

View From The Chair

After being out of circulation for quite a few months due to a major renovation and re-display project and a month off travelling I returned to work to the anticipated mound of emails, post and phone messages. One of them was from a national entomology organisation expressing concern about the lack of young entomologists and asking if NatSCA had any information on how many entomologists were entering the curatorial profession. The situation in entomology circles appears to be depressingly similar to that in museums, a dearth of younger people entering the profession. I touched on this subject briefly in a previous *View*, highlighting the lack of and even complete absence of applicants for natural sciences posts.

Leicester and many other museum services have had particular trouble in recruiting to natural science curator posts, particularly biologists, to the extent that the posts remain unfilled and some have even been deleted. More evidence as to the decline in new natural science curators and conservators entering the profession came from the small to non-existent number of graduates taking courses in museum studies. The Leicester University Museum Studies course has not run the specialist Natural Sciences Curatorial course for the last two years.

Since that short article action has been taken to attempt to address this worrying trend. Over the last year Leicester and Bolton Museums have been working in partnership with the University of Leicester Department of Museum to develop a Natural Sciences Graduate Trainee programme, with the support of NatSCA and the MA amongst others. Modelled on the Positive Action Traineeships the trainee posts will be based at each museum and undergo an extensive training programme, including work based placements at other museums, registration on the Distance Learning Museum Studies course at Leicester University. Further good news is that both of these posts are being supported financially through the Renaissance in the Regions programme. This active support recognises the importance of the natural sciences and the skills gap within the profession. We hope to be able to advertise these posts to take in the current student year and target this year's graduates.

While these two posts are targeted at biological curation, there is more good news from ICON for natural sciences conservation. Icon, the Institute for Conservation is to receive £1m from the Heritage Lottery Fund for a scheme for 60 training placements in conservation. Natural Sciences conservation traineeships are to be offered in Cardiff and Belfast and will be advertised in May to start in September.

After a number of years of disappointing news regarding natural sciences posts these welcome developments are a positive first step in injecting fresh blood into the profession. NatSCA will do all it can to help support and develop initiatives like this and look to extend them if possible.

- Nick Gordon

Additions:

Errata and references from “Applying the theory of minimising the risks from the ten agents of deterioration at the Herefordshire Museum Resource and Learning Centre”, Andrew, Katherine, J. (NatSCA News, 6: 23 – 26)

- Hereford Museum and Library was opened in 1874 but the history of collecting dates back to the formation of the Herefordshire Natural History, Literary and Philosophical in 1836 with the successor (and still extant) Woolhope Field Naturalist Club founded in 1851. (Churcher et al, 1999). The natural science collections are relatively modest, at around 10,000 items in total and collecting has been fairly static with the exception of a major entomology bequest in the late 1990s. However, the main thrust of collecting was by F.C. Morgan curator from 1925 to 1945 who concentrated his efforts on social history, agriculture, art and costume. The whole collections total some 100,000 items. **(p.24)**
- We used the staff time on-site to undertake a 1 container in 10 inventory of collections located in this store (Craig, 2004) adding data to the database initially from hand completed sheets and later direct onto a laptop. **(p.25)**
- Using our wheeled vehicle store as the unloading point for containers and taking delivery of two to three containers twice a day, two days a week. **(p.26)**
- We have been delighted with the response to the new facility and can report in the first ten months of operation 364 researchers, 50 behind the scenes tours with 451 participants, 1007 hours of volunteer input and 44 meetings. We are also testing out our approach to public open days with the first event (part of Museums & Galleries Month) attracting 132 participants, two further events bringing the total up to 310 participants. The long term aim is to offer ten open days a year. **(p.26)**

References

Churcher, I., Hill, R., Robinson, C. *An Ornament of the City – 125 years of the Hereford Free Library and Museum*, The Herefordshire Council 24 pp

Craig, S.D.W., 2004. A collections survey: promises, pitfalls and realities. Postprints of the 2004 Museums Documentation Association conference <http://mda.co.uk>

Costain, C. 1994 *Framework for the preservation of museum collections* Canadian Conservation Institute

Waller, R. 2003 *Cultural property risk analysis model – development and application to preventative conservation at the Canadian Museum of Nature* Goteborg Studies in Conservation 13, Acta Universitatis Gothenburgensis. 107pp

NatSCA AGM 2006

AGENDA

- Apologies for absence
- Minutes of AGM London June 2005*
- Matters arising from London AGM minutes
- Chairman's Report
- Secretary's Report
- Treasurer's Report
- Membership secretary's Report
- Editor's Report
- Natural Science Conservation Report
- Election of ten committee member posts
- Seminars
- Study Trips
- Any Other Business
- Date and Venue of Next Meeting
- Vote of thanks
- Close

* The minutes of the London NatSCA AGM were published in *NatSCA NEWS* Issue 6: 14-19,

Elections for NatSCA committee

2006-2008

The ordinary members of NatSCA Committee, which were voted into office at the AGM in Dublin in 2004, have served for two years. These ten committee posts are now up for re-election to serve from 2006 to 2008. Previous committee members can be nominated for further terms of service.

N.B. Service tenures are three years for Chair, Secretary and Treasurer and two years for Editor, Membership Secretary and up to 10 other committee members.

Proposed and seconded Nominations for committee must reach the Secretary by 30th March 2006 ie 28 days before the AGM.

Elections to be held at the NatSCA AGM at 1.45 on Thursday 27th April, 2006 at Liverpool Museum, William Brown Street, Liverpool, L3 8EN.

Please cut out this section from the Newsletter and post to Paul Brown, Department of Entomology, the Natural History Museum, London, SW7 5BD, or email your nominations to P.Brown@nhm.ac.uk



Name of Nominee:

.....

Proposed by:

Name.....Signature.....

Seconded by:

Name Signature.....

How Do You Use Yours?

Do your conservation skills wow the masses? Is your insect collection at the frontline of crime-fighting? When was the last time your geology collection attracted £3m of external funding? Did your mammal event last year get rave reviews?

NatSCA is asking for examples of interesting, dynamic and successful ways in which people are using their natural science collections to inspire, educate or even generate funding. We're looking for examples of good practice that could be applied to any collection in the country - anything that would help make the case for the retention of natural science collections and their curators.

Any thoughts to: clare.stringer@leeds.gov.uk or 0113 2146526

NatSCA Conference & AGM

‘Selling Natural Science’: Developing concepts and ideas for galleries and other public resources

April 27th & 28th 2006

Thursday 27th April

9.00 - 9.30: Registration

9.30 - 9.40: Welcome and Introduction from Keeper of Liverpool Museum

9.40 - 10.05: Paul Manners, Project Executive, BBC Learning
Inspiring action

10.05 - 10.30: Susie Fisher, Director, The Susie Fisher Group
What do people want from a natural History gallery?

