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Biology Curators Group Newsletter

Title: Pest Control: Making the Best of a Bad Job!

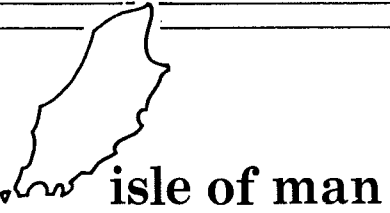
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AGM 90



isle of man

4 - 7 MAY 1990

The Isle of Man is easier to get to than you think! Car ferry services run from Liverpool, Heysham, Stranraer, Dublin and Belfast. Manx Airlines offer good rates, from the mainland.

Accommodation on the Island is good value for money at this time of year.

Provisional Programme

- Friday 4 May The Uses of Biological Collections plus contributions from the Isle of Man, Ulster, and the Republic of Ireland museums. 2pm Annual General Meeting. Officers' Reports and Review of the Year
- Saturday 5 May The Uses of Biological Collections/Field trips
- Sunday 6 May Field trips and study visits (optional)
- Monday 7 May (Bank Holiday) - stay an extra day if you wish.

By kind permission of the Manx Museum we have free use of the exciting 'New Extension to the Manx Museum' - well worth seeing. We are hoping that the meeting will be free. You book your own accommodation and transport. You may attend all, or part of the meeting. Make a date in your diary now!

* A pack including details of accommodation, ferry services and detailed programme will be available in March 1990 from: Derek Whiteley, BCG Secretary, City Museum, Sheffield S10 2TP.

MYRIAPODS

In May 1990 we have the opportunity to boost the biological records for the Isle of Man by putting our collective skills together and surveying the island while we are out 'enjoying ourselves' at the AGM meeting. Can I just appeal for you not to overlook the centipedes and millipedes while you are there. The British Myriapod Group are compiling a list for the island at present and would be grateful for any recent records. Thank you.

Paul Richards
Sheffield City Museum

Techniques

PEST CONTROL: MAKING THE BEST OF A BAD JOB!

After sitting through some fascinating talks at the BCG AGM in 1988 concerning pest control in museum natural history collections we decided to try to improve our arrangements in Bolton Museum.

Our main problem in Bolton is chronic lack of space in the stores. We also have the regular problems of varied and largely poor storage units and lack of effective environmental control. We are slowly working on the problem of storage units (as money permits) and have managed to improve environmental control in our largest store by erecting a floor-to-ceiling partition wall. This has been sealed as well as possible so that environmental conditions are buffered from the corridors and lift shaft adjacent to the store. However, we still have over 25% of our collections housed in open areas with very poor environmental control and security.

The overcrowding problem has a number of effects on pest control. Firstly, the stores are difficult to clean; this is exacerbated by irregular, old, badly-designed cabinets with numerous dust-traps. Secondly, pesticides are not feasible for continuous use as many areas are needed for work areas and many cannot be isolated from offices. Finally, in a crowded working environment it is easy to use various stores as temporary places to stack wood, carpet, or to place returned loans or new acquisitions prior to fumigation.

We decided to improve our working practices, at least for stores which have some degree of isolation.

Monitoring is important so that improvements or deterioration of storage conditions can be seen. Regular temperature and humidity readings are taken (weekly) and are providing us with a clearer picture of the environment in each store. Spot checks are performed with a whirling hygrometer and thermohygrographs are circulated around different stores. (We don't have money for one in each store yet). For monitoring pests we instigated the use of sticky traps. These are placed throughout the Museum in offices, stores and even corridors and are checked every month. All traps with anything stuck on are removed and their captures identified. Records of all catches are kept for each separate

room or area. This will, we hope, build up a good picture of our pest problems. It is very important to date traps when set and to mark which areas they were set in otherwise it is extremely easy to mix them up later.

Each storage area is being carefully cleaned by staff. This means emptying each cabinet in turn, wiping off dust and grime and vacuuming up fluff etc. from behind, under or on cabinets. Once a store has been cleaned thoroughly we use Dichlorvos to fumigate. A piece is placed in each drawer and left for two weeks before removal. This work is performed while wearing thin rubber gloves and rubber face-mask with screw-in canister filter of a suitable type. However, despite these precautions the high levels of chemicals has caused some eye irritation which was especially pronounced for two members of staff who were wearing contact lenses! Next time we shall be obtaining fresh air full-head hoods (see details below) before handling the chemical. We hope to obtain funding for these from central Health and Safety money.

We shall not be able to fumigate collections in corridors or in office areas, but we are trying to rearrange storage so that these areas are used for collections that are less 'pest sensitive' such as rocks and skeletal collections. How is it going? Well, before we used sticky-traps we had only had one pest occurrence - a single museum-beetle larva on a cockroach that had been used for loan. However, we now have records of Australian Spider Beetle, Silverfish, Psocids, Museum Beetle and two Clothes Moths (Tineola biselliella and Endrosis sarcitrella). None were infesting collections but it shows that potential trouble is ever-present! The only concentration of pests was of Museum Beetle which was in an office area and was tracked down to rolls of fluff behind bookcases!

THE FUTURE

After a store area has been thoroughly cleaned and every drawer fumigated we plan to fumigate once every twelve months by placing quantities of Dichlorvos in the stores, not in every drawer, and sealing them for two weeks. If our sticky traps suggest a rise in pest numbers then we shall fumigate earlier.

In the enclosed store areas we are installing cheap domestic dehumidifiers of a model recently recommended as a 'best buy' in Which Magazine! These are set to switch on if relative humidity rises above about 50%. Obviously in more open areas we cannot control relative humidity in this way. As most of our storage area is in a basement we find

that our problem is always high humidity, never low humidity. It is not a big problem so we hope that a domestic machine will suffice.

