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## The Biology Curator

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Title: Procedure for Curating Old Glass Museum Jars

Author(s): Not Listed

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priority to target "problem" areas and to mediate to enable consortia to be developed.

Steve Garland  
BCG Biological Recording Cell

### Local Information, Local Collections

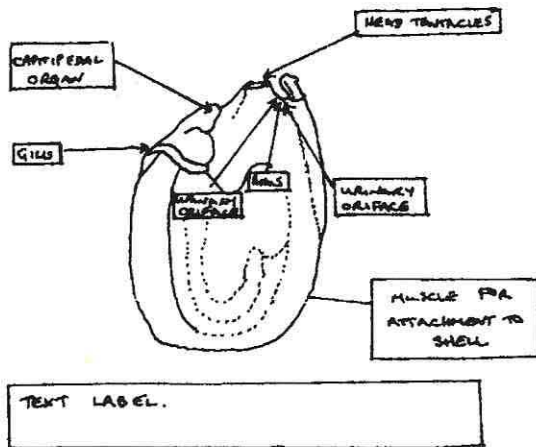
A BCG one-day seminar examining the links between collections and biological recording. Speakers will examine the role of collections in the underpinning environmental data, and its many uses such as the biodiversity and the ubiquitous Local Agenda 21 initiatives. The need for new collections to be made to support new environmental records will be discussed.

Anyone interested in contributing to this meeting please contact Graham Walley at the Nottingham Natural History Museum, Wollaton Hall, Nottingham NG8 2AE. (Tel: 0115 928 133/Fax: 0115 928 3692/Email: gw@notmusanthist.demon.co.uk)

The date planned for is Thursday 30th January 1997 at Wollaton Hall.

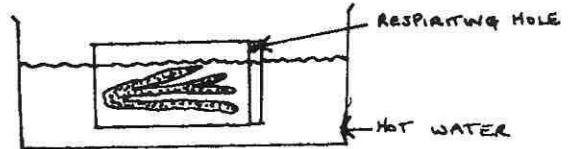
### PROCEDURE FOR CURATING OLD GLASS MUSEUM JARS

If the jar has a complex system of outside and inside labels it is advisable to do a quick sketch to ascertain the position of each.



First the lid is removed from the jar, either by easing off gently with a scalpel or by softening the seal in warm/hot water (not boiling). It is important to make sure that the respiring plug in the lid is removed or pushed out, otherwise the jar might explode due to pressure from the vapourising preservative. Don't allow water in!

The specimen is carefully withdrawn from the jar and placed in a holding tray with liquid until required. Outside

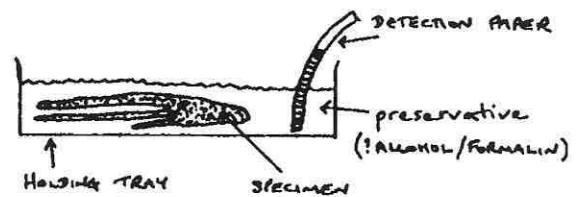


labels associated with the specimen are soaked off and dried. Once dry put in a box for safe keeping.

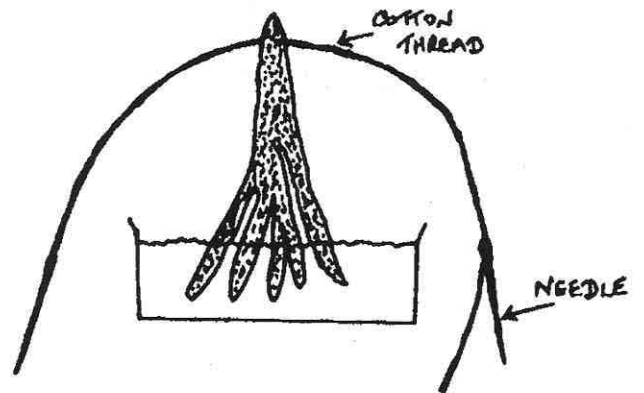
The jar and lid are then cleaned using a scalpel or soft kitchen abrasives and left to dry. Take all traces of paint off.

At this stage whilst the jar is drying, some of the following procedures might be undertaken:

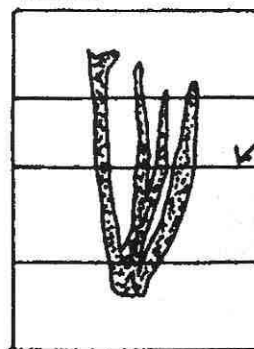
(i) the preservative is checked using detection paper. In many cases it is often not apparent what preservative has been used. (Simon's gravity method, detection papers, Alizarin preps).



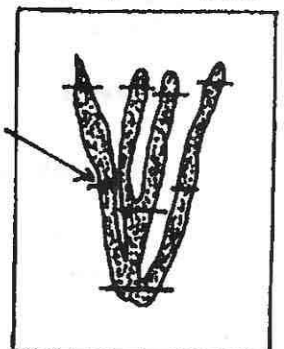
(ii) the specimen is rehydrated using sodium tri-phosphate or Decon 90 method.



TIED AROUND PLATE

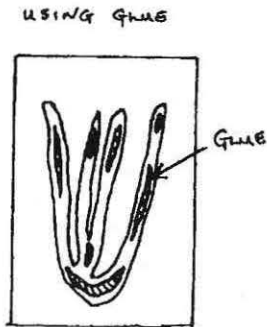


SEWN OR TIED DIRECTLY ONTO PLATE



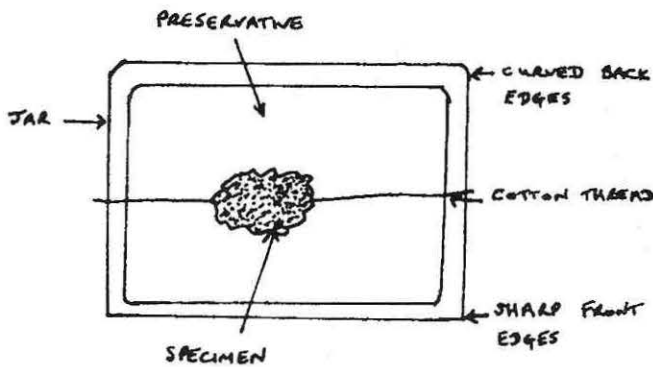
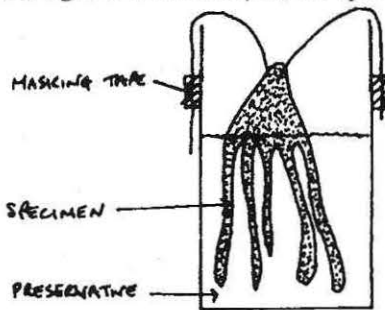


(iii) the specimen is re-strung for direct hanging or onto a backing plate, using cotton thread. (not plastic, plastics can deteriorate in preservative.)

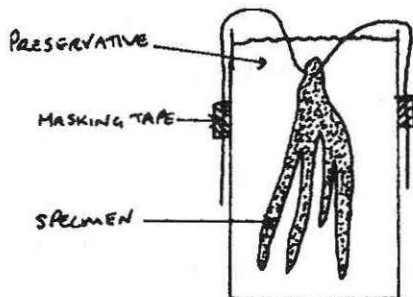


(iv) the specimen is glued directly to the backing plate, using 1% "Necoloidine" in a 50-50 mixture of diethyl ether and isopropanol.

The jar is then half-filled with preservative and the specimen is gently lowered in. Check which is the front and back of the jar. The front edges of the jar are usually sharp. If the specimen is being hung directly then allow plenty of excess thread. For light or small material, the specimen can

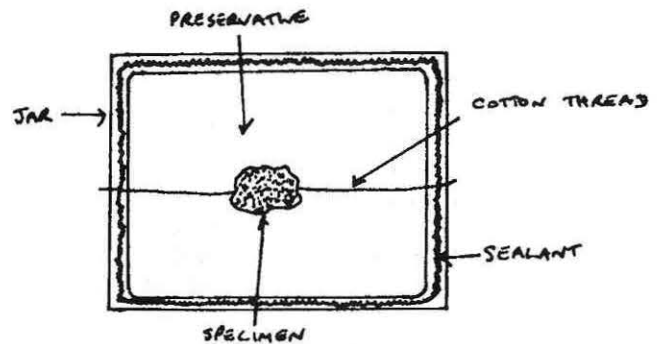


be arranged at the required height by temporary attachment of the thread to the sides or back of the jar using masking

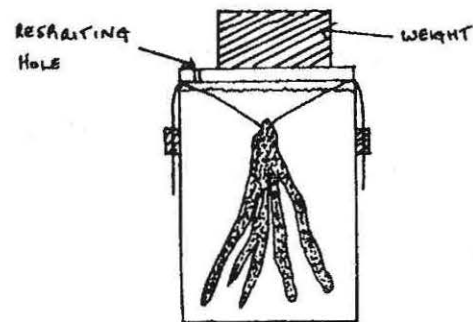


tape.

Fill the jar with preservative to about an inch from required height. Place jar in an area where it will not have to be moved.



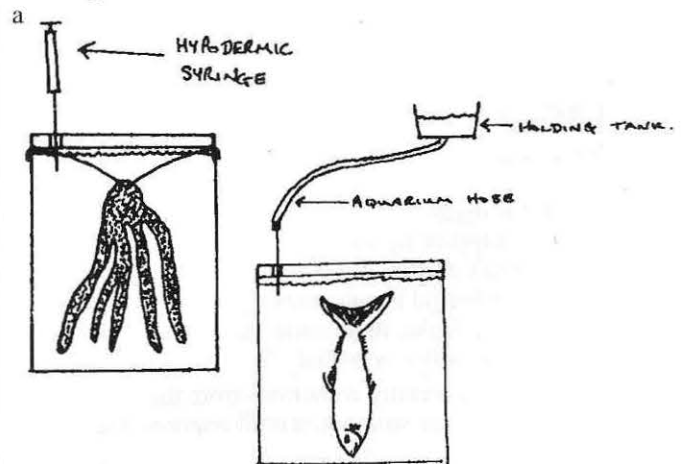
Next, carefully run a line of silicon around the lip of the jar. It gives better results if the line can be made constant. During this time the lid can be warmed slightly on a hot plate.



Place the lid (rough side down) carefully into position, making sure the respirating hole is not covered. Clean off any excess silicon around the edges and place weight on top of the lid, (make sure weight will not stick to the lid with silicon) and leave it overnight. (24 hours means that the silicon has a good time to set.)

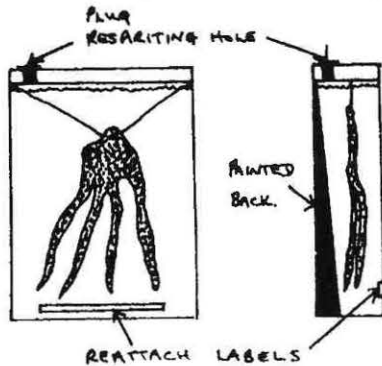
Trim cotton threads back. Remove tape. Smooth down with silicon.

Using





hypodermic needle fill jar up with preservative to just below the sealed edge, so when jar stands the preservative is not against the seal. For larger jars, an airline of aquarium hose can be fitted to a 5mm hypodermic needle and preservative



can be added from a holding tank. Then plug respirating hole with silicon and leave for another 4-8 hours before moving.

If so required, the jar can now be repainted and any outside labels reattached. It is good conservation practise to note down, for future reference, exactly which sealant and methods have been used for each jar.

## A COMPARISON OF TWO PAPERS AND TWO INKS FOR USE AS COMPUTER GENERATED LABELS IN FLUID PRESERVED COLLECTIONS

*Julian Carter, Conservation Officer  
Zoology Department  
National Museum and Gallery of Wales, Cardiff  
Cathays Park, Cardiff, CF1 3NP*

### Introduction

With the possible discontinuation of Resistall paper (supplied by Preservation Equipment Ltd in the UK) which the National Museum of Wales (NMW) Zoology Department currently uses in producing labels for use in fluid preserved material, a possible replacement was required. Work done by other workers (Crawford Ross, 1961; Pettitt, 1975; Lambiris, 1990) suggest a number of possible alternatives which included the 100% rag paper Goatskin Parchment produced by Wiggins Teape (now Arjo Wiggins). Goatskin Parchment had been used previously by the department and is commonly used in natural history collections but had lost favour at NMW when the last batch purchased in the late 1980's disintegrated on immersion in fluid. This was apparently due to a change in production methods. However Goatskin Parchment is still manufactured and is being used by other institutions. As a result it was decided to compare the Goatskin Parchment currently manufactured with the Resistall paper.

In conjunction with these papers it was decided to look once again at computer generated labels for use in fluid preserved material. This is an area that continues to be unclear, although Pitkin (1995) provides a good overview. Looking at the available data two inks were chosen to look at, both of which are for use in deskjet printers, which are reasonably cheap and easily available. The two inks are both manufactured by Graphic Utilities and are available through

Misco Computer Supplies. These were the black indelible ink and the PermaDri™ black pigmented ink. Both inks are available as refill kits for the deskjet cartridges.

### Test Procedures

Labels were produced on a PC using Filemaker Pro. The labels were printed on the papers Resistall and Goatskin Parchment using a HP 500 deskjet printer. The labels were printed using the two graphic utilities inks; indelible black and PermaDri black. Once printed the labels were allowed to dry overnight. Labels printed on Resistall paper in the usual manner were used as the control. These were printed using a hand operated printing press and carbon black ink, with information hand-written on using a Rotring pen with Indian Ink

The fluids for use in the testing procedures was as follows:

- 0.1 Molar Hydrochloric acid (HCl).
- 80% IMS
- 4% formaldehyde
- De-ionised water

Before any label was placed in the test fluids the label details were written on using a Rotring pen with Indian ink and then it was rinsed in water to remove any 'excess' ink which would otherwise run. This has been recommended specifically when using the indelible ink (Pitkin), but was done as standard with all the labels.

On removal from the test fluid the label was placed on a flat glass surface and a scalpel blade lightly stroked across the print image to assess the robustness of the image from abrasion and the wet strength of the paper.

Two tests were then carried out. One to induced immediate changes and the other to look at longer term storage in the test fluids. Both tests used heat to accelerating the ageing effects.

### 1. Boiling Test

The test fluids were brought to boiling point, using an electric laboratory heater in a fume cupboard, and the labels immersed (with great care) into the fluid for a period of 60 minutes.

### 2. Storage test

The labels were placed in fluid storage jars of each of the test fluids and placed in a glass fronted heated cabinet at a temperature of 50 to 60°C for a period of three weeks.

### Results

The results have been summarised in Table 1. In all cases the PermaDri ink kept a better image than the indelible ink, whilst the Resistall paper had better image abrasion resistance.

### Discussion

#### 1. The Papers

During the running of these tests it was reported from the USA that Resistall paper was to be manufactured once again removing the immediate need to find a replacement. However it is interesting to note that the current Goatskin Parchment that is available is suitable for use in fluid collections, more so in alcoholic collections, but is not as good as Resistall. The more waterbased the solution the softer the Goatskin becomes and the more easily the print is abraded from the surface, although provided the paper is handled reasonably carefully this should not be a problem.