

# PCN

**PEST CONTROL NEWS®**

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## Bugs with Bugs!

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## 6 Critical Update to Permanent Rodenticide Baiting Conditions

Conditions under which permanent baiting with rodenticide is allowed have been updated by CRRU UK.

## 4 The Future of Fly Control

After years of research and development, PestWest® introduces the worlds first, online flying insect monitoring system.

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# Bitesize...

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Aston University study finds nine in 10 insects analysed from England hospitals were carrying potentially harmful bacteria - over half of which were antibiotic-resistant.

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## Critical update to permanent rodenticide baiting conditions

Conditions under which permanent baiting with rodenticide is allowed have been updated by the Campaign for Responsible Rodenticide Use UK to cover a critical difference between outdoor and indoor locations.

In both situations, CRRU chairman Dr Alan Buckle emphasises that the fundamental requirement remains for a professional rodenticide user responsible for the site to identify and document 'a high potential for reinvasion where other methods have proved insufficient.

The updated ruling applies to indoor locations only, where permanent baiting is usually more likely against reinfestation by mice than rats. It specifies that the frequency of routine inspections and re-visits when target pest presence is indicated are a matter for the pest control technician in charge of the control programme.

Dr Buckle says this update comes about in response to feedback from professional pest controllers at a British Pest Control Association (BPCA) forum.

Unchanged is that permanent outdoor bait points loaded with rodenticide continue to require re-inspection at least every four weeks. Permanent baiting in any location is permitted only using products with labels stating specifically such use.

Full details are available in 'CRRU Guidance: Permanent Baiting, revised July 2019, downloadable from [thinkwildlife.org/downloads/](http://thinkwildlife.org/downloads/).



## Alastair Fernie, Bird Control Specialist, AMRSPH, joins Killgerm

Alastair has 24 years of valuable experience within the industrial cleaning, pest control and bird proofing and control sectors. He has wide knowledge and experience of the bird proofing sector due to quoting and carrying out bird proofing work on both commercial and residential properties. He has also used air weapons, culled pest birds and eradicated guano.



## Gov of Jersey adopts UK rodenticide stewardship regime

The Government of Jersey is introducing rodenticide stewardship covering the sale and use of professional rodenticides, modelled on the Campaign for Responsible Rodenticide Use UK's regime.

Jersey's Growth, Housing & Environment department has announced that stewardship point-of-sale competence checks will be introduced on 18 July next year, with CRRU assisting towards this.

Jersey authorities have confirmed that professional use rodenticides are supplied already from the UK with appropriate HSE and stewardship labelling. In common with UK, they are vigilant to prevent non-UK, and therefore non-stewardship, products being sold there.

For stewardship-label rodenticide distributors and users, implementation details will be explained locally during the year ahead.



## John Kay

John Kay, the well-liked and familiar industry stalwart, has recently passed away.

John is fondly remembered as a long-serving member of the technical department at Killgerm Chemicals, having retired in 2007. During his long service at Killgerm, John advised and trained many pest controllers who greatly appreciated his counsel.

During his career in the pest control industry, spanning over 35 years, John was President of the BPCA, worked for Rentokil, Wakefield Council and Killgerm, having also served in the Royal Navy.

Matthew Davies of Killgerm Chemicals commented: "I was lucky enough to spend my formative years at Killgerm alongside John and it was a real pleasure to work with him. As well as being a font of knowledge he was a true gentleman. He will be dearly missed, and we offer our condolences to John's family, friends and industry colleagues."

Away from working life, he is remembered as a loving husband, caring and proud father and grandfather.

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PCN



# Bugs with bu

Hospital insects harbour drug-resista

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*“NHS hospitals are extremely clean environments and the risk of insects carrying bacteria and transferring these to patients is very low.”*

**ugs!**  
nt bacteria

- Aston University study finds nine in 10 insects analysed from English hospitals were carrying potentially harmful bacteria – over half of which were antibiotic-resistant
- ‘Bugs with bugs’ were collected from food preparation areas and wards including neonatal and maternity units
- Findings underline the importance of pest control measures in healthcare environments to prevent public health risk to patients

More than 50% of bacteria recovered from flying insects in a group of English hospitals were resistant to one or more antibiotics, posing a potential infection risk to patients, according to a new study.

The Aston University study collected almost 20,000 insect samples – including houseflies, ‘filth flies’ such as bluebottles and greenbottles and a variety of ‘drain flies’ - from seven NHS hospital sites in England. Microbiological analysis found that nearly nine in 10 of those tested were carrying potentially harmful bacteria such as *E. coli* and *Staphylococcus aureus*, either internally or externally on their bodies.

Flying insects harbouring bacteria were collected from several locations throughout the hospitals using ultraviolet (UV) light flytraps and electronic fly killers. They included areas where food for patients, visitors and staff was prepared or stored, as well as wards, neonatal units and maternity units. In some cases, the level of bacteria carried by flying insects was enough to potentially cause infection.

Over three-quarters of the insects collected were ‘true flies’ – a group which includes midges and common houseflies – with a further 14% being ‘true bugs’ including aphids. Smaller groups of ants, wasps, bees and moths were also collected. The sample collection took place over an 18-month period, with higher numbers being collected in spring and summer.

Over 80 bacterial strains were isolated from the insect samples. Enterobacteriaceae – a family that includes *E. coli* and various other faecal / gut bacteria - were the most commonly isolated, accounting for 41% of isolations from flying insects, followed by *Bacillus* (which includes the ‘food poisoning bug’ *B. cereus*) at 24% and staphylococci (which includes *S. aureus*, a cause of skin infections, abscesses and respiratory infections) comprising 19%.

The analysis showed that 53% of the strains were resistant to one or more class of antibiotics. Of this figure, 19% were resistant to multiple antibiotics, a feature known as multi-drug resistance (MDR). Penicillin was found to be the least effective antibiotic, with many bacteria showing resistance. Resistance to other commonly-administered antibiotics, including vancomycin and levofloxacin, was also observed.

The study, published in the highly-respected *Journal of Medical Entomology*, was co-authored by PhD student Federica Boiocchi, and Professor Anthony Hilton, both from Aston University’s School of Life and Health Sciences and Dr Matthew Davies of Killgerm Chemicals Ltd.



Lead author Federica Boiocchi, said:

“The results from this large-scale microbiological analysis show that a variety of flying insects collected from UK hospitals do indeed harbour pathogenic bacteria of different species.

“What’s quite interesting, though, is the high proportion of drug-resistant bacteria found in these samples. It’s a vivid reminder of how our over-use of antibiotics in healthcare settings is making infections more difficult to treat.”



Anthony Hilton, Professor of Applied Microbiology at Aston University, added:

“NHS hospitals are extremely clean environments and the risk of insects carrying bacteria and transferring these to patients is very low.

“What we are saying in this paper is that even in the cleanest of environments, it’s important to take steps to prevent bacteria being brought into hospitals by insects. NHS hospitals will already be implementing many of these measures, but there are simple steps that can be taken to improve this further.

“Infection control is taken extremely seriously in the NHS. Insects will only play a very small role in the transfer of bacteria, so this risk should be seen in the context of wider efforts to stop the spread of harmful and drug-resistant bacteria.”

Dr Matthew Davies, of Killgerm Chemicals Ltd, said:

“We hope this study is useful for those in charge of pest management measures, for example by highlighting when insects are likely to be most prevalent and which are of the greatest risk to public health. This knowledge then informs the selection and installation of quality insect monitors and effective UV light traps, among other integrated pest management measures provided by professionals.

“It could also mean emphasising the importance of replacing glue boards and UV-tubes more frequently, and monitoring the insect catch closely, especially during the warmer months.”



Pest Control News asked co-author Dr Matthew Davies, of Killgerm Chemicals, what else readers should take from studies like this. “There is even more information on this topic than what we could squeeze into the recently published paper. For example, we isolated a type of *E. coli* from bluebottle flies *Calliphora vicina* sampled from a hospital restaurant. The type of *E. coli* we found is known from blood cultures and urine (often from surgical cases in hospital) rather than from faeces. In short, flies are acquiring pathogens from the hospital and not just bringing ‘germs’ with them from the outside.

A further type of *E. coli* was isolated from greenbottle flies, *Lucilia sericata*, collected from a hospital kitchen. This type of pathogenic *E. coli*, that has potential to cause fatal diarrhoea in infants, has been detected in samples from healthy calves and is not known as a clinical isolate. It is likely therefore that *L. sericata* had acquired it from calf faeces and then entered the hospital, illustrating perfectly the dangers of fly ingress and capacity for introduction of non-clinical isolates into the hospital environment where they may prove pathogenic in humans.”

Pest Control News noted that ‘drain flies’ were more numerous than might be expected and Matthew responded, saying “Yes, to coin a phrase, I would say ‘drain flies are underrated’ in hospitals. When I say ‘drain flies’ I mean Psychodidae, Phoridae, Sphaeroceridae and *Drosophila* which are highlighted as an emerging problem or even new potential vectors in the hospital environment, due to their described carriage of pathogenic microorganisms in the clinical setting. The collected findings continue to emphasise the importance of pest control as a component of infection control in hospitals.”