Sticky traps: Chekkitt insect traps. Available from Layson Ltd., (Environmental Services), 27 Tatton Court, Kingsland Grange, Warrington, Cheshire WA1 4RR. Cost £14 per 50 (as of 1988). NB These traps come with lures for cockroaches - we don't use the lures; they smell of curry! (PS we have no cockroaches.)

Dehumidifier: Matsui DH125. Available only from branches of Currys Ltd. Price £149.99 (as of 1989).

Full face masks - fresh air type: available through your local safety equipment supplier. Equipment made by Martindale Protection Ltd., Neasden Lane, London NW10 1RN. Price c. £350 for pump, airlines and two hoods.

Other equipment used was Dichlorvos (Vapona) masking tape and polythene sheet for sealing rooms, mastic for sealing cracks in store partition walls and warning notices to stop people from entering.

The sticky traps last for several months or more. If the atmosphere is very dusty or if infestations are high (you have to change the traps as you can't remember which insects are new and which are old!) or if the traps get wet they will need changing more often. One useful note, always inform your cleaning staff about them; they lose their effectiveness when they've been wrapped around a vacuum cleaner brush, or so we found!

All items that are loaned out or new acquisitions are treated in a deep-freeze at -18°C for one week. 48 hours is the recommended 'dose' but we go 'over the top' to be safe, especially with the larger items. A cheap digital thermometer with remote thermocouple probe is a useful item. It can be attached to the object to take readings with the freezer closed. We use a normal domestic chest freezer with as large a compartment as we could afford/accommodate.

The pest control strategy we have implemented is far from ideal. However we do now feel that we have a better monitoring system than before and no-one is suffering from high pesticide fume levels. There are still some high risk collections (some insects, pyritized fossils and plants) in high risk areas but we have plans to move or enclose many of these in the next year or two. We must remain especially vigilant in these areas until then. In the enclosed stores we are now

monitoring pest levels and environmental conditions so that we should quickly notice any worrying changes. This also means that all of our store areas are visited on a regular basis by staff; a strict timetable is vital. Accurate record-keeping is also vital.

One day Bolton Museum may have the facilities to care for its natural history collections adequately but until then we feel that we have arrived at a reasonable strategy involving sensible amounts of staff time, section money, health and safety and minimal risk to collections.

Note:

Since writing this article the new Control of Substances Hazardous to Health regulations have come into force (as of 1 October 1989). These are generally known as COSHH. We will now have to rethink our policy as concerns the use of Dichlorvos and it remains to be seen whether or not it is possible to achieve a viable pest control strategy in existing store areas.

Steve Garland
Senior Keeper, Natural History
Bolton Museum and Art Gallery

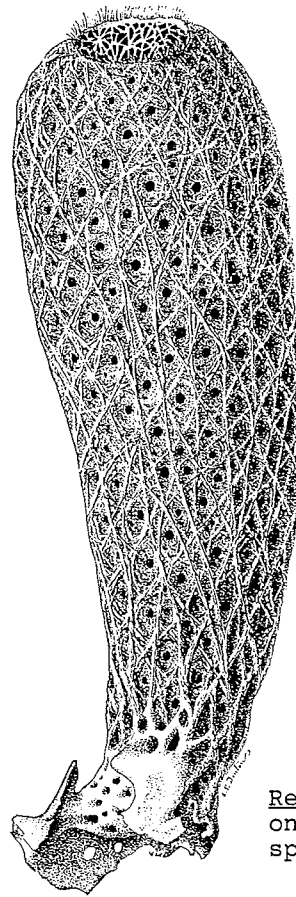
PS
If you haven't heard of COSHH I suggest you contact your council safety officer, local environment health department or nearest Health and Safety Executive for urgent advice. It will mean an end to curators working in offices and stores containing fumigants.

THE SPONGE BATH

The glassy skeletons of sponges, especially the Venus Flowerbasket type appear to gather dust and dirt in direct proportion to their fragility, presenting the curator with a depressing sight or a seemingly formidable task of cleaning. Cheer up! The answer is rapid, simple, cheap and safe and requires no fancy equipment or training.

EQUIPMENT

- 1 A supply of distilled or deionised water sufficient to allow for one wash basin and two or three rinses of each sponge. If the tapwater available is very pure, the distilled or deionised water may be used for just the two final rinses.
- 2 A small amount of non-ionic detergent, Synperonic N for example. This is obtainable from many laboratory suppliers or from Archival Aids, PO Box 5, Spondon,



Regadrella phoenix,
one of the glass
sponges.

Derby DE2 7BP. Only a few drops per pint of water are needed, sufficient to provide a small head of foam.

- 3 Clean waterproof tanks in which to wash the sponges. Glass specimen jars are ideal, also beakers, bowls and plastic wash tubs. Ensure that the sponge will slide easily in and out of the jar, that there is no lip on which it might catch, and that when it is in the jar you can manoeuvre it without difficulty, maintaining your grip until the sponge is resting on the bottom.
- 4 A sink or drain, for disposing of the water.

If you have jars of the right size and shape, so that you can hold the sponge and gently lower it to the bottom, no further equipment is necessary. If you have particularly large or awkward specimens, which you wish to wash in situ in their own jars, or if you have only long, narrow jars available, you will need a small amount of flexible tubing to syphon the water in and out, making sure that there is room in the jar for both specimen and tube. If you do not wish to hold the sponges by hand, place them in a 'chip basket' of clean wire or plastic mesh before lowering them into the container. If you are afraid of damage when the sponge rests on the bottom of the jar (if it has a broken or fragile end, for