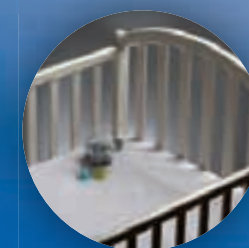


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BEDBUGS  
New Midlands data



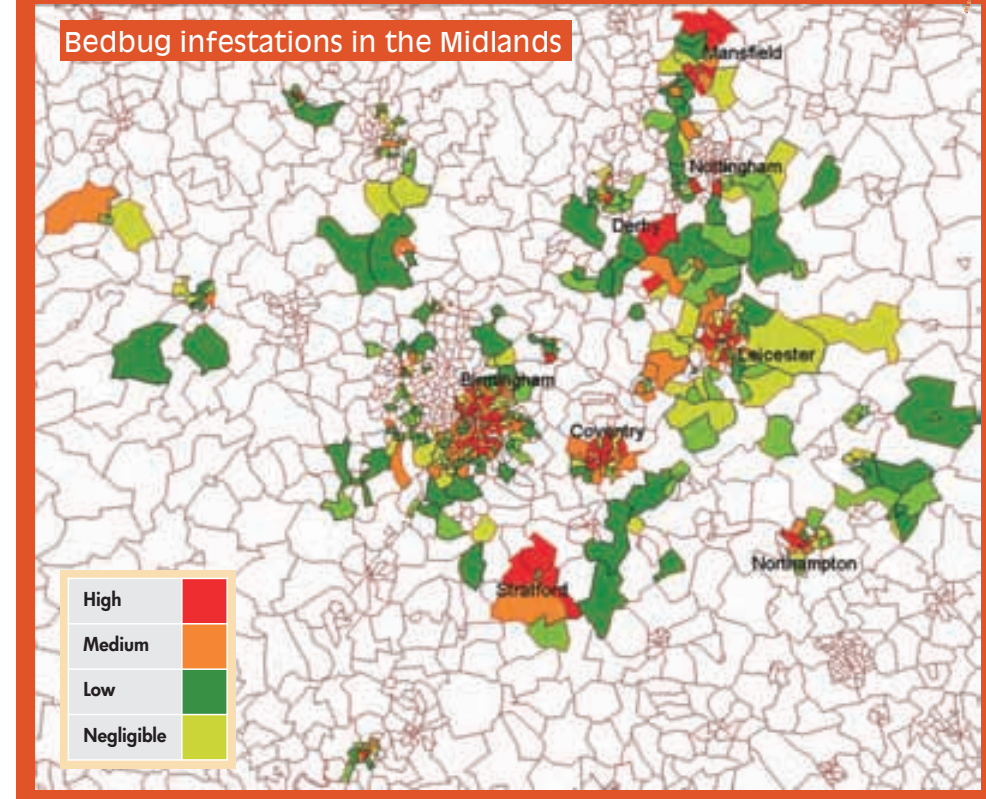
numbers yet saw a negligible increase in the next five years, whilst others witnessed a dramatic rise in the same period. The 'worst' percentage rise recorded was between 2003 and 2007 when a council saw a 41-fold increase in infestation numbers, albeit starting from a very low base. However, their overall numbers are still far below those of similar authorities.

It would be easy, for example, to take two Local Authorities with similar population sizes e.g. Coventry and Wandsworth in south London, which both have around 300,000 inhabitants and see that both had a similar number of infestations in 2007. However coming to the conclusion that they were in the same situation would be far from the case.

Between 2003 and 2007 Coventry experienced a 12-fold increase in infestation numbers whilst Wandsworth actually saw a tiny decrease, with a noticeable dip in 2005. Moreover, whilst Coventry's problems appear to be fairly widespread, with infestations spread across the city, Wandsworth's problems seem to be confined to specific parts of the borough, suggesting very different causes of their respective problems.

By comparison, in 2007, Birmingham with a population more than three times that of Coventry, had only slightly higher infestation numbers to its neighbour. But Birmingham bucked the trend with a lower than average increase (just over two-fold) in infestations between 2003 and 2007. Just like Coventry though, in Birmingham, bedbugs are being reported in virtually every part of the city.

## Bedbug infestations in the Midlands



To conclude, David Cain said: "Whatever the explanation, it is clear that we need to be looking at things in a much more investigative and structured manner, both at a local, national and international level. If we do not completely change the way we think and come up with radical new strategies to tackle this pest, we could again see an epidemic within a few short years. We need action now to change the way the pest control industry is thinking. The population at large needs to start to appreciate the seriousness of this problem, rather than simply reacting to infestations with yet more chemicals."

## Unlocking bedbug population dynamics

Has public transport paved the way for their return?

Toby Fountain of the University of Sheffield is about to start exciting research work. Funded by NERC and the Royal Entomological Society, he aims to unlock the secrets of bedbug ecology and population dynamics.

It is an acknowledged fact that after decades in decline, bedbug populations the world over are showing an enormous increase. They have become a major international pest species. However the cause of their return remains a mystery.

Many theories have been proposed, ranging from global warming to widespread insecticide resistance. This new research project focuses on the long-range dispersal of bedbugs. Being flightless the only way bedbugs can move long distances is by 'hitch-hiking' either on a

person or in their belongings. Cheap and easily accessible air travel and public transport create a huge potential for bedbugs to move long distances in a small amount of time. This has led many to suggest that public transport may have facilitated the resurgence.

To test this theory and gain a greater understanding of bedbug ecology, bedbug population dynamics need to be explored. Due to genetic variation between individuals, molecular techniques can be harnessed to study relatedness and bedbug population structure in affected areas. Usually in dispersing populations a negative relationship would be expected between increasing geographic distance and relatedness. However if two infestations are connected by a public transport link, relatedness between them

may be higher when compared to two infestations which are unconnected but separated by a similar geographic distance. Whether infestations are caused by single or repeated introductions of individuals can be evaluated, as can how these introductions then spread through buildings.

In collaboration with pest controllers, it is hoped to gain a more detailed insight into how these insects disperse and to formulate more effective control strategies. With the London 2012 Olympics carrying the potential for a new influx of bugs, it is essential to have a greater understanding of how bedbugs are moving between the bedrooms of the world.

**Pest** will be following the progress of this research. However, it is likely to be at least two years before results are available.



# Bedbug management and control

Not too long ago, bedbugs were viewed as a pest of the past. Like as not, the current generation of pest controllers, would never have had to treat an infestation – until the current outbreak, that is. Consequently there was no reservoir of practical experience to draw upon, nor any armoury of products readily to hand.

However, pest control is an innovative industry. From a position of virtually no management tools there is now a bedazzling array of bedbug monitors, bedding covers, physical barriers and other such devices. To help our readers work out what's available *Pest* has attempted to draw all these items together. Whilst every effort has been made to ensure all relevant products are included, we apologise should any have slipped through the net. This review is followed by a report on a new and relatively unique means of bedbug monitoring – the use of bedbug detection dogs.

## Physical barriers

With their nocturnal habits, coupled with the tendency for bedbugs to reside in the bed, bedding or areas surrounding the bed, a variety of physical protective barriers have been developed. None of these actually kill the bugs, but they do offer protection and can serve a useful function as part of an integrated management approach.

### Mattress and bedding encasements

The idea behind these products is to prevent the movement of bedbugs – either into an uninfested mattress or, should the mattress already be infested, preventing the bugs from exiting to bite the human sleeping in the bed. The covers are impermeable to the bugs.

Mainly brought in from the USA, a whole array is now available. All are brilliant white, meaning any bedbugs or faecal deposits are easily spotted. Each comes with patented zip fastening technology. They are also impermeable to dust mites, mould and bacteria. In addition, they wash like a sheet and dry quickly.

For those travelling away from home, Brandenburg has also introduced SecureSleep travel pillow with encasement, luggage liners and a laundry bag.

- 1 Mattress Safe – available from Paragon and SX Environmental
- 2 SecureSleep Encasements – available from Brandenburg
- 3 Protect-a-Bed – available from Killgerm



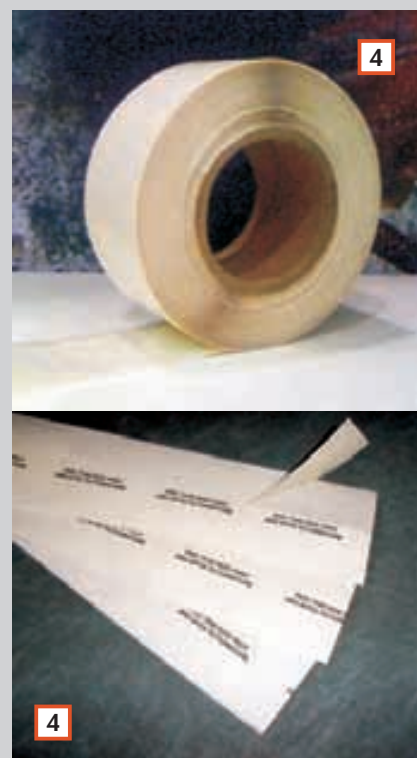
### Bedbug tape

Bedbug tape comes either in strips or, for larger areas, in rolls.