10.30 - 11.00: Tea / Coffee break

11.00 - 11.25: Kevin Walsh, Executive Officer (Programme Development), Oxford University Museum of Natural History
'Feeling Good': a new approach to display

11.25 - 11.50: Simon Chaplin, Senior Curator, Hunterian Museum at the Royal College of Surgeons
Beautiful bits that bob: redisplaying John Hunter's collection in the 21st century

11.50 - 12.15: Paul Bowers, Interpretation Manager – Darwin Centre Phase 2
Emma Freeman, Interpretation Manager – Special Exhibitions
Michael Harvey, Interpretation Manager, Gallery Development Natural History Museum
Darwin Centre and beyond : access to collections and access to ideas at the Natural History Museum

12.15 - 12.40: Speaker TBC

12.45 -1.45 Lunch

1.45 - 2.15: NatSCA AGM

2.30 - 5.00: Tours of collections storage areas World Museum Liverpool
(Spaces for each tour will be limited to 10 people. Each tour lasting 25mins)

- Botany
- Entomology
- Geology
- Vertebrate Zoology

Plus: Treasure House Theatre presentation
(Philosophy of THT, showcasing collections, communicating to audience etc)

3.30 - 4.00: Tea / Coffee break

5.15: Evening reception, World Museum Liverpool

7.30 / 8.00 Conference meal

Friday 28th April

9.00 - 9.30: Mike Graham, Steve Cross, Phil Witter, World Museum Liverpool
The work of the Clore Natural History Centre

9.30 - 10.00: Paul Richards, Curator of Natural History, Sheffield Galleries & Museums Trust
Street safari: The next generation

10.00 - 10.30: Richard Sutcliffe, Research Manager (Natural History), Culture and Leisure Service (Museums), Glasgow City Council
Kelvingrove's new natural science displays - ten years in the planning

10.30 - 11.00: Tea / Coffee break

11.00 - 11.30: Will Watts, Dinosaur Coast Project Officer, Scarborough Museums & Gallery
Redisplaying the Rotunda Museum

11.30 - 12.00: Leander Wolstenholme, Curator of Botany, The Manchester Museum
Displaying the Undisplayable

12.00 - 12.30: Henry McGhie, Head of Natural Sciences & Rebecca Smith, Curatorial Assistant- Natural Sciences, The Manchester Museum, The University of Manchester
Representing nature in museums: the roles of attitude and authority

12.30 - 2.00: Lunch

2.15 - 4.45: Gallery Tours:

- Bug House
- Clore Natural History Centre
- Aquarium
- World Cultures (TBC)

Costs:

NatSCA members - bookings received by **31st March: £45 – 2 days, £25 – 1 day**

Non-members and NatSCA members booking later than 31st March: **£60 – 2 days, £40 – 1 day**

Student rates for bookings received by **31st March** (proof of student status required): **£30 - 2 days, £15 – 1 day**

Conference meal extra at **£20** per person (excluding drinks)

Number of places will be limited due to limitation on lecture theatre size – so book your place now – bookings will be taken on a first come first served basis.

For regular updates and extra booking forms visit our website www.natsca.org.

Queries to Jo Hatton (jhatton@horniman.ac.uk). Contact details at the back of newsletter.

Full conference details, including booking forms to be mailed to NatSCA membership by end of Feb.

Bursaries for 2006 Conference

NatSCA would like to offer a number of bursaries for members towards the cost of the annual conference. There is a limited amount of money and the committee has decided that the following division best represents a fair dispersal of funds enabling the most members to attend.

- 90% of cost of reasonable travel and accommodation for those living more than 2 hours away
- 50% of conference fees for those living within 2 hours travel.

- All successful applicants must agree to provide a paper for the Newsletter before the bursary will be paid – this can be either an article on a suitable topic, or a personal view on the course or conference attended. (Content and style etc should be discussed with the Editor, when the bursary is approved).
- 90% of accommodation costs up to £50 per night will be repaid only with a receipt
- Travel costs to be agreed with the Bursary Committee at the earliest possible date.
- International applications will be considered at the discretion of the Committee.
- ALL bursaries are given at the discretion of the Committee and require proof of payment.

All applications must be sent to the Bursary Committee by 20th of March. Successful applicants will be notified in time to qualify for the early-bird discount rate. Application should be by sending name, address and brief statement of interest (no more than 200 words) to any one of the bursary committee.

Bursary Committee:

Editor: Victoria Papworth
Department of Botany
The Natural History Museum
London, SW7 5BD
Email: V.Papworth@nhm.ac.uk

Treasurer: Kate Andrew
Hereford Museum and Art Gallery
Broad Street
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Email: kandrew@herefordshire.gov.uk

Events Organiser: Jo Hatton
Horniman Museum
London Road
Forest Hill
London, SE23 3PQ
Email: jhatton@horniman.ac.uk

An Introduction To The British Historical Taxidermy Society **- Martin Dunne**

Martin Dunne and Adrian Sailor founded the B.H.T.S. in 2004. Both founder members being keen collectors of historical taxidermy.

It has been evident for many years that there was no representative body for the collector of taxidermy, particularly those with an interest in the historical aspect.

The Society was soon born. Now up and running it represents the largest group of collectors of historical taxidermy in the U.K. With many members being recognized authorities in particular areas of interest. We are also proud to have Dr. Pat Morris and Christopher Frost as our Patrons, two of the most respected names in the taxidermy fraternity.

The society held its' inaugural meeting at The Natural History Museum, Tring, in November 2005 where members enjoyed a behind the scenes tour and a talk by Pat Morris on the history of taxidermy. This was a resounding success with members attending from all corners of the U.K. who found the museum staff extremely accommodating.

Whilst the Society is still in its infancy, our aims are clear; to provide a forum for collectors of taxidermy, natural history and associated subjects. We aim to promote, preserve and further our knowledge of the subject and its past practitioners.

We are also in the process of forming a society library, which has acquired its first publications through acquisitions and donations.

Our aim in 2006 is to create an archive of ephemera and related material. Plans of a central databank on historical taxidermy, its practitioners past and present are also well in hand. In fact, we are accepting donations both from members and collectors, via the Internet and in traditional paper form.

Looking further ahead, we are assessing the possibilities of creating a B.H.T.S collection of historically important taxidermy. This obviously creates its own problems for a society such as ours, housing and funding such a collection being the most obvious.

We believe all our aims are achievable and with the level of support we have so far enjoyed, we feel the society will at last bring together a much overlooked fragmented pool of information, to one central point benefiting collectors and researchers alike.

Any enquiries please contact: -

Martin Dunne (chairman)
Tel: 07749189201
e-mail: taxidermy1@hotmail.com

Adrian Sailor (secretary)
Tel: 01785223215
e-mail: ar.sailor@homecall.com

Endangered Species in glass: the Blaschka models **- Julia Sigwart**

An essential part of any 19th Century natural history collection, the scientific models made by Leopold and Rudolf Blaschka froze the delicate features of organisms in time, to represent specimens that were difficult to preserve for display. These sculptures famously include anatomically detailed, scientifically correct models of hundreds of species of marine invertebrates and greatly magnified microscopic organisms. However, with the rise of underwater photography and less expensive modelling techniques, these models fell out of fashion and have in most cases been relegated to distant storage. Only recently have the models been recalled from obscurity and recognised as fascinating treasures in collections.

