

## **The Hampshire County Council Museums Service: Caring for Shell Collections**

### **Introduction**

The Hampshire County Council Museums Service (HCCMS) houses some 6800 specimens (c1500 species) of bivalves and a few gastropods. These have recently undergone sorting, identifying (where necessary), cataloguing, re-boxing and re-housing.

A preliminary assessment of the collection indicated that most specimens had data, some more than others. This coupled with the presence of several paratypes meant that the collection was worth conserving. A trawl through the accession registers identified two main collections: the Major Earle Collection and the Thorne-Carr Collection.

### **Problems**

The shells had been stored in individual boxes, tissue paper and bags within cardboard boxes, many of which had become brittle with age. The boxes housing the Major Earle Collection had labels on the outside identifying the Superfamily (or Superfamilies), although labels and contents did not always correspond with each other. Families and genera were mixed inside the boxes and in numerous instances the individual boxes had split open. Fortunately, in the case of the Earle Collection, the majority of the specimens had been numbered before coming into the HCCMS collections which greatly facilitated sorting. The specimens in the Thorne-Carr Collection, on the other hand, were labelled 'shells, miscellaneous'.

Aside from the problem of locating individual specimens, the boxes were stored sometimes up to 3 or 4 high on dexion racking. This meant that in order to gain access to a specific box, several other boxes had to be removed to retrieve it. In addition many of the boxes were large, heavy and above head height, making lifting awkward, difficult and potentially hazardous.

Many of the shells had been stored in cigarette, soap or cigar boxes, which had ill-fitting lids and were lined with cotton wool which had yellowed with age. Shells that had not been cleaned adequately prior to storage, showed signs of *Anthrenus* infestation. In some instances where wooden boxes had been used, Byne's Disease had developed. Many of the shells in the Thorne-Carr collection had been wrapped in twists of newspaper or tissue paper which had yellowed with age.

### **Long Term Storage**

The long term effects of wood and other wood products including cardboard, newspaper and tissue on calcium carbonate based specimens have been well documented (Nicholls, 1934; Tennents & Baird, 1985). A storage system that minimised these effects; dealt with other environmental problems such as dust settlement and ambient pollution; as well as enabling easy access to the collections needed to be devised. As with many natural history specimens, constant vigilance is the best way to ensure that the integrity of the collections is maintained. However in practice this is difficult to achieve, especially with the numbers involved. One method is to ensure that the specimens can be

easily accessed for speedy checking without the need for opening boxes. With this in mind polystyrene boxes with 'snap top', lids were purchased, along with polyester wadding. The advantages of using these boxes are:

- Both polystyrene and polyester are materials that have been classified as 'safe' (von Endt, Erhardt and Hopwood, 1995).
- Specimens can be viewed from the sides, allowing visual checks for mechanical damage, Byne's Disease and any other potential problems.
- Specimen labels can be read without the need for opening the boxes.
- Use of this system enables instant recognition of type material within the collection.
- The 'snap-fit' lids are airtight thereby preventing settlement of dust and providing protection from ambient pollution.
- The cabinets can be locked ensuring that any rarities are protected (to some extent) from potential theft.

Polystyrene boxes are available in a variety of sizes.

In certain instances self sealing plastic bags have been used. These bags have been used to store Cypraecassis species and other large specimens. Although the long term effects is not known, specimens stored in plastic bags for over 10 years at HCCMS have not shown any deterioration.

The re-boxed specimens have been stored in stove enamelled steel cabinets with a 'Key Colour Bin System'. Each cabinet holds 8 drawer units, the drawers being of three different sizes, with the smallest and middle sizes being inter-changeable. The advantages of using these cabinets are:

- Instant access to the specimens. These are stored in Superfamily order and then alphabetically, enabling access to the non-specialist and specialist alike. The relatively small quantity of material does not warrant storage in strict systematic order.
- The inter-change-ability of the drawers both within and between cabinets means that shells do not have to be catalogued systematically. This flexibility has proved an advantage as the contents on the outside of the box being catalogued do not necessarily correspond with the contents on the inside. Boxes of shells can be picked up at random, catalogued, re-boxed, re-housed and the new drawer location moved at a later date to fit in with the schematics.
- The amount of specimens removed at any time can be controlled. One or two drawers can be accessed while the remainder are locked away.
- The drawers can be labelled clearly.
- Protection against light. Shells have pigments that are light sensitive and therefore need to be housed in the dark. This system ensures that as little light as possible reaches the specimens.
- A relatively inexpensive storage system.

Literature cited:

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