The idea is that it is applied sticky-side uppermost around walls, bed legs or where bedbug activity is suspected.

It serves as both a defence (preventing the bugs crawling up a bed leg, for example) and/or as a means of monitoring any activity.

- 4 Bedbug tape and strips are both available from Barretine Environmental Health and Killgerm



## Monitoring devices

Detection and monitoring are at the core of professional pest control. If we don't know what pests we have, where they are living, and whether they are increasing or decreasing, it is almost impossible to deliver rational pest control.

Although there are good monitoring devices available for many pests, until recently there has been nothing available for bedbugs, other than a visual inspection. A 2001 article on bedbugs published in *Pesticide Outlook*, listed three issues that appeared critical to resolving the bedbug upsurge and top of the list was the development of an effective bedbug monitoring tool.

Around seven years later the first wave of devices was launched in the UK. There is now an array of options available. The challenges

involved in developing these products have been considerable. Bedbugs are relatively inactive and, even when they are active, they respond to cues such as heat and carbon dioxide, which are difficult to incorporate into a discrete, sensibly-priced device.

This section outlines the main products available. For the user, making an informed choice among these products is hampered by the lack of comparative data on their effectiveness. Users of these devices would do well to encourage suppliers and manufacturers to provide such information so that claims of product effectiveness can be properly assessed. Meanwhile, in the not-too-distant future, the identification and synthesis of bedbug aggregation pheromone is likely to herald in a second wave of devices.

### Passive monitors

Passive monitors contain no attractant and rely on the fact that bedbugs like to reside in cracks and crevices close to their host. The monitors are designed to provide an early indication of infestation, or to be used as a monitoring device after treatment.

Each of these monitors contains layers of cardboard like material reminiscent of corrugated cardboard – these provide the potential harbourage. The paler coloured outer-case means 'blood spots' can easily be seen.

The BB Alert Passive incorporates a white band around the exterior, which clearly shows any bedbug faecal staining when the insects are present.

- A Barretine passive monitor – available from Barretine Environmental Health.
- B BB Alert Passive – available from Brandenburg, Barretine Environmental Health, SX Environmental and Industrial Pesticides
- C Killgerm Bed Bug monitor – available from Killgerm



### Caster and screw-in barriers

These two simple devices were developed in Australia. The castor barrier attaches to the bottom of the bed legs, whereas the screw-in barrier is fitted between the bed leg and the bed. The idea is that both create an impassable glue barrier.

- 5 Bed Bug Barrier is available from Barretine Environmental Health and SX Environmental Supplies

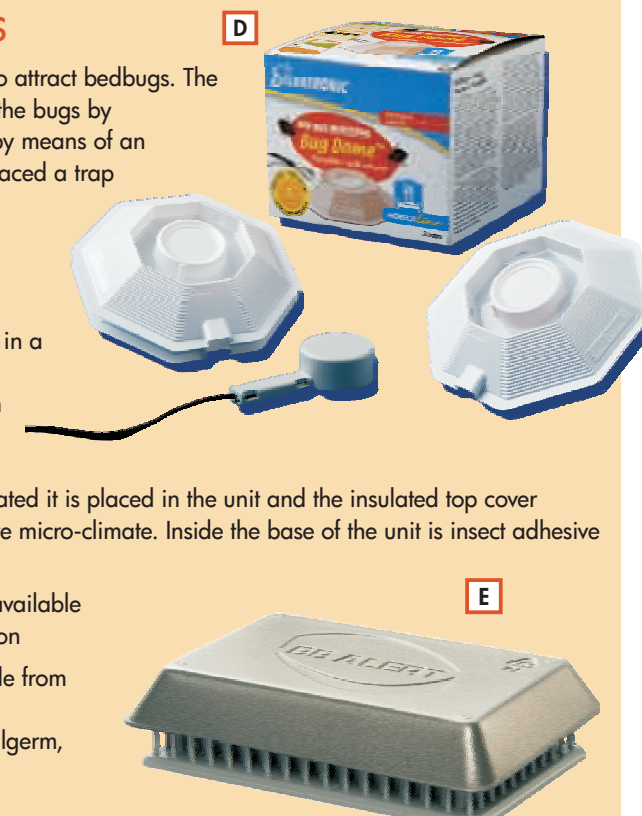


### Active monitors

These monitors are designed to attract bedbugs. The Silvatronic Bug Dome attracts the bugs by mimicking human body heat by means of an electric heater over which is placed a trap dome. This contains a special adhesive that prevents bugs escaping once trapped.

The BB Alert Active uses a replaceable activator supplied in a sealed package which, after opening, simulates the warmth and respiration that bedbugs use as indicators to find their hosts. Once the sachet is activated it is placed in the unit and the insulated top cover closed, so creating an attractive micro-climate. Inside the base of the unit is insect adhesive that traps the bedbugs.

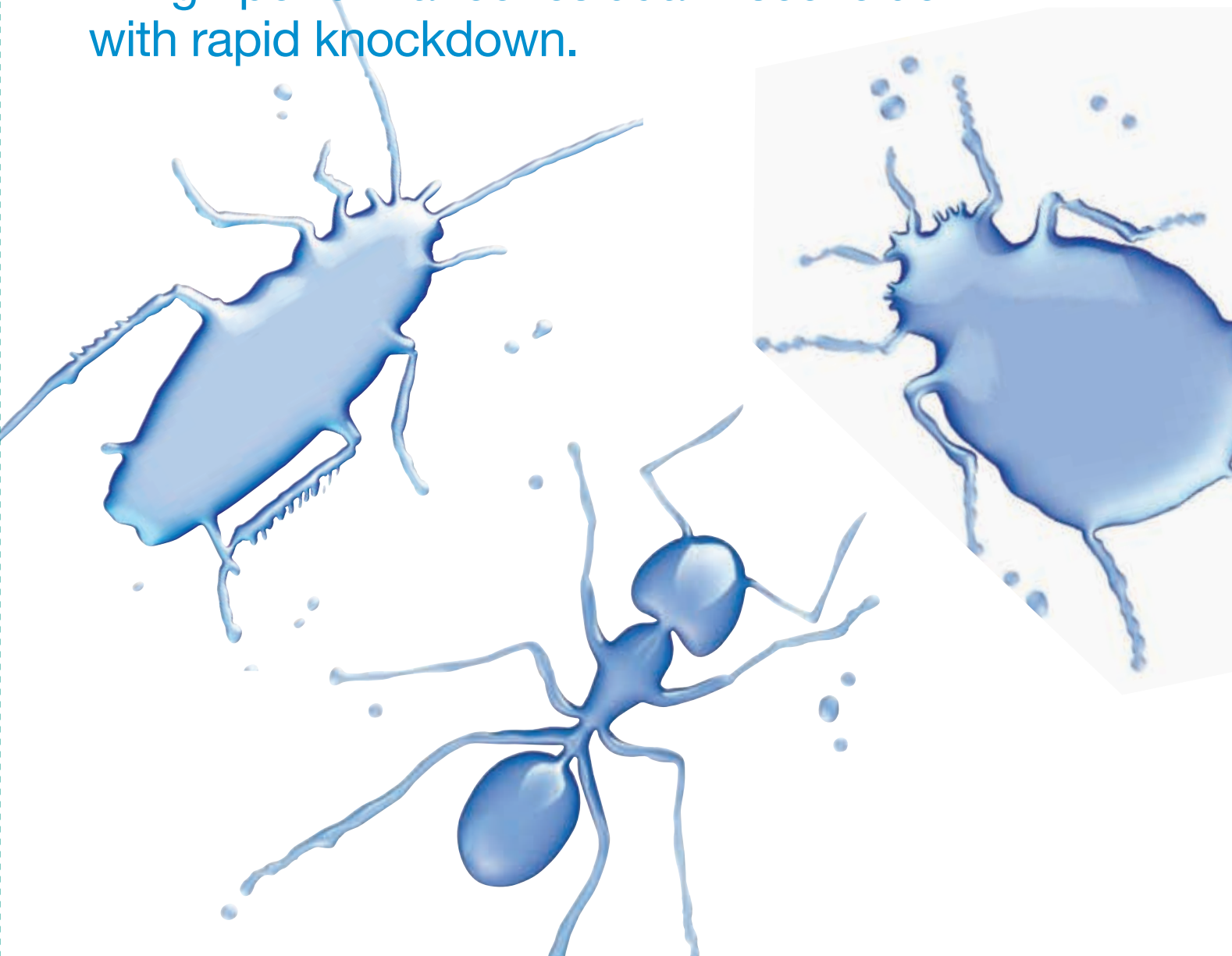
- D Silvatronic Bug Dome – available from Killgerm and Paragon
- E BB Alert Active – available from Brandenburg, Barretine Environmental Health, Killgerm, SX Environmental and Industrial Pesticides





