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Author(s): Moore, S.

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Deodorising Skeletal Material

A section of shark vertebral column was recently brought to me from the County's SEARCH educational unit, which provides me with many challenging jobs since children are handling biological specimens. The problem with much dry elasmobranch skeletal material is that it develops an unpleasantly fishy smell after a while. This particular sample attracted many critical comments from children who visited the facility and I was asked to remove or replace the smell with something more pleasant.

The sample of shark vertebral column, measuring 18 cm in length, was first rehydrated in about 2% aqueous Decon 90 overnight and then transferred to a mild bleach of about 5 volume hydrogen peroxide in distilled water with a trace of 0.880 ammonia which acts as a catalyst. The column was then left in water for about 12 hours and any pieces of rehydrated adherent tissue were removed. The sample was transferred to 50% IMS for dehydration for about 4 hours and then to 80% alcohol. A few drops of aromatherapy oil suitably entitled 'Oceanus' were added to the alcohol giving a sweet sea breezes aroma to the mixture. The column was left in this for 2 weeks, then removed and left to dry out under restraints to prevent flexing of the sample during drying.

The result was a pleasant smelling and cleaner vertebral column. The children were happy well for about 4 months, then back it came again. Although the Oceanus oil was still present there was that unpleasant fishy smell as well!

A search through the literature has revealed nothing to help with this problem so it will be a repeat of the re-odourising treatment using a stronger-smelling oil provocatively entitled 'Cannabis'! What might this lead to?

Seriously, the technique works well on freshly prepared osteological material and the Oceanus is a non-pervasive, non-irritating smell that removes the bony smell from such samples. The recurrence of the original odour in cartilaginous skeletal material is more problematic. Has anyone had such experiences or are our collections' natural smells all right for us hardened

scientists? When it comes to dealing with the public, children especially, that's a different matter!

Simon Moore

Hampshire County Council Museums Service



An alternative and completely non-invasive method of dealing with smelly specimens is detailed in "Storage System for Odoriferous Skeletal Material" by Tamsen Fuller, in 'Storage of Natural History Collections: Ideas and Practical Solutions, Carolyn L. Rose and Amparo R. De Torres (ed.s), SPNHC (pub.), Pittsburgh, PA, 1992, pp 247-248.

This article gives clear instructions for the use of an absorbant (activated charcoal) within a simple but dedicated storage container to combat odours.

Tracey Seddon

Conservation Centre, NMGM

Note from Ed:

'Oceanus' is not an aromatherapy oil, but a perfume oil produced by The Body Shop. A full list of ingredients of this product can be found on the bottle.

If anyone would like to comment on Simon's controversial methods please write in.