

Trouble on two wings

tackling flying insect problems

Flying insects are a classic symptom of summertime, so much so that we almost take them for granted. A few flies in the main kitchen, a bluebottle on the meat counter, some wasps around the outdoor dining area; not ideal admittedly, but surely not a disaster? Clive Boase of the Pest Management Consultancy explains.

SMALL INSECTS – BIG PROBLEMS

Of course, not every fly is a disaster, but it may be a disaster waiting to happen. Every year we see incidents where flying insects create serious problems for premises and businesses. For example, a couple of summers ago, a large and very popular UK theme park found itself featured on a prime time TV investigative show, in relation to wasp problems. A senior executive from the park admitted on the show that they had mishandled the wasp problem, and put the public at risk. On a smaller scale, but no less important to the business itself, customers of a popular coffee chain complained to their local Environmental Health Department about a fruit fly infestation. This resulted in the restaurant being closed for a week, and being featured on the front page of the regional newspaper under a damaging headline. There are many other similar cases that demonstrate not only a threat to the wellbeing of the customer, but which also have had a serious impact on the business itself.

Although most flying insects are small in size, the severity of the problems they can cause is disproportionately large. Flying insect problems fall into four main categories:

1 Nuisance

The simple presence of numbers of flying insects may be an irritating nuisance to staff, customers and residents. Guidance on the Clean Neighbourhood and Environment Act (2005) states that “As a guideline, an occupier will normally experience some irritation if there are five or more ‘flying’ house flies present in any one room at any one time on three successive days.” Clearly, the threshold at which many guests, customers, or the public become upset by insects is relatively low, and unhappy customers lead to complaints.

2 Disease transmission

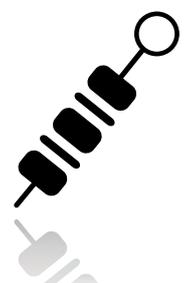
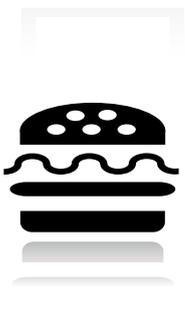
Flies are widely recognised as carriers of disease-causing organisms, and their high mobility makes them particularly effective vectors. They acquire these pathogens whilst crawling or feeding on infected materials such as putrid waste, and may then subsequently infect human food when they alight on it. This transfer may occur simply as the fly walks on the food, but will also take place as a result of the fly’s defaecation and regurgitation. A wide range of pathogens have been isolated from houseflies, and in a healthcare setting the presence on flies of the notorious MRSA and *C. difficile*, is of particular concern.

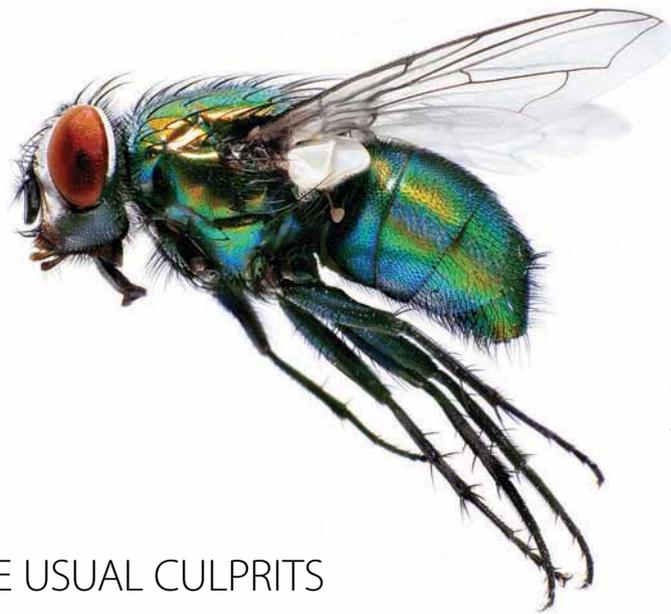
3 Prosecution

Environmental Health Departments have a responsibility to enforce food safety and environmental health legislation. Typically EHOs will work with and advise businesses where potential insect issues are present. However as a last resort, and where advice has not been heeded, then legal action may be taken against offending businesses. Prosecutions for fly problems are likely to lead to more negative exposure for the business.

4 Impact on brand

Negative publicity arising from a fly incident can have a significant impact on the public’s and customers’ perception of the brand. This in turn is likely to affect the business itself. Such impacts are difficult to quantify, but brand-aware organisations are very conscious of the risks, and will take great care to avoid such negative exposure.