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**BEDBUGS**  
Using monitors well



## Monitors monitor: Pest controllers control

We have moved from a time when there were no bedbug monitors to be had and professional pest controllers were crying-out for just one, to today where there are several to choose from. The debate has now switched to how they can be profitably integrated into the bedbug servicing function. Mathew Kaye, managing director of Midmos Solutions Ltd, the developer and manufacturer of the BB Alert range of products, explores some of these, at times, controversial issues.



Mathew Kaye managing director of Midmos Solutions

The 'war' of the bedbug monitor is currently being fought on the streets of Britain – or so you might think from the level of debate between the advocates of using monitoring units and those sticking to traditional pest control methods in fighting the spread of bedbugs.

Perhaps it is time to declare a truce and consider if the two might profitably exist side-by-side?

The growing reliability of bedbug monitors does provide a means of remote, round-the-clock, labour-minimal monitoring of multiple rooms and locations. Monitors provide early stage detection of the pest, with some attraction monitors having a significantly

higher catch-rate of nymphs over adults. It therefore follows that when used properly, every monitor unit in place in a client's premises is operating as an additional pair of eyes in the search for an embryonic bedbug problem.

The key is 'used properly'. However sophisticated monitor systems become, they will not replace the trained and experienced pest control technician in isolating and dealing with a bedbug problem. Monitors monitor – they do not inspect, they do not think, they do not eradicate.

Monitors are an excellent early stage warning of activity. They let the professional pest controller proactively treat the site of the

problem earlier and more easily. They can make a contribution to population reduction during treatment. They can also be a useful indicator of treatment progress and a proof of success. Most of all, they can change the emphasis of the service from reactive to proactive. To the client, reactive may mean customer complaints, money, publicity and loss of reputation – being proactive can prevent this.

### A question of cost

'How many monitors can I buy for a £?' is really not the question to ask. The real question is 'how much are the increasingly dire costs of undetected bedbug infestations?' Pest controllers are right to charge a fair and realistic price because here, to cheapen the product, cheapens the service and that way lies another war, this time on price. Surely, based on a BB Alert Active unit, the cost to the client of between 5p and 7p per day taken over a year's usage is not too much to ask?

Added value of monitor usage comes with 'properly using' them. Integrated into the pest controller's armoury, they establish a significant role in the partnership with the client. Together, a schedule for monitor locations is established, proper training is put in place for first level inspection, along with a chain of notification, a recording system for checks and suspect locations and immediate treatment when required.

To conclude. The pest controller's role in this partnership may have changed, but it has in no way diminished. The end result is a service agreement with a deeply involved client and a controlling role over a proactive system using monitor units as the front-line of an integrated solution.



Bedbugs can cost clients money and reputation. Monitoring provides a valuable solution

Above: Identifying a monitor unit

Left: Positioning for effective and discreet monitoring

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pest 17



# Finding bedbugs

## Are dogs better than people?

The use of specially trained dogs to detect bedbugs is not an entirely new phenomenon, having successfully been used in the USA for several of years. However, hearing about them is one thing – seeing them at work is quite another. **Pest** editor, Frances McKim, was lucky recently to be invited to watch two canine experts as they hunted their quarry.

Having previously written about the introduction of bedbug detection dogs to the UK as well as being at several talks on their use at PestWorld 2009, I was pleased to accept the invitation to see these dogs at work for myself. The invite came from Adam Juson, a partner in Merlin Environmental, to join him for a routine inspection at one of the large international hotels in central London. To spare their blushes, the hotel has to remain nameless – suffice to say most readers will have heard of it, if not, as I have, actually stayed there myself.

The deal was – to facilitate our arrival, the hotel had closed-off an entire floor of approximately 100 rooms for the morning so that guests did not bump into a 'man with a dog' and a photographer wandering around. The hotel had had problems with bedbugs in the guest bedrooms for several years, particularly on the floor due to be investigated, but now felt they were getting on-top of the problem. Adam's task was to



Ready to make a start

screen all the bedrooms for any presence of bedbugs. This was in fact a routine job as Adam is a regular visitor to this hotel since his company is contracted to check all the rooms on a three-monthly cycle. For those interested in the financial side, the hotel is charged £3.50 per room for this quarterly inspection service

Any pest controller who has had to check just one bedroom for bedbugs will know that to undertake this thoroughly can take anything up to 30 minutes per room. So with approaching 100 rooms to do, you don't need to be a mathematical wizard to work out how long it would take to complete this task. And with what degree of accuracy and at what cost to the client? This is where the detection dogs enter the equation.

### Can they really detect bedbugs?

Despite all the experts I had previously met and the statistics produced by the entomologists at the University of Florida who have done much of the scientific work proving that well-trained dogs can detect a single live bug or egg with 96 percent accuracy, I was still somewhat sceptical.

So – I arrived at the hotel and rang Adam. He broke-off from his screening and came down to collect me. So far not a dog in sight. Back on the floor under investigation we went into one of the bedrooms and there, waiting to greet us, was Charlie. Or to use his posh name – Charlie Brown. Charlie is a three-year-old chocolate labrador. Sleek and with his coat gleaming, he is the sort of dog you would be more than proud to own. Yet he is no 'couch potato'. With a scent

detection pedigree going back several generations, Charlie is a working dog. In fact, all his siblings have made the grade and are now on active service working with their noses, or as some describe them, working as 'noses with a dog attached'.

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Having been introduced to Charlie I was, naturally, checked out by him for friendliness. Luckily I passed. However, this was not surprising – working dogs they might be but they live as part of Adam's household, not outside in a run as is often the case. Adam explained: "In their day-to-day tasks our dogs regularly meet a large number of unfamiliar people so they do need to be 'people friendly', plus they work in smart locations so they must never be dirty or smell doggie." Looking smart and smelling sweet adds to the tasks those caring for these dogs have to allow for – as routine baths and copious amounts of grooming to ensure no tell-tale dog hairs are left behind is all part of the daily routine.

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Detector dogs work in pairs – one working and one resting in shifts of anything from 30 minutes to an hour. So it was time for Charlie's rest and his place was taken by Basil. Now he is a different character. If Basil was a human you would describe him as a bouncy, chatty person always ready for a bit of a laugh. Charlie is much more studious and rather serious. Another labrador, Basil is officially described as fox-red, so his posh name of Basil Brush is more than appropriate.

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In a matter of hours Adam and his dogs had screened an entire floor. If a person had done this, would they have detected the bedbugs? Maybe – but more likely not, as the infestations were only minor. Whatever, it would have taken considerably longer. Or, more likely, the hotel would have waited until the infestation was far greater and a sighting reported either from positive results using monitors, or by the housekeeping staff, or worse still by guests who had been bitten. So – was I impressed? One short and quick answer – yes.

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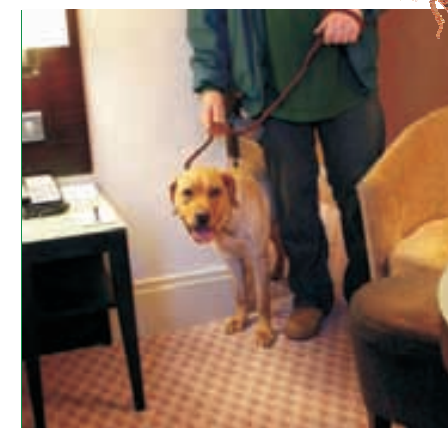
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Evidence. Found, one bedbug



Nice room but are there any bedbugs?



Let's check under the beds



There must be one here somewhere



Who's a clever boy then!