### Where to find the full paper?

The full research paper, *An Examination of Flying Insects in Seven Hospitals in the United Kingdom and Carriage of Bacteria by True Flies*, was published in the Journal of Medical Entomology on Friday, June 21st <https://doi.org/10.1093/jme/tjz086>

### What other work have the authors done on flies?

The current study follows on from the research group’s previous papers, ‘The housefly *Musca domestica* as a mechanical vector of *Clostridium difficile*’ and ‘Acquisition and retention of *Clostridium difficile* by *Musca domestica* larvae and pupae during metamorphosis’ both published in the Journal of Hospital Infection in 2016 and 2017 respectively.

The earlier studies described the potential for adult *M. domestica* to contribute to environmental persistence and spread of ‘hospital superbug’ *C. difficile* in hospitals, highlighting adult flies as realistic vectors of this micro-organism in clinical areas. Furthermore, the potential antimicrobial action of *M. domestica* larvae and their extracts against *C. difficile* spores was highlighted as warranting further investigation.

<https://www.sciencedirect.com/science/article/pii/S0195670116303814>

<https://www.sciencedirect.com/science/article/pii/S0195670117300166>

By Federica Boiocchi



**“Infection control is taken extremely seriously in the NHS. Insects will only play a very small role in the transfer of bacteria, so this risk should be seen in the context of wider efforts to stop the spread of harmful and drug-resistant bacteria.”**





# No more ‘winging it’ as three new general licences announced for bird control

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**A** collective sigh of relief was heard throughout the industry, following recent bird licensing upheaval, as three new general licences for the killing or taking of wild birds in England were issued on Friday 14<sup>th</sup> June.

Following the recent DEFRA call for evidence, it was demonstrated that a range of impacts upon individuals and groups were experienced as a result of the revocation of licences GL04, 05 and 06, including crow attacks on lambs and ewes during lambing, the risk of predation for eggs and fledglings of birds of conservation concern, and public health issues caused by pigeons in urban areas.

The new licences will allow users to control certain species of wild birds in order to:

- Conserve wild birds and flora or fauna (WML GL34)
- Preserve public health or public safety (WML GL35)
- Prevent serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber, fisheries or inland waters (WML GL36)

The decision to issue the new licences follows analysis of information provided to Defra’s formal open evidence-gathering exercise which allowed all concerned parties to explain the impact that Natural England’s withdrawal of its three general licences GL04, 05 and 06 had on the management of wild birds.

The call for evidence ‘Use of general licences for the management of certain wild birds’ closed on Monday 13 May, with over 4,000 responses submitted. Having also sought the views of user groups on the usability of different potential licensing options, the three new general licences seek to protect wild birds whilst recognising the legitimate needs of people and other wildlife.

The three new general licences cover species and specified purposes that Defra considers appropriate in light of the information gathered through that exercise and other relevant evidence, including statutory advice from Natural England. At this stage, the new licences will not apply to European protected sites (more information below).

The licences will be valid until 29 February 2020. In the meantime, Defra will lead a review of the longer-term general licensing arrangements. DEFRA intend to launch an initial public consultation by

the end of the summer, with further details to follow. Defra will work closely on this review with Natural England, who have already indicated the need to examine a wider range of general and class licences.

Environment Secretary Michael Gove said:

“I recognise the scale of interest and concern that was generated by Natural England’s decision to revoke three general licences and I am grateful to those thousands of individuals and groups who shared their experiences in responding to the call for evidence.

The three new general licences announced seek to minimise some of the negative impacts that the withdrawal of the previous licences had. But this is a temporary way forward and does not cover European protected sites, where the law is more complicated and we continue to engage with stakeholders.

We will shortly set out details of a wider review of general licences, to provide a long term licensing solution which balances the needs of users and wildlife.”

Natural England’s Chair, Tony Juniper CBE, said:

“I welcome the Environment Secretary’s announcement, which follows a great deal of work between Defra and Natural England to tackle an exceptionally complex situation.

I am immensely grateful for the efforts of my colleagues at Natural England in putting in place alternatives for users affected by the recent changes to general licences.

Our aim has always been to ensure that there is a robust licensing system in place which takes into account the needs of people and wildlife. We look forward to working closely with Defra on a review of general licences later this year to help achieve this.”

Natural England revoked three general licences (GL04, 05 and 06) in April following a legal challenge and subsequent legal advice which concluded that the three licences were unlawful. For many users, Defra’s new licences will be the appropriate option. Beyond these, Natural England recently issued three general licences GL26, GL28 and GL31 to cover some of the species and purposes covered by the original licences that were revoked. These remain in place, since they allow for specified activity on European protected sites which are not covered by Defra’s new licences.

Natural England also introduced an interim system for issuing individual licences whilst the replacement general licences were being developed. Users who have received one of these individual licences can continue to operate under them should they wish. Whichever licence a user chooses to rely on, they will need to ensure they comply with the conditions and requirements of that licence. Natural England will be contacting all applicants who have made one of these individual licence applications where a licence has not yet been issued to determine whether they need to continue to with any part of their application.

## New licences

### General licence to kill or take certain species of wild birds to conserve wild birds and flora or fauna (GL34)

Species covered: Carrion Crow, jackdaw, jay, magpie, rook, Canada goose, Egyptian goose, monk parakeet, ring-necked parakeet, sacred ibis and Indian house-crow

### General licence to kill or take certain species of wild birds to preserve public health or public safety (GL35)

Species covered: Carrion crow, jackdaw, magpie, feral pigeon, rook, Canada goose and monk parakeet

### General licence to kill or take certain species of wild birds to prevent serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber, fisheries or inland waters (GL36)

Species covered: Carrion crow, jackdaw, magpie, feral pigeon, rook, woodpigeon, Canada goose, Egyptian goose, monk parakeet and ring-necked parakeet

### Gulls

Users can continue to apply to Natural England for an individual licence for control of herring gulls, and now for lesser black-backed gulls. Due to their poorer conservation status, these species have not been included in the new general licences. In terms of control of nests and eggs, their breeding season for this year is largely complete, so Natural England is developing a new class licence for these species to be ready in good time for next year’s breeding season.

### Protected sites

European protected sites are subject to specific EU law requirements given their particular importance to conservation. These include a process for ensuring that any impacts on the site are properly considered before any plan or project can be undertaken, known as a Habitats Regulations Assessment (HRA). There are a number of ways in which people can continue to carry out control on European protected sites – which include Special Areas of Conservation (SACs), Special Protection Areas (SPAs) – as well as Ramsar sites. For instance, they can apply to Natural England for an individual licence if they are not already covered by an existing individual licence or the specific circumstances provided for by Natural England’s three recent general licences (carrion crow, Canada goose and woodpigeon). Users who already have an individual licence issued since 25 April 2019 can continue to operate under that should they wish.

At this stage the three new general licences will not apply to European protected sites, or to land within 300 metres of those sites. Defra will continue to work closely with conservationists, farmers, landowners, pest controllers, gamekeepers and all interested stakeholders in order to develop solutions that may be available for activity on protected sites.

As in the previous system, users will need to ensure they have consent from Natural England for any activity on Sites of Special Scientific Interest.

### Background

Defra and Natural England have published guidance on their decision-making process with advice and FAQs for users. If you have further questions, a dedicated Defra enquiry line is now available: call 0330 159 1986 or email [GEnquiries@defra.gov.uk](mailto:GEnquiries@defra.gov.uk). Bird control industry specialists can also offer guidance.





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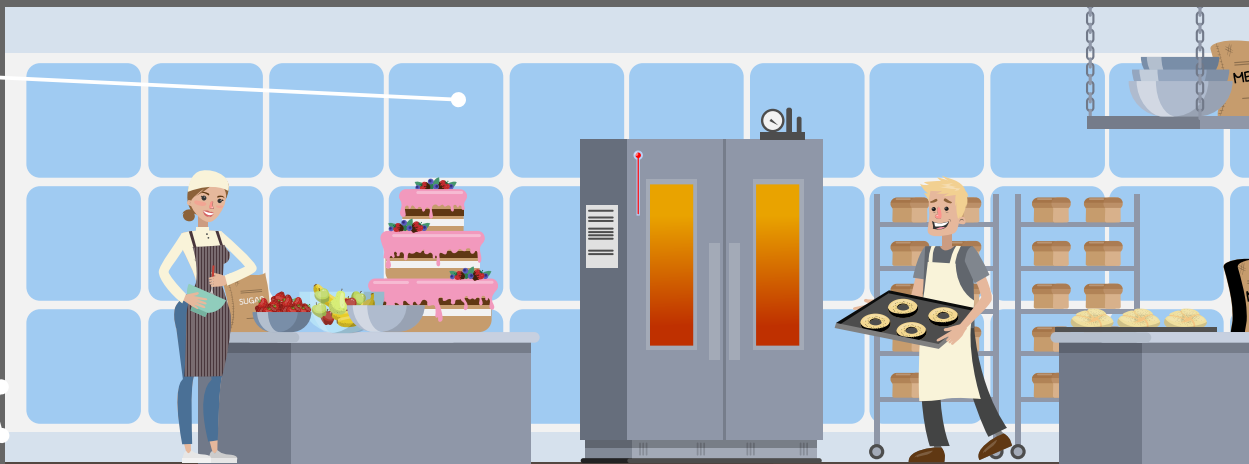
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**Following feedback from their customers, Killgerm Chemicals have re-launched a new and improved AF<sup>®</sup> Tunnel. The AF<sup>®</sup> Tunnel now features a new lock and key for increased security and a bait bar which has been housed inside the lid, favouring the natural feeding behaviour of rodents.**

**I**t also now accommodates two Snap-E mouse traps and the lid can be removed completely for better access.

Matt & Sue Greenhalgh run Forest of Dean Pest Control in Lydney, Gloucestershire. The family run business has been operating for two years. After recently switching to the new AF Tunnel, they gave us their views on how they are finding the new design.

