

Editorial

Welcome to the second issue of your Newsletter.

Apologies first of all for the rather late arrival of the last issue, which left the printers on time but got caught up in the postal strike, so a couple of the ads were out of date.

This issue contains the new NatSCA constitution as well as nominations for committee. I hope that you will read the constitution and give us feedback, as well as thinking about giving some time to work on committee. An organisation is dependent on its members and especially on new ideas and thoughts.

Once again I will make the traditional editor's appeal for articles, reviews, training courses and letters. I have recently received a copy of "Amphibians and Reptiles of Surrey" by Julia Wycherley & Richard Anstiss for review, if anyone would be interested? I also have a copy of "Specimens" by Roger Lincoln & Phil Rainbow. It needn't take a vast amount of your time. You know the bonus? You get to keep the book when you have reviewed it!

Dates for your diary:

- 1st February 2004

The Council for Museums, Archives and Libraries announced that as from February it is dropping the name "Re:source" from its title. The organisation, which provides leadership across the sector and strategic advice to government, said it would be known in future as the Museums, Libraries and Archives Council, abbreviated to MLA. Apparently this re:branding has been achieved at a special low price, and I'm sure will prove popular.

- 1st April 2004 – Dichlorvos ban

The Health and Safety Executive has set a deadline of 1 April 2004. From this point the use of Dichlorvos (also known as Secto, Vapona, DDVP) has been banned.

- The minutes of the ACP meetings can be found on the website of the Pesticides Safety Directorate of DEFRA: <http://www.pesticides.gov.uk/committees/acp/acp.htm>.

- The statement and minutes of COM's consideration of Dichlorvos are published on the Department of Health website: <http://www.doh.gov.uk/com.htm>

- Further information on the approval system for non-agricultural pesticides can be found on the HSE website: <http://www.hse.gov.uk/hthdir/noframes/bpau.htm>

For further information:

Call HSE's InfoLine: 08701-545500

or write to: HSE Information Services, Caerphilly Park, Caerphilly CF83 3GG.

- Victoria Noble

Contributions for Issue 3, July 2004

All articles, letters, news, adverts and other items for inclusion for the next issue of the NatSCA Newsletter should be sent to the address below by June 1st:

Victoria Noble [Editor, NatSCA]

Department of Botany, Natural History Museum, LONDON, SW7 5BD

email: V.Noble@nhm.ac.uk

View From The Chair

We are nearly through our first full year as a new organisation, and it seems pertinent to point out that NatSCA is a new organisation, not a simple amalgam of our two former bodies, the Biology Curators Group and the Natural Sciences Conservation Group. The first year has involved a lot of work, not only setting up the nuts and bolts of the new group, but also in beginning to develop new approaches and ideas and new ways of working. On top of this the committee have worked very hard to continue the good work of BCG and NSCG and to avoid any 'gaps in service'. You are reading the second impressive issue of NatSCA News, we have held a very successful and oversubscribed entomology training day, NatSCA has achieved full charitable status and by now you will have received details of our AGM and first major conference.

The first full NatSCA conference approaches during April in Dublin. Jo Hatton has put together a full and varied 3-day programme with an excellent series of speakers and I would encourage all that can to attend. As well as the diverse line up of speakers and tours there is the matter of elections. All members of the committee were elected for one year as an interim measure to get NatSCA up and running. These elections will be for the first full term committee who will have the responsibility to take NatSCA forward and develop it into the strong and vocal advocate natural sciences collections and people working with them need. While only young, NatSCA will only develop and grow through infusion of new blood with fresh ideas and different perspectives. Both the committee and myself would urge anyone who wishes to stand for election and if you have any questions we will be more than happy to answer them.

The next few years present many new challenges with many issues at local, regional, national and international levels that we should as a group have input into. Museums as a whole need more than ever to demonstrate their wider benefits to society, that we are socially inclusive, reaching out to new audiences while maintaining and building on our traditional users. It is essential that we respond to these emerging and demands, while at the same time not losing sight of what is surely the core reason for and responsibility of a museum, its collections. We must as a group and a profession responds positively to these new agendas and challenges but on our own terms through reasoned debate and argument. If we do not we may find ourselves marginalised with inappropriate 'solutions' and agendas imposed upon us.

Much thought and debate therefore has been had about where we as a group should direct our energies. Some of the areas currently identified include: supporting lone natural sciences curators and conservators in museums and those with no specialist staff; developing links with regional agendas, notably Regional Hubs; becoming involved with national debates such as the Museums Associations Collections 2050 working groups where NatSCA as an organisation has applied for applied for positions on both the collections acquisition and collections use groups. A fuller outline of the draft aims and objectives of NatSCA are included in this newsletter and we welcome your views either in writing or at conference in April.

Finally I would like to thank the committee for all their hard work over the last year. It has been an interesting first year and everyone has given it there all. The next few years will be equally interesting and NatSCA will be in a prime position to be a strong advocate for the museum natural sciences and everyone working field. See you in Dublin.

- Nick Gordon

Letters

Response to Registration Attack

Dear Editor,

We feel that we should respond to a letter in the last issue (NatSCA News Issue 1 p.3-4). Steve Thompson's comments on registration guidelines raise some issues and questions that we feel we can answer. Steve asks the question why legislative or direct government funded museums are not included in registration phase III? The answer to this is that these museums already do have to comply to the standards in registration – however because of their size and specialist nature they are considered individually. The NHM is registered and is regularly reviewed by Re:source.

Steve also raises the point that the national museums are, by definition, the benchmark institutes and then comments that he can hardly blame the NHM for not volunteering to take on the almighty task of striving to meet the highest standards of all. The NHM is committed to being the benchmark institute for natural history standards in the UK, and is also striving to be a world leader in this field. This is written into the NHM's 10-year vision (a series of nine deliverables that the museum aims to reach by 2010) viz *"we will specifically... set world standards in collections conservation and management"*

The NHM has invested manpower, time and money into achieving this end. The museum has created the collections standards project, whereby standards employed in the worlds largest natural history museums and botanic gardens are being collated and evaluated. The NHM is then undertaking a benchmarking exercise against these standards to ensure that it matches best practice

and moves forward to take a leading role.

In addition to this project the NHM is also a leading partner in the European Community funded Framework VI initiative, the SYNTHESYS project. This project, which is due to begin in February 2004, brings together a significant proportion of Europe's largest natural history institutes. One aspect of the SYNTHESYS project is to create a set of European-wide standards that all institutes can follow. RBG Kew is leading this phase of SYNTHESYS, however the NHM is a leading partner and we will integrate the results of the European project with our own collection standards project.

We plan to report on this work at the SPNHC conference in 2005, which will be in London (at the NHM). The main theme of the conference will be on standards in natural history collections.

Dr Paul G. Davis
Director, Collections Standards Project
Natural History Museum, London

Dr C.J. Stanley
Chair, Collections Management Group
Natural History Museum, London

Middleton, Garden of Wales

As leader of Carmarthenshire county council I am very concerned over the situation that has arisen. We regard the National Botanic garden to be a crucially important facility for conservation, science, education and tourism and one that has the potential to support sustainable regeneration in Carmarthenshire and beyond. For this reason, my officers and I have been working hard over recent months in collaboration with the

garden and other key stakeholders to do everything we possibly can to secure a viable, long-term future for the facility. This has included making a contribution in the region of £150,000 to the financial package brought together in partnership with the Welsh Assembly Government and the Millennium Commission to support the garden over the past few months, whilst a concerted effort has been made to identify a way forward.

The National Botanic Garden of Wales is an independent organisation run by a Board of Trustees. The County Council plays no part in the management of the organisation but has played a leading supporting role throughout its life to date.

The Garden represents an investment of over £40 million, much of which has been provided by the public sector, notably the Millennium Commission. This investment was made on the basis of a business plan prepared by the garden during its formation that projected that it would be a self-funding organisation that would not require public subsidy. The funding principle was that the core objectives of conservation, science and education would be funded through the operation of a garden open to the public, who would pay an entrance fee. The principle problem at the Garden for some time now has been its failure to attract sufficient numbers of paying visitors to financially support its operation. Much consideration has been given to the reasons for this, and it is generally accepted now that insufficient attention has been given to visitors, and that the visitor product is weak and not sufficiently attractive. Consequently, the Trust finds itself in the position of considerable debt, which it is proving impossible to overcome. It is widely acknowledged that the Garden needs significant further investment in order to improve the visitor experience whilst respecting and enhancing its core purpose of conservation. The Trust appears unable to secure this investment given

its precarious financial position. It now appears inevitable that the Trust will have to cease its activities probably through a formal process of liquidation. Whilst this is sad and will quite possibly result in the closure of the Garden to the public, for the time being, I hope very much that this is not the end of the story. I remain convinced that there is a future for the Garden which embraces the story of plants and turns it into an experience that will inspire visitors to come, not only once, but repeatedly.

We at Carmarthenshire County Council remain committed to doing everything that we reasonably can to work with others to secure a viable and sustainable long-term future for the National Botanic Garden of Wales, and we are optimistic that such a future can be realised through different management arrangements. I take encouragement from the statement made by the Minister for Culture, Welsh Language and Sport at the Welsh assembly Government that whilst the present situation may result in the demise of the Trust, it does not mean that it is the end for the Garden itself, and the Assembly will consider alternative proposals that would offer a viable future. We shall work closely with the Assembly and other parties towards securing a bright future for the Garden.

*Councillor M. Gravell
Carmarthenshire County Council*

Note: The National Botanic Garden of Wales continues to be in detailed discussions with an undisclosed third party on the future of the Garden. An outcome to these discussions is apparently expected within a matter of weeks, during which time the Garden will remain open to the public and for education programmes.

Natural Sciences Collections Association (NatSCA)
CONSTITUTION

This Constitution was adopted on 7th April 2003 at the Inaugural General Meeting of the Natural Sciences Collections Association.

Registered Charity Number 1098156

1 Name.

The name of the Association is: Natural Sciences Collections Association (“the Charity”).

2 Administration.

Subject to the matters set out below the Charity and its property shall be administered in accordance with this constitution by the members of the Executive Committee, constituted by clause 7 of this constitution (“the Executive Committee”).

3 Objects.

The charity’s objects (“the objects”) are:

- (1) to advance the education of the public in the care and use of natural sciences collections and specimens.
- (2) to promote for the benefit of the public the highest standards in the preparation, care, conservation, management, interpretation and research of natural sciences collections and specimens.
- (3) For the benefit of the public to promote the science of natural sciences collections conservation and curation.

4 Powers.

In furtherance of the objects but not otherwise the Executive Committee may exercise the following powers:

- (i) power to raise funds and to invite and receive contributions, provided that in raising funds the Executive Committee shall not undertake any substantial permanent trading activities and shall conform to any relevant requirements of the law;
- (ii) power to employ such staff (who shall not be members of the Executive Committee) who are necessary for the proper pursuit of the objects and to make all reasonable and necessary provision for the payment of pensions and superannuation for staff and their dependants;
- (iii) power to co-operate with other charities, voluntary bodies and statutory authorities operating in furtherance of the objects or of similar charitable purposes and to exchange information and advice with them;
- (iv) power to establish or support any charitable trusts, associations or institutions formed for all or any of the objects;
- (v) power to appoint and constitute such advisory committees as the Executive Committee may think fit;
- (vi) power to do all such other lawful things as are necessary for the achievement of the objects.

5 Membership.

(1) Membership of the Charity shall be open to:

(i) individuals (over the age of 18 years) who are interested in furthering the work of the Charity and who have paid the annual subscription laid down from time to time by the Executive Committee, and

(ii) any body corporate or unincorporated association which is interested in furthering the Charