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Title: Pests in geological collections

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mounts all bright and sparkling. The blood stains occurred when the dog cut its lip on the knife blade! Is there a moral here?

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Pests in Geological Collections

I suspect that most articles in this issue will concern insect pests and biological collections. I felt it might be useful to describe a few instances of pest infestation in geological collections.

Mice infestation in a palaeontological collection

I encountered a mice infested fossil collection on a work experience placement from my Museum Studies course. My task for the two weeks was to go through wooden drawers housed beneath display cabinets, check the collection against an existing register, check identifications and taxonomy, then clean, accession, re-bag and complete computer catalogue entry cards for someone else to copy type onto the local authority mainframe computer.

Specimens had old paper labels attached with animal glue and most were housed in thin polythene bags. As work proceeded, it was found that several of the shallow drawers closer to the floor had a pest problem. A colony of mice had had a field day, the polythene bags were chewed to shreds to make nests, some labels had also been chewed up, possibly with the added benefit of tasty animal glue to eat, drawer bases were stained with urine and there were mice droppings all over the place. The general stirring up of the collection had caused some specimens to break and pieces to become disassociated, a few specimens had also been gnawed.

Fortunately, the existence of an earlier catalogue and the systematic ordering of specimens meant that it was possible to sort out each drawer fairly easily. The mice had not managed to move specimens between drawers.

The museum was heated by large pipes running beneath the floor with cast iron grills on top.

Presumably, the mice had entered the building via these heating ducts.

Rats!

A friend of mine was forced to discard their geological collection for similar reasons. The collection was housed in an old chest of drawers, carefully wrapped up in newspaper, and kept in the workshop in the garden.

Due to the neighbours habit of keeping a sheep in the back garden, rats became a problem in the area. Some considerable time after the rat man had been to put down poison bait, my friend decided to have a look at his collection. The rats had returned to their nesting spot inside the chest of drawers to die, leaving an most unpleasant mess of shredded newspaper and rotted rat. The collection was a complete write off.

Invertebrate pests in geology collections

Poor storage conditions for collections, such as sheds and temporary buildings, often means that cabinets are infested with woodworm and cabinet contents with museum beetle, silverfish, spiders etc. regardless of the contents. If such an old collection is acquired by a museum, it should not be assumed that just because it is a geology collection, it won't have a pest problem. I have spent many hours cleaning shed skins of museum beetles off geology specimens, picking off remains of insect bodies and then treating cabinets for woodworm.

Recently, I have encountered similar problems in an old egg collection. Fortunately, in both institutions, all incoming material is quarantined and fumigated (either by methyl bromide or freezing) so pests were dead by the time the collection came to be conserved and curated.

Prevention

Most of the problems described above could have been prevented by housing collections in good conditions rather than poor quality sheds and temporary buildings. A regime of housekeeping, tidy storage of packaging materials, regular inspection of collections and very strict enforcement of locations in which food and drink can be consumed within the museum environment would have prevented problems from escalating. Preventing access to buildings by keeping windows closed, blocking holes to the outside and ensuring that doors and loading bays close properly will prevent pests from entering in the first place. Rubbish bins with food waste stored close to entry points will encourage rodent pests.

Many larger museum stores have trays or boxes of poison bait in place in stores, but if present, the creatures are likely to die somewhere inaccessible. Having collection furniture raised to allow easy access for cleaning underneath will reduce the rotted rat risk. (Williams & McLaren 1990).

Routine quarantine and "fumigation" of collections, either newly acquired material or specimens that have been out of the building for some time before they enter main stores will prevent problems from spreading into museum stores.

References

I have included a few references that may not be that well known in the UK:

The well written series of CCI (Canadian Conservation Institute) Technical Bulletins include three of relevance for reducing the risks of biological agents.

Strang & Dawson, 1991 Controlling museum fungal problems - *CCI Technical bulletin no. 12*

Strang & Dawson, 1991 Controlling vertebrate pests in museums. *CCI Technical bulletin no. 13*

Dawson & Strang, 1992 Solving Museum Insect Problems: Chemical Control - *CCI Technical Bulletin no. 15*

Williams & McLaren, 1990, Modification of storage design to mitigate insect pest problems. *Collections Forum* Vol 6 no 1 pp27-32

Katherine Andrew

INSECT PEST CONTROL IN COLLECTIONS
SUPPLIERS

Insect traps	**ICS Group Industrial Pesticides North West** Hygiene House, 21-29 Brasenose Road, Liverpool L20 8HL Tel: (0151) 922 4149
	Killgerm Chemicals Ltd P.O. Box 2, Ossett, West Yorkshire WF5 9BW Tel: (01924) 277631 Fax: (01924) 264757
	R E Child 17 Talbot Street, Pontcanna, Cardiff CF1 9BW Tel: (01222) 398943
Sample vials/ centrifuge tubes (for containing insects not in traps)	**Oakes Eddon & Co Ltd** Scientific House, Dryden Street, Liverpool L5 5HH Tel: (0151) 207 3062/3/4 Fax: (0151) 298 1206
	Fred Baker Scientific 6/7 Dalton Court, Astmoor Industrial Estate, Runcorn, Cheshire, WA7 1PU Tel: (0928) 566976 Fax: (0928) 580438
	Or any laboratory suppliers
Insecticide formulations:	
Dethlac(lacquer spray	**ICS Group Industrial Pesticides North West**(see above)
Drione (dessicant dust)	**Killgerm Chemicals Ltd** (see above)
Vapona/similar dichlorvos-based insecticide strips	**Boots, Superdrug, largesupermarkets**, etc...