#### **Is the new AF Tunnel a good solution to your pest problems?**

Absolutely! We have attended several rat infestations where the new AF Tunnel has worked really well. We particularly love that the bait rod is in the roof, as this helps to keep the blocks dry.

#### **How does the new AF Tunnel compare to other rodent tunnels/boxes?**

The only other tunnel box that we have used is the previous version of the AF Tunnel. The design and ease of use of the new version makes it far superior to the original design.

We recently attended a residential property and discovered a rat infestation underneath the decking. To treat the problem, we used both the new AF Tunnel and the Rotech Bullet Bait Box. The new AF Tunnel proved to be the most popular attraction for the rats and helped to resolve the problem quickly and efficiently.

#### **Where have you used the new AF Tunnel?**

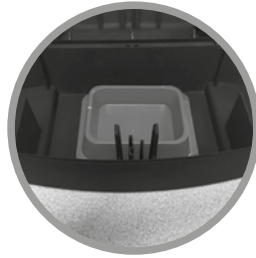
We have tried the new AF Tunnel in a wide variety of areas including residential houses, schools, farms and commercial premises. The Tunnel can be used in lots of different places thanks to the easy to use and technician-friendly design. It also appears to be squirrel-proof too!

#### **What do you think to the new lock and key?**

We have found the new lock and key far better on the new AF Tunnel compared to the previous version. The new lock and key is much easier to use, as we found the old lock could be very frustrating, especially when the box was wet.

# 'KEY' changes

- New lock and key for improved security
- Bait bar inside the lid to favour rodent feeding behaviour
- Now accepts two mouse traps
- Removable lid for ease of cleaning
- Lid cut-out allows tie wraps to show status



### What did you use before?

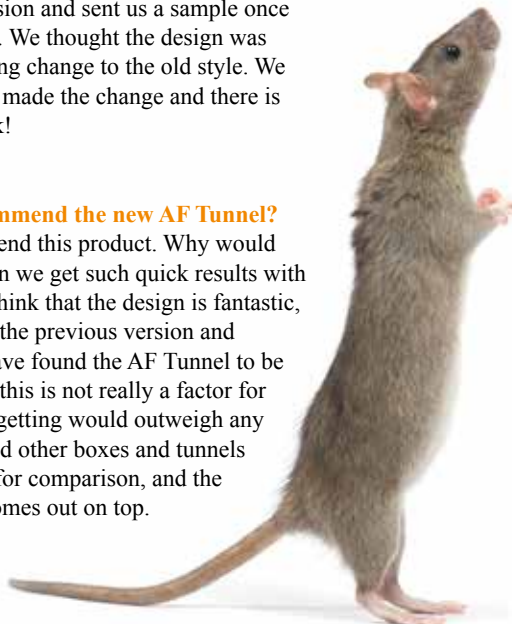
We have previously used the old version of the AF Tunnel, AF Rat Box, AF Atom and Rotech Bullet Bait Box. The new AF Tunnel is by far the easiest to use. We really like the new lock and key, and having a removable lid is particularly useful so that the date and inspection label can be written easily, without a struggle.

### Why did you change to the new AF Tunnel?

We had spoken to Killgerm Chemicals and mentioned that we didn't like the old version of the AF Tunnel, they told us about the new version and sent us a sample once the product was available. We thought the design was innovative, and a refreshing change to the old style. We are really pleased that we made the change and there is definitely no looking back!

### Finally, would you recommend the new AF Tunnel?

We would 100% recommend this product. Why would we use anything else when we get such quick results with the new AF Tunnel? We think that the design is fantastic, the lock is far superior to the previous version and much easier to use. We have found the AF Tunnel to be competitively priced, but this is not really a factor for us the results that we are getting would outweigh any higher price. We have used other boxes and tunnels alongside the AF Tunnel for comparison, and the new AF Tunnel always comes out on top.



Know your enemy...and similar looking 'friends'

# Asian Hornet

## *Vespa velutina*

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**AKA:** Yellow-legged Hornet

**Native to:** Asia

**Habitat:** Nests usually high in trees and man made structures, sometimes closer to the ground; hunts honey bees, other insects and also feeds on fruit and flowers.

**Asian Hornet**

Not easily confused with any other species. Dark brown or black velvety body. Characteristically dark abdomen and yellow tipped legs. Smaller than the native European Hornet.

Introduced to France in 2004 where it has spread rapidly. A number of sightings have been recorded in the UK since 2016. High possibility of introduction through, for example, soil associated with imported plants, cut flowers, fruit, garden items (furniture, plant pots), freight containers, in vehicles, or in/on untreated timber. The possibility that it could fly across the Channel has not been ruled out.

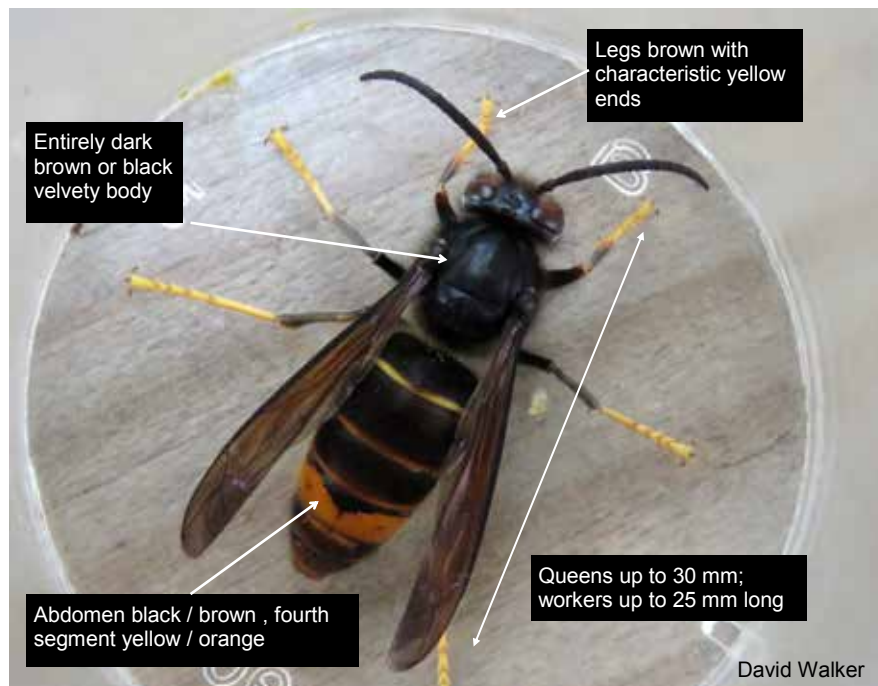
A highly aggressive predator of native insects. Poses a significant threat to honey bees and other pollinators.

Do not disturb an active nest. Members of the public who suspect they have found an Asian Hornet should report it with a photo using the details provided in the green box at the end of this ID sheet.



David Walker

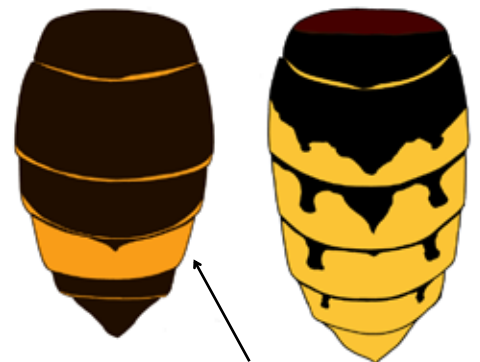
**Key ID Features**



David Walker

Asian Hornet

European Hornet



Asian Hornet abdomen is almost entirely dark except for 4th abdominal segment.



Asian hornet "hawking" for honey bee prey

J. Haxaire



**Asian hornet (*Vespa velutina*) for comparison**

- Queen up to 30mm long, worker up to 25mm long
- Legs yellow at the ends
- Dark brown / black abdomen with a yellow / orange band on 4th segment
- Head dark from above, orange from front
- Dark coloured antennae
- Entirely black velvety thorax
- Never active at night



Q. Rome

**Similar Species**

**European hornet (*Vespa crabro*)**

- Queen up to 35mm long, worker up to 30mm long
- Legs brown at the ends
- Yellow abdomen marked with brown on the upper part, not banded
- Head yellow from above, yellow from front
- Yellow antennae
- Thorax black with extensive brown markings
- May be active at night



Roger Burgess

Mia Tonge, National Bee Unit

**Giant woodwasp (*Urocerus gigas*) - a harmless 'friend'**

- Larger than Asian hornet, female up to 45mm long
- Legs yellow
- Distinctive yellow and black banded abdomen
- Long cylindrical body unlike Asian hornet which has an obvious waist
- Long yellow antennae
- Female has an obvious long sting-like appendage (ovipositor) which it uses to lay eggs in trees



Q. Rome

**Hornet mimic hoverfly (*Volucella zonaria*) - a harmless 'friend'**

- Abdomen has more yellow stripes than Asian hornet
- Legs darker than Asian hornets
- Only one pair of wings (hornets and wasps have two pairs)
- Large, globular eyes



Didier Descouens



Alvesgaspar

**Median wasp (*Dolichovespula media*)**

- More extensive yellow and orange colouration on abdominal segments than Asian hornet
- Yellow markings on thorax unlike Asian hornet



Q. Rome

**Field Signs**

Active April-November (peak August/September). Mated queens over winter singly or in groups, in various natural and man-made harbourages – underneath tree bark in cavities left by beetle larvae, in soil, on ceramic plant pots – potentially any small, well-insulated refuge. Makes very large nests in tall trees in urban and rural areas, but avoids pure stands of conifers. Will use man made structures (garages, sheds etc.) as nesting sites.



**For more information visit:**  
[www.nonnativespecies.org](http://www.nonnativespecies.org)  
[www.nationalbeeunit.com](http://www.nationalbeeunit.com)

**ALERT!**

**Report sightings of this species:**

- With the iPhone and Android recording app: Asian Hornet Watch
- Online at: [www.nonnativespecies.org/alerts/asianhornet](http://www.nonnativespecies.org/alerts/asianhornet)
- By email: [alertnonnative@ceh.ac.uk](mailto:alertnonnative@ceh.ac.uk)



# PCN

Dinner

# Carnival Party

PCN Dinner - Wednesday 6<sup>th</sup> November 2019

**ARENA MK, MILTON KEYNES**

£75 pp (+vat)  
£750 per table (+vat)  
10 people per table

- Drinks Reception
- Charity Raffle
- 3-Course Meal
- Live Entertainment
- Free Bar (limited)

Bar will close at 12.30am  
Residents can continue the evening at the Pitchside Bar.

**Dress Code: Smart Casual -  
No jeans/ no trainers**

Tickets can be cancelled up to 4 weeks prior the event, tickets cancelled after this time will be charged at full price.

**To book your place please contact  
Sadie Baldwin 01924 268 433.**



# Mating Disruption



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Certain moth species remain an issue for the food industry. Using pheromones within active monitoring has long been common practice to detect early signs of infestation or monitor ongoing populations being treated. As always regarding stored product insects, the key factor is hygiene. Thinking beyond hygiene and chemical treatments, is there another way apart from monitoring or insecticides?

## Common food moths

Including Indian meal moth (*Plodia interpunctella*), Warehouse moth (*Ephestia elutella*), Mediterranean meal moth (*Ephestia kuehniella*) and Tropical Warehouse moth (*Ephestia cautella*). It may take a specific skill to identify between the *Ephestia sp.*! so send a sample for identification if in doubt. These species are all fairly common and create similar issues:

- Stock degradation
- Stock loss
- Tainted end products
- Loss of quality
- Mould issues
- Economic loss
- Potential reputation damage
- Customer complaints





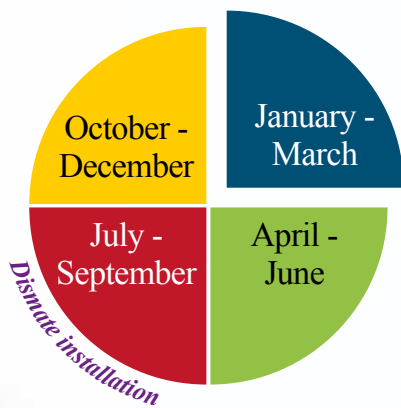
All moths have a complete metamorphosis life cycle (egg – larvae – pupa – adult) and as with many stored product insect pests the larval stage is often the most damaging. If interference with one of the life cycle stages can be achieved, then we could have a method of control.

**Monitoring**

Moth level observation can be implemented by inspection but primarily by using a variety of monitors. Ranging from simple sticky glue pads or pheromone monitors (such as the funnel type monitor or a demi-diamond fitted with the correct pheromone-impregnated sticky pad) the monitoring systems are effective and reliable when maintained in a good condition with regular replacement of the sticky pads or the lure. The low-level of pheromones present are designed to act as a female moth, thus attracting the male moth to the monitor. Pheromones are species specific chemical messages, used for many different things. Often pheromones can initiate a behaviour in other members of the same species. This is why you will see pheromone products with the specific species on the label. For example, the demi-diamond pads are labelled for *Ephestia/Plodia*. The black and white stripes sometimes seen on traps are also thought to provide added attraction to certain species.

**Treatment**

Initially after a stored product moth infestation has been discovered either via a monitoring system or by inspection the first step should always be hygiene. However, after hygiene may come the use of an insecticide to treat the issue. Standard chemical treatments may involve residual or non-residual insecticides either sprayed, fogged or used at ultra-low-volume. Heat treatments can also be used. One of the main issues with stored product moths is that they are either in or around the food product. Therefore, use of insecticide has to be carried out with upmost care. The insecticides generally cannot be used on or close to food contact surfaces.



Dismate works in a very different way to control food moth populations. First used in the UK in 2001, Dismate has been extensively trialed and tested with impressive results. It has been used in chocolate factories, mills, bakeries, nut and dried grain storage and grain silos. All with great success.

**Mating cycle disruption**

Small colour-coded pheromone packs are used to emit powerful pheromones, the same pheromones used to attract the male moths during monitoring. However, much higher levels are used which is why the product can be applied alongside standard monitoring. The attracted male moth begins to conduct his mating ‘dance’ in the presence of the pheromone. No female arrives, and the male dies without mating having used all his energy to perform the ‘dance’. This also forces the females to wait longer prior to mating (if at all). Moth eggs rapidly decrease in number and quality as the females ages. So even if she does manage to mate with an appropriate male, the fertilised eggs that are the result of the process are either not viable or weak. The conclusion of this is a reduced number of moths. This can take some time with an established or long-term infestation due to moths in various stages of development prior to adult emergence and also their presence within food or food residue.

**Dismate installation**

Dismate dispensers need to be installed every 7 meters, so that the pheromone will then slowly dispense into the air. The dispensers need to be replaced on a quarterly basis (hence the colour-coding to allow a quick check and ensure that the correct colour is used for the correct quarter).



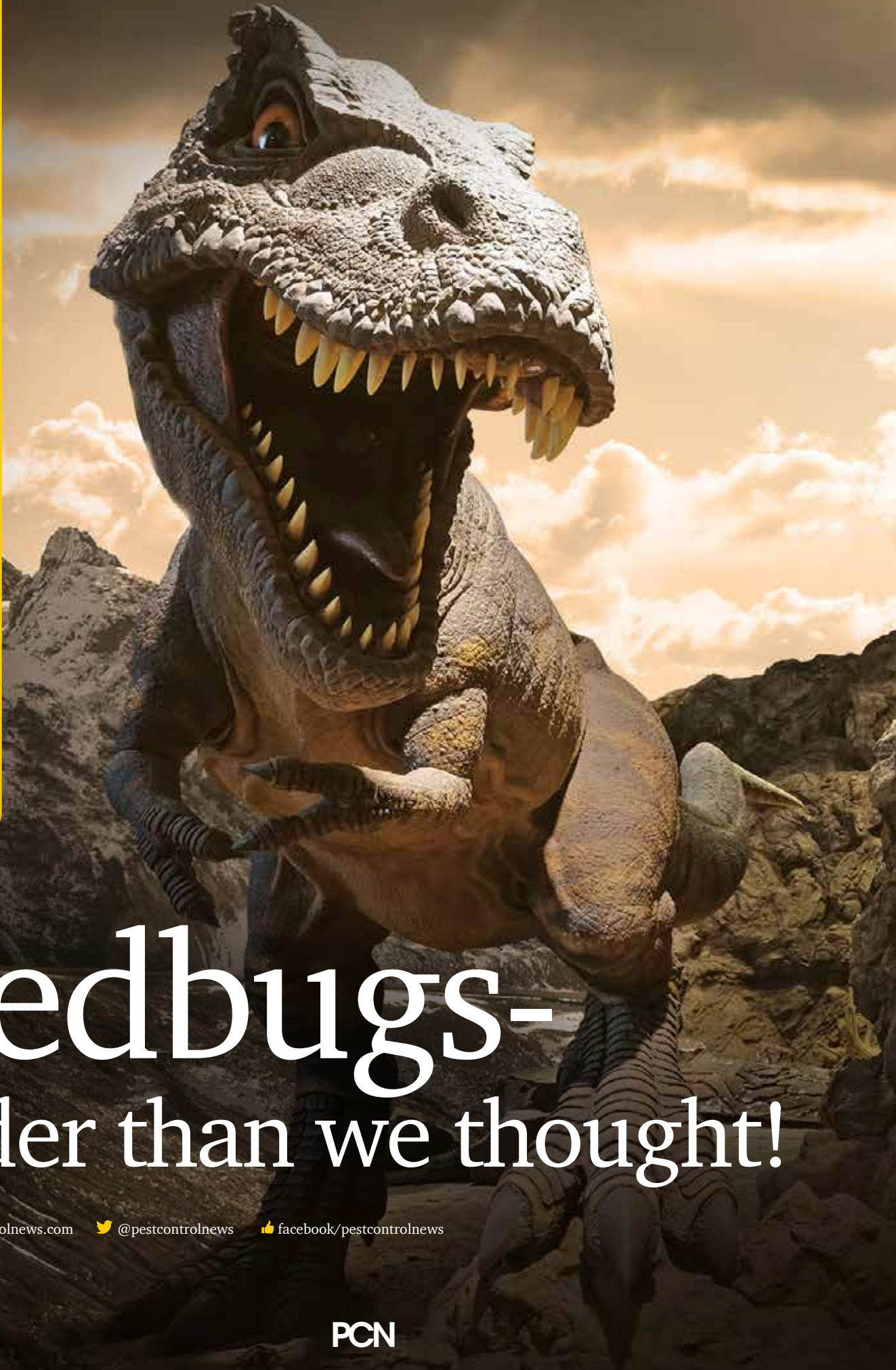
After installation there are also some precautions and a ‘what to expect’. It is imperative that the monitoring system in place remains. The levels of pheromone in Dismate are above the levels in standard moth monitors, so detracting away from monitoring is not an issue. Both should still be used, carefully, alongside each other. A short-term increase in moths flying may be seen following installation, as this is a response to the high levels of pheromone in the air. There may also be an uplift in number of moths caught on or in traps. This is all as expected. After the short-term increase in activity the population will start to decline and a reduction in numbers will be seen. This also results in long-term control, even providing protection in the scenario of a new infestation (for example, transported into the site with stock, products or machinery). The moths will be swiftly attracted to the pheromone and therefore controlled.

**Summary**

- Dismate is a chemical free and non-toxic control method
- It cannot replace hygiene, as with all stored product insects – hygiene is critical (residual moth larva and populations can remain in food debris)
- Dismate is most effective when used alongside good hygiene practices
- Change dispensers every 3 months (quarterly)
- Maintain the current moth monitoring system
- Honest and accurate documentation is essential, to track and set acceptable limits
- Install dispensers every 7 meters

With 17 years of experience behind the product, this is a valuable non-toxic system for continual food moth control.

# Science-sense



# Bedbugs- Older than we thought!

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**I**t is often thought that bedbugs were around humans from the dawn of *Homo sapiens* and evolved to take a blood meal from us as a next step from bats which themselves were thought to be the original host of Cimicidae (or the common bedbug ancestors). When we lived in caves, the bedbugs lived with us, the story goes, or so it was thought based on previous evidence.

However, further research recently published in the Current Biology Journal\* has discovered a new scenario. It seems that before evolving to feed on birds and bats, bedbugs potentially fed on a much larger host which pre-dated bats by more than 30 million years.

#### **Bedbug species**

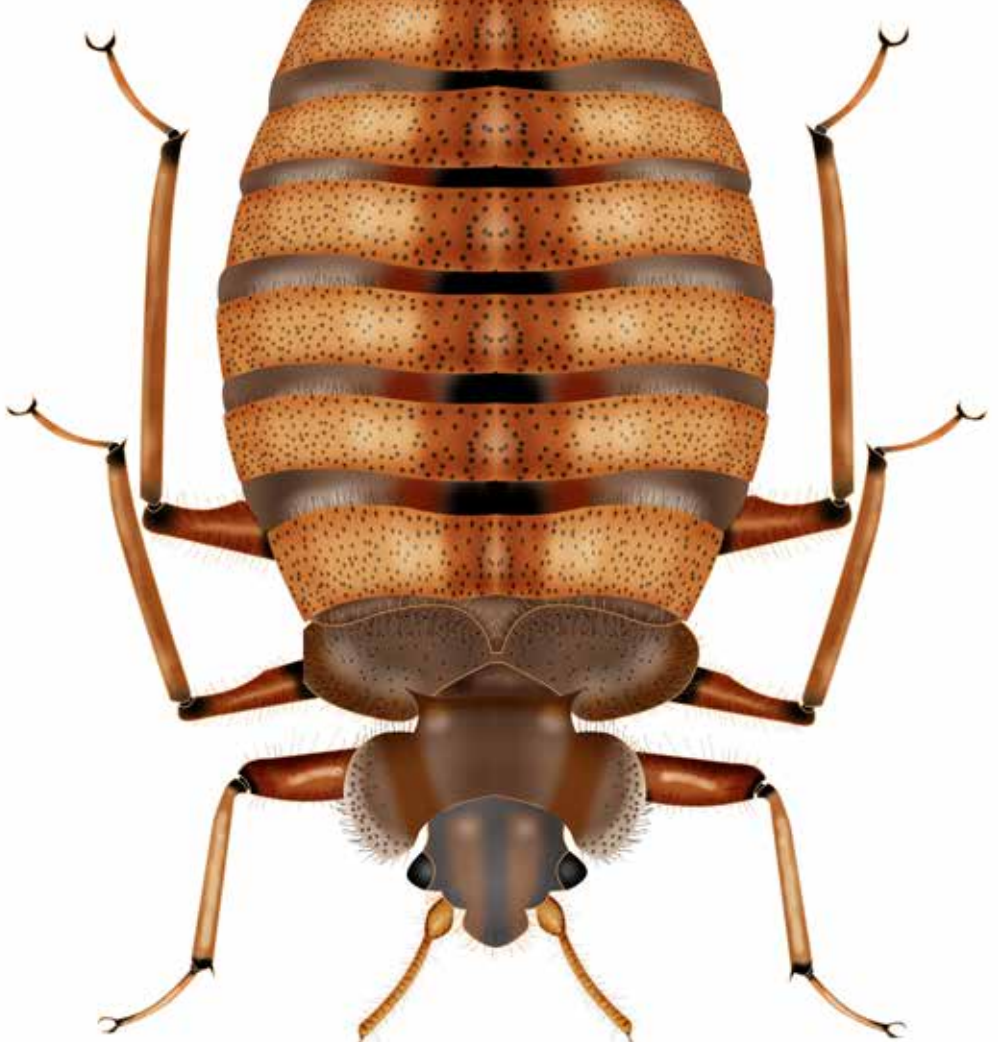
There are over 100 different species of bedbugs, only two feeding on humans! They are *Cimex lectularis* and *Cimex hemipterus* (the common bed bug and the tropical bedbug respectively). Extensive DNA (deoxyribonucleic acid) sampling techniques were used on around 30 different samples of bedbugs to determine their genetic codes. And to see if there was anything to explain why there are just two species that routinely feed on humans.

The behaviour of the bedbug species is also particularly complex, as there are no other insects on earth that behave quite like bedbugs. For example, their specific mating behaviour – commonly known as ‘traumatic insemination’ this is not seen in other public health pests. In alternative research regarding traumatic insemination... ‘Male bed bugs only mate with recently fed females and do so by traumatic insemination (TI). Consequently, there is a tight temporal correlation between female feeding and the likelihood of her being infected via TI.’\*

The female bedbugs can upregulate their own immune system prior to feeding and the higher likelihood of mating. Females with very regular blood meals were able to predict the cycles of feeding and mating, increasing their pathogen defences against potential infection - thus showing better survival and reproduction rates, when compared with females with irregular unpredictable feeding patterns. They really are very strange animals, but scientifically brilliant animals!

#### **Bedbug genome**

The bigger picture is to try to determine why the certain two species evolved to feed on humans and what we can do about it to control them. By testing DNA from 30 samples of bedbugs the emphasis continues to look for coding differences between the bedbugs that feed on us and the bedbugs that don’t. The secret to better control of bedbugs may lie in their genetic code. The original theory began by placing bedbugs at around 50 million years ago when the emergence of the first mammals was seen. However, this was discounted when fossils found of bedbugs (or bedbug species from the family Cimicidae) were dated and using fossil-dated phylogeny (finding the history of their evolution) which actually placed them way



before the first bats, more than 30 million years before bats. It was also a theory that bedbugs fed on our ancestors, archaic humans *Homo erectus*. Again, this has been discounted by phylogeny techniques, they did not feed on *Homo erectus*.

#### **What did they feed on then?**

The original ancestral host of the bedbug is not known...yet. Fossils of bedbugs dated back actually pre-date the earliest fossils of bats and birds to around 115 million years ago. So, picture the scene, the earth's atmosphere is oxygen rich, trees and vegetation are larger, animals are larger, supersized insects are fluttering and crawling about, we are in the Cretaceous period in the Mesozoic era. What exactly wandered the earth 115 million years ago? The simple answer is dinosaurs. Great big dinosaurs. Without knowing which dinosaurs or other animals hosted bedbugs, it's difficult to say their exact host. There were some of the more recognised and famous individuals wandering about at this time. Even *Tyrannosaurus rex* (*T. rex* for short) is placed from 150 million to 65 million years ago. *T. rex* was certainly around at the same time as the first bedbugs. Even Pterodactyls were dominating the skies for 163 million years (228 to 66 million years ago). It's a nice theory that what we see as common bedbugs today could have fed on a Pterodactyl! More interesting is that at around 66 million years (the end of the Cretaceous period), there were several catastrophic events that finished off the dinosaurs. Often termed the ‘extinction event’. A major volcanic event began by spewing larva and toxic dust into the atmosphere which blocked the sun, followed

up shortly (in earth life terms) by a massive asteroid bumping earth at 70,000mph causing a massive 5-mile-wide crater and almost complete obliteration of terrestrial life on earth. The theory goes that more than three quarters of all life on earth was wiped out. However, bedbugs survived all of this and evolved into the species we see today. Truly they are born survivors.

#### **How does this affect bedbug management?**

With ongoing genetic coding trials and research tapping into the genetic code of bedbugs, using this as a way to control them is a long way off. Standard rotation of insecticide actives is still needed and should form a basis of a multi-pronged integrated pest management plan. Heat and physical methods should also play their part in the rotational treatment system as we limit chemical use and are faced with a rising level of resistance. For the moment business as usual but know that pest controllers are the frontline battle against a phenomenal ancient survivor that has walked the earth for millions and millions of years.