Ready for home



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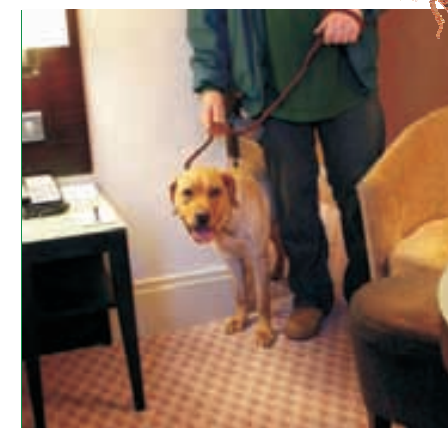
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Ready for home



# Chemical controls

The treatment of bedbug infestations by spraying an approved insecticide is the traditional means of control. The aim of this section is to provide readers with a list of those products which do just this.

The main active substances approved for use for the treatment of bedbugs are shown in the table. Regrettably it has not been possible to list the individual product names. This would be a relatively easy task for some actives where there are only a few brands but for others the list of approved products can be enormous. If you are interested in a specific active substance, but are not sure which product to use, then either contact your pest control distributor, or check the list of registered products on the Health & Safety Executive website.

Remember too that recent work has shown that there can be resistance to pyrethroid and carbamate insecticides. Nonetheless, the feedback from practical usage is that with careful and thorough insecticide application, especially of cracks, crevices and harbourage areas, together with combinations or sequences of insecticides

from different classes and two or more treatments, then eradication can still be achieved

When treating for bedbugs, one fact which is frequently overlooked is that no products are approved for use for the treatment of bed linen. Indeed, only a limited number of products are approved for the treatment of the mattress. It is vital you read the label before using any insecticide to check on the correct uses.

## The forgotten product?

Often overlooked, diatomaceous earth is a non-toxic, inert powder effective at controlling a wide range of crawling insects, including bedbugs. It consists of the fossilised shells of ancient aquatic algae (diatoms) and is odourless and non-staining. It kills the bedbugs by dehydration. In fact, it absorbs the oils and waxes from the insects cuticle causing it to lose water and die.

## UK insecticide active substances for bedbug control

Insecticide class	Active substance
Carbamate	Bendiocarb
Pyrethroid	Pyrethrins Tetramethrin (in mixtures) d-Phenothrin Permethrin (alone & in mixtures) Alphacypermethrin (alone & in mixtures) Deltamethrin Lambda-cyhalothrin
Insect growth regulator (IGR)	Flufenoxuron in mixture Pyriproxifen mixtures

This physical activity means this product is not classified as a pesticide and is therefore ideal to use when pesticide-free treatments are required, or as an accompaniment to hot or cold treatments. It also remains effective against bedbugs resistant to conventional insecticides. It should be thoroughly applied with a puffer into cracks, crevices and voids and then left undisturbed.

It is available as Silico-Sec (Industrial Pesticides), Oa2Ki powder (Barrettine), Dia-Secticide (Paragon and SX Environmental) or Killgerid from Killgerm.

## Bed Bugs — Innovating for the future

It is with great pleasure that Bed Bugs Limited announces the impending publication of UK and international patents which cover the use of passive bed bug monitoring technologies, methods and principles. Already licensed to MidMos Solutions, a division of Brandenburg, they are now available as the BB Alert Passive products.

Bed Bugs Ltd - a history of innovation and education

In 2003 we first noticed patterns and trends starting to emerge in the dynamics of bed bug infestations and in 2005 we started the world's first team of bed bug specialists to tackle infestations and study the factors behind the problem.

In 2008 we started to prepare our intellectual property and began testing novel approaches to early detection. In 2009, with the experience of over 14,000 bed bug cases behind us, we filed process and technology patent applications on these principles, having extensively reviewed the existing granted patents. We also co-authored the first consumer guide to bed bugs since the 1940's.

In 2010 we started delivering a new solution to the hospitality industry and will be following this up with several new and exciting technologies in the coming year.

*"We welcome approaches from any pest control companies seeking to collaborate on methods and technologies to assist us in our goal of developing sustainable solutions to the growing bed bug problem."*

*100% customer satisfaction should be the standard of our industry — not just an aim.  
See you at Pest-Ventures 2010."*



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# Blowing hot and cold

Non-chemical pest control techniques have always been part of the industry, with the COSHH Regulations reinforcing the need to consider such approaches. The recent upsurge in bedbugs has triggered further interest, partly because bedbugs are often associated with bedding or clothing (which can't be treated with pesticides) and, also, because bedbugs can be difficult to control with current pesticides.

## Heat treatment

One approach is treating a whole room and its contents. The problem here is sensitive, and maybe infested, items including vinyl records, aerosols and oil paintings, which have to be removed prior to treatment. The challenge is to ensure the required temperature is reached quickly, and is distributed evenly within the room and any associated voids. Such treatments can be costly, although their comprehensiveness makes them attractive.

Where numbers of items need treating, then use of a large insulated 'bubble' or to quote its technical name – a diathermic treatment capsule is required, operated by such companies as ServiceCare. Into this, items such as mattresses, rugs and even furniture can be loaded. The 'bubble' is then heated (to 58°C for bedbugs) and the humidity controlled until monitoring shows that the required lethal temperature has been reached. Of course bedbugs within the rest of the room need to be addressed separately.



The Cryonite method uses the extreme cooling properties of liquid CO<sub>2</sub> to freeze the bedbugs to death

## Cold treatment

Originally developed for food industry pests, the Cryonite method is growing in popularity for bedbugs. It uses the extreme cooling properties of liquid CO<sub>2</sub> (carbon dioxide) to kill all stages in the life cycle of this pest.

In this system liquid CO<sub>2</sub> is transformed into an exceptionally cold, dry ice snow at around -70°C which freezes the bedbugs.

The CO<sub>2</sub> snow is not poisonous and leaves no wet or gummy residues. The CO<sub>2</sub> snow is a mixture of three different types of particles: small, medium and large sizes. The three together form snow with optimum freezing qualities. As the CO<sub>2</sub> snow is blown out of the applicator's nozzle, the vapours rapidly and easily penetrate bedding, box springs, the undersides of furniture, and cracks and crevices where bedbugs like to hide, freezing them to death. The snow vapour stream is able to penetrate places which other treatments find hard to reach.

## Treatment of infested clothing

Advice on treatment of infested clothing, has always been part of bedbug control. Research published this year shows that the householder has several options. These include machine washing at 60°C, or tumble-drying on a 'hot' setting for 30 minutes minimum, or dry cleaning, or freezing at -18°C. In practice however, it is not always possible to find a technique that suits every domestic item.

Non-chemical techniques offer the advantages of activity against all life stages of the bedbug and also against insecticide resistant strains. Some of the non-chemical techniques provide a relatively rapid means of elimination, as compared with pesticides that may take days, or even longer, to eliminate the problem. The non-toxic nature of these approaches means treated areas can be occupied immediately.



Heat treatment using a diathermic treatment capsule

On the downside, these techniques have no protective effect. If a few bugs escape the treatment, or are subsequently introduced, they may then re-establish with impunity. Another shortcoming is the limited efficacy data on these techniques. Unlike pesticides, which require comprehensive efficacy data for regulatory purposes, these non-chemical techniques can be introduced and recommended without such support.



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# Europe's bedbug challenge continues to grow

The increasing challenge of bedbugs is being felt to almost exactly the same extent by pest control professionals in northern and southern Europe. This fact is revealed in the latest pest control study undertaken by BASF Pest Control Solutions.

The internet-based study was conducted over the past year with more than 110 pest controllers, almost equally divided between the UK and Italy. Bedbug control was identified as an important aspect of their businesses by over three quarters of those involved. In the UK 49% (36% in Italy) rated the pest as very important.

The vast majority (89%) report increasing calls for bedbug treatment in recent years, with hotels and residential homes unsurprisingly being by far the greatest current sources of business.

At the same time, over 80% of pest controllers in both the UK and Italy are finding bedbugs more challenging to deal with these days, the majority significantly so. More restricted insecticide choice is identified as the greatest particular current control challenge. Also mentioned by more than a third of controllers are more frequent infestations and more extended treatment periods (Figure 1).

Our study underlines the growing challenge presented by bedbugs across Europe," comments study co-ordinator, James Whittaker of BASF Pest Control Solutions.

While differences of detail were apparent between UK pest controllers and their Italian counterparts, they were remarkably consistent in their views. Northern and southern Europe clearly share almost exactly the same problems with this particular insect pest.