Leopold completed his first glass replica commission, 100 glass orchids for a local aristocrat in 1857- the same year his son Rudolf was born. Over their lifetimes the Blaschkas supplied museums, universities and institutes across Europe and North America with precise glass models of invertebrates from their catalogue of over 700 (predominantly Atlantic and European) species. Every model was hand made and painted to order. As scientific models grew to dominate a trade founded on laboratory glass and taxidermy eyes, the team sought out better “sitters” for their art, and installed large aquaria to keep live molluscs and anemones in their inland studio. In the last phase of their collective career they signed an exclusive which resulted in more than 4,000 models still held by the Botanical Museum in Harvard University. Rudolf completed the Harvard commission three years before his death in 1939, leaving no heir to the family trade.

Modern glass artists have been unable to recreate these stunning, intricate sculptures, and the father and son team never recorded their techniques. (But the American Museum of Natural History, New York, hired their own German glass artist to independently make very similar models of protozoa.) The Blaschka workshop where all the models were created in Dresden, Germany, was destroyed during bombing in World War II, as was a major collection of models held in the local natural history museum. Although some of their archives are preserved in the Corning Institute of Glass (Ithaca, USA), there is very little information about how they worked their glass magic. Although a charming mystery, this has led to growing concern among glass conservators, who are struggling to preserve and repair neglected models. Even the simplest forms of cleaning, to remove more than 100 years’ worth of dust, is a complicated job on these delicate works of art.

Over their long career, the Blaschkas clearly employed techniques that often involved using whatever was near at hand. Experimental work by some glass conservators quickly revealed that models of different ages and different species use completely different kinds of pigments, and different chemical compositions of glass (inconvenient for choosing a standardised cleaning technique!). Some models use pigmented glass, and others are surface painted, and others (such as naturally transparent jellyfish) use powdering techniques that look deceptively like glass decay.

September 2006 will see the first-ever international meeting focussed on the work of glass artists Leopold and Rudolf Blaschka. These 19th Century artists produced a fusion of science and art, which has never been equalled. Art and science museums worldwide hold Blaschka sculptures, which are increasingly recognised for their historical, technical, and artistic importance. Bridging the gap between science and art puts the Blaschka’s work in a unique position, which is long overdue for serious study.

The Dublin Blaschka Congress will be hosted in Ireland by the partnership linking University College Dublin and the National Museum of Ireland (Natural History), in collaboration with the Natural History Museum (London). Conference proceedings will include major contributions from some of the worlds leading glass scholars: David Whitehouse (Corning Institute of Glass, USA), Susan Rossi-Wilcox (Harvard University, USA), renowned Blaschka scholar Henri Reiling, and Chris Meecham (National Museum and Galleries of Wales).

‘There is growing interest in Blaschka works, because these are the earliest modern objects that directly connect science and art. Scientists call them “models”, artists call them “sculptures”, but they clearly have a huge value to both,’ says Nigel Monaghan, Keeper of Natural History in Dublin. ‘This congress is very timely for our collection, and for many scholars.’ In their own era, Leopold and Rudolf Blaschka described themselves as ‘natural history artisans.’ Their work has since been described as ‘an artistic marvel in the field of science and a scientific marvel in the field of art.’

Like an endangered species, it is not clear how Blaschka specimens in total exist, or where they are all held. Particularly among conservators and collections managers, where science and aesthetics often conflict over issues of storage, study, and display, these models have an interesting role. These scientifically accurate models, looking ready to crawl away, are beautiful. The 21st Century tradition of exhibition can perhaps take a lesson from this 19th Century innovation.

The Dublin Blaschka Congress will take place 28 - 30 September. The main aim of the congress is to network the growing number of people with interest in the Blaschka glass models, their history, and their conservation. The congress will include keynote addresses as well as submitted papers from areas as diverse as scientific illustration, conservation, exhibition, invertebrate anatomy and lampworking. A public exhibition of Blaschka models never before seen on display will be held in the National Museum of Ireland (Natural History), Dublin from September through December 2006.

For further details including congress registration, see www.ucd.ie/blaschka or contact Catherine McGuinness at blaschka2006@ucd.ie or telephone +353 (0)1 6486396.

Working Group On The Art Of Taxidermy
And Its Cultural Heritage Importance
- Adrian Norris

This Working Group was established at the ICOM NatHist Meeting held in Jakobstad, Finland June 2005

The working group was formed to

- develop a series of actions through which we could highlight (at least some of) the more important examples of taxidermy held in museums throughout the world
- establish the factors which make them culturally important, to the local community and to try to establish their importance to the wider international and scientific community.

This has resulted in the publication of a “**Code of Conduct**” for the long-term care and storage of Taxidermy.

A series of papers have now been published and these are available on the ICOM NatHist Web Site

<http://www.icom-nathist.de/icom/>

If you, or your museum, would like to be involved or kept up to date with forthcoming events and papers please contact:

Adrian Norris, 17, West Park Drive, Leeds, LS16 5SL
E-mail adrianxnorris@aol.com

Conserving transparencies - Simon Moore

Abstract

Fluid collections often contain at least a few specimens preserved in something other than formalin, IMS or phenoxy-ethanol-based preservative fluids. Some of these are transparencies, either traditional, alizarin-dyed, *in situ* endoskeletal preparations or anatomical vaso-injected preparations. This article reviews the preservatives and methods used to conserve these types of preparations and the solvent hazards involved.

Review

Transparency specimens are prepared to show some internal structure of part of an animal or plant or an entire endoskeleton of bone or cartilage. Alizarin dyes, whether red, blue or yellow (even green) are still currently used to stain bone, as they are calcium-specific. Victoria (dark blue) or Alcian blue (kingfisher blue) are used to stain cartilage. Older anatomy preparations often contain parts of organs or tracts where the associated blood vessels or lymph ducts or other vessels have either been injected with dyed starch/latex or mercury. Botanical specimens are simply placed into a transparency-inducing medium (such as glycerol) to show internal anatomical structure. Many botanical preservative media also contain glycerol as a humectant but this should not be confused with its use as a transparency preservative.

Outline of techniques

- For Alizarin staining (Figs 1-3), entire (small) animals are fixed in 70% IMS and then either skinned or de-scaled (scales often contain some calcium which will become stained with the dye, masking the skeleton) and sometimes the alimentary tract is removed to give a clearer result.

The fixed, skinned and/or eviscerated specimen is then macerated in a glass container with 2-5% aqueous potassium hydroxide (KOH), depending on specimen size and/or fragility, over a series of days or weeks until the tiniest bones have become visible inside the tissues. Ensure that the volume of KOH = at least twice the volume of the specimen, else yellow areas in the fluid may form indicating a gradual loss of fixation which may lead to specimen collapse.



Fig. 1 Sterlets stained by double-staining alizarin red/alcian blue technique for bone and cartilage. The darker areas are blue (cartilage) and the grey areas are red (bone).
Specimen preparation, courtesy of Ralf Britz, Natural History Museum, London.