Good night. Sleep tight. Don't let the bedbugs bite.

\*All details and sources of information can be acquired by contacting ‘technical@pestcontrolnews.com’. All details in this article are based on ‘Bedbugs Evolved before Their Bat Hosts and Did Not Co-speciate with Ancient Humans’ Authors: Steffen Roth, Ondrej Balvin, Michael T. Siva-Jothy, ..., Edward H. Morrow, Endre Willassen, Klaus Reinhardt.



# The Future of Fly Control

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**After years of research and development, PestWest is introducing its latest pioneering innovation and the future of fly control: flyDetect®, the industry leader in online flying insect monitoring.**

**Pest Control News interviewed Product Design Engineer from PestWest, Andy Nulty, discussing what flyDetect® is all about and how this particular trap will revolutionise the whole industry.**

**Let's start at the beginning. How was the idea of flyDetect® born?**

Many years ago, we had seen the start of remote monitoring being applied to the area of rodent control, and as part of the rigorous research and development programme within PestWest we challenged ourselves to think of ways to bring a similar approach into the much more complex area of fly control. From the initial planning stage, the outline of flyDetect was born, and this has led to the multi-year development project designed to deliver the vision.

**In a nutshell, what are the main technical features? And how do you see Pest Control Companies and end-users benefit from these?**

There are many technical features that will benefit a Pest Control Company:

- They can set a flying insect threshold and will be notified when it is exceeded.
- Once the threshold is met, the trap will then remain in alert status until serviced, and the flyDetect® app will prioritise these units using a traffic light system from red, amber and green, depending on the progress towards the alert level.
- They will receive immediate notifications of emerging infestations.
- They can view images of the glue board on request and receive automatic images of the glue board every day, rather than just viewing a sticky board every few weeks following a regular service schedule.

**Where do you see flyDetect® being used? For which purpose/environment is this the 'right' unit?**

flyDetect® would be best suited for areas of sensitive manufacturing, so places like pharmaceutical plants, food manufacturing or packaging sites, where early detection of infestations or fly problems is highly desirable and valuable to the business and its reputation.

Another benefit for areas of sensitive manufacturing is that the system saves all of the images it takes into a searchable archive. This allows the technician to analyse trends as well as having a permanent track-record/proof of their due diligence.

Alongside this, when a service is undertaken, the technician can add notes and supporting photographs documenting their visit which is saved alongside the sticky board image in the archive.

Let's say there was a sudden increase of flies at a certain trap, the alert system would trigger within one day, the technician could prioritise the visit aided by the traffic light alert system in the flyDetect® app. When they get to the site, say for example they find an overflowing bin or an open window, they can document the cause of the alert with photographs



PCN





and notes, helping to ensure practices can be put in place so this doesn't happen again, and then perform the sticky board replacement. From an auditable point of view, all bases are covered.

**Very interesting! Could you tell us a bit more about the process of developing flyDetect®? And what has been the biggest challenge throughout the development?**

We have been working on flyDetect® for many years, and it has taken a lot of development to get to where we are today. Initially we were just trying to create a system which allowed remote viewing of a sticky board, but what the system has developed into is much more than this. The biggest hurdle was in getting accurate and reliable results and finding a way of displaying these to the user in the most valuable way we can. This presented challenges in both software and hardware design, and it took a collaboration between both aspects to achieve what we have.

**Exciting times ahead! Where do you see the industry going over the next 5 years in terms of 'Permanent Monitoring'?**

Well, the ability to know when a trap is over an acceptable threshold or limit in real time is always going to be valuable to businesses. Faster response times to the traps which do need attention, and reduced man hours by not having to visit traps which don't need to be serviced yet is also key to business efficiency. A number of companies have moved towards finding 'counting software' but when tested these are often inaccurate, and as many are just mobile phone-based camera apps, you have to be at the site stood in front of the trap to use them, so they also do not offer the alert system and labour saving that flyDetect® does. flyDetect® will be evolving over the coming years and more features will be added to the applications as we begin to generate more data and listen to customer feedback about which features would be useful for them.

Should you have any questions or would like to receive further information, please do not hesitate to contact PestWest on: [info@pestwest.com](mailto:info@pestwest.com)



# RODENTS:

## Sense and sensibility



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This is the second in the rodent senses mini-series. This time around it's the sense of touch. This is a highly developed sense in rodents. Much of their navigation and response to environmental stimuli is linked directly to touch.

**B**ackground  
Thigmotactic responses are the most widely known behavioral mechanisms in direct response to a physical environmental factor. Thigmotaxis specifically is the orientation of the animal in response to the touch stimulus. So how is this stimulus perceived by the rodent to trigger an action or behaviour? The 'initial pick up' is via one of the most obvious features possessed by rodents, their whiskers. The whiskers are basically directly routed into the rodent's nervous system, with the specific nerve pathways from the whiskers (or neurons) travelling right to the brain. A region of the brain that is devoted to this is the somatosensory cortex. This area of the brain picks up sensations from the skin and organs (either pain or other sensations), visual and auditory and then processes the electrical impulses triggered by the initial stimuli. Within the somatosensory cortex is the barrel cortex which specifically picks up nerve impulses from the whiskers. Think of the whiskers as an extension of the central nervous system.

### Other than whiskers?

Rodents also have guard hairs. You can sometimes see these longer, tough hairs that are often slightly longer than normal coat hairs. They can be found all over the body, concentrated mainly around the legs and areas most likely to contact surfaces. Apart from whiskers, which can provide initial guidance, guard hairs continue the process so that the rodent can extend tactile intelligence as they are moving and navigating their environment.

### Rodent feet

The sensory pads present on rodent's feet are also highly sensitive. Temperature changes, textural changes and moisture can all be easily perceived. This is very similar to our own human fingertips and toes. This feeds directly into rodent control. Building on each of the their behaviour towards new things, with focus on rats – certain changes should be avoided. Bait stations are an example, as the rat neophobic response could be triggered by an unknown or unfamiliar touch of an object, after direct contact with feet pads or whiskers. From experience, on several occasions in a very dusty environment, the elusive rat has escaped a glue board after placing one foot on it and deciding something was amiss before backing away (having not become stuck due to a very dusty foot pad!).

### Utilising touch for control or management

Basic principles apply. Placing rodent monitoring and trapping devices along runs (against wall floor junctions where we know the rodents have been travelling) is helpful. This is especially useful due to the fact that they will use their tactile stimuli to travel in this pattern. Adding to this, is the point that they are creatures of habit!

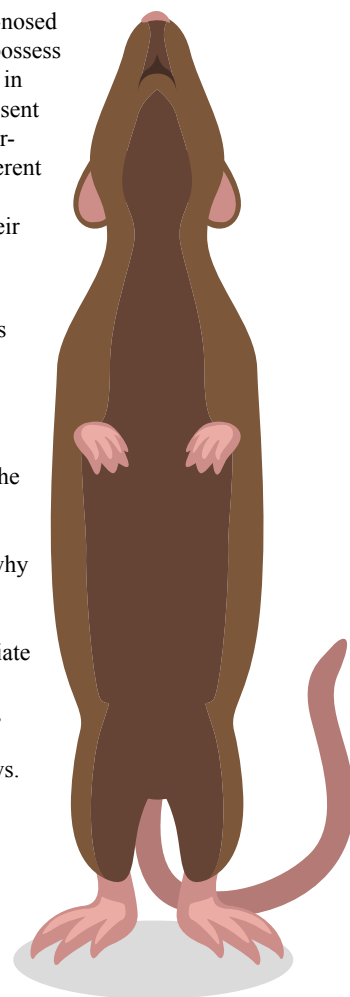
Carefully consider making material changes. Although not necessary in all circumstances it may be worthwhile changing the material of the monitoring station. For example, metal is cold and is easy to differentiate. Plastic and cardboard less so, hence why some stations can have a cardboard liner added, to further camouflage the internal surface of the monitoring station. You could also use locally available materials (as always, label directions apply), lessening neophobia but knowing that the neophobic response is triggered by differences in the normal environment perceived by the whiskers, guard hairs or feet pads. With rodent behavioral knowledge and known responses to certain stimuli we can predict (in part) where the rodent is most likely to travel and go. This knowledge allows us to tailor treatments to the environment present.

### Moles

Although not rodents, it's only fair that moles (insectivores) are mentioned. They can still create many issues as a 'pest'. Moles in particular have even more advanced whiskers and as important for them, guard hairs. At the epitome of sensory touch perception is the moles nose (not for smell in this case, we covered smell in the PCN 118), but as a touch appendage. Moles possess a specific sensory organ, first discovered in the European mole (*Talpa europaea*) called Eimer's organ. A highly specialised set of skin cells, formed into a bulbous appendage (hence the mole's nose is usually brightly coloured and proportionally larger). These skin cells are densely packed with nerve fibres which can perceive vibrations of the smallest levels. This becomes more visually evident in the star-nosed mole (*Condylura cristata*) whereby they possess twenty two additional appendages located in rings around the nostrils. Known to be present in South America, it is thought that the star-nosed mole can differentiate between different insects as prey. A fantastic example of an outwardly highly sensory adaptation to their environment.

### To summarise.....

- Its essential that sensory perception is considered in all rodent management
- Touch in rodents is very highly developed, for rodents it is basic survival
- Think how it could be perceived by the rodent, think like the rodent
- Consider different walking surfaces
- Consider runs and routes taken and why they may have travelled that way
- Remember that there will always be individuals or even colonies that deviate from the textbook!
- \*Details of all references, quotations, data and research can be obtained by contacting [technical@pestcontrolnews.com](mailto:technical@pestcontrolnews.com)







# Vazor ICE

A ready-to-use freezing spray that works through cold technology (below  $-40^{\circ}\text{C}$ ) to eliminate most crawling and flying insects quickly and efficiently. Insects, upon direct contact with the freezing spray-jet, are controlled quickly. It does not contain insecticides and leaves no residue.

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



# New Products

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## K-Othrine Partix

Contains: 2.49% Deltamethrin

A broad-spectrum suspension concentrate for use against a wide range of insects, including: indoor control of crawling insects, cockroaches, bedbugs, houseflies at rest and spiders, plus outdoor control of wasps in free hanging nests. Suitable for use in public places such as schools and hospitals, domestic, commercial and industrial premises. Features an innovative formulation containing carnuba wax, which holds insecticide onto all surfaces, even absorbent ones. The new formulation also enhances bioavailability of the active ingredient, resulting in efficacy even at low application rates.

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



## Electrostatic Hand-held Sprayer

An electrostatic sprayer designed to positively charge any solution sprayed through it. The sprayer electrostatically wraps any solution around objects to provide a  $360^{\circ}$  coating. The sprayer applies up to 65% less solution and applies the spray over 300 times quicker than a conventional sprayer. The 3-in-1 nozzle lets you set the spray particle size to match the application. The convenience of cordless power allows for effortless movement from room to room with the Victory 16.8v Lithium-Ion battery allowing you to run between 20-80 tanks on a single charge.

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



PCN

## Goodnature A18 Metal Cover

The Goodnature A18 Trap Cover is a sturdy but lightweight powder coated aluminium cover, that can be used to effectively conceal traps when used in open areas. The cover gives the trap added protection from squirrels that may try to chew through the lure basket or other exposed areas of the trap. When fitted, the cover still allows full access for squirrels to enter the trap. There are no fittings required as the cover simply slides over the trap and bracket. Its tight fit ensures that it remains securely in place.

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



## Unikey - Manhole Cover Lifting Kit

The Killgerm Unikey is a universal manhole cover lifting key kit. It comes supplied with a range of interchangeable tips which can easily be attached to the two handles allowing most manhole covers to be lifted. Made from Zinc plated carbon steel the handles and tips have a safe working load of 250kg (1000Kg straight pull destructive testing).

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



## Drain Smoke Bracket

The Killgerm Drain Smoke Bracket is used to help place Killgerm Drain Smokes into drainage pipes in deep chambers. When combined with the Rat Flap Pole, the bracket allows drain smokes to be used in chambers of up to 3 meters in depth. The bracket can also be used as a fire-retardant base when drain smokes are used in plastic drainage pipes. The raised lip at the front of the bracket and raised handle at the rear ensure that the drain smoke remains secure when inserting and removing from drains.

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

## Ratimor Brodifacoum Trays

A highly efficient pasta bait with excellent palatability, in a unique presentation. Packaged in 60g trays.

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# New Products

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# PESTTECH 2019



## NPTA

tomorrow's association  
for today's technician

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While everyone is running around at this time of year, with how it seems at times 'no time to think' the NPTA is busy planning this year's Pest Tech exhibition, which will take place on the 6th November.

**F**ollowing the success of last years move from the Rioch to the Marshall Arena, based at the MK Don's stadium, this year's event to promising to be the best ever. So why should you visit? Well, for numerous reasons, from the quality of speakers and topics on the agenda to keeping up to date with the latest innovations in the pest control industry.

We are all aware of the need to keep up to date with training and knowledge and the chance to do that free of charge, is not to be sniffed at. Also, it is great time to meet up with the people that you haven't seen in a while, after all we are all involved in a very small industry and its great to sit down and have a coffee with old acquaintances.

The NPTA have had a long tradition of running events designed with the pest control technician in mind and this year's event will be no different. So, what is on the agenda this year? The NPTA plan every event with practicality and the needs of the pest control community in mind. To that end, there is going to be a staging area, where technicians can try out the latest innovations in air weapon technology courtesy of BSA where a live rifle range will be in place.

There will also be practical demonstrations on how to cook game and butcher a venison carcase from Ralf Skripek the Wild chef. CJS Falconry will be on hand to talk and advise on the use of Hawks and Falcons in Pest Control situations.

In addition to the usual pest control stands, also present at the event will be DEFRA, the HSE and CRRU who will be able to answer your questions on regulatory matters and is a good opportunity to highlight any concerns you may have about the direction the industry is taking.

There will also be a dedicated seminar area, separate from the main exhibition area, where there will be speakers discussing such topics as pest risk assessment; invasive species, in particular the Asian Hornet, which is likely to become the next big challenge facing the industry and one not to be missed. Also, remember that every talk attracts CPD points, particularly useful for those chasing points before the end of the year.

As if that wasn't all enough, there is also free parking and admission to the event (how often to we get anything free in life) and fantastic facilities within a short walk including, McDonalds, KFC and many other retail outlets.

So, get yourself and your team down to Pest Tech this year for a great day out. The NPTA will be taking pre-registration applications from the 1st October 2019 from both members and non-members.

To book your place, please call **01773 717 716**

## Confirmed Exhibitors

- BASC
- BAYER
- BELL LABORATORIES
- PELSIS
- CJS Birds of Prey
- Rundlebeck Taxidermy
- Bradshaw Bennett
- Metex
- Bat Conservation Trust
- Lodi UK
- CRRU (Campaign for Responsible Rodenticide Use)
- PMA (Pest Management Alliance)
- Ralf Skripek the Wild chef
- Bower Products, Collin's Traps
- Pest Magazine
- DEFRA
- W.F.Fountain
- Basis Prompt
- Killgerm Group
- Pelgar International
- Pest West
- SOFHT
- Rentokil Deadline
- IENV Solutions
- PestFix
- Russell IPM
- Cliverton
- Barrettine Environmental
- Health Woodstream Europe
- HSE
- Hockley International
- ATEO (Air rifle Training and Education Organisation)
- BSA Guns



## Be prepared for | any pest

- Trusted high performance, low dose formulation
- Excellent broad spectrum insect control
- Proven rapid knockdown and reliable residual action
- Easy, acceptable and safe in use



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 **BASF**  
We create chemistry



# PPC LIVE 2020 shaping up nicely

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**P**PC Live is on the road again! The next stop for the one-day exhibition and conference is the Yorkshire Event Centre. Set in the beautiful, historic Yorkshire Dales National Park, Harrogate, PPC Live is all about giving frontline staff, hands-on experiences, and showing off the latest and greatest innovations in the sector.

**PPC Live is back! Get the date in your diary now: 11 March 2020**

The British Pest Control Association (BPCA) is well known for its national event PestEx. PPC Live is BPCA's sister show with a focus on providing practical experiences for frontline staff like technicians and surveyors.

## LOCATION, LOCATION, LOCATION

The Yorkshire Event Centre is located just 15 minutes from the motorway with plenty of free parking and only a ten-minute walk from the nearest train station.

The 250-acre Event Centre is the perfect location for a Northern PPC Live. Hall 2 is 1,950m<sup>2</sup> which is ideal as there will be loads of exhibitors with a mix of disciplines from across the pest management industry.

PPC Live will have a large exhibition hall, 100-seat seminar theatre, an outdoor demo area with grandstand seating and an all-new indoor practical area. It's the only pest management show in the UK that does all of that!

## OUTSIDE DEMO AREA

Back by popular demand! PPC Live will sprawl outside too (and not only to take in the beautiful countryside). BPCA will be hosting some practical pest management demonstrations.

Here's a little taste of what to expect:

- UAVs (drones) demo
- Air gun training
- Practical trapping session
- Working at height equipment.

And that's only a sneak preview! Grandstand seating will give you a perfect view of the demonstrations.

## TECHNICAL SEMINAR THEATRE

Our silent technical seminar theatre will have seating for 100 people and will use headphones like PestEx, you won't miss a single word of the presenters.

Sessions they've already confirmed include "How to do great site surveys" and "An insecticide stewardship panel".

Industry experts and PestEx favourites Sharon Hughes from BASF, Alex Wade from Pelgar and Matthew Davies from Killgerm all have new talks planned for PPC Live. Sean Byrne from PestFix will be talking at PPC Live after his talks at BPCA Regional Forums received such good reviews.

The team from the Bat Conservation Trust will be giving us a peek at some of the stuff they've been working on with BPCA. BPCA will also be launching new training courses, so PPC Live 2020 really isn't to be missed!!

## INDOOR DEMO THEATRE

See new ideas and get some hands-on experience while you're at the show in the new indoor demo theatre. PPC Live is all about how things work and giving you the tools to help you in the field.

PPC Live has joined forces with friends and experts from around the industry to showcase ideas old and new. The indoor demonstration theatre is about giving you the opportunity to interact with practical sessions, lead by industry experts.

The schedule is already action-packed. Already booked:

- A practical fumigation session
- A guide to effective rodent proofing
- Demonstrations of remote monitoring technologies
- Interactive face mask fitting
- Insect identification workshop.