"This isn't surprising given greater international travel, increased pressure on houses in multiple occupation, increasingly disadvantaged communities and decreased use of residual insecticides in cockroach control, amongst other factors, in both countries. And, of course, to cap it all the industry has recently lost one of its most widely used weapons in the war against bedbugs – chlorpyrifos – under the EU Biocidal Products Directive."



The study shows alpha-cypermethrin (Fendona), lambda-cyhalothrin (Demand) and bendiocarb (Ficam) are the three most widely used insecticide actives in current bedbug control use. Probably more as a result of relative product availability than anything else, lambda-cyhalothrin and bendiocarb are the most popular choices in the UK while alpha cypermethrin is notably more evident in Italian use.

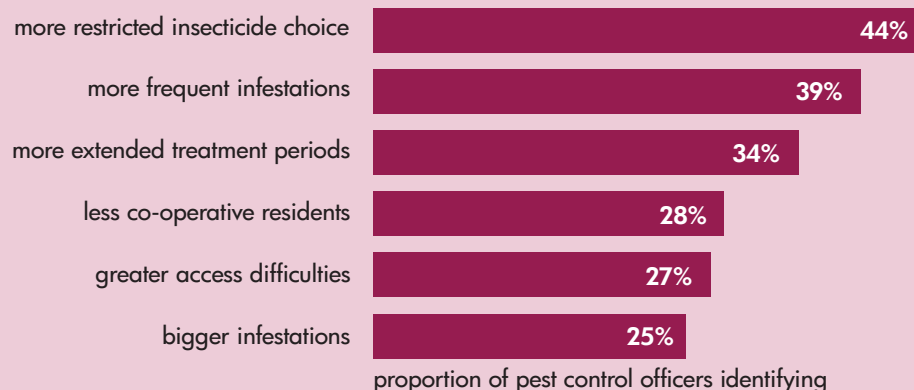
Since the withdrawal of chlorpyrifos, the proportion of pest controllers using lambda-cyhalothrin and alpha-cypermethrin has increased sharply in both countries while bendiocarb usage has only risen marginally in Italy and actually declined in the UK.

"Synthetic pyrethroids clearly dominate today's bedbug arsenal," Mr Whittaker acknowledges. "However, the variety of pyrethroid formulations available provides a wide range of knockdown and residual activity performances.

"As a relatively new pyrethroid up to 200 times more active than some synthetic pyrethroids, lambda-cyhalothrin is a leading chemical for bedbug control; especially so in its long-lasting, microencapsulated Demand form. Equally, alpha-cypermethrin in the form of Fendona provides excellent knockdown and residuality, the high quality SC formulation ensuring excellent availability of the insecticide deposit on the treated surface.

"Also, with the limited number of insecticide classes available, products like Tenopa can be an important component of a bedbug control treatment and it has gained particular popularity amongst Italian controllers in recent years. Combining alpha-cypermethrin with the potent insect growth regular, flufenoxuron, it gives two distinct modes of action within a single product."

Figure 1: Current bedbug control challenges



Source: BASF Pest Control Solutions European bedbug study 2008/09

"Thankfully, insecticide resistance doesn't appear to be a widespread problem for most pest controllers. 70% of UK and 52% of Italian professionals rarely, if ever, coming across it in practice," he notes. "The fact that 15% say they often encounter bedbug resistance in Italy against just 2% in the UK may have more to do with differences in control practice than with actual resistance."

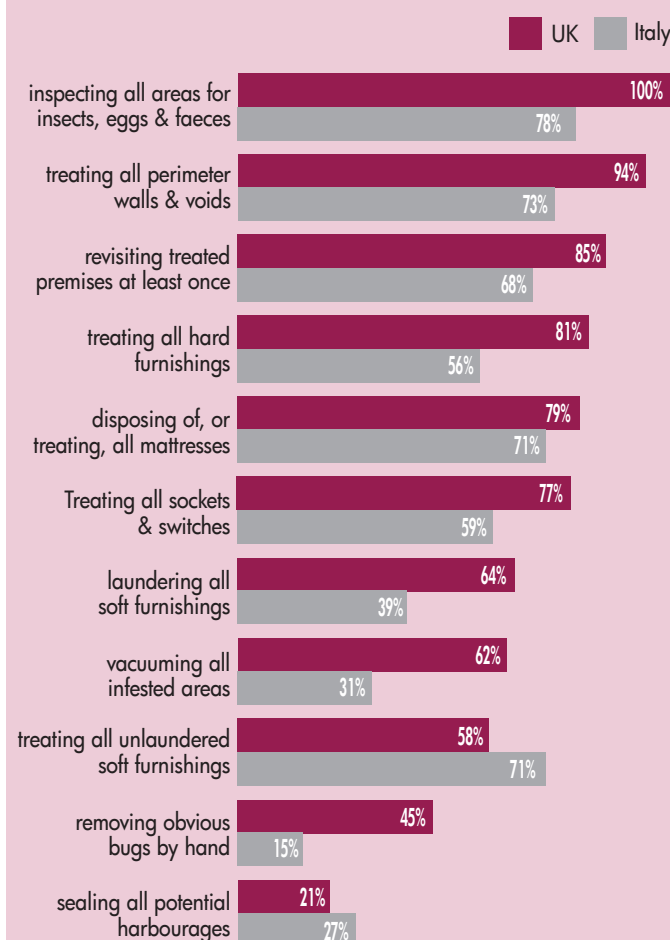
While it is encouraging to see the thoroughness with which most professional pest controllers in both countries are tackling bedbugs these days, the BASF study highlights greater proportions of UK operators employing the key elements of best control practice in almost every respect.

Particular differences are evident in the comprehensiveness of inspection and primary insecticide treatment as well as their commitment to follow-up visits (Figure 2).

"Despite the major pressures on pest controllers' time these days, first class treatment practice is essential for good bed bug control," James Whittaker stresses. "Because they live in a wide range of hard and soft furnishings as well as wall and skirting cracks and crevices and can survive up to 18 months without food, this has to include good preparation, treatment and follow-up.

"Even with the UK, our study highlights considerable room for improvement in bedbug control practice," concludes James. To help professionals improve their expertise, and in a cost-effective manner, BASF is producing an interactive video treatment guide for professionals, due for release this summer.

Figure 2: Current bedbug control practices



Source: BASF Pest Control Solutions European bedbug study 2008/09



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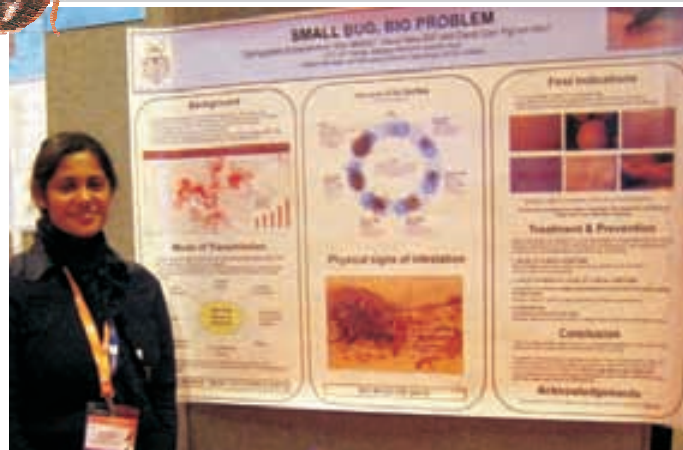
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*Damyanthi Kuhanendran seeking to raise GP's awareness of bedbugs and the symptoms they cause*

## ...among the medical profession

The current resurgence of bedbug problems is well established in the pest control industry – but this is generally not the case in the medical profession. Patients who have been bitten by bedbugs consult their doctors about their mysterious bites, but do doctors even consider the possibility of bedbugs? Most likely not.

Damyanthi (Damy) Kuhanendran, who is currently on the GP vocational training scheme in Medway, Kent, had a personal cause to raise her interest in bedbugs. Having let her four bedroom house in Tooting, London to medical students it became infested with this

# Spreading the word

pest. Only then did Damy realise the scale of the problem.

Recognising this lack of knowledge, Damy wanted to raise GP's awareness – to get them to consider bedbugs as a possible cause of their patient's mystery bites.

As a result, Damy prepared a poster display which she presented at the 3rd Annual National Primary Care Conference organised by the Royal College of General Practitioners (RCGP) held late last year at the Scottish Exhibition and Conference Centre in Glasgow. This was attended by GPs, GP trainees, practice managers, practice nurses, physician assistants and medical students.

In conversation with the many doctors and health professionals she spoke to, most were totally surprised that bedbugs were on the increase. Most thought they only infested the bed. Few had ever seen one.

