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## NSCG Newsletter

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Title: Old Polecats Never Die, They only....

Author(s): Entwistle, B.

Source: Entwistle, B. (1999). Old Polecats Never Die, They only..... *NSCG Newsletter, Issue 11, The Ten Agents of Deterioration, 7. Light and UV*, 1 - 3.

URL: <http://www.natsca.org/article/1139>

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## Introduction

This is the seventh part of our series on the Ten Agents of Deterioration; the risks facing museum collections.

The next issue will deal with Pollutants. These could be cumulative over a period of time, such as items becoming contaminated by substances due to inadequate storage, or possibly an incidence of direct pollution e.g. the effects of a gaseous leak on specimens. Please do send in articles on the issue of Pollutants; in many cases it is only after the event that one considers the risk.

For details of recommended standards of light and UV levels for the display and the storage of natural history specimens see:

'2. Standards in the Museum Care of Collections of Biological Collections.1992'  
p. 54 ISBN 0-948630-18-3

and,

'3. Standards in the Museum Care of Collections of Geological Collections.1993'  
pp. 49-51 ISBN 0-948630-20-5

Both published by the Museums and Galleries Commission, U.K.

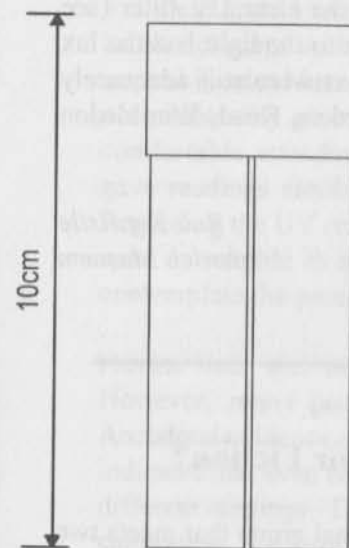
## Old Polecats Never Die, They only .....

Whilst re-displaying the Natural History Galleries in Ipswich Museum we found that some specimens had been on display so long they had completely faded on one side.

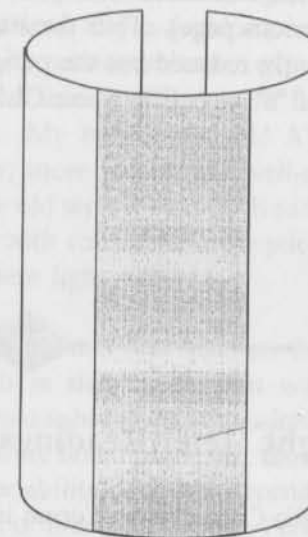
Some like the polecat in the title had faded on one side only, the side facing the gallery. The opposite side still retained its natural colour. Displaying these specimens the other way round was not an option. The polecat could not be used for educational purposes as mercuric soap had possibly been used during its preparation, and it could not be displayed in its faded form.

I decided to re-colour the specimen taking the unfaded side as my guide. Any re-colouring had to be reversible, so I used Windsor and Newton pigments blended/mixed to the right colour, and applied the pigment with a dry brush. The pigment was simply trailed through the previously

Miniature  
Fluorescent Tube



Norden  
U.V. Filter



"CLE"  
Tinted 'F'  
Stop Filter

cleaned fur. Since no medium has been mixed with the pigment it can be removed by vacuuming.

All the specimens were re-displayed in the original Victorian wall cases which had been re-wired and given a new lighting system. The new lighting system consisted of small 4 inch high, low voltage fluorescent tubes. These were placed centrally, four to a case. Although the lighting system was more discreet the light intensity in the central area was very severe, up to 1000 lux and the UV was above the recommended levels. The lights did not have a dimming facility, and in any case dimming them would have thrown the edges of the cases into almost total darkness.

The problem was how to reduce light in the central areas of the case and still retain adequate lighting for specimens on the periphery.


We cut down Morden fluorescent UV light filters into five inch lengths and down the central portion stapled CLE tinted "f" stop filter to cut lux levels. The filter comes in a number of grades "f" stop 1, 2 and 3. By combining

the different grades we could reduce lux levels.

Only the central front facing area of the tube was covered with the tinted "F" stop filter, the side areas were left only with the clear UV filter (see diagram on previous page). Thus the areas nearest to the light had the lux levels significantly reduced but the peripheral areas were still adequately lit. Suppliers of "F" stop filters are; CLE, 69 Haydens Road, Wimbledon SW19 1HQ.

*Bob Entwistle  
Ipswich Museum*

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### Light Meter Readings – Fact or Fiction?

The East Anglia Conservators Forum is an informal group that meets two or three times a year in the museums of members, either from private practice or both large and small museums.

Discussion topics vary from case studies to large issues such as pests.

At one meeting in November 1997 the focus was on lighting. Members were invited to bring their own light meters and compare the readings obtained by different types and makes of hand held light meter. Meters ranged from the twenty years old to the new such as the Novatron and Meaco digital UV and lux meters, and many reported that their equipment had recently been calibrated. About a dozen different meters were placed on a table and their lux readings compared. To our surprise the variations were considerable. The meters were moved to somewhere else in the room, and their readings taken again. The UV readings were compared, and these showed slightly less variation. There was no consensus as to the actual light reading in that place at that time.


Given that the recommended light levels are fairly precise at 50 lux for light sensitive organic material and 100 lux for inorganics, even a variation of 10% makes a difference for someone trying to place objects in an

exhibition environment where they will be subjected to light for some time. In the battle to reduce damaging ultra violet radiation on objects, having accurate data and reliable measuring equipment is fundamental. Yet these meters were giving wildly different readings, for lux seemingly in two clusters with some outliers. By a window, readings varied by several hundred lux. Incidentally, newer and more expensive models did not necessarily give more believable readings, or sit in the middle of a comfortable sounding cluster. My twenty-year-old AVO LM 4 meter gave readings similar to other, more recent and well-respected brands. Regarding the UV readings, the old style meters such as the Crawford 760 were as reliable as any. It is with considerable scepticism that I would contemplate the purchase of a new light meter.

Precise data was not gathered as this was just an informal meeting. However, many people's faith in their equipment was badly shaken. Anecdotal evidence obtained from subsequent discussions with colleagues indicates that even two of the same brand of meters, thus tested, gave two different readings. Does the variability of results depend therefore on the calibration, if it is not the type, or brand, of meter? Perhaps we can only rely on light meters to give us a relative picture of display conditions, and not an absolute reading we can trust. Is this good enough? Why not try this experiment yourselves if you think me unduly cynical. It would certainly make a good research topic, and a Which? style report would be welcome by all museum staff.

*Lynn Morrison  
Conservation Officer/Care of Collections*

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