## REGISTRATION OPEN

Any guests that register early receive a bacon roll and hot drink. Don't wait until the last minute to register!

[bpca.org.uk/ppclive](http://bpca.org.uk/ppclive)

## WANT TO EXHIBIT AT PPC LIVE 2020?

Not booked your stand yet? Contact Beth at BPCA and ask about how you can get your products into the hands of technicians and business owners. [beth@bpca.org.uk](mailto:beth@bpca.org.uk)

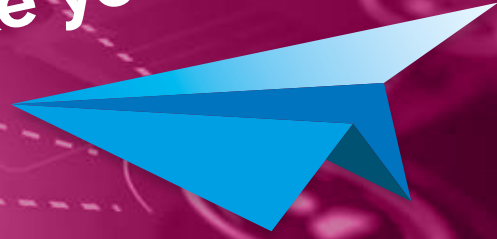




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# Government finally breaks its silence over ‘gagging order’ crackdown in the workplace

**T**HEY have long been the legal weapon of choice for the rich, famous and powerful to stop their dirty washing being aired in public.

Businessman Sir Philip Green, film mogul Harvey Weinstein, and soccer legend Cristiano Ronaldo are just a few celebrities who have reached for Non-Disclosure Agreements to prevent alleged wrongdoings hitting the media.

But away from the High Street, the Hollywood boulevards and the world’s top football stadiums, they have increasingly been misused in UK boardrooms to hush up employee claims of sexual harassment, racial discrimination, bullying and other abuse in the workplace.

It’s no secret that the Government has been plotting a crackdown on such agreements – also known as “gagging orders” or, in old money, confidentiality clauses – being used to stop people from speaking out.

The vast majority of UK businesses comply with the law and use NDAs legitimately – from protecting commercially sensitive information to preventing information being shared with competitors. And it is crucial that this right is protected.

Yet, as we have all seen in the news recently, there is a handful of employers using the secretive nature of NDAs to cover-up criminal acts in the workplace.

Many women – as well as men – have been pressurised to accept the pay-off and the gagging clause that comes with it, rather than try to take on their boss and their legal team, and risk losing everything.

But all this is poised to change as greater protection for those facing harassment, bullying and intimidation comes into force.

For the first time, new legislation will prohibit NDAs being used to prevent individuals from disclosing information to the police, regulated health and care professionals, or legal professionals, such as a doctor, lawyer, or social worker.

The long-awaited shake-up will also:

- Ensure employers make clear the limitations of a confidentiality clause, in plain English, within a settlement agreement and in a written statement for an employee, so individuals signing them fully understand what they are signing and their rights.

- Extend current legislation so that individuals signing NDAs will get independent legal advice on the limitations of a confidentiality clause – including making clear that information can still be disclosed to police, regulated health and care professionals, or legal professionals regardless of an NDA.
- Introduce new enforcement measures to deal with confidentiality clauses that do not comply with legal requirements - for example, an NDA in a settlement agreement that does not follow new legislative requirements will be legally void.

Whether the proposed changes go far enough to stamp out fully the growing misuse of NDAs remains to be seen – the devil, as ever, will be in the detail.

Yet the Government announcement signals the biggest step forward for those employees who wish to blow the whistle on workplace abuse – and are currently silenced.

**For advice on NDAs, gagging clauses, or your businesses queries generally please feel free to call Giles Ward on 07789 401 411 or email him at [giles.ward@milnerslaw.com](mailto:giles.ward@milnerslaw.com)**

# Your guide to the pest control 2019 TRAINING DATES



To book visit: [www.killgerm.com](http://www.killgerm.com)

Killgerm Training run courses nationwide offering different types of courses for different levels of experience and knowledge. Details of all course dates and locations are available online at:

[www.killgerm.com/pest-control-training-calendar](http://www.killgerm.com/pest-control-training-calendar)

There is also a full list in the Killgerm catalogue on pages 223-225.

For further information or to book your place on a course call:

01924 268445 or email [training@killgerm.com](mailto:training@killgerm.com).

## 2019 TRAINING DATES

### Killgerm Principles of Rodent Control

10th Sept 2019, Ossett  
10th Sept 2019, Lingfield  
24th Sept 2019, Norwich  
9th Oct 2019, Grangemouth  
5th Nov 2019, Perth  
26th Nov, Bristol

### Insect Control

11th Sept 2019, Ossett  
11th Sept 2019, Lingfield  
23rd Oct 2019, Coventry  
25th Sept 2019, Norwich  
27th Nov 2019, Bristol

### Safe Use of Pesticides

12th Sept 2019, Ossett  
12th Sept 2019, Lingfield  
26th Sept 2019, Norwich  
24th Oct 2019, Coventry  
28th Nov 2019, Bristol

### Selling & Marketing for Bird Control

20th November 2019, Ossett

### Pest Awareness for Non PCO

17th Sept 2019, Ossett

### Safe Use of Air Weapons for Bird Control

12th Sept 2019, Kibworth  
18th Sept 2019, Portishead, Bristol  
19th Sept 2019, Bisley  
9th Oct 2019, Doncaster

### Bird Control Theory/Practical

3rd & 4th Sept 2019, Cluny Clays  
2nd & 3rd Oct 2019, Portishead, Bristol  
16th & 17th Oct 2019, Ossett

### Sales Skills Course

13 & 14th Nov 2019, Bracknell

### IOSH Working Safely in Pest Control



1st October 2019, Aldershot  
21st November 2019, Ossett

### Starting Out in Pest Control

12th Nov 2019, Bracknell

### Pest Control Refresher

19th Sept 2019, Coventry  
9th Oct 2019, Ossett  
10th Oct 2019, Bristol  
10th Oct 2019, Grangemouth  
29th Oct 2019, Aldershot

To book visit: [www.bpca.co.uk](http://www.bpca.co.uk)

### Using Rodenticides Safely

09/09/2019 Derby

### Practical Vertebrate Trapping

10/09/2019 Derby  
22/10/2019 South

### Practical Insect Control

11/09/2019 Derby  
23/10/2019 South

### Starting and Managing Your Own Pest Management Business

18/11/2019 Derby

### General Pest Control - Level 2 Award in Pest Management

22/09/2019 Stafford

### Certificate in Bird Management

12/09/2019 Derby

### Bedbug Control

17/09/2019 Midlands

### Insect Identification

16/09/2019 Midlands

### Safe Use of Air Weapons for Effective Pest Management

29/10/2019 South

### Becoming a Technical Inspector


08/10/2019 Scotland

### Becoming a Field Biologist

09/10/2019 Scotland

### Level 3 Award in the Safe Use of Fumigants for the Management of Invertebrate Pests

30/09/2019 Derby



To book visit: [www.pestsolution.co.uk](http://www.pestsolution.co.uk)

### September 5, 2019

#### RSPH Level 3 Award in Pest Management

Day 1 – 5th September 2019  
Day 2 – 17th October 2019  
Day 3 – 18th October 2019

### September 12, 2019

#### RSPH Level 2 Certificate in Pest Management

Day 1 – 12th September 2019  
Day 2 – 13th September 2019  
Day 3 – 19th September 2019  
Day 4 – 20th September 2019  
Day 5 – 26th September 2019  
Day 6 – 27th September 2019

Exam – 4th October 2019

### October 10, 2019

#### RSPH Level 2 Award in the Safe Use of Rodenticides

### November 14, 2019

#### Practical Vertebrate Trapping

### November 21, 2019


#### RSPH Level 2 Award in the Safe Use of Rodenticides

### November 28, 2019

#### RSPH Level 2 Award/Certificate in Pest Management

Day 1 – 28th November 2019  
Day 2 – 29th November 2019  
Day 3 – 5th December 2019  
Day 4 – 6th December 2019  
Day 5 – 12th December 2019  
Day 6 – 13th December 2019

Exam – 20th December 2019



To book visit: [www.pestsolution.co.uk](http://www.pestsolution.co.uk)

### November: 18th to 27th

#### RSPH Level 2 Award & Level 2 Certificate:

Day 1 – 18th November 2019  
Day 2 – 19th November 2019  
Day 3 – 20th November 2019  
Day 4 – 21st November 2019  
Day 5 – 22nd November 2019  
Day 6 – 25th November 2019  
Day 7 – 26th November 2019  
Day 8 – 27th November 2019

### September: 9th to 18th

#### RSPH Level 2 Award & Level 2 Certificate:

Day 1 – 9th September 2019  
Day 2 – 10th September 2019  
Day 3 – 11th September 2019  
Day 4 – 12th September 2019  
Day 5 – 13th September 2019  
Day 6 – 16th September 2019  
Day 7 – 17th September 2019  
Day 8 – 18th September 2019



To book visit: 01773 717 716

## NPTA 'ON THE ROAD' TRAINING DAYS

11th September 2019, Tonbridge,  
19th September 2019, Farnborough  
16th October 2019, Dudley



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The main safety feature of the RatMat is the low energy pulse it uses. This is dramatically less powerful than a standard electric fence.

Our energiser box generates a pulse of 0.45J which is far less than some large animal boxes which generate up to 18J. This means it is 40 times less powerful, whilst still being effective in repelling small animals.

RatMat uses the least powerful energiser box in the range which was initially developed to repel pigeons safely. The box is commonly used in domestic settings for chickens, pets and as a cat repellent.

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