Damy summed-up her experience by saying: "Doctors need to realise that bedbugs are back and to consider them as the cause when patients present with itching and bites. From these it is impossible to say if bedbugs are the cause, so the patient needs to check for visible evidence in their home and workplace."

## ...with the hotel industry

Many in the hotel industry are equally blissfully unaware of the current bedbug resurgence – that is until their premises becomes infested.

In an attempt to take the message to this industry, Bed Bugs Ltd exhibited at the recent Hotelympia event held at the start of March at ExCeL in London. The exhibition attracted managers ranging from small single-site locations to the more significant UK chains.

The exhibition was a great opportunity to discuss what these managers were looking for from their pest control servicing companies. Managing director, David Cain, summarised his feelings saying: "One of the biggest take-home messages for us was that the hospitality industry is looking for integrated solutions that address their business pressures, rather than servicing companies who want to rush in and spray the rooms as quickly as possible."



*Shock, horror – bedbugs are back! David Cain, centre, took the message to the hospitality event, Hotelympia, in March*

# Heidi flies the flag



Heidi is two year-old English beagle trained to sniff-out bedbugs – just like the dogs employed by Merlin Environmental (see pages 18 and 19). But to undertake her work at the security-conscious University of Pennsylvania, she has to have her own contractor's identification card!

Not only this, Heidi has also been flying the public relations flag. She recently starred on regional TV when she accompanied her owner, Martin Overline, to visit the state Capitol to raise awareness about bedbugs nationwide. This was all part of Legislation Day, organised by the National Pest Management Association (NPMA). One of the causes NPMA is campaigning on is a desire for legislation to define who is responsible for eradicating bedbugs in a rental property – landlords or tenants.

Heidi's owner Martin Overline is also founder and president of Aardvark Pest Management from Philadelphia, USA. Martin's firm offers a full-range of pest control activities and is a strong believer in an integrated approach to pest management using practical, pesticide free solutions to pest problems whenever possible.

Not only does Heidi sniff-out any bedbugs at the University of Pennsylvania alongside her handler, Martin, she also searches hotels, college dormitories, domestic houses, cinemas and public transport.



*Heidi with her owner Martin Overline, founder of Aardvark Pest Management*

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## Take the Pest Test

BASIS has made two PROMPT CPD points available if you can demonstrate that you have improved your knowledge, understanding and technical know-how by passing the **Pest Test** and answering all our questions correctly. So read through our 16 page special on bedbugs and then complete the questions below.

Try to answer them all in one sitting and without referring back to the articles. **Take care as some questions may have more than one correct answer so tick all the answers you believe are correct.** **SEND COMPLETED QUESTIONS** to: **Pest Magazine**, Foxhill, Stanford on Soar, Loughborough, Leicestershire LE12 5PZ. We will contact you with your result and if all your answers are correct we will send your details to BASIS who will credit the CPD points to you.

<b>1</b> Why are physical techniques useful for controlling bedbugs? a) They are active against all strains <input type="checkbox"/> b) They are much cheaper <input type="checkbox"/> c) They provide lasting protection after treatment <input type="checkbox"/> d) They cannot damage the contents of the room <input type="checkbox"/>	<b>4</b> What should you do if you suspect chemical resistance? a) Create your own mixtures of insecticides <input type="checkbox"/> b) Ask the customer to throw away the bedroom contents <input type="checkbox"/> c) Use a sequence of treatments from different insecticide classes <input type="checkbox"/> d) Stop using all insecticides <input type="checkbox"/>
<b>2</b> What are the benefits of using bedbug monitors? a) Help reduce bedbug numbers <input type="checkbox"/> b) Let you know if bedbugs are present <input type="checkbox"/> c) None, but they do help you charge more <input type="checkbox"/> d) Help prevent bedbugs re-invading treated premises <input type="checkbox"/>	<b>5</b> In what circumstances are detector dogs most useful? a) When you have many rooms to survey at one site <input type="checkbox"/> b) When your customer likes dogs <input type="checkbox"/> c) To compensate for an inexperienced technician <input type="checkbox"/> d) When you are concerned about abusive tenants <input type="checkbox"/>
<b>3</b> Which pesticides are approved for the treatment of bed linen? a) Alphacypermethrin <input type="checkbox"/> b) Bendiocarb <input type="checkbox"/> c) There are no approved products <input type="checkbox"/> d) Lambda-cyhalothrin <input type="checkbox"/>	<b>6</b> Why are bedbugs an increasing problem? a) Climate change <input type="checkbox"/> b) Increased resistance to some insecticides <input type="checkbox"/> c) Better insulated homes <input type="checkbox"/> d) The withdrawal of pesticides such as DDT <input type="checkbox"/>

Name:	Tel:	PROMPT registration number:
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## UKPCO elects new chairman

Adam Juson from Merlin Environmental was elected chairman of the UK Pest Controllers Organisation (UKPCO) at its Annual General Meeting on 20 February in Lutterworth, Leicestershire.

The AGM saw a lively, and at some points heated, debate on industry matters and the path forward for the UKPCO. Significant changes were discussed, including modifications to the legal status and aims of the group, as it repositions itself as a body of professional independent pest controllers.

Amongst other things, the UKPCO aims to encourage members to help each other. Many at the AGM were keen to express thanks for this support, which, they said, had included help with holiday cover, assistance on larger contracts and general technical advice. It shows the strong spirit of co-operation and mutual development in the organisation.



New chairman for the UKPCO group is Adam Juson, centre

## More members for NPTA

Membership of the National Pest Technicians Association (NPTA) has passed the 800 mark. The figures were announced at NPTA's Annual General Meeting at the NPTA offices in Kinoulton on 17 February. In his report for the year to 31 March 2009, chairman Peter Crowden also highlighted that the number of accredited members had tripled. Accreditation is the highest level of membership involving passing a detailed audit of premises, stores, equipment, vehicles, paperwork, training and working practices. "To see membership continue to grow in times of recession was extremely pleasing," he said. The Association's finances continue to be well managed with another small profit recorded.



## BPCA announce meeting date

The British Pest Control Association (BPCA) is also getting in on the AGM act. It has announced the date for its 2010 meeting as 18 May. The meeting will be held at the BPCA Offices in Derby and begins at 10.30. All members are welcome.



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# Germany's busy flagship event



Crispy fried locust - delicious!

Organised by the German pest control association, DSV, (Deutscher Schädlingbekämpfer Verband), Eurocido is held every two years in its established location of the Westfalenhalle in Dortmund, Germany.

The event this year was held on 18 and 19 February and attracted over 60 exhibitors and nearly 2,000 visitors, as claimed by the organisers, despite the €25 on the door entry fee – we are certainly spoilt in the UK with all our free-of-charge events.



Jan Klaus Beckmann from the German magazine, DpS, with the new overalls



Dr Mark Benecke signs his latest book

Naturally, the majority of visitors are German pest controllers with all the leading German pest control manufacturers and distributors present. However, the popularity of this event with international visitors and manufacturers has risen, especially those from Europe. The furthest to travel without doubt was Yongxin who had come all the way from China, but the largest contingent of overseas exhibitors came from the UK and included Agrisense, Bell, HQ Products, International Pest Control, P+L Systems, Network, PestWest, Russell IPM and SX Environmental.

Eurocido has its own distinctive German feel. With exhibitors dressed in full Bavarian lederhosen you could only be in Germany! And then there was Olga helping to entertain the guests at the very generous exhibitors' reception. Here the organisers laid-on an excellent reception with beer and food in abundance, to say thank you to the exhibitors and to provide an ideal networking opportunity.

What also caught your attention was a stand cooking-up insects for consumption by the visitors. Meal worms and locusts may not have been on your lunch menu, but

delegates seemed keen to have a try – to such an extent, supplies of raw materials began to run low. The local TV station from WDR TV Studio Dortmund was there filming and they found the cooked insects irresistible.

A new introduction this year was the *Pest Control News* night. Similar in concept to the PCN dinner held after PestTech, this was a jolly affair and attracted over 270 guests. The entertainment not only included a comic, but also a Strictly Come Dancing display from the German champions (who had recently been fifth in the World Championships) plus live music and dancing provided by the Remember band. There were a few sore heads the following day!

A series of seminars ran alongside the event with simultaneous translation for English-speaking visitors – an interesting experience! The star of the presentations was Dr Mark Benecke who spoke about the forensic link between flies and dead bodies. Viewed in Germany as something of a pop star it was standing room only for this one. And after his presentation, there was a good queue requesting autographed copies of his latest book.

