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The Biology Curator

Title: A Synopsis (with added personal thoughts) of the fluid preservation seminar, hosted by Hampshire County Council Museums Service on 7th November 2001

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Source: Beccaloni, J. (2001). A Synopsis (with added personal thoughts) of the fluid preservation seminar, hosted by Hampshire County Council Museums Service on 7th November 2001. *The Biology Curator, Issue 21*, 13 - 14.

URL: <http://www.natsca.org/article/373>

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particularly important because of the potential role of voucher collections in support of biodiversity data. The National Biodiversity Network has recognised this potential since its inception, but so far there has been little integrated thinking as to how this role could be developed effectively.

With the advent of the NBN, there has been an increasing awareness of the need to encourage higher standards of data collection by those involved in recording wildlife. Part of this process must involve the quality of identifications, and the support of these identifications by voucher specimens. As was pointed out above, the housing of such collections is vitally important, and therefore the NBN has a real interest in encouraging partnership approaches to the designation of such repositories across the country. The development of local information networks around local biological records centres is one aspect of such work, but the parallel development of natural science archives and resource centres ought also to be on the agenda.

There are opportunities in all this for support. It may not be immediate, but the linkage with the interests of the NBN may help in developing bids to bodies such as the Heritage Lottery Fund for support. The NBN has so far agreed a strategic approach to involvement of the voluntary movement in biological recording as a basis for making bids to the HLF. The role of museums in acting as repositories of volunteer survey material or archives could well be a very legitimate extension of this. Further thought as to how this can be developed would be needed, but what is clear is that "joined-up thinking" (all the rage now of course) is needed, and that real partnerships need to be forged between museums and the rest of the biodiversity community. In this way biological collections might, again, be seen as a real resource for the community at large, not just an albatross around the cultural museum curator's neck.

Trevor James
**NBN Development Officer for Recording
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A SYNOPSIS (WITH ADDED PERSONAL THOUGHTS) OF THE FLUID PRESERVATION SEMINAR, HOSTED BY HAMPSHIRE COUNTY COUNCIL MUSEUMS SERVICE ON 7TH NOVEMBER 2001.

The seminar titled 'Fluid preservation – do we really understand it?' was hosted by Hampshire County Council Museums Service at their headquarters, a converted farm called Chilcomb House on the outskirts of Winchester. Simon Moore and his colleagues had arranged a number of interesting talks and demonstrations. In addition, there was a handling display of ground glass and storage jars from Stoelzle-Oberglas, the company who had sponsored the seminar, plus a display of fluid-preserved material in various media dating back to 1957. We were also presented with files, stuffed with interesting papers and information relating to the talks.

The seminar was divided into three parts - the biomechanics of fixation and preservation, more specific areas such as rehydration agents, and practical demonstrations. After an interesting welcome speech by Stephen Locke, the Director of Hampshire County Council Museums Service, Simon gave a brief history of fluid preservation. He then outlined the processes of fixation and preservation, and discussed 'new' preservatives, such as Opresol. Julian Carter (National Museums and Galleries of Wales) gave a talk on the biomechanics of formaldehyde with alcohol fixation, and a brief outline of DNA fixation and storage in alcohol. What I found most interesting was the difference between 'true' and 'pseudo' fixatives, where true fixatives create chemical cross-linking, whereas pseudo fixatives merely denature/coagulate. Although I found Julian's molecular diagrams a little hard to follow, as I had given up chemistry in the second year at senior school, I was left feeling that I wanted to find out more about the chemistry of the collections that I curate. I also felt safe in the knowledge that I know who to call if things get tough!

Simon then talked about the histological effects of fixation and long-term preservation, as well as whether preservatives are beneficial or not. I found this all very interesting, as I have only ever seen the effects of poor fixation/preservation at the 'whole specimen' level. Next, Maggie Reilly (Hunterian Museum, University of Glasgow) gave a review of current rehydrating agents. Contrary to my expectations that she would tell us about a definitive rehydrating agent, I was surprised to learn that the subject is still in some ways, at the 'drawing board' stage. This left me feeling very enthusiastic about following up some work that I had done three years ago, where I had compared sodium tri-phosphate and Decon 90 as possible rehydration agents for Arachnida and Myriapoda specimens. Maggie had very helpfully provided a reference list, which will come in useful.

Clare Valentine (Natural History Museum) talked about the move of the Zoology collections into the new Darwin building at the NHM's South Kensington site. It was very interesting to hear about her experiences and compare them with those of the Entomology Departments' team, as we had also taken part in moving collections into the same building. However, Clare's involvement in the actual move was much greater than ours. Jenny Bryant (NHM), was the last speaker for the morning session. She talked briefly about the fluid preservation of plant specimens and which are the most effective agents. It transpires that the NHM still uses traditional methods, like so many institutions, but there is a need for experimentation with modern preservatives.

After a fantastic lunch (the best I've ever consumed at a conference!), we split into groups for the practical demonstrations. Christine Taylor and Chris Palmer (Hampshire) took us around their biology store. Amongst other interesting specimens, we saw the superb fungal collection that Simon had freeze-dried, and well-preserved birds in beautifully painted display cabinets, which depicted scenes from the Hampshire area that existed over one hundred years ago. What I found particularly nice, is that the collections are used to train local people, such

as wardens of nature reserves.

In the workshop area, Christine demonstrated the transference of formalin-preserved material to alcohol (IMS). Simon demonstrated the Celloidin mounting technique, and 'volunteered' several people to try their hand at attaching snail shells to glass back plates! Simon also demonstrated the drilling of glass lids and back plates. Back in the meetings room, Julian demonstrated the use of a Density Meter for determining the concentration of ethanol/water mixtures. Simon also showed how to distinguish formalin from alcohol by using the 'map pin' technique. Andries van Dam (Leiden Museum) had brought along some packets of plastic 'pills', which are used in much the same way as Simon's map pins. The different coloured 'pills' float or sink depending on the type of fluid and its concentration, and can be left in specimen jars for monitoring purposes. At this point, delegates had to rush to get their trains, so the day's events were over.

I think that this seminar was a very worth while event. Sometimes it is quite easy to feel that you are working in isolation, although when you attend a seminar such as this, you realise that there is a community of people working to a common goal and the enthusiasm for the subject is tangible. The importance of these seminars therefore, doesn't just lie in the words imparted, but in the people who impart them. My initial answer to the original question 'Fluid preservation – do we *really* understand it?', changed somewhat through the course of the day. After hearing all the talks, my answer now is 'no we don't, but we are trying our best to get there!'

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