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# Bits and Pieces: the story of Lister's Conch

In 1986, the Hunterian Museum's most precious shell specimen, *Strombus listeri* or Lister's conch was severely damaged whilst on display loan to our neighbouring institution, Glasgow City Museum and Art Gallery. The shell is both historically and scientifically important. Its historical significance stems from the fact that it is one of the oldest traceable natural history specimens in Europe - its ownership can be traced back to the John Tradescants, father and son, respective gardeners to Charles the I and II of England. At Lambeth, in London, the Tradescants founded the first recorded museum of natural objects in Britain. The shell is the holotype of the species and was the only known specimen until well into this century. The damage occurred on the morning before the exhibition was due to open when workmen were erecting the title board above a number of showcases, one of which contained the *Strombus listeri*. The title board slipped, hit some of the cases which toppled over domino-fashion, the *Strombus* fell out and was crushed by one of the cases. The shell was broken into hundreds of fragments but given its importance we decided to try and have it repaired. Initially it was not apparent to us who might undertake such a job but on professional advice we took the shell to a ceramics conservator (Ellen Breheny at Hopetoun House, West Lothian). We understood that it was an extremely difficult job with no successful end result guaranteed but we still felt that it was worthwhile to try.

The first step was to lay out the pieces and see what there was to work with - there were well over 200 pieces. Figure 1 shows the initial stages of the work where the larger pieces of the shell have been stuck together using Ablebond 342-1 epoxy resin. The inner spiral of the shell has been partially reconstructed with the fragments glued onto gummed paper. This difficult three-dimensional jigsaw presented an additional problem in trying to fit the



Figure 1

pieces back in place. Certain torsion forces are exerted in the formation of a gastropod shell giving rise to areas of strength and weakness. When a shell is damaged like this one, the pieces do not simply fracture, there is some release of these torsion forces and the pieces warp, particularly in the inner spiral. Consequently it is very difficult to get adjacent pieces to fit together properly. The larger pieces of shell on the lip were fitted together first, then the body of the shell was reconstructed. The internal structure was strengthened using nylon gossamer and Ablebond 342-1. When partially reconstructed, the shell was filled with a calcium carbonate in gelatine filler to form a support for the inner floating fragments. The lip was then reattached to the body. Gaps were filled with a mix of Ablebond 342-1, barium sulphate and ground pigment to match the body colour. When no longer necessary the inner mould of calcium carbonate and gelatine was washed out with hot water. On gap-filled areas, the pattern was retouched with ground pigments in

Paraloid B72 and xylene. The upper part of the spire of the shell had broken into a few large fragments and was relatively simple to repair. However the lower part of the spire where it adjoins the body of the shell sustained the worst damage and was too fragmented to allow accurate reconstruction. The end result is that the shell is in two large pieces and about 40 small fragments as shown in figure 2.



Figure 2

We are satisfied that as good a reconstruction as possible has been made of the shell. The specimen retains its historical value and most of its scientific value but is no longer any use for illustration or exhibition. Splendid modern examples of this species such as the one shown in figure 3 can be purchased fairly cheaply.

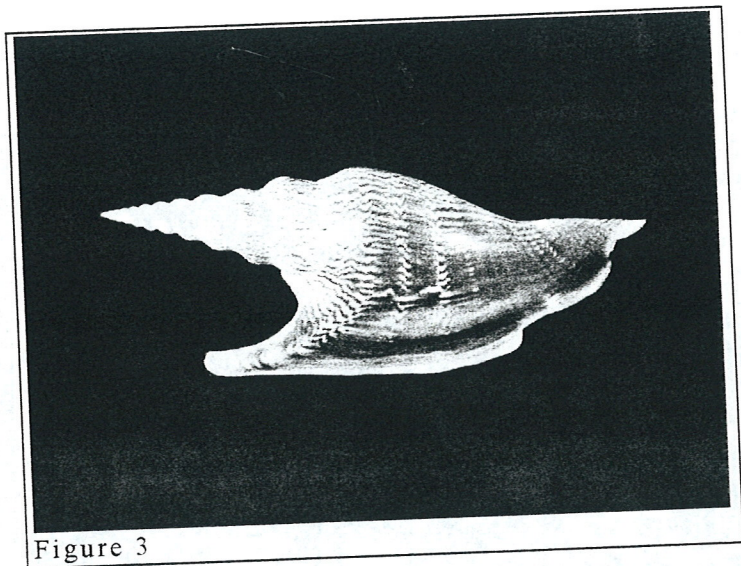


Figure 3

There was one positive outcome to this story. When the shell was smashed open it was found to contain foraminiferal sand which provided us with further information on the shell's origins and gave the Hunterian Museum one of the earliest collected samples of marine sediment.

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## **A Mycoherbarium for Hampshire**

The preservation of fungi for a scientific collection has always been desirable but problematic: specimens lose their shape and colour during controlled air drying and many become exceedingly fragile. Basidia and cystidia (the morphologically-important spore bearing and sterile cells lining the gill septa) become shrivelled, at least the spores are stable although a high-powered microscope is