

Using insect traps and pheromones in Museums and Historic Houses

Introduction

Pest control in museums should not be simply a reaction to the discovery of insect activity and damage. Every museum or collection should reduce the risk of damage by adopting an insect pest management [IPM] programme. This will include; monitoring for pests, targeting treatment only where it is needed and modifying the environment to discourage pest attack.

The use of insect traps for monitoring is the first priority in setting up an IPM programme in historic houses or museums.

Sticky blunder traps

Non-specific sticky traps should be used as basic monitoring devices for insects such as silverfish, booklice, ground beetles, carpet beetles and other crawling insects. Sticky blunder traps are good for monitoring the residual population of insects in a building to assess the risk to the collection. They can also give a useful indication of the number of crawling pests which are invading a room or building.

Traps should be placed in a regular grid pattern against wall floor angles, preferably in corners where they will catch more wandering insects. Plastic floor traps are low in height and can be tucked under shelves and storage units. Numbers should be matched to the priorities of the collection and a trapping programme should not exceed the resources available to check the traps.

Pheromone traps

However, placement of these traps is more complex than simple sticky traps. Because they are far more expensive, they are usually only used in areas where there is a high risk to valuable objects or where one of these pest species is suspected.

Webbing clothes moth *Tineola bisselliella* Pheromone traps which contain a synthetic attractant lure for clothes moth *Tineola bisselliella* can be very effective. These lures have been used in a number of different traps and situations over the last six years. The flight activity of the males is stimulated by the pheromone and suspended traps provide a very useful early warning of infestation. When temperatures are high enough to promote flight, up to 20 times as many moths may be caught on traps with pheromone lures as on unbaited ones. When temperatures are below 20! C, the males are reluctant to fly and the suspended traps may be less effective. In these situations, the pheromone can be placed on simple sticky traps on the floor and the traps with lures will catch more male moths. *Tineola* lures may also attract males of the case-bearing clothes moth *Tinea pellionella*, although a specific pheromone for this species is now available.

General principles of insect trapping in museums and historic houses

- ! Survey the site and prepare a plan to decide where to place traps
- ! Traps should normally only be placed in areas where there are collections.
- ! Place sticky traps in a regular grid pattern with all traps date-labelled and their position marked on a plan.
- ! Place traps on floors in corners and near walls, not in the middle of open areas.
- ! Check traps at regular intervals. A suggested frequency of trap check is four times a year in March, June, September and December.
- ! Identify and record insects caught on traps. It is also useful to record whether carpet beetles caught are larvae or adults.
- ! The more traps that are used, the greater the chance of finding insects but the work load should not be underestimated and trapping programmes should be designed to be manageable.
- ! Pheromone lures and traps are much more expensive than the small sticky blunder traps but are valuable for accurate monitoring and early warning in sensitive areas.
- ! Large numbers of non-pest insects may be caught on traps if they are near outside doors. When this happens, the traps should be replaced more frequently or the trapped insects will become food for pests.
- ! Over a period of time, a record of catch will build up a picture of the distribution of insects. Additional traps should be placed in areas where pests need to be more accurately pinpointed.
- ! Traps should be used to supplement regular visual inspection of vulnerable objects and the information can be used to target preventative and remedial measures.

Warning when bats are present in a property

Sticky cardboard triangle traps should **NOT BE USED** in rooms where there is any risk of catching bats. If there are bats in the area, and it is necessary to use traps, thin plastic floor traps should only be used.

Traps are available from:

Historyonics, 17 Talbot Street, Pontcanna, Cardiff CF1 9BW

Tel 02920 398943