



## PEST MANAGEMENT AT THE CMN

Pests pose a serious threat to the CMN's natural history collections. The damage done to specimens is irreparable. You will find below some information on the main types of pests and some simple steps you can take to help prevent infestations. The CMN has put in place many precautionary measures to safeguard our collections from a variety of pests. By respecting these measures, you can help us protect the specimens.

### WHAT ARE PESTS ANYWAY?

Some examples of the more common pests:

- ☞ **Insects** are the most frequently encountered pests. Both larval & adult stages can be destructive.
- ☞ **Beetles** - the pest species of beetles tend to be small, less than 1cm in length. Most belong to one family of beetles called *Dermestidae* (carpet beetles and larder beetles, among others). Dermestids are the most destructive pests in museums, as they will eat virtually anything organic, including animal and plant matter, hair, horn, feathers, fur, carcasses, wool, etc.
- ☞ **Clothes moths** - Larvae eat hair, feathers, fur, wool, and any natural fibers.
- ☞ **Silverfish** - Both immature and adult stages are destructive, and are most commonly found in humid situations. They eat paper, starchy foods, book bindings and glues, textiles, wall paper, sizing, linen and cotton.
- ☞ **Booklice** – Tiny insects that feed on paper; they are found in areas of high humidity.
- ☞ **Ants** - Carpenter ants can do extensive damage to wood.
- ☞ **Mice & Rats** - They will chew all kinds of plant and animal material.

Please remember that even if the pest itself doesn't cause direct damage, dead pests will provide a food source for other pests. A good example of this is an accumulation of dead cluster flies that supports a dermestid presence.

## WHAT CAN YOU DO TO PREVENT PEST INFESTATIONS?

- ☞ Please **do not bring live plants or cut flowers into the NHB** building. The soil is a potential source of hidden insects. Silk plants are fine.
- ☞ Keep any food items in offices and coffee stations in plastic containers with a good seal. Ziploc plastic bags or plastic bags fastened with a twist-ties **ARE NOT** pest-proof. Placing food in the refrigerators is also a good way of discouraging pests.
- ☞ Please do not leave behind partially eaten food.
- ☞ If you eat at your desk or in a meeting room after the cleaners have emptied the garbage pails, take your garbage with you when you leave. You can put it in a central refuse collection area, take it to a recycling or composting bin, or take it home. Do not let it sit in the garbage pail overnight.
- ☞ Keep coffee stations and eating areas clean – wash your dishes, clean up crumbs, wipe up spills.
- ☞ Eliminate clutter on windowsills and under desks in order to facilitate cleaning and provide fewer places for insects and rodents to thrive.
- ☞ Help us with pest monitoring – if you find a pest, report problems by complete a Pest Incident Report Form (available on most CMN bulletin boards)
- ☞ Watch for adult insects (alive or dead), larvae, cast skins and rodent droppings. Staff who work regularly with collections in storage and on display are particularly encouraged to scan for signs of pest activity.

## PRECAUTIONS TAKEN BY THE CMN

- ☞ **No food or drink is allowed in collection areas**, including collection pods, labs, examination rooms.
- ☞ At the NHB, there is a designated area well separated from collection pods to receive incoming material – **all incoming biological material goes through the Pest Management Area to be frozen as a preventive measure.**
- ☞ A similar procedure will be implemented shortly at the VMMB.
- ☞ An extensive monitoring program is in effect at the NHB. Sticky traps are placed throughout and collected every month. The traps are then studied and the insects are identified and counted. This information is used to guide our pest management activities.
- ☞ The museum uses non-chemical treatments for pest eradication including walk-in freezers, a carbon dioxide bubble, and heat treatment.
- ☞ Vulnerable specimens are occasionally inspected for signs of infestation. We look for adults and larvae (alive or dead), shed skins, frass, and damage to specimens such as holes or missing parts. The most susceptible specimens are checked more frequently.
- ☞ CMN's cleaning contract contributes to pest management
  - garbage is removed daily from the building
  - garbage is placed outside in tightly sealed containers that are cleaned regularly.
- ☞ The Natural Heritage Building includes protection features -
  - There are four separate pods for collections to reduce the risk of cross-contamination
  - Ventilation systems for pods are separate from the rest of building and isolated from each other in such as way as to reduce risk of cross-contamination
  - High-quality gaskets are installed on all doors in collection pods
  - There are no suspended ceilings in the pods. This eliminates an area which would be hard to access and keep clean and thereby prevents a buildup of dead flies and other insects that could provide food and convenient breeding ground for harmful pests.
  - Flooring & walls in the Science Wing area are light in color to facilitate pest detection
  - There is a vegetation-free zone around building – a 1 meter wide strip covered with pea gravel
  - Outside doors are fitted with high quality door sweeps.