

INTEGRATED PEST MANAGEMENT

Introduction

The word “pest” refers to any of a number of creatures that can pose a threat to your collection. Many insects like to feed on substances found in documents, photographs and books such as cellulose, starch and glue. Mice like to shred paper for nests. Pests can work very quickly, and in a short time your precious documents may be irreversibly damaged. It is very important, therefore, to be aware of the possible dangers and what you can do to prevent them.

INTEGRATED PEST MANAGEMENT (IPM):

Integrated Pest Management (IPM) is an “holistic” approach to controlling pests. IPM seeks to control pests by understanding their habits and life cycle, and thus why they might be attracted to your area. IPM also stresses a minimal and judicious use of pesticides which may pose a potential threat to your collection, the environment and you.

There are five basic components of Integrated Pest Management: *Inspection and Monitoring, Identification, Habitat Modification, Treatment and Prevention.*

Inspection and Monitoring

- It isn’t necessary to inspect everything in your collection, just a sample of each type of item in each different location.
- Keep an eye out for the following signs:
 - ⇒ insect parts or carcasses
 - ⇒ droppings - insect droppings may look like fine granular powder or tiny black specks
 - ⇒ holes, both in shelving and in artifacts
 - ⇒ areas that look “skinned” - many insects like the sizing on the surface of paper or book covers.
- Sticky traps can be placed in strategic areas such as behind books on a shelf, along walls and under furniture.
- Regular inspection can keep a small problem from becoming a disaster!

Identification

- It’s important to know exactly what type of pest you have so you don’t waste time and resources on treatments that aren’t appropriate for that type of pest.
- Research into the habits and life cycles of the specific pests that are posing a threat to your collection will tell you what you may have to do or change to make your area more unattractive to the pest.
- Many universities and cooperative extension program offices have entomologists on staff who may be willing to provide identification as a public service.
- There are also several very useful web sites that can help you identify a particular pest, as well as provide information on habitat preferences and favorite foods. Some of these sites are listed at the end of this note.

Habitat Modification

- There’s a reason the pests have decided to set up housekeeping in your area. Find out what it is that they like and *change* it.
- Find their food and water sources and eliminate them.
- Keep dishes washed and food crumbs swept up.
- Empty interior trash receptacles often.
- Remove dying plants and cut flowers.
- Try to maintain a strict schedule of housekeeping. Dirt and clutter provide a hospitable environment for many pests.

- Many insects enjoy high temperature and humidity levels. Maintaining moderate conditions (around 70 degrees Fahrenheit and 50% relative humidity) will help control pests and help preserve your collection.
- Habitat modification will not only encourage existing pest populations to leave, it will also help prevent a re-occurrence of the problem in the future.

Treatment

- Remember that finding one or two insects is an occasion for heightened awareness and monitoring, but is not necessarily an occasion for use of chemical treatments.
- If treatment becomes necessary, try first to find a non-chemical method to eliminate the pest.
- Materials that are not fragile or deteriorated can be vacuumed. Empty vacuum bags immediately afterwards.
- Some sticky traps are made to attract specific pests, such as cockroaches and clothes moths.
- Careful and controlled freezing can be used with some items to kill the pests infesting them. Just remember that freezing is not appropriate for everything, and can actually damage some items. Please contact a conservation professional before freezing anything you care about.
- If chemical treatments are deemed necessary, use only those that are appropriate for the specific pest that you have.
- Try to select the least toxic of the pesticides that are available.
- Try not to use poisons for rats or mice. Poisoned rodents often crawl away and die in unreachable areas such as between walls and under furniture, and their carcasses provide food for other pests.
- Rodents should be caught with traps, either “humane” or “death.” Traps should be checked frequently.

Prevention

- Find out how the pests are gaining entrance to your area and stop them.
- Make sure all doors and windows are adequately screened and sealed.
- Try not to leave doors or windows propped open.
- Seal cracks or holes in the foundation and gaps around pipes.
- Place screens or filters over drains and vents.
- Place exterior trash receptacles away from the building.
- Try not to plant bushes and other plants within a foot or so of your building.
- Remember that insects can also be brought into the building in the boxes, books and papers themselves. Check new additions to your collection carefully for signs of insect infestation.

Sources

- ◆ Patkus, Beth Lindblom. “Integrated Pest Management.” Andover, MA: NEDCC, 1999.
- ◆ Jessup, Wendy Claire. “Integrated Pest Management.” *AIC News* 22, no.3: 1-5.
- ◆ *Museum Handbook: Part I - Museum Collections*. Washington, DC: National Park Service, 1990.

For further information

The conservation staff of the Local Records Preservation Program is available to provide additional guidance and support. Contact them at: P.O Box 1747, Jefferson City, MO 65102, (573) 751-9047, or local.records@sos.mo.gov.

The Local Records staff has compiled a list of preservation-related vendors, particularly those that provide supplies and services to Missouri citizens and government officials. It is available from the Local Records office or at https://www.sos.mo.gov/CMSImages/LocalRecords/Vendors_Information.pdf.

Published by the Local Records Preservation Program, Missouri State Archives, Office of the Secretary of State. The full set of Conservation Notes on this and other topics is available at <https://www.sos.mo.gov/archives/localrecls/conservation>.

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