THE USUAL CULPRITS

In tackling fly problems, the first step is to work out what types of flies are present, or could be in the future. As Akeel Jaffar of London-based HLA Pest Control Services points out, “Identification is essential if the source of the flies is to be located, and appropriate management measures then put in place.”

Remember also that the fly’s life cycle comprises not just the adult winged stage, but also the egg, larva (maggot) and pupal stages. Although it is the mobile adult stages that are normally of most concern, finding and removing the habitat of the preceding young stages is often key to solving the problem.

Four steps toward effective fly management

Once our pests have been identified, we can start making progress towards their prevention and elimination. Again we are going to need to work closely with our pest control contractor on this, although it is likely that much of the work will eventually have to be done by ourselves. As Moray says; “There are some companies that still believe that their pest control contractor should be able to resolve their pest problems unaided. In reality, the best pest control is always a partnership, and when dealing with flying insects, there is probably around a 70/30 split between customer and contractor inputs.”

1 Find the source of the flies, and remove it

Many fly problems arise within the site itself, so work with your pest control contractor to find out where the flies are coming from. They should be able to identify specific fly breeding sites, and provide you with constructive advice on how to reduce or eliminate them. For example, regularly cleaning

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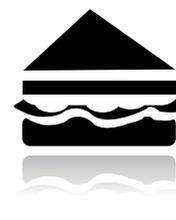
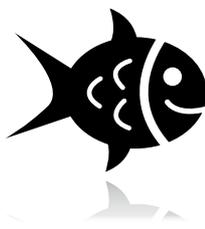
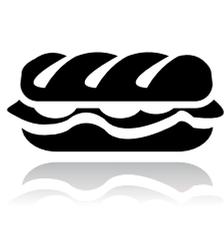
the inside of waste bins will help reduce housefly numbers, drying out areas of wet flooring may reduce drain fly breeding, while removing sugary deposits from under bars and serveries may reduce fruit fly breeding. “One bakery we were involved with” says Brian Duffin of Rokill “had persistent housefly problems. Our investigation found that the flies were breeding within wet flour trapped under equipment. Once the client put procedures in place to prevent this happening in the future, fly problems decreased markedly.”

2 Prevent more insects entering

However no matter how clean you keep your own site, there is little you can do about the surrounding area. There is the likelihood therefore that there will be a steady flow of flying insects attempting to access your premises, throughout the warmer months and into the autumn. Window and door screens are very effective providing they are fitted and maintained well, and are essential in food preparation areas. However other kinds of premises may also require proofing measures. A new hi-tech pharmaceutical manufacturing site in the UK ran into problems with cluster flies in production areas, that contaminated the end product. Preventing contamination required proofing work to the cladding on plant towers.

Tom Holmes of P+L Systems commented “There are a huge range of businesses that can benefit from quality fly proofing solutions – we’ve seen a large increase in the number pest controllers specifying fly screens for ‘non-food’ sites to protect their customers and employees, including hotels and offices.”

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KNOW YOUR ENEMY

Most flying insect problems are caused by a relatively small range of culprits.

Over time, the importance of the different fly groups may change, as Professor Moray Anderson of Killgerm Chemicals points out. “In recent years, we have seen increased numbers of problems in buildings with the smaller flies such as drain and fruit flies, and this appears to be linked to a reduction in the routine use of residual sprays.”



HOUSE FLIES

BLOW FLIES 'BLUEBOTTLES'

CLUSTER FLIES

FRUIT FLIES

DRAIN FLIES

WASPS

APPEARANCE

Medium-sized, dark coloured fly.

Large metallic blue or green flies.

Similar to house flies, but very different behaviour.

Small (<3mm), dark, with red eyes.

Several different types. All are small (<3mm), and most are dark coloured.

Unmistakable, large, with black and yellow bands.

TYPICAL SOURCES

The larvae live in a wide range of decaying organic waste. Food waste bins, landfill sites, and animal farms.

The larvae prefer dead or rotten meat.

The adults and young stages live outdoors in green areas for most of the warmer months.

The larvae live in decaying fruit and vegetable waste. Also in drink spillage in bars.

The larvae typically live in wet, dirty areas, such as drains, areas where waste water accumulates, wet waste bins, and sewage works.

Wasps build and live in a nest, containing up to several thousand wasps. The nest is often in roof voids, cavity walls, or other similar places.

LIKELY PROBLEMS

The adult flies come indoors, and settle on food and surfaces, creating a nuisance and the risk of contamination.

