

# FREEZING TO ERADICATE INSECTS

Objects made of organic materials can be damaged by insects. Freezing items is a good mitigation technique to ensure an item is no longer infested and does not pose a threat to other belongings. Freezing objects can kill insects at all stages of their life-cycle but has the advantage of needing no chemicals.

## What can be frozen?

Paper and some photographs. Many textiles and wooden items. However, if there are several material types present within the object, such as plastics, metals or paint layers, freezing can be problematic as each medium responds differently to the change in temperature.

We don't recommend freezing the following materials due to embrittlement and possible fracturing: glass, ivory, bone, teeth, painted objects and wood panels, wax, leather, ceramics, wooden objects with joints, objects with craquelure (network of fine cracks on the surface) or other finish deterioration such as veneers that are splitting or warped, instruments with strings under tension.

If in doubt consult a conservator.

## Freezing procedure

- Avoid squashing fragile items such as hats or feathers by putting them in boxes before bagging.
- Place the items in a see-through, zip-lock polyethylene plastic bag. Gently squeeze out any excess air before sealing. Double-bag the item if possible and seal with adhesive tape.
- Place the bag in a domestic frost free freezer, elevated from the base and not in contact with other items. The freezer must be at least -21 degrees Celsius and able to rapidly cool items.
- Leave bagged items in the freezer for at least 7 days in order to kill all life stages of potential pests.
- Open the freezer as seldom as possible during this time to reduce temperature fluctuations.

## Post Freezing Treatment

- Remove bagged items from the freezer, but do not open the seal on the bag until the package has returned to room temperature – it is safest to wait 12 - 24 hours. It is best to thaw the object as slowly as possible.
- Handle the package as little as possible after removing it from the freezer to prevent damage to the items inside, as they are usually very brittle when frozen.
- Once the package has returned to room temperature, the bag may be opened and the items removed.