The Melvill-Tomlin Collection: completing the inventory in 22 years!

One of the major tasks facing museum staff when acquiring new material is the task of curating and incorporating the items in the main collections. When the Melvill-Tomlin collection of molluscs was acquired by the Museum in 1955 it was the second largest such collection in private hands.

James Cosmo Melvill

John Read le Brockton Tomlin

The collection was started by James Melvill in 1853 and passed to John Tomlin in 1919. Both men had very diverse interests in molluscs, and consequently they built a collection representing all regions and most habitats in the world. On arrival in Cardiff it must have had over 40% of all molluscan taxa known (est. 35,000) and a much higher percentage for some parts of the world (Persian Gulf, Red Sea, South and East Africa). Melvill's notable acquisitions included rare shells of Mitras, Cones and Cowries. At the turn of last century he had nearly 400 of the 500 described forms of *Conus* including some real rarities. Melvill named over 1000 taxa, especially from areas like the Persian Gulf and a Museum publication listed these names. Tomlin continued to acquire important collections including the Pectinidae described by Bavay, *Placostylus* species described by Layard from New Caledonia and Archer's collection from Singapore. Tomlin described fewer new species himself, preferring to work on taxonomic revisions and species identification for others. On his death in 1954, the Museum received this collection, his library and papers, but no index, as Tomlin had not needed one.

One of our tasks is to improve accessibility to the collections. This collection arrived in mahogany cabinets and was stored in various parts of the building. Later, static storage was built, allowing all of the mollusc collections to be brought together. In the last fifteen years the storage of the collection has been expanded as curation has continued. Now the shells are housed in mobile storage racking with a drawer system, allowing us to increase or decrease the distance between the drawers. This is very flexible allowing organisation in a standard systematic sequence and means it is easily accessible to any taxonomic researcher. We have also been able to integrate all collections and currently have sufficient space to continue to incorporate new collections. This maintains the highest possible standards of collection stewardship.

A Melvill-Tomlin tray and handlist

Placostylus *from Layard*

Our other goal is to ensure accessibility to the data. In the past, entries were hand-written into large registers, but now documentation means entering the information into a computer database. When Graham Oliver arrived in 1978 he developed a paper system for recording information and with Alison Trew started a programme tackling curation of the Melvill-Tomlin Collection. Between 1978 and 1994 Alison, Graham and volunteers curated 64 superfamilies, establishing

the present name and labelling and securing the storage container. When each superfamily was finished the handlist was published and sent out to 120 institutions across the world. In this way the information on the collections was disseminated as widely as possible to taxonomists who name, study and describe new species as these were the people most likely to use the collections. However, if we continued such standards of curation a full inventory would take another thirty years.

In 1995, the advances in computer technology meant we could take a different approach to documenting data. At this time the Rio Summit and the demand for country-level species lists led to an increased demand on museums to answer enquiries about their holdings. Such a task is extremely time-consuming where collections are sorted in systematic sequence and consequently we were unable to handle them.

As a result we decided to accelerate the pace of documentation by inputting the basic collection information into a rapid entry database (using Filemaker Pro©) allowing many people to enter data at the same time. Since 1997 we have had over twenty staff in total inventorying and curating the collection. After twenty-two years we have completed the first inventory which means that any enquiries relating to locality, including species lists, can now be answered accurately in minutes rather than days or weeks.

Melvill's greatest prize specimen of Conus gloriamaris

First extension to collection store holding Tomlin library and roller racking

We have now databased 78,160 lots of shells in the Melvill-Tomlin collection. That is over 786,000 shells! The importance of the collection can be judged by the number of type lots (the specimens used for the first description of the species – especially the number of holotypes, syntypes or paratypes). In the first ten years working on the collection, Alison and Graham recognised 1100 lots of type, figured or cited material in the collection. However, as the graph demonstrates, in the last three years we have databased a total of 3069 lots of potential type status, indicating that we still have a lot of work to do to enhance the quality of information about these objects.

To research the status of a lot may take anywhere from half a day to a week: tracing the literature describing the species; comparing handwriting on specimen labels with the handwriting of the person who described the species; verifying that the specimens came from the location given in the species description; and checking the specimens to see if they look like the specimens which were illustrated. With many older collections, the shells used to describe new species were not differentiated and thus it is only the detective work of museum curators and taxonomists around the world that can help to locate and document the status of material. Now that we have an inventory this task is made much easier, as the entire database for all items in this prestigious collection will be accessible to taxonomists worldwide. Hence we have many helpers!

Our next target is to incorporate digital images of the type material and increase access to these beautiful objects through the web.

You can visit the Melvill-Tomlin Collection on our website at: http://www.nmgw.ac.uk/biosyb/collections/mollusca/index.en.shtml

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