The adults will lay their eggs on raw or cooked meat and fish. Also, a dead bird or rodent in the roof or chimney may become infested and produce hundreds of flies.

In the autumn, the adult flies will come indoors to hibernate, often in roof voids, sometimes in their thousands.

Large numbers of small flies indoors creates a nuisance, and the risk of contamination.

Large numbers of small flies indoors creates a nuisance, and the risk of contamination.

Wasp stings, nuisance to staff and customers, and the risk of contamination of food products.

3 Eliminate any remaining insects

At some sites, improved hygiene and proofing will together eliminate most of the flies. However there will be many other sites where on-going fly control will be essential, to bring numbers down, and to show due diligence.

In roof voids control of cluster fly relies heavily on the careful use of insecticides during the autumn. Similarly, at locations such as waste composting facilities, regular use of insecticides for housefly control may be essential. Nigel Binns of Pestex Services in Staffordshire agrees. “A good analogy is painting the Forth Bridge - it’s a continual process. In waste facilities, the fly population can rise rapidly. If you allow numbers to grow by cutting back on applications, it becomes difficult to re-take control. That’s why an on-going programme of treatments is essential.”

At food handling sites however, insecticides are less likely

to be used routinely, and alternative products such as electric fly killer units are more commonly used instead. Roger Featherstone of Cambridge-based Five Star Pest Control points out that “Although some units still use a high-voltage grid to kill the flies, units fitted instead with a sticky board are much more commonly fitted now, as these reduce the risk of insect fragments contaminating the premises.” Recent guidance from the British Retail Consortium also steers food companies in the direction of sticky board units. In-depth knowledge of these units is vital. Daniela Edward, European Business Manager at PestWest said “we believe good fly control is more than just hanging a unit where it can be seen to emit light. For a fly control unit to be effective, it is absolutely imperative that the right unit is chosen, positioned and maintained correctly. The choice of UV-tubes is another crucial aspect.”

As well as simply killing flying insects, the types and numbers

of insects caught by the EFK can provide useful insight into the status of pest control on your site. Your pest control contractor may be able to provide a catch analysis service, which involves identifying the insects caught, establishing trends, and providing guidance on an appropriate response. For example, a sudden spike in the numbers of fruit flies may indicate a hidden build up of organic waste, that needs finding and removing. Alternatively, the presence of numbers of large night-flying moths, may indicate that proofing measures need checking, such as a kitchen door being left open on warm summer evenings. A good pest control contractor should be able to read the catch like a book, and provide you with constructive advice.

Besides due diligence, good pest control companies should also highlight the areas which are of greatest importance to your business. Steve Jackson of P+L Systems says "Contemporary decorative units are becoming increasingly popular as businesses aim to protect their brands and ensure that customers have a great experience. These discreet units are ideal for front-of-house areas, including receptions, lobbies and restaurants."

4 Keep records

Finally, pest control work on your site should always be documented. Good records are not only a legal requirement, but they will also be useful to auditors, to the Environmental Health department should they visit, and they will be useful to you as you monitor progress and plan future fly control work. Your pest contractor should maintain a folder at your site, containing records of all findings and work done. Do check the folder at intervals to make sure it meets your requirements, and if not, discuss this with your contractor.

OUT-THINKING THE FLIES

Flying insect pests will never be completely eradicated. Every summer brings a new crop of flies, wasps and other seasonal pests, that will yet again threaten our premises and businesses. That threat is increasingly being taken seriously. As Brian Duffin says "we are seeing a growing intolerance of flies, especially in the food

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industry. Clients now want to know where each fly is from, and how to prevent it."

Effective prevention and control of flying insects requires a close partnership between yourself and your pest control contractor. Together you need to look back at last year, see what worked and what didn't, and learn from it. You need your contractor to assess the risks of infestation, identify any current pests, and recommend appropriate measures. They need you to ensure that proofing is maintained, waste is handled properly, and cleaning schedules followed. So, if you haven't done so already, call your pest contractor, arrange a meeting, and draw up a pro-active plan for 2012. Careful planning now will reduce the need for fire-fighting in mid-summer, and we all know what is happening in mid-summer this year. We can't afford to be closed for a week...

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Clive Boase has a background in the development and evaluation of novel products for public health pest control. However for 20 years he has run the Pest Management Consultancy, which provides independent support internationally on urban pest issues to a broad range of clients. He is involved on various levels including training and development, running international conferences, novel product development and evaluation, litigation, and technical writing. He is particularly interested in the management of flying insects, and has recently co-authored a major new book on mosquitoes and their control.

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