NSCG Newsletter

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tions) and ozone should be 2µg/m^3. Fine particulates (dusts) should not exceed 75µg/m^3. Pesticides that have been applied to collections will also be present, some such as naphthalene and mercuric chloride are extremely stable and will continue to form vapour around the specimens for an extremely long period of time. Air quality sampling is recommended for botanical and zoological collections, bearing in mind that the chemical species to be monitored must be known before analysis begins. The TWA (Time weighted average over a period of 8 hours) applies for the following three chemicals. Mercuric chloride should not exceed 0.025mg/m^3, naphthalene should not exceed 53 mg/m^3 or 10 PPM and dichlorvos (Vapona™) 0.92 mg/m^3. If the area in question is not air-conditioned then installing or increasing ventilation is essential to improve air flow and thus reduce toxic build ups.

Cassar, M. 1995. *Environmental Management; Guidelines for museums and galleries*. Museums and Galleries Commission. Routledge London and New York

Dust

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Dust, depending on its consistency can be a very harmful contaminant and cause specimen deterioration. Although we are aware of its damaging properties and try to exclude it from our work area, it still manages to seep in through the smallest of gaps.

In my experience, white-plumaged birds have been the most susceptible to the normal and everyday grey household dust. Once it gets into the feathers it is (so far) impossible to remove entirely, resulting in a pale grey bird. Specimens of coral, especially the larger colonial madrepores, once

bleached of their natural colour often fall victim to dust, thus appear drab. If the dust is at all acidic in nature, then feather proteins and coral aragonite may become corroded.

As always, we try to exclude dust from specimens and displays but we end up generating even more through our normal working procedures. Building and building fabric renovation generates masses of dust and despite precautions of moving specimens or covering with sheets, using dust traps and static electricity it still plagues us.

Reduction by prevention seems to be the only cure but how many of us have suddenly discovered that builders are in an adjacent room drilling through the wall (*didn't you get the memo*?) and it is back to square one.

Despite this rather depressing tone, I hope that contaminant analysis will continue and might produce some more detailed articles in the newsletter.

Dust Monitoring

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Introduction

Dusts deposited onto the surface of artefacts within museums can not only potentially cause harm by absorption of moisture or abrasion of fibres etc. but also may dull the visual appearance. Ambient dust levels are readily determined using a combination of gravimetric procedures and laser techniques such as the Grim Real Time Dust Monitor. Armed with this information it is possible to calculate the deposition time (see Ligocki *et al.*, 1990 and Nazaroff *et al.*, 1990). However, simpler techniques such as the glass deposition gauge (glass microscope slides) determine what is actually settling onto surfaces, and whilst glass may not