## Event highlights

For those in the industry who attend these events all over the world, they do start to look somewhat similar. But look carefully and the differences are there to see.

For example, go to an American, Australian or UK event and you can't help but be aware of the bedbug problem with a wide variety of products and devices on display. At Eurocido you had to search hard to find any mention of bedbugs at all. Much more evident were the number of stands promoting organic or green pest control by using the likes of pheromones and the release of beneficial insects such as *Trichogramma* parasitising wasps. Also, products marketed to appeal to a green audience, such as the water-based Chrysamed insecticide based on permethrin.

There were several products spotted which surely will be appearing soon on the UK market. One was what looked like a litter bin. The idea of incorporating a rodent bait box in the bottom of such bins is now well established, but this takes the idea a step further by including a wasp catching device at the top. Once attracted, the wasps are caught in a clear plastic box, so easy to check if full, and when it is, the box is simply removed unopened and replaced with a new one.

Another was a neat little plastic container for gel baits. Called a bait canteen, gel is simply injected into the top of the canteen and foraging cockroaches or ants access it via entry holes which can be made wider or narrower, by simply turning the canteen.

BASF unveiled three new products which, registration requirements permitting, are sure to hit the UK market. These included an insecticide for bedbug control called Mythic. Based on chlorfenapyr it claims to be effective against resistant bedbugs when mixed with Fendona or Demand. Introduced



Above:  
The TV film crew was fascinated by the freshly cooked bugs

Right:  
Olga tempts the visitors  
Below:  
Traditional Bavarian dress



for ants was Fourmidor, based on fipronil, which is likely to give Maxforce Quantum a run for its money. Also new to Germany was Storm Pasta.

In a completely different vein, a range of overalls specifically designed for pest controllers was on display. Developed by clothing manufacturer, Christoph & Oschmann, and promoted via the leading German pest control magazine, DpS, they are made of water-repellent material, with padded knees and extra pockets to accommodate torches and other small items of equipment.

All in all, Eurocido lived up to, or surpassed expectations. The tenth one will be held on a similar date, at the same venue in two years time and will certainly be worth a visit.



🇬🇧 Brits abroad! 🇬🇧



Paul Sidebottom and Diana Al-Zaidi flying the flag for Russell IPM

🇬🇧 Brits abroad! 🇬🇧



First time exhibitors. Howard White of Rat Pak with German colleague, Helen Gies

🇬🇧 Brits abroad! 🇬🇧



Belles of the ball - Sabra Fearon and Amanda Comish of Killgerm at the dinner

🇬🇧 Brits abroad! 🇬🇧



The Insect-O-Cutor team. Tom Holmes, Claire Larcombe and Steve Jackson

🇬🇧 Brits abroad! 🇬🇧



James Mendoza and Trevor Green of SX Environmental with Killgerm's Paul Hoyes

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Alchochem's Ronald van Lierop with Phil Huggins and David Bowerman from Bower



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As announced in the last issue, **Pest** is to make an annual award for the most innovative new product launched into the UK professional pest control market and **Pest** readers are in the driving seat.

We have already received a good number of nominations but there's still plenty of time to get your favourites onto our shortlist. All you have to do is fill in the form below and send it in. You have until 31 August to make your nominations. After that a shortlist will be drawn up which will then be put to a readers' vote.

Remember too that in this, the first year, we are extending the qualifying period so for the 2010 award, any product launched between 1 April 2009 and 31 August 2010 is eligible. This means all products launched at PestEx can be considered.

We are looking to recognise product innovation, so go on, nominate the product, or products, that you feel have made the greatest improvement to your life and/or working practices.

## Nomination form

I would like to nominate:

1

2

3

4

5

Name:

Organisation:

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## Easy does it with Bayer

A new innovative dispensing device called 'Ezi Dose' has been introduced by Bayer Environmental Science for their deltamethrin-based K-Othrine WG (wetable granule) product.

It is designed to give added flexibility when applying K-Othrine so allowing pest controllers the opportunity to mix the exact amount they are going to use – ranging from 0.5 l to 5l. Just one press of the Ezi Dose trigger measures 0.5g of concentrated product, enough for one litre of solution – the spray volume needed for a routine infestation. Many pest controllers have been using K-Othrine SC 10 (formerly called Crackdown) for years. The WG formulation is a suspension concentrate (SC) dried into a granule. The WG formulation reduces operator exposure, and if spilt can be cleaned up quickly and easily, yet it still dissolves within a minute.

[www.pestcontrol-expert.com](http://www.pestcontrol-expert.com)



## Don't get bitten

Whilst mosquito control may seem a long way off, start planning now for the summer weather when mosquitoes will once again be an issue. The Biogents Eisenhans system from Killgerm has been especially designed to be used in public areas creating an effective perimeter treatment for catching mosquitoes.

The system incorporates multiple numbers of fully waterproof traps that can either be placed on the ground or hung, so ensuring they are placed where they are most needed. Efficacy is assured, claims Killgerm, by means of a CO<sub>2</sub> control box. This mimics human respiration, releasing CO<sub>2</sub> in pulses at targeted times which proves irresistible to the mosquitoes.

[www.killgerm.com](http://www.killgerm.com)



## Ratimor range introduced

The Ratimor range of rodenticides, based on bromadiolone, is now available from Industrial Pesticides. The bait composition and the added attractants increase attractiveness to such an extent that rodents prefer to consume these baits rather than their natural food, claim the manufacturers, Unichem.

The range consists of Ratimor fresh bait (pasta bait) offering effective and fast rodent control, both indoors and out. Oily scented compounds cause the bait to remain moist, tasty and palatable for longer. Ratimor wax blocks are designed for use in and around buildings and sewers. The formulation gives high resistance to mould and extreme weather conditions.

Finally, Ratimor grain bait rodenticide is designed for mouse and rat control both indoor and outdoor use.



[www.industrialpesticides.co.uk](http://www.industrialpesticides.co.uk)

## Feeding station for use with gels

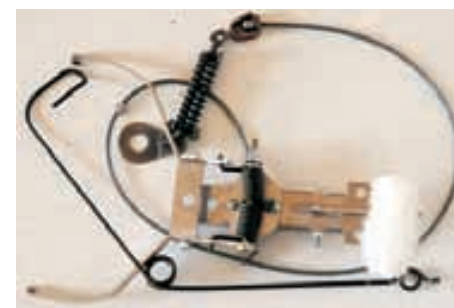
This neat little device – as seen at Eurocido (see page 29) – has, as predicted, made its way to the UK care of Industrial Pesticides. It has been developed to provide a unique, time-saving answer to indoor baiting using insecticide gels applied via a bait gun. There is no need to open the canteen to bait, the operator simply injects the gel through the hole in the top and then sticks it into place with the pre-fixed sticky pad. The canteen is transparent for easy monitoring, whilst the insect entry holes can be made larger or smaller to accommodate either cockroaches or ants, by a simple twist of the unit.



[www.industrialpesticides.co.uk](http://www.industrialpesticides.co.uk)

## Light and compact to catch a fox

Designed to capture canines, including the red fox, is the Collarum. It captures its intended target by throwing a cable loop over its head and around its neck. It is not a snare. The end of the capture loop is anchored in the ground and the animal is held like a dog on a chain. Magnum says, the trap is canine-specific because of the trigger mechanism, which requires a pull action rather than the push/depress mechanism usually employed by traps.



This trap is safer to utilize in areas where people and pets may come in contact with it. An unknowing person springing the Collarum is at little risk. Animals other than canines are very unlikely to be caught and should a dog be caught it can be released with no harm done. Unlike fox cage-traps which are large, bulky and difficult to conceal, the Collarum is light, compact and easy to hide.

[www.magnumtrap.com](http://www.magnumtrap.com)

## All covered up

Encasement products for mattresses, box-springs and pillows to protect against bedbugs are certainly all the rage. Two new makes have just been introduced.

The **Secure Sleep** range is the first of these from BB Alert manufacturers, Brandenburg, offering full-cover protection and they claim to be impenetrable to bedbugs. Made from a woven tear-proof micro-polyester and featuring a patented, triple safeguard zip design, the covers give all-in-one protection against not only bedbugs but also dust mites, fluids and allergy triggers. They come with a lifetime product warranty. Additional to the range, but still using the same materials, are the Secure Travel products catering for the threats of international travel with luggage liners, laundry bags and travel pillows.