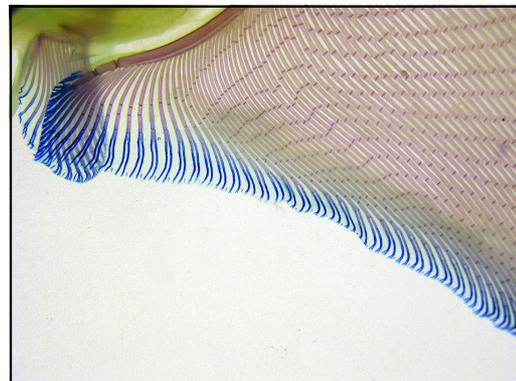


Fig. 2 Edge of ray wing stained with blue and red dyes, as before, to show cartilage and semi-calcified areas of cartilage. *Specimen preparation, courtesy of Ralf Britz, Natural History Museum, London.*

The specimen is then stained in fresh KOH mixed with some saturated solution of Alizarin dye in alcohol until the KOH is deeply coloured with the dye. It is then transferred into 5% to 10% glycerol, depending on its fragility, especially if a fragile (semi-embryonic) skull is involved [see Osmotic Pressure section]. The specimen gradually starts to become transparent and the slightly acidic nature of the glycerol differentiates the excess dye, removing it from non-calcium positive areas that have become stained. After several weeks, the specimen can be transferred into 70% or (eventually, if preferred) pure glycerol, as desired, and the preparation is complete. The dense fluid also supports the frail specimen. A crystal of thymol is often floated on the surface to prevent mould growth.

Some preparators prefer to use propylene glycol since it is less dense and less exudatory than glycerol and should not require any fungus preventative. The result should also show any internal organs as unstained but predatory organisms can be shown to have ingested smaller animals and, if as yet undigested, these can be shown as stained skeletons in the gut of the predator, or, as unborn in the uterus of a pregnant animal.

Cartilaginous skeletons are stained with either Victoria or Alcian (Kingfisher) blue dyes. Bony and cartilaginous endoskeletons can be stained with a combination of the blue and red dyes to show both types together (Figs 2-3).

Conservation note: Most preparations require little conservation. Fungal-infested or low level preservative can be carefully changed or topped up. If fungus has affected the staining then the specimen must be returned, gradually, to KOH and re-stained.

- For dyed or resin vaso-injections, the required tissues are dissected so that they can be easily seen *in situ*. They are then flushed with saline to remove blood masses and clots. Air bubbles are removed in fluid by careful manipulation.

Older specimens may have been injected with dyed starch paste, gelatine or by chemically induced (coloured precipitation) methods.

Resin or dyed latex (normally red or blue for blood vessels and cream for lymph) is injected into the vascular system (ref. Mahoney, 1978) and allowed to harden (resin) or fixed (latex). Resin injections tend to be used for corrosion preparations where the tissues outside of the injected mass are subsequently dissolved away in hydrochloric acid.

Dyed organs for transparency are then moved up a dehydration ladder of graded alcohols (normally in 10% or 20% steps depending on the fragility of the specimen) until they can be stored in a suitable organic transparency medium such as methyl benzoate, turpentine (even turpentine substitute but not other paint thinners – as yet untested). If there is any opacity or cloudiness this will be due to contained water forming an emulsion with the storage medium: the specimen will have to be moved to isopropanol to remove the water content before returning the specimen to the transparency storage medium.

Conservation note: Where the dye has fallen out of the vessels it has often fragmented. If the specimen is important enough, then it will need to be taken down a dehydration ladder and re-injected. For specimens stored in alcohol or solvents, celloidin (Moore, 1999: p. 111) will have to be used to consolidate the dyed medium. For formalin-preserved specimens, gelatine (Moore, 1999: pp. 111-112) may be used as a consolidant.

- For mercury-injected specimens (Fig. 4), treat with great care. The mercury is obviously hazardous (see below) and the specimens are usually more than 100 years old. Mercury can easily pool at the bottom of an organ whose finer vessels have ruptured through careless or rough handling over time. Regrettably, the organ itself can become ruptured so that the mercury spills out into the jar. Even by tipping a jar, the mercury can become displaced making fluid changes difficult.



Fig. 3 Mercury injected portion of alimentary canal to show allied blood vessels; mid-18th

Conservation note: Most mercury preparations are stored either in methyl benzoate or turpentine and over time, this will become increasingly yellow, even orange. Although this discolouration will not damage the specimen, it will not enhance its appearance. Draining a mercury injection jar needs to be carried out very

slowly so that tissues bearing an increased weight of mercury will not rupture. Ensure that the jar is tilted at an angle of about 20-25° from the vertical and ensure that it is well-supported. This will prevent the mercury from pressing on the areas that have supported it all these years. Using a fine translucent tubing so that the fluid will flow slowly, drain the jar by siphoning. Refill the jar by doing the reverse with clean solvent.

Turpentine substitute has been tested to replace turpentine but not longer than five years. The author has tried cleaning the contaminated fluid using charcoal but this has not worked due to the chemical changes in the fluid.

Problems with Osmotic Pressure

Owing to the high osmotic pressure of dense fluids such as glycerol, care must be taken when transferring up the glycerol ladder, not to rush the process. Vulnerable tissues such as semi-embryonic mouse or bird skulls can become dented if the osmotic pressure change is too great and some can even become invaginated (and difficult to reverse!). By transferring the specimen back to a more dilute stage, this undesirable effect is reversed without having to resort to fluid injection to inflate the skull, which can also lead

to distortion or rupture of the fragile tissue. Most transparencies are stored in 70% glycerol (diluted with deionised water).

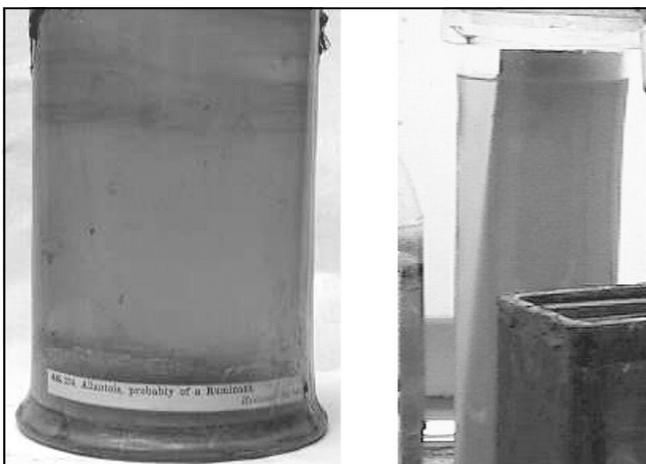


Fig. 4 Jar containing turpentine with a semi-dissolved plastic backing plate – subsequently replaced by glass.

The reverse and inverse can also occur when transferring up a dehydration ladder, leading to a solvent storage medium but the same rule applies – if the specimen shows signs of osmotic swelling or shrinkage, return it to the previous stage of dehydration for a longer period.

Hazards

As a normal part of good practice, jars should always be labelled to identify the fluids that they contain and, ideally, a history of fluids used in the process (fixative, IMS ladder &c). This is necessary both to conform to health and safety regulations and to give an idea of how the specimen was processed should any-

thing go wrong with it in the future.

