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## The Biology Curator

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Museum policy to treat data capture strategy in two distinct parts.

The first concerns the short-term strategy to be used for the incorporation of existing machine-readable records and to prevent the problem growing. This can be formulated largely on pragmatic considerations without worrying too much about scientific priorities.

The strategy is that:

a) All new specimens (or collections of specimens) entering the NHM are, and will continue to be, accessioned electronically.

b) All existing electronic data should be transferred to the prototype software resident on Departmental servers as quickly as possible.

The second part of our data capture strategy concerns the retrospective databasing of our registered material. It is fully realised that this will take a considerable period of time to complete and will require very large resources indeed. It is also realised that existing staff resources are not sufficient to make a rapid response to all areas of our collections and it is vital that our efforts are further supported by external resources.

It is Museum policy that the information in our databases will be as accurate as possible. The Museum strategy to achieve this is to carry out rigorous quality control at the time of data entry. It is recognised that this may marginally slow down data entry but data quality is of greater importance than sheer quantity.

Not all taxonomic groups share the same degree of political and scientific interest and it would be better to target certain groups for early completion in order to make an impact and satisfy certain external priority needs. The Multi-Criteria Decision-Making Tool should be applied to help establish clear priorities for the future. Each major taxonomic group at the Phylum or equivalent level should first be prioritised within each Department. Priorities within these most "important" phyla should then be assessed so that our efforts may be concentrated as a short term solution to the larger problem.

### **Implementation**

There will be a Collections Database Project Team established to implement the Policy and Strategy and to report progress to the Board at quarterly intervals. Policy will be kept under review by the Board which will approve targets proposed by the Project Team. It is Museum Policy that at least 20% of our curatorial effort be expended on databasing of all descriptions.

### **Data Security**

It is Museum Policy that all specimen-based databases be regularly archived at weekly intervals and copies kept off-site. It is the responsibility of the Project Team to ensure that archiving procedures are rigorously and regularly carried out following the agreed standards as set out by the Information Policy Group.

### **NATURAL SCIENCE CONSERVATION IN THE UK – where next?**

*K.J. Andrew, Ludlow Museum*

This paper deals with the aspect of British natural science conservation that I have come to know intimately, geological conservation. I suspect that the situation I will describe for geology is the same or worse for biological conservation.

A total of four geological conservators are currently employed in posts of that designation at the National Museum of Wales, Leicester Museum, The Sedgwick Museum and Bristol Museum in conjunction with the SW Area Museum Service. The Natural History Museum Palaeontology laboratory has a team of five permanent staff and two temporary staff working on tasks that include conservation. The Hunterian Museum, Manchester Museum and Oxford University Museum geology technicians also undertake a limited amount of conservation work.

Should some disaster befall an important geological specimen, your museum acquires a collection in a poor state or you finally get grant aid for that drawer full of things you suspect have pyrite decay, what do you do? These incidentally are all real examples brought to my attention in the last couple of months.

If you are not one the museums who employ a full time geological conservator and grant aid is involved, a conservator will have to be chosen from the Conservation Register for many Area Services to fund the project, others maintain lists of approved people.

If you are fortunate to be a SW Area Museum Service member, then there is a conservator, working 50% of his time on geological specimens solely for the south west. If you are in SEMS, you will be given my name or Chris Collins name. If your museum is anywhere else, a recent search of the Conservation Register listed myself, a fossil preparator and a peripatetic geology curator who specifically states that only simple cleaning tasks are undertaken. The Natural History Museum labs do carry out some outside conservation work but they are not apparently listed on the register.

In August 1995, I stopped working as a freelance geological conservator and returned to paid employment and am officially now a curator. I am permitted to undertake four weeks of conservation work per year for outside bodies on an income generation basis so my services are not lost entirely.

However, this change needs some explanation and in the light of what I wish to set out, I hope some action can be taken.

In the late 1980s, concern was expressed about the lack of geological conservators in the UK, leading players were Chris Collins, Simon Timberlake and Louise Bacon amongst others. After various aborted starts, funding for a one year internship and support came from the newly set-up Conservation Unit, AMSSEE and the Curry Fund and I started training in November 1989 at the Horniman Museum. A few months later, the National Museum of Wales created a similar training post, along with training posts for Botanical and Zoological Conservators. The NMW posts are now permanent.

My training was extended for a year, with an additional Curry fund grant and an MGC grant to AMSSEE. The second year was spent in Canada working with Rob Waller at the Canadian Museum of Nature and also at CCI. I completed my training contract with three months of work for AMSSEE member museums. After that, my immediate options were unemployment or self employment.

AMSSEE agreed to give me the small amount of equipment that they had supplied during the training period on condition that I became self employed, they also researched museum laboratory space for me in my preferred location. After a period of business training and planning with Birmingham Venture, a training provider to Birmingham Training Enterprise Council, I became self

employed on 3 August 1992. During the first year, I received a business start up grant of £40 per week, I remained self employed for exactly three years.