Keep safe with **Mattress Safe** from both Paragon and SX Environmental Supplies. Once again this range offers similar features to the Secure Sleep range. Made from Softcover fabric that is soft to the touch whilst contouring to the style of the mattress and not compromising the comfort of the pillow.



[www.bedbugsalert.com](http://www.bedbugsalert.com)

[www.riwa.co.uk](http://www.riwa.co.uk)

[www.sxenvironmental.co.uk](http://www.sxenvironmental.co.uk)

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## Free chart for football fans

Follow England's progress in the FIFA World Cup football competition that kicks-off in South Africa on 11 June with this poster from Bayer Environmental Science.

All the Group games are detailed – which countries are playing, where and when. You can fill in the scores as the matches are played, then forward the teams to the next rounds and eventually the final.

Request your free chart by either emailing your full postal details to pestcontrolexpert@bayercropscience.com or fax 01223 226635.

## Reducing customer complaints in stored products

The title of this book says it all. Written by well-known international entomologist David Mueller, it draws together his knowledge acquired from a career working with stored products and creating modern pest management programmes.

The introduction to the book states: "Pest management is not about a 'product'. It is about a path of continuous quality improvement to solve pest problems." Pests are symptoms of a condition. They are indicators of specific environmental conditions which must be managed. Control can be achieved by changing the environmental conditions or applying a chemical. Knowing the pest is half the battle in controlling it.

The book's 335 pages, the majority in full colour, set-out to detail how control can be achieved. The presentation is

easy to follow and includes dozens of illustrations and photographs. What makes it particularly helpful are the numerous practical case studies, highlighted checklists and tips which could only have been prepared by someone who has worked 'at the coal face'.

Copies at [www.insectslimited.com](http://www.insectslimited.com)



**Pest verdict:** Ideal for anyone working in pest management in the food industry, warehousing, or retail facilities.

## New distributor catalogue time

Without exception, full product range catalogues are now available from the UK distributors. Despite all their products being detailed on their websites, annual printed catalogues still remain to the fore.



Company	Email	Telephone
Barrettine	beh@barrettine.co.uk	0117 967 2222
Industrial Pesticides	sales@industrialpesticides.co.uk	0151 933 7292
Killgerm	sales@killgerm.com	01924 268400
Paragon	info@riwa.co.uk	0161 428 0622
SX Environmental	info@pestcontrolonline.com	01702 544777

## Do you have what it takes to be a BASIS PROMPT professional?

A new national campaign to explain the benefits of BASIS PROMPT, the register for professional pest controllers, has been launched. Put together by an industry-wide group the theme for the campaign is 'Have you achieved the status of a registered BASIS PROMPT professional?'

"One of the key elements is that we will be offering **free** membership for this calendar year to anyone who succeeds in passing the RSPH/BPCA Level 2 in pest control or equivalent," says Rob Simpson managing director of BASIS, the independent standards setting organisation that administers PROMPT. "This will give newly qualified technicians the chance to find out more about the benefits of membership and to discover that collecting the necessary Continuing Professional Development (CPD) points isn't as difficult as they might think."

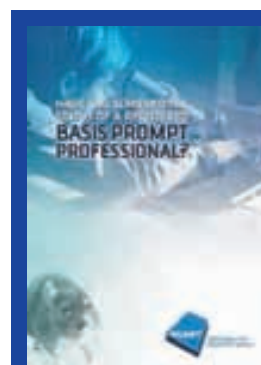
He says that BASIS PROMPT is the best way of proving to customers and potential employers that you are fully qualified and up-to-date with all the latest developments. To join the register pest controllers must hold the Level 2 qualification or equivalent. To stay on the register members must collect 20 CPD points annually to show that they are keeping up-to-date. There are lots of ways of collecting CPD. Reading all six issues of this magazine for example is worth two points a year. Doing a **Pest Test** (see page 26) earns another two points. Then there are points for attending events such as PestTech or PestEx and training seminars. Both independent events and those organised by manufacturers or distributors qualify.

A new booklet is being produced which explains the benefits of BASIS PROMPT and plans are also afoot to promote the benefits of using and employing registered professionals.

"We are extremely pleased to see the industry getting behind PROMPT," adds Rob Simpson. "The register has been running for nine years and whilst we have a loyal band of people who collect their CPD and renew every year there are many in the industry who have yet to benefit."

### Benefits in brief

- Proves your professionalism to customers and employers.
- Helps you and your business stand-out from the crowd.
- Provides a commercial edge when tendering for contracts.
- Raises the professional bar to help keep cowboys out.



To get a copy of the new leaflet contact [jill@basis-reg.com](mailto:jill@basis-reg.com) or call 01335 343945

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REFERENCE  
Diary dates

	DAY	EVENT	VENUE	FIND OUT MORE
APRIL	20-21	Pest-Ventures 2010	Kegworth, Nottinghamshire	<a href="mailto:moira@dewpointmarketing.co.uk">moira@dewpointmarketing.co.uk</a>
	22-23	CEPA Europest 2010	Mercure Buda Hotel Budapest, Hungary	<a href="http://www.cepa-europest2010.com">www.cepa-europest2010.com</a>
MAY	19	Pest Control. Front Line Public Health: Best Practice & Future Challenges	28 Portland Place London	<a href="http://www.rsph.org.uk">www.rsph.org.uk</a>
JUNE	4-5	EuroHiPeCo	Warsaw, Poland	<a href="http://www.euro-hipeco.pl/en">www.euro-hipeco.pl/en</a>
SEPTEMBER	9-11	Expoprag 2010	São Paulo, Brazil	<a href="mailto:expoprag@workmarket.com.br">expoprag@workmarket.com.br</a>
	21-23	Best of the Best 2010	Telford International Centre	<a href="http://www.cieh.org/events">www.cieh.org/events</a>
OCTOBER	20-23	PestWorld 2010	Hawaii, USA	<a href="http://www.npmapestworld.org/events">www.npmapestworld.org/events</a>
	28 - 1 Nov	International Forum for Sustainable Management of Disease Vectors	Hangzhou City, China	<a href="http://www.chinavbc.cn">www.chinavbc.cn</a>
NOVEMBER	3	PestTech 2010	National Motor Cycle Museum, Birmingham	<a href="http://www.pesttech.org.uk">www.pesttech.org.uk</a>
	17-19	Parasitec 2010	Cité des Sciences & de l'Industrie, La Villette, Paris, France	<a href="http://www.parasitec.org">www.parasitec.org</a>
	18	SOFHT Annual Lecture & Lunch	The Savoy, London	<a href="http://www.sofht.co.uk">www.sofht.co.uk</a>

## Extra bedbug speakers added to Pest-Ventures 2010 programme

The Pest-Ventures team has announced that it will be giving even greater emphasis to the control of bedbugs with two extra speakers agreeing to take part in the Day 2 Rising to the Challenge programme on Wednesday 21 April 2010.

The first new speaker comes all the way from Australia. He is Stephen Doggett from the Institute of Clinical Pathology & Medical Research at Westmead Hospital in New South Wales. Stephen is a well known and respected expert on bedbugs and the principal editor of the Australian Environmental Pest Managers Association (AEPMA) Bed Bug Code of Practice, now in its third edition. He is the author of numerous articles and technical papers on the bedbug problem.

The second speaker is Adam Juson from Merlin Environmental who will be outlining the theory and practice of using bedbug detection dogs. Adam and his dogs are featured on page 18 and 19 of this edition of *Pest*.

Presentations will also be given by Clive Boase from The Pest Management consultancy who as well as acting as chairman for the whole bedbug session will also provide an overview of the non-insecticidal monitoring and control techniques now available.

Completing the expert bedbug line up will be David Cain from Bed Bugs Ltd who will outline his novel views and approaches to bedbug control.

Day 1 of the 2010 programme includes a number of papers on rodenticide resistance with Dr Colin Prescott of the University of Reading and Dr Dougie Clarke from the University of Huddersfield bringing delegates up to date with the latest resistance testing techniques and the industry-led Norway rat resistance sampling project. The latter is collecting rat tails for analysis to map the distribution of anticoagulant resistance in the UK. Pest-Ventures also provides an ideal opportunity to network and gain CPD points for the PROMPT Professional Pest Controllers Register.

The full programme can be found on the *Pest* website at [www.pestmagazine.co.uk/content/newsitem.aspx?id=275](http://www.pestmagazine.co.uk/content/newsitem.aspx?id=275)

Places can be booked by contacting Pest-Ventures Moira Hart on 01664 822678 or email: [moira@dewpointmarketing.co.uk](mailto:moira@dewpointmarketing.co.uk)





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