Discreet hazard labels as to solvents, flammables and irritants should also be present on the jar, taking care that these do not become contaminated with solvent, upon opening a jar, or they will need replacing. Always bear in mind the solvent action of these preservatives. The author has found on several occasions coloured plastic backing plates being used to mount transparency specimens preserved in solvents. The resulting opaque solution may (Fig. 5) look alarming but provided the specimen is still, more or less, supported by it then no damage should have occurred. The specimen will obviously require a glass or ceramic backing plate and a renewal of preserving fluid.

Mercury injected specimens should be treated with great care, not only to prevent organ rupture and mercury-into-jar seepage (as above) but to prevent mercury from escaping from the jar and becoming a hazard in itself. Always bear in mind that even the tiniest amounts of spilled mercury are a serious hazard and can give rise to cumulative heavy metal toxemia if ingested.

Hampshire County Council Museums, Libraries and Archives Service,
 Chilcomb House, Chilcomb Lane,
 Winchester SO23 8RD.

Procedures For The Preparation Of Whole Insects As Permanent Microscope Slides And For The Remounting Of Deteriorating Aphid Slides

- Paul A Brown* & Emma De Boise**

Department of Entomology, The Natural History Museum, London

*Slide Preparation Laboratory

**Soil Biodiversity Laboratory, Department of Entomology, The Natural History Museum, Cromwell Road, London, SW7 5BD. UK.

This paper has been prepared to increase the circulation of our slide mounting techniques beyond the usual expert entomologist readership to the natural history conservator and curator community. Slide making methods are published in taxonomic papers or in Entomological manuals such as Cranston & Gullan (199X). Carter and Walker (1999) do not cover slide-making techniques. If possible, it is worth referring to an expert taxonomist working on the group of insects or other small organisms concerned so as to learn the latest and best specific variations in preparation and dissection techniques.

Preparation for microscopic examination as used for Hemipteran bug whole mounts.

Many small insect specimens can only be accurately identified once they have been cleared of their body contents and mounted on microscope slides. Specimens preserved in Formaldehyde cannot be cleared and so are almost useless for taxonomic study. Standard 75 x 25 mm slides, preferably of 0.8-1.2 mm thickness are normally used. Cover-slips should be the thinnest possible, no.0 grade, but many workers have their own preferences for cover-slip dimensions. We use circular cover-slips of 13 mm, 16mm, 19mm and 22mm diameter, depending on the size of the specimens.

For rapid identification of a specimen, almost any mounting medium can be used with a good refractive index and protected by a cover-slip. For permanent museum preparations, it is important that an archival quality mountant is used. There are many slide mounting media available, as listed in Brown (1997) and after much experience of mountant deterioration (as mentioned below) we suggest that the best choices for permanent preparations are Canada balsam and Euparal, because of their proven long-term performance. Canada balsam is used for Hemiptera, Thysanoptera, Phthiraptera, Psocoptera and small Hymenoptera whole mounts and is manufactured from the resin of the conifer *Abies balsamea* which is usually thinned with xylene. Canada balsam is known to be stable for over 150 years. The refractive index of Canada balsam (1.48 when still wet and 1.52 after the Xylene has evaporated) is similar to insect cuticle so if you use Canada balsam, phase contrast microscopes can be used to successfully study the fine details of insect cuticular features. Euparal is used for Hemipteran and Dipteran whole mounts and Lepidopteran genitalia permanent collections and have not exhibited any deterioration in over 50 years. Euparal is reportedly a recipe of Eucalyptus oil, methyl salicylate, camsal, sandarac and paraldehyde but is now a trade secret. Euparal has a contrasting refractive index (1.48) to insect cuticle and so is more suitable for bright field microscopy.

The technique which we use at the NHM for whole mounting small Hemipteran bugs (aphids, whiteflies and coccids) is stated below and closely follows the method published by Martin (1999). For many small insects, all stages of this method can be carried out in a square-based watch glass or similar small receptacle with a wide top and a lid. Decanting fluids between stages of the procedure needs to be done whilst observing the pipette tip through the dissecting microscope (to



Fig.1 Hazardous chemicals such as xylene and phenol require the use of a portable fume hood.

avoid the loss of specimens), the use of test tubes is not recommended. COSHH regulations for some of the reagents and chemicals used in this technique demand the use of suitably ventilated working areas, preferably with fume ducting or fume hoods.

1. Maceration of body contents is carried out by warming to around 80°C in a 10 % Potassium Hydroxide solution (an alkali) for 5-10 minutes or longer, until visible contents have become translucent. A small puncture may be made in the ventral surface of each specimen in order to speed up this and subsequent processes, and to help prevent osmotic collapse.
2. Decant excess macerant.
3. If the insect is naturally waxy, De-waxing of cuticle is carried out by gently warming specimens in a medium such as Carbol-Xylol (Xylene with 10% dissolved Phenol), Carbol-Histoclear (Histoclear with dissolved Phenol) or Chloral-Phenol (equal weights of Phenol and Chloral Hydrate warmed to liquefy and remaining liquid when cooled).
4. Decant de-waxing fluid, making sure that as much chloral phenol, if used, is removed as possible as this might cause blackening problems in the future.
5. a) for specimens with opaque black cuticle, rinse in strong alcohol and then partially bleach cuticle by immersing in a freshly prepared mixture of cold strong Ammonia and 30-volume Hydrogen Peroxide solutions. Bleaching should be monitored as it can be very rapid, and may be stopped quickly by adding a few drops of a water-soluble acid. Domestic bleach is unsatisfactory for controlled cuticular bleaching.

OR

- b) for very pale unsclerotised specimens, staining may be carried out by adding an excess of Glacial Acetic Acid* or Acid Alcohol and a few drops of Acid Fuchsin stain solution. Staining is carried out cold and usually only takes a few minutes. Failure of staining may result if de-waxing has been inadequate (see stage 3).
6. Decant bleach or stain and twice rinse specimens in Glacial Acetic Acid* or 95% Ethanol.
7. *Final dehydration* of specimens may be carried out by soaking in Glacial Acetic Acid* or Absolute Ethanol for a few minutes. Decant dehydration fluid.
8. *Clear* specimens by adding a few drops of Clove Oil or Histoclear (for Canada balsam), Euparal Essence (for Euparal) or an appropriate product for any alternative mountant.
9. Place specimen(s) on a pre-cleaned and polished slide, in a drop of Canada balsam or chosen alternative mountant and arrange specimens as required. Depending on the group, it is a good idea to place some specimens dorsum-upwards and some venter-upwards, (as prescribed by taxonomists). This aids observation of discriminate characters, particularly, in the resolution of ventral characters of species with very ornate dorsa. When mountant has partially dried, gently lower a cover-slip with a small amount of fresh mountant: the drier mountant will hold the specimens in place, while the fresh mountant will spread to cover the entire lower surface of the cover-slip. A little practice will be needed to perfect the amount of mountant needed to provide a preparation which does not cause distortion through over-flattening, but is also not so thick that its optical quality is impaired.
10. Slides must be adequately dried, especially if vertical storage is to be employed. With Canada balsam, slides may require up to two months at 35-45°C prior to permanent vertical storage. If slides are provided with a pair of thick card labels, they can then be stacked immediately, and the cover-slip will also be protected throughout the life of the slide: for this reason, paper labels are not recommended for permanent collections.