During the three year period, I rented laboratory space at Birmingham Museum & Art Gallery and paid for this with free work. Several larger projects were undertaken on site and administration and report writing was carried out at home, initially with an old Amstrad computer and latterly with a PC. Throughout the three years, I worked extremely hard, including evenings, bank holidays and on average one day a weekend. On some large scale projects, I had to employ an assistant.

A reliable car was essential, since I travelled 26,000 business miles in the three years. I spent 25% of the year staying away from home whilst working on-site in other museums, either on large scale conservation projects or on conservation surveys.

I found myself needing to spend one entire day a week dealing with business administration, plus a least an additional hour on daily administration, telephone calls and so on, this made a considerable cut into conservation time.

Over the three year period, I assigned 450 lab numbers to a total of approximately 700 specimens plus a smoke damaged school collection of a further 1000 items. Three conservation contracts took three to four weeks for a single large vertebrate fossil, the other specimens were a combination of invertebrate fossils, minerals and sub-fossil vertebrate material. I undertook conservation work for a total of 17 different museums, a school and two private individuals and survey work for an additional seven museums. I also undertook ten large scale conservation surveys of geology collections, either as complete or sampled surveys. I also computerised and checked the geology collection and catalogue at Dudley Museum.

Average turnover over the three years was £16,300, of which 30% was used in business expenses, e.g. telephone, postage, accountancy bills, insurance, transport costs, training. Leaving an average taxable income of £11,400, from this money, capital investment (i.e. purchase of large pieces of equipment) a personal pension payment and the tax bill had to be met in addition to any money left over for my own consumption, i.e. wages. I was only able to pay myself the equivalent of a salary of £7,000 in the first year, £9,500 in the second year and £10,000 in the third year. During the three year period, I increased the rate for conservation from £16.50 to £19.50 per hour, although I charged only £8 to £10 per hour for a regular cataloguing contract over a two year period.

I invested £6000.00 of my own money in capital equipment, plus £2700 for a car and £2000 of equipment purchased with grant aid. Despite spending over £1,000 over the three year period in business insurance I still had only the legal minimum cover. Full cover for theft or damage to conservation equipment would have cost over £3,000 over the three year period.

Cash flow was a major problem, often with six to seven week periods between receiving any cheques. I had to borrow sums of £1000 several times during the three years to balance purchases prior to a large scale job with income that would not be received until several months later. Fortunately, rent for premises was paid in kind as free conservation work, had a monthly bill been required for premises, I simply would not have been able to pay it.

Work flow was also constrained by the various different

AMC grant years and application methods, for example, AMSWM work cannot be carried out between the end of February (when all invoices need to be in) and May when the first new grants are allocated. SEMS work now takes nearly two years from initial estimate to grant allocation.

I enjoyed my time as a self employed conservator and I received a lot of encouragement and support from the Conservation Unit, Birmingham Museum & Art Gallery and from the regular users of the service. However, I was not making a viable living from it, rather, I (or my household) was personally subsidising the museum community. If I had not had a second income in my household and emergency loans from close family to support cash flow crises, I would not have been able to survive. I suspect any one else dealing solely with museums and not the private sector would find themselves in a similar position.

It is here that most other branches of conservation have a distinct advantage, since there are private collectors of paintings, furniture, samplers and so on willing to pay self-employed conservators to have their valuable items treated. In geology, the only area of overlap into moneyed private collecting is in fossil preparation.

The current situation is such that there is now no-one able to carry out urgent geological conservation work for those museums without their own conservators or outside the SW. Work for which plans can be made several years ahead is possible to arrange, but unless on a large scale, is very difficult to organise.

So what is the answer? There are a few younger conservators in the field but all are on short term contracts and for the reasons set out above, most are simply not considering self-employment. Formal training such as the course Chris Collins is planning would be useful to start to train new blood, but internship type jobs are required now with close supervision to enable existing interested persons and any newly trained conservators to gain experience. The about to be released NVQ levels 4 and 5 in conservation will work best with this kind of supervised training arrangement and it is only then that a conservator could move on to a job where work has to be undertaken alone and complex decisions made without guidance from a supervisor. With recognised qualifications and experience, progression into museum management would be possible and the profession would not then stagnate.

Infrastructure, administrative support, rent-free lab space and a regular income are required, an experienced geological conservators as an employee would then service all preventative conservation needs within the employing institution and interventive conservation for collections in addition to generating a useful income from subcontracting to other museums in the area. Experienced conservators in such laboratories would then be able to offer internships to newly qualified conservators. From near countrywide experience, I would imagine that there would be sufficient work for a least one such geological conservator per Area Museum Service, but incentives to use the service would need to be built into grant programmes and geological rescue curation would also be needed in many cases.

Whilst certain area museum services have moved towards enabling rather than providing services, in the current economic climate, continuity of care and high standards of natural history conservation simply cannot be achieved via this route without personal hardship for the contracted provider.

Having experienced self-employment, my suggestion for a workable future for all branches of Natural Science Conservation is as follows:

1. Training course to equip natural science graduates with a post graduate qualification encompassing museum practice and collecting theory with special reference to older collections, materials science, preventative conservation and hands-on natural science practical conservation skills. Also available as a part-time course for interested parties in employment.

2. Internship programme to enable natural science graduates, but preferably conservation graduates, museum studies and course 1 postgraduates, to gain practical experience in natural science conservation in an environment with real work and funding pressures. If no prior conservation training, units of course 1 &/or Leicester Museum Studies course should be attended, however there is probably already enough demand to have a prior training requirement.

3. NVQ levels 4 & 5 in Natural Science conservation to demonstrate practical ability.

4. New posts for natural science conservators, initially one per area museum service on an employed but partially income generating basis with **realistic** targets.

5. On-going in service training, for conservation management and higher levels of NVQs.

6. Progression to higher levels of museum management, enabling a flow of natural science conservation skills rather than stagnation or loss.

## REGIONAL COLLECTION STORES, ARE THEY A VIABLE PROPOSITION?

*Ian Wallace, Liverpool Museum.*

### Data Collection

A federation of biology curators in the North West of England, known as the North West Collections Research Unit (NWCURU) has recently surveyed all 60 institutions that we know hold natural history collections in the region. The survey looked at collection content and condition. It was grant aided from the Museums & Galleries Commission Natural Sciences Incentive Fund administered through the North West Museums Service. The report will be available to all participating institutions shortly. The section produced by Gary Cleland and Ian Wallace contains the data on which the paper on Regional Collection Stores was based.

### Is there a need for Regional Stores?

The function of a Regional Collection Store would be to house specimens from several museums in a retrievable way and secure from additional deterioration.

A curator regularly using, or wanting to make sure that they could use material at a moments notice, is not going to want that material in a store more than 40 yards away, let alone 40 miles. Material that is not being, nor likely to be ever looked at would, however, seem a suitable candidate for a regional store. Is there a lot of such material? – the NWCURU survey attempted to assess this.

### Scale of use of collections classified by type of institution

Institutions holding Natural History material were classified into three types:-

**Type 1. Institutions with Natural History curator with formal museum training.** Here all 10 claimed, not

surprisingly to use the collections.

**Type 2. Institutions with a non-Natural Historian curator with formal museum training.** In these only 2 of the 21 claimed their material was used!

**Type 3. Institutions with curator having no formal museum training e.g. College lecturer, research station scientist, society curator (and collections in total store – locked away).** Here over a third, 11 of the 29, claimed their material was used.

Note that in claiming that collections are used, almost no curator would claim that their material was exploited to its maximum but most natural history material being looked after by natural history curators receives at least some use.

### The nature of the under-utilised material

It is worth looking at the un-used or seriously under-utilised material in the North West in more detail. Using the numbers given above and multiplying them by the collection content data collected during the survey enables the following table to be produced:-

Table 1. CATEGORY	UNUSED MATERIAL		USED MATERIAL	
	(type 2)	(type 3)	(type 1))	(total)
Mounts	2,229	743	20,271	(23,841)
Vert. skins	521	100	75,749	(76,972)
Osteology	85	288	12,333	(13,086)
Eggs	15,838	2,000	105,016	(127,936)
Insects	35,390	9,390	3,978,810	(4,080,032)
Molluscs	50,586	11,165	773,400	(844,466)
Other dry inverts	772	92	91,087	(92,296)
Spirit inverts	90	3,000	112,086	(116,346)
Micro. slides	675	7,820	45,447	(61,522)
Herb. Sheets	9,686	9,075	2,272,340	(2,351,737)
Other Bot.	450	720	308,655	(310,001)
Biol. models	1	6	1,230	(1,337)
Rocks	6,083	1,269	23,199	(56,853)
Minerals	9,283	3,177	48,168	(71,746)
Fossils	13,913	6,582	390,829	(434,849)
Other Geo.	0	462	11,932	(12,534)
<b>TOTAL</b>	<b>180,000</b>	<b>57,000</b>	<b>8.75 million</b>	<b>(9 million)</b>

TOTAL Type 2 + Type 3 = 237,000 which as % of Type 1 or Cat.Total = 2.7%

The immediate conclusion from examining Table 1 is that only a small proportion of the regions natural history material is languishing with little chance of ever being used. There is probably not enough 'languishing material' on its own to justify establishing a Regional Store. The store only becomes a viable proposition if it also includes material from those museums classed as having "well used" collections – those with natural history curators. Of that material the greatest problem is produced by mounted mammals and birds. Paradoxical material in that it includes the most used specimens – those on public display – but also what are often one of the least used parts of a collection when they are off display and crammed into stores.

Many museums would love to release the storage space occupied by this mounted material for other uses if they knew they could retain access to that material. If we therefore consider a sizeable proportion of the north west's mounted material as being potential candidates for a regional store, that might make it more feasible. We have estimated we would need a minimum of 50,000 sq. feet to store and service the region's mounted material.

It would be too easy for a Regional Store to become a very convenient dump for material never likely to be used that could not be thrown away easily because of legal problems,