Integrated Pest Management: A Holistic Approach to Managing Pest Damage to Cultural Assets

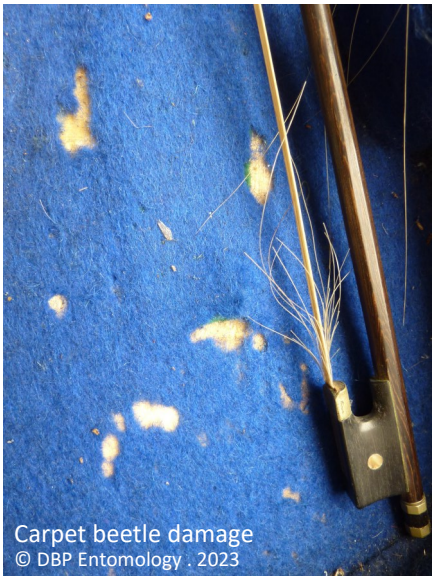
WHAT IS INTEGRATED PEST MANAGEMENT [IPM] ?

Pest control in museums, libraries, archives and houses is frequently a reaction to the discovery of insect activity and damage. The aim of Integrated Pest Management [IPM] is to provide practical, safe and cost-effective methods to prevent collections, furnishings and buildings from being damaged by pests.

The main IPM principles used in museums, libraries and archives are;

- Monitoring for pests by inspection and trapping
- Targeting treatment only where it is needed
- Modifying the environment to discourage pest attack

Silverfish damage
© DBP Entomology. 2023



Carpet beetle damage
© DBP Entomology . 2023

WHY USE IPM IN A MUSEUM, LIBRARY, ARCHIVE OR HOUSE?

Care of collections and historic buildings involves many different disciplines including conservation and management of collections and buildings. The major causes of deterioration are the environmental effects of temperature and humidity together with agents of decay such as insects and moulds. All of these factors are interrelated and the IPM approach is to look at the whole picture rather than to react to each crisis. Expertise in collections care in museums, libraries, archives and houses should be used to develop an IPM programme tailored to the specific needs of a collection or house.

DEVELOPING AN IPM STRATEGY

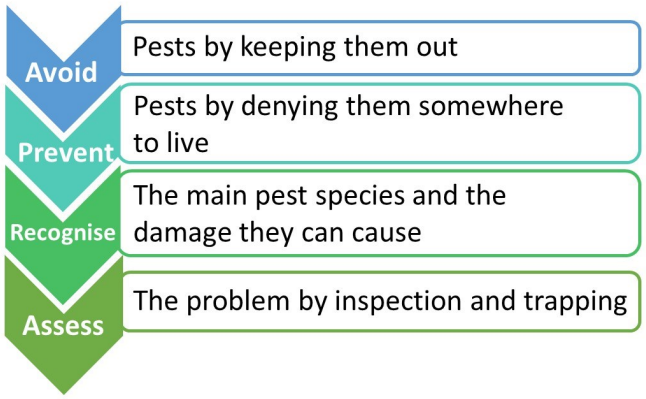
IPM must be relevant to the needs of the building or collection. It should use as much local information and expertise as possible. It should also be practical and achievable as it is all too easy to devise an IPM scheme which turns out to be unworkable. It should be a process of evolution rather than revolution and encourage participation by all.

Silverfish on a trap
© DBP Entomology. 2023

AC/DP CoLab
amycrossman@hotmail.com


Carpet beetle larvae
© DBP Entomology. 2023

To develop an IPM strategy it is important to understand and recognise some of the key components of successful pest control. These are:



Once the pest problem has been identified, then the options for control must be evaluated. There are many factors which will determine the decision on what will be the most appropriate treatment to use. Problems in buildings must be targeted by cleaning and use of residual insecticides in specific areas. The treatment used against an infestation in an object will depend upon the type and fragility of the object, the environment where it is kept and the available budget. Options include; low temperature, high temperature, carbon dioxide fumigation and nitrogen anoxia. Any decision involving treatment of historic material should be approved by a trained conservator.


Webbing clothes moth larvae
© DBP Entomology. 2023

Benefits

- A well planned and executed IPM programme will prevent crisis and will prevent problems recurring.
- Modern IPM methods are much safer for objects, people and the environment than routine use of toxicants.
- An IPM programme will make much more effective use of limited human and cash resources.

Key references and sources of information

Pinniger, D B [2015] Integrated Pest Management in Cultural Heritage, Archetype Publications, London, UK 142p.

Pinniger, D B and Lauder, D [2018] Pests in Houses Great and Small. English Heritage, London, UK

Strang, T and Kigawa, R [2009] Combatting Pests of Cultural Property. CCI Technical Bulletin 29, Ottawa, Canada. 44p.

Website giving information on IPM and including an insect pest database

What's Eating Your Collection? (whatseatingyourcollection.com)

Website for IPM information in the USA

Museumpests.net | A Product of the Integrated Pest Management Working Group

English Heritage insect pests poster

Conservation Advice and Guidance | English Heritage (english-heritage.org.uk)

AC/DP CoLab
amycrossman@hotmail.com