* The choice between Glacial Acetic Acid and alcohols, is influenced by economic and safety factors. Glacial Acetic Acid has the advantage of being a cheap means of neutralising alkalis and vigorously dehydrating material, and provides the acid medium necessary for staining; it has the disadvantages of its unpleasant, breath-catching smell and ability to cause skin burns. Whilst 95% industrial Ethanol (IMS) is cheap when it can be readily obtained, Absolute (100%) Ethanol is extremely expensive, and both are more pleasant to work with than Acetic Acid. Ethanol is extremely hygroscopic, however, and many workers prefer 100% iso-propanol, which is not. Iso-propyl alcohol is, thus, a better choice for dehydration in humid environments, as well being cheaper than Absolute Ethanol.

Labels, glues and inks should all be selected with archival quality in mind. Suitable materials and methods are suggested by Carter & Walker (1999), for slide-mounted material.

Conservation of Deteriorating Microscope Slide Preparations.

Upton (1994) and Brown (1997) have drawn attention to the problems of Gum Chloral and plastic mounted slides deteriorating over time. We here discuss the procedure used to rescue such material from the slide collections held in the Department of Entomology of The Natural History Museum, London.

Only a well-trained slide-preparator or conservator should undertake remounting of slide material. When in doubt please employ an expert to assess the problem first and to train staff if necessary or subcontract the work to a conservator. Carter and Walker (1999) briefly mention restoration of insect specimens on slides but the procedure mentions “easing the cover-slip off the slide” which we would not recommend as damage to the specimen(s) may occur.

Within the NHM Aphidoidea collection, a continuing survey of the collection is carried out to reveal deteriorating slides. Due to lack of time and man-power only deteriorating ‘Type’ slides and slides of species not well represented in the collection (i.e. if there are less than 50 slides of a given species) are chosen for remounting. Slides selected for remounting are those Gum Chloral mounts showing signs of Phenol blackening with pink, bluish or black areas emanating from the specimens. Other Gum Chloral mounts showing signs of crystallisation are also selected where Chloral Hydrate crystallises from the edge of the cover-slip as water evaporates from the Berlese due to a failed sealant ring.

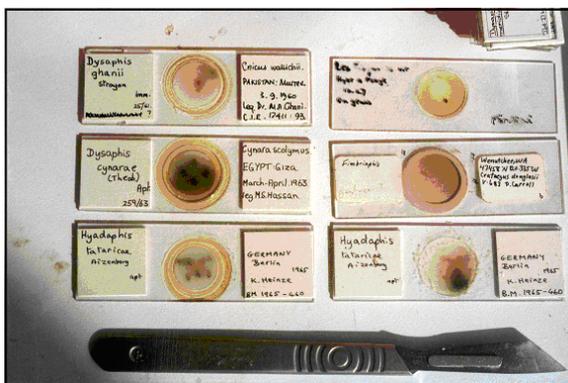


Fig. 2 deteriorating aphid slides showing blackening and crystallisation of Berlese gum chloral mountant.

Blackening in the Diptera collection slides has been blamed by some to be a reaction of the ringing medium Euparal with Gum Chloral. In the aphid slides, insufficient washing of the clearing mixture of chloral phenol might cause blackening and bleaching from the specimens before placing in the Berlese mountant, as the blackening emanates from the specimens and not from the edge of the cover-slip. Phenol is used in photography as a blackening agent!

Both aphids and Diptera were mounted in the same Berlese recipe that as quoted in Eastop & Van Emden, 1972:-

Gum Arabic	48g.
Chloral hydrate	80g.
50% w/w Glucose syrup	20ml.
Glacial Acetic Acid	20 ml.
distilled water	120 ml.

Berlese and other new mounting media were chosen because of the contrast in refractive index with insect cuticle, Berlese has an RI of 1.48.

Phenol balsam slides in the Diptera collection are satisfactory at the moment but a small number of aphid slides in this medium have turned black with cuticular degradation and have been rescued by soaking out in Xylene. This may indicate a future problem for this mountant. After dehydration, the specimens are soaked in a phenol/100% ethanol mix before placing in Canada balsam, which is dissolved in Phenol/Ethanol instead of Xylene.

Plastic (Polyvinyl Lactophenol) and gelatine mounts, showing signs of shrinking where air is entering under the cover-slips in long fingers, are also rescued. Canada balsam mounts are also occasionally rescued when the slide is broken or when the body contents need to be cleared for further taxonomic study using warm 10% potassium hydroxide. The Canada balsam slides in the Entomology Department are mostly not

showing signs of deterioration apart from yellowing and many are of a great age.

Methodology

Forty slides make up one batch and these are prepared by the scraping off of the ringing medium (Euparal and Murrayite) with a sharp scalpel, being careful not to damage the cover-slip in the process. These slides are then marked into three using a diamond stylus and the thirds are carefully snapped along the score lines, which usually do not splinter. The central third with the specimens under the cover-slip are placed into a watch glass with 30% alcohol and the two ends are put into water in a tub on top of the watch glass so as to keep the labels associated with the specimens. The labels float off the glass and are affixed to a new slide, which is again placed with the associated specimens and watch-glass. If the labels are paper, these are glued to an already carded slide using neutral pH Lineco PVA adhesive. If the labels are card, these are fixed with the same glue to an uncarded slide and if the card laminates in the water, the top label surface can be glued to a new card square. Future removal of such labels is done by carefully removing a layer of the card below the label, which strengthens it for further affixing. Occasionally non-permanent ink runs in this treatment so the soaking is watched carefully so those labels deteriorating can be removed quickly and then removed with careful use of a sharp scalpel. The new labelled but as yet blank slides are then left to dry on top of the watch glass with the associated specimens. Especially when dealing with 40 slides, one must be careful not to disassociate the specimens from the labels. A dedicated slide mounting-conservation area is prerequisite to avoid other people disturbing this system.

The specimens are left for a few days to soak in watch glasses with in 30% Ethyl Alcohol (the alcohol stopping fungal growth). These are placed in trays with suitable warning signs to avoid disturbance and covered to reduce evaporation and exposure to light. Some water-soluble mounts soak out quickly and the slide-square and cover-slip can easily be removed and disposed of in the sharps bin. Other mounts often need a further soak in cold 10% Potassium Hydroxide that digests the remaining mountant without damaging the specimens. This soak can be for 5 to 30 minutes. If the mountant is still intransigent, a further soak in warm KOH, or warm acetone will usually work. Acetone has a low boiling point so care must be taken to avoid over-evaporation or fire. The much thicker Lewis Diptera slides mounts in the NHM have successfully been soaked out of the possibly, slightly different Gum Chloral mountant by using warm acetone. The insect cuticle in this mountant has not deteriorated or bleached to the same extent as in the aphid ‘Berlese’ mountant.

Occasionally damaged Canada balsam slides can be soaked in Histo-clear ‘orange’ oil and or in xylene but the latter should be done in a fume hood. Cover-slips and specimens should not be helped out of the mountant as this often can damage the specimen with appendages breaking off. Often old Canada balsam slides have uncleared specimens with body contents still opaquely present. For taxonomic study, features of the cuticle need to be viewed so the body contents should be cleared. A careful heating in 10% KOH can clear these specimens before they are washed and dehydrated. Specimens that have previously been stored in formalin before mounting will not clear – this is another reason for not using formalin as a preservative.

