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Author(s): Purwell, V.

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dust slide monitoring has been maintained throughout the project. A number of locations had varying deposition rates and a study has been made on the accumulation rates under these varying conditions (Adams and Kibrya, *in prep.*).


Summary

The use of glass microscope slides and the measurement of the reduction of surface gloss to determine dust deposition is an inexpensive and unobtrusive technique, which can be applied to a wide range of environments. This method allows monitoring of dust sources and where contractors are involved discussing ways of reducing the ingress of dusts: assessing the influence of visitors, pinpointing "leaky" windows and assessing cleaning regimes.

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Removing Mercuric Chloride Residues from Herbarium Labels

Vicky Purwell, National Museum & Galleries of Wales, Cathays Park
Cardiff, CF1 3NP

Mercuric chloride or corrosive sublimate, as it is also known, has been applied to botanical specimens since the late 18th century. Over time, the chemical reacts with the paper medium and can produce a grey/black stain that can discolour the herbarium sheet and obscure data on labels. Catherine Hawks (Falls Church, Virginia) and Deborah Bell (Smithsonian Institute, Washington) have published a paper describing how to successfully remove these stains from labels.

The specimen itself does not become discoloured, so when re-mounting a specimen the previous discolouration (and therefore pesticide application) should be recorded onto the new sheet.

The authors found that the data was rendered illegible by the dark salt deposition. Analysis had shown that the stain contained mercuric sulphide and possibly a mercury oxide/sulphide compound. Un-reacted mercuric chloride could also be present on the paper.

The authors were familiar with the effectiveness of iodine in removing the colouration within mercury stained tissue (Natural History Museum, 1906) and so they experimented with varying concentrations of iodine solutions and found all to be successful. The following method was recommended.

A solution of 0.5g iodine, 1.0g of potassium iodide was dissolved in 50 ml de-ionised water. 2 ml of this solution was extracted and diluted in 10 ml of de-ionised water. The stained label was then placed over a piece of glass and a drop of this solution was placed over the darkened area. The droplet was then blotted with a piece of neutral, acid-free blotting paper. This procedure was repeated until the stain was removed. The slight yellow discolouration that remained was removed with de-ionised water and dried between two clean blotters.

The process takes about an hour and did not affect the inks below, but cleared away the discolouration so that the data was clear and able to be read. When handling mercury contaminated material it is imperative to work within a well-ventilated room, preferably working on the specimen within a fume cupboard. Nitrile gloves should be worn if the specimen is to be handled directly. Some specimens are dusty and to avoid breathing in loose particulates which may carry contaminants, a dust mask should be worn.

Hawks, C. & Bell, D. 1999. Removal of stains caused by mercuric chloride treatments from herbarium sheet labels. ICOM Committee for Conservation: Preprints of 12th Triennial meeting Lyon, Sept 1999 Vol. II. James and James (Science publishers) Ltd. London: 723-727.



Ask Before You Guess

Darren J. Mann, Hope Entomological Collections, Oxford University Museum of Natural History, Parks Road, Oxford OX1 3PW

On starting at the Hope Entomological Collections I spent several hours 'drawer pulling' in the old Victorian cabinets of Coleoptera, this as well as giving me an idea of the material we held, also acted as an preliminary pest survey.

In one cabinet of foreign Cerambycidae (longhorn beetles), I came across some friable grey lumps of an unknown substance. Some of these had broken-up and covered a number of the specimens with a speckling of grey dust, which has proved quite difficult to remove and although not damaging (as far as we know), detracts from the aesthetics of specimens for display and photographic purposes.

The drawers in which I have so far found this deposit, have had reasonably tight fitting lids, which I thought excluded an external origin. Then, I remembered hearing that in the past camphor/naphthalene sometimes had contaminants, such as ash (whether this is true or museum folklore I do not know. Has anyone else heard of this?). This may have been the source of the material, problem solved, or so I thought. Later, I spoke to a colleague about this matter, on telling them my thoughts on the possible source of this material, he merely remarked "oh that's just Westwood's cigar ash". So, for all my detective work my hypothesis was wrong, the source was simply an old entomologists' bad habit. J.O. Westwood was the Hope Professor between 1861 and 1892, and was probably the last person to curate most of our foreign Coleoptera holdings, maybe I should exhibit the 100 year old ash. I have learnt that if I come across any new problem, it is always best to ask before you guess, as someone might actually know the answer, saving you both time and possible error.



Some Further Reading

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