

## █ INTEGRATED PEST MANAGEMENT IN COLLECTIONS STORAGE AND CONSERVATION

### **Scope**

This document is intended to set out policy regarding monitoring pests in collections areas █. Collections areas are defined as any spaces in which artwork is stored or exhibited, including collections storage, the conservation laboratory, and gallery spaces. Pests in non-art storage areas, such as kitchens and food service spaces, are monitored by Building Operations (contracted out to █).

### **Justification**

The threat of pest infestations is a constant and major concern for museum collections. The Integrated Pest Management program at █ is a risk management program that focuses on preventive practices such as sanitation, monitoring, education and excluding pests to control pests and to reduce or eliminate the use of pesticides in the museum. The IPM program at the █ is designed to manage and reduce the risk of damage and/or loss to the art collection and to provide a healthier and safer environment for both visitors and staff.

### **Applicability**

The IPM program at █ is coordinated by the museum's Conservation Scientist. Most IPM activities relating to collections are carried out by Collections Management and Conservation staff as directed by the Conservation Scientist and Conservator, with critical support from Building Operations and Environmental Services, but all staff and volunteers play a role in protecting the collections. A successful IPM program requires museum-wide support.

### **Monitoring and Record Keeping:**

The IPM team monitors pest activity within the art storage areas of the building using sticky traps. These areas include basement storage, the conservation laboratory, and the library and archives. Sticky traps are monitored monthly by collections and conservation staff. Currently, galleries are not monitored with sticky traps, but at a minimum, select monitoring is advised in galleries adjacent to food services and the live plants in Rivera Court.

- Identification: The █ identify pests found in the museum. Reference images of known museum pests can be found on the MuseumPests website: <https://museumpests.net/identification/>
- Recording: Ground traps are labeled with the room number, location within the room (a-c, as labeled on the IPM maps), and date the trap was set. Insects identified

for each trap are recorded in excel. Excel spreadsheets from monthly inspections are located on [Sharepoint](#). Annual review of these findings is conducted to locate potential problem areas, especially those effected by high humidity. Locations of sticky traps are documented on maps prepared by █; the maps are stored on Sharepoint.

Any sightings of known pests (e.g., cockroaches, dermestid beetles, silverfish, book lice, mice, rats), mold outbreaks, or unidentified insects in the museum should be reported to the collections or conservation staff.

### **Preventive Actions**

The following actions are undertaken to prevent an infestation and mitigate it from spreading:

Museum Housekeeping and Building Maintenance: Regular cleaning of the entire museum/maintaining the building envelope. Cleaning the cabinets and collection area removes shelter and food for pests. Clutter or trash should not be allowed to accumulate. Collection areas should be cleaned regularly by the museum cleaning crew. Food and drinks should be prohibited in the collection areas. Unneeded packaging materials should be promptly discarded, especially starch based peanuts which are known to harbor pests.

Storage Cabinets: Cabinets protect collections from light as well as pests. They should be regularly monitored for faulty seals and maintenance problems. Doors should remain closed at all times except when working on collections within the cabinet.

Examination of Incoming Objects: All objects entering the museum (this includes but is not limited to collections objects returning from loan; incoming loans from other institutions; and gifts and acquisitions) are inspected for pests by Conservation staff; this activity is generally undertaken after a 24-hour acclimatization period. If a conservator is not immediately available, Collections Management and Registration staff will examine the object and report findings to Conservation.

Isolation: The isolation of incoming objects is an important part of the IPM program and will prevent the infestation of collections. A widespread outbreak of pests in a collections area can cause serious and irreversible damage to artwork and be a costly and long-term endeavor to resolve.

- **Bagging and Monitoring**: Quarantining an object in a sealed, clear polyethylene bag will not eradicate pests, but may be used to monitor objects with suspected infestations and will inhibit the infestation of other objects when other treatments are not yet feasible. Objects should be placed in appropriately sized polyethylene bags, always maintaining a complete seal. The object should be placed on a clean, white support of stiff board to enable sighting of frass or other evidence of pest activity.

- Isolation room: The museum does not currently have a dedicated isolation room, but one should be assigned, preferably adjacent to the “off-dock” receiving area and distant from collections storage. A chest freezer should be located in this space as well as storage cabinets and shelving for art. The sole purpose of this room is short-term isolation of incoming objects to prevent a large infestation of collections.

### **Remedial Actions for Active Infestations**

If an object is found to be infested, the following actions may be taken, under the supervision of the Conservation Scientist and/or the Conservator:

#### **1. Documentation:**

Identify the pest and the stage in its development, and identify the media of the infested material (protein or cellulosic). Nearby collections objects should be examined to ensure the infestation has not spread; identification of the pest and its stage of development will determine what materials in collections are most important to examine. All treatment must be documented. After treatment, objects should be cleaned, if appropriate, and all evidence of infestation should be documented and removed.

#### **2. Treatment:**

Depending on the collection item/material, pest, and extent of infestation:

Low Temperature Treatment (“Freezing”): Low temperature treatment is the preferred method of eradicating a pest infestation. A chest freezer is located in the █. Large objects may require the rental of a shipping container freezer. This method is sustainable and cost-effective but may not be suitable for all types of materials, and there are size limitations related to the dimensions of the freezer.

Anoxia: Anoxia (a low oxygen environment) may be used when low temperature treatment is not practical. █ has the ability to construct custom-sized packages for anoxic treatment.

Fumigation: Chemical treatment of objects is not recommended but may be used as a last resort, such as with the infestation of a large collection. The preferred chemical at this time is Vikane (sulfuryl fluoride). This is ideally performed offsite or in a fumigation trailer, as onsite fumigations require the building to be closed to staff for health and safety reasons.

Related actions:

Isolation and Monitoring: Following the treatment of an object by low temperature treatment, anoxia or as a last resort, fumigation, objects may be sealed in clear polyethylene bags and monitored over time to ensure the success of the treatment. A note indicating the date and purpose of the bagging should be attached to the exterior of the bag.

Pheromone traps: Pheromone traps may be used for targeted, species-specific testing where necessary.

Sticky traps/mats: Placement of sticky traps and mats at key points in storage areas will not eradicate pests but will allow for capture and detection of any wandering pests.

### **Support and training**

Staff responsible for IPM of art storage areas at the museum – primarily Collections Management and Conservation – are trained on contemporary approaches to integrated pest management by █. Funds are allocated through the Collections Management and Conservation departmental budgets to ensure that the staff has the necessary supplies to carry out their work, as well as access to workshops and other training opportunities.

█ in integrated pest management as applied within museums and regularly offers trainings/workshops that are highly recommended for Collections Management staff involved in IPM.

Training resources:

- Museum Pests workshops: <https://museumpests.net/author/rachael/page/4/>
- Insects Limited: <https://www.insectslimited.com/conferences>
- Other: <https://museumpests.net/resources-2/resources-education-training/>

### **Revision/Review**

This policy will be reviewed on a yearly basis. Conservation (█) will initiate the review with support from Collections Management (█).

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