The freed specimens can then be soaked in 30% alcohol in the watch glasses for a further period to wash any remaining KOH. The 30% alcohol is then decanted off and glacial acetic acid added for a short period of 2-5 minutes or changes of 50%, 80%, 95% and 100% alcohol, to dehydrate the specimens. If the cuticle of the specimens has been badly bleached by the deterioration process, Acid Fuchsin can be added in the glacial acetic stage to stain the specimens. The acid or alcohol is then decanted off and drops of clove oil are added to the specimens in the watch glass. From the clove oil the specimens can be removed to a drop of clove oil on the new slide and the appendages arranged suitably if the specimen is not already too rigid to allow this. Do not force the specimen if rigid as damage may occur. Different needle forceps, flattened pins and small spatulas can be used to remove the specimens from

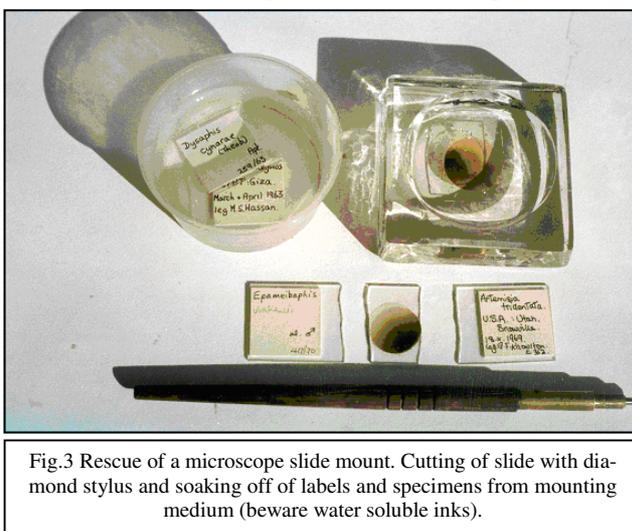


Fig.3 Rescue of a microscope slide mount. Cutting of slide with diamond stylus and soaking off of labels and specimens from mounting medium (beware water soluble inks).

the watch glass to the slide, which is the most delicate part of the operation. Any appendages that become detached, should be placed close to the specimen from which they came. The clove oil is then carefully soaked from the arranged specimens using the rolled corner of a tissue, taking care not to remove the specimens or their appendages in the process. Sometimes specimens will disintegrate through no fault of the conservator. If this occurs, place the fragments on the slide as even these can still be of taxonomic use. Add a drop of Canada balsam to the specimens and ensure that they are still arranged correctly and then place a cover-slip over the balsam and specimens ensuring that there are no or few air bubbles. Small air bubbles will often vanish when the slide is placed in the oven and attempting to remove bubbles by pressing on the cover-slip may cause damage to the specimens. This process is routinely carried out in a fume hood, especially if glacial acetic acid or xylene is used.

Place the slides in an oven at 30°C for three-four weeks to harden. If the balsam slides are not incubated then the balsam may well never harden sufficiently so that, if the slides are to be stored vertically, the mountant will run to the bottom of the slide under the influence of gravity. Very large numbers of 'thin-mount' slides are stored vertically in the NHM Entomology collections and no properly hardened slides have slumped. Thick mounts should always be stored horizontally as the centre of a mount often does not harden sufficiently even after baking.

Liquid mount conservation is not discussed here, as we do not have such mounts in our direct care. Simon Moore discusses the conservation of liquid slide mounts in his paper reporting on a project undertaken to save drying slides held within the Royal College of Surgeons in London (Moore, 1979).

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Substances controlled under the Misuse of Drugs Regulations 2001 **- Home Office (Drugs Licensing)**

Many museums currently hold substances controlled under the Misuse of Drugs Regulations 2001. To legalise this situation a licence to possess the substances is required from the Home Office. Whilst most museums already hold such licences, with the frequent additions to the list of substances coming under control, it is possible that some collections have been overlooked, and still require licensing. Licenses to possess are required whether controlled substances are locked away in a store, or whether on display.

The easiest way to check if anything in your collection requires to be licensed is via the Home Office website, which has a list of all substances controlled under the Regulations:

www.drugs.gov.uk/drugs-laws/licensing

If you find you are in possession of substances that appear to require licensing, then an application form can also be found on this site. This form should not take any more than 15 minutes to complete. Before a licence can be granted, a visit will be made by a Home Office Inspector to agree appropriate security levels and operating procedures for maintaining the collections. With the levels of security already in place at most museums it is unlikely that much, if any changes would be required. Licenses currently cost £30 per drug per year. The Home Office expects to issue a licence within one month of receiving an application.

If you feel this may affect your collection but are unsure please contact any of the following who will be pleased to give advice.

Home Office Drugs Licensing – 0207 035 0483

Drugs Inspectorate (South) – 0207 035 0482

Drugs Inspectorate (North – including Scotland) – 0113 220 4570

CONSERVATION NEWS
Notices, Adverts & Meetings

Call for Papers:

**2nd International Conference of the European Society
for the History of Science**
 Cracow, 6-9 September 2006

Symposium R11: Botanical gardens within global and local dynamics
 Sociability, professionalization and diffusion of knowledge

The aim of this symposium is to portray the "actors" involved in the dynamics characteristic of the social and scientific functioning of the botanical gardens from the Renaissance to the present. We want to consider professionals and non-professionals in the fields of botany, horticulture, architecture and arts in order to reflect the social structure of botanical gardens. Furthermore, we want to depict those gardens as places of cultural and scientific exchange.

We welcome papers in English on the following topics:

- 1- The exchange of knowledge within and between botanical gardens, referring to their methodical arrangement (natural system or artificial system) as well as to their design (for example, exchanges between scientists, architects and gardeners).
- 2- The role of the gardens in the institutionalization and the professionalization of botany during the early 19th century, the garden as medium.
- 3- The botanical gardens and their role in scientific networks.
- 4- The botanical gardens as places of sociability and meeting places for amateurs and professionals.

Although our approach is firmly rooted in the field of the history of science we especially would like to encourage interdisciplinary proposals, which would take theoretical elements of the history of botany, of horticulture, of garden design as well as of the history of social concepts into account.

www.2iceshs.cyfronet.pl

Organizers:

Dr. Nicolas Robin Germany	Prof. Dr. John Dixon Hunt USA	Dr. Volker Wisseman Germany
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Meetings:

National Federation for Biological Recording & Biological Records Centre
Special Conference & NFBR AGM

5-6 May 2006
 "Biological Recording for the Future"

Millennium Training Centre, Great Barr Hotel, Birmingham

Contact:
 Mandy Rudd
 Greenspace Information for Greater London (GIGL)
the open space and biodiversity records centre for London
 Ph: 020 7803 4278
 E: mrudd@wildlondon.org.uk

Useful links:
www.wildlondon.org.uk www.lbp.org.uk www.nbn.org.uk www.nfbr.org.uk

SPNHC-NSCA 2006 Joint Annual Meeting

"The Road to Productive Partnerships"
 May 23-27, 2006

Hotel Albuquerque at Old Town, Albuquerque, New Mexico

The Society for the Preservation of Natural History Collections and the Natural Science Collections Alliance will hold a joint annual meeting in Albuquerque, New Mexico, May 23-27, 2006 at the Hotel Albuquerque at Old Town, in the heart of Albuquerque's historical district and just off Route 66. "The Road to Productive Partnerships" theme will focus on collaborations of scientific collections with partners such as government agencies, local and international agencies, and non-profit groups. Your co-hosts will be the University of New Mexico Museum of Southwestern Biology and the U.S. Geological Survey Arid Lands Field Station.

In addition to invited speakers and oral and poster presentations, our program will feature a series of special sessions with relevant and wide-ranging topics of interest for today's museum professional. A series of workshops will be offered on May 27 and will highlight recent advances in georeferencing, digital imaging, data sharing, and bioinformatics. Several pre-meeting full-day and half-day field trips will be available, as well as museum tours on the University of New Mexico campus, a reception and banquet with live music, Trade Show, and unsurpassed networking opportunities.

Meeting registration will open in January, but you can begin making your hotel reservations now. See the "hotel information" link at the web site for details about the Hotel Albuquerque at Old Town.

<http://www.msb.unm.edu/meetings/SPNHC-NSCA2006>

Deadlines to remember:
 Abstract submission: March 15, 2006
 Early Registration: March 24, 2006
 Hotel reservation: April 23, 2006

Contact:
 Cindy Ramotnik
 U.S. Geological Survey, Department of Biology, MSC03 2020
 1 University of New Mexico, Albuquerque, NM 87131-0001
 505-277-5369

Meetings:

GCG Meetings 2006

GCG Workshop – The Curation and Conservation of Rock collections

April 26, 2006
 National Museum of Wales
 Contact:
 Helen Kerbey
 National Museum of Wales
 tel: 029 2057 3367
 email: helen.kerbey@nmgw.ac.uk

GCG Seminar and Field Trip – Dangerous Collections

18 and 19 May 2005
 The Manchester Museum
 Contact:
 Mandy Edwards
 University of Manchester
 tel: 0161 275 3947
 email: mandy.edwards@man.ac.uk

GCG Workshop – Geological Archives
 11 October 2006 (Date to be confirmed)

World Museum Liverpool
 Contact:
 Tony Morgan
 World Museum Liverpool
 tel: 0151478 4286
 email: tony.morgan@liverpoolmuseums.org.uk

GCG Seminar and 33rd AGM - Learning with Geology Collections

4 and 5 December 2006
 Plymouth City Museum & Art Gallery
 Contact:
 Helen Fothergill
 Plymouth Museum
 tel: 01752 304774
 email: helen.fothergill@plymouth.gov.uk

Study Visit : Liverpool/Manchester

To be arranged.
 General Contact:
 Steve McLean
 Hancock Museum
 tel: 0191 222 6753
 email: s.g.mclean@ncl.ac.uk

Meetings:

Buckland Symposium
University Of Oxford, 12 August 2006

The Oxford University Museum of Natural History, the History of Geology Group (HOGG) and the Palaeontological Association are meeting together on Saturday 12th August 2006 for a day of talks on the charismatic William Buckland, to remember the 150th anniversary of his death (1784-1856). The Museum will also be exhibiting some of Buckland's specimens.

To book a ticket for the Buckland Symposium please send a cheque for £15 to Professor Jim Kennedy at the address below, with details of your name and address. (Members of HOGG and the Palaeontological Association pay £10.) Cheques should be made out to the Oxford University Museum of Natural History.

A registration form can be downloaded (shortly) from the HOGG website www.geolsoc.org.uk/hogg

For further details contact Professor Jim Kennedy
Address: University Museum of Natural History
Parks Road
Oxford OX1 3PW
UK

Email: jim.kennedy@university-museum.oxford.ac.uk

Notice:

Disposal

Home wanted for a small collection of glass negatives of British birds

Liverpool Museum has obtained approximately 1100 glass negatives of British birds from the late Eric Hardy, well known in the north west as a natural history journalist.

Unfortunately the provenance is not otherwise known and there is no locality data whatsoever. I am pretty sure Hardy took some himself but others certainly came from a professional photographer called P. Webster, who sold glass projection slides from an address in Newcastle upon Tyne, and we have several such slides and some prints made from the negatives we would also like to dispose of.

I cannot justify retaining more than a few representatives as part of the Hardy archive because of their lack of locality and other certain provenance.

An offer of a home for this material, or any information on P. Webster of Lesbury Avenue Newcastle upon Tyne would be welcomed.

Ian Wallace
Curator of Paper Biological Records,
National Museums Liverpool
ian.wallace@liverpoolmuseums.org.uk

News:

The Museums and Galleries History Group

The Museums and Galleries History Group is pleased to announce the first issue of its biannual newsletter is now online at the MGHG website, www.mghg.org, containing news of projects, publications, research and events in the field of museum and gallery history.

The MGHG provides a platform for debate and contact among all those who seek to understand museums and galleries from historical and theoretical perspectives. The interests represented are wide-ranging, interdisciplinary and international and the group also acts as a forum for considerations of the place of museum history within academic discourse and its importance for current museum practice.

In addition to its newsletter, the MGHG organises regular symposia (the next, on the subject 'Past and Present: negotiating museum and gallery history', will be held at Newcastle on 7th-8th September 2006). It is also putting together a searchable research register of members' interests. Access to the first issue of the newsletter is free to everyone, but future issues will be available only to members.

Information about how to join (cost only £10, with a discounted rate of £5 for registered students) can be found on our website, together with further information about the group and the coming symposium.

Dr Katharine Edgar (GHG Marketing Officer)

Lecturer Department of Museum Studies University of Leicester
 103-105 Princess Rd East Leicester LE1 7LG
 Tel: +44 (0)116 252 3971
 Email: ke14@le.ac.uk

**HPSM Listserv Covering The History And Philosophy Of Science
 In The Northeast Of England**

The History and Philosophy of Science and Medicine (HPSM) Network was founded by Durham University's Department of Philosophy in 1999. The purpose of the HPSM listserv is to create a network for researchers with links to the north of England who are interested in topics broadly relevant to the history and philosophy of science and medicine (including bioarchaeology and palaeopathology). This is accomplished by posting messages that advertise HPSM events (lecture series, departmental seminars, individual papers, conferences, museum displays, etc.), research (new lectureships, research projects, funding proposals, etc.) and collections (material, archival, cyber, etc.).

At present, the list has over one hundred academic subscribers, as well as students reading for an MA or PhD in HPSM related subjects. The list includes staff members from the Centre for Life (Newcastle) and the universities of Durham, Newcastle, Sunderland, Teesside, York, Leeds, Manchester, Lancaster, Leicester and Warwick. However, there are several independent scholars too. The listserv is moderated, but it is open to anyone with a genuine interest in HPSM studies.

To join, simply send an email to Dr Matthew D Eddy (M.D.Eddy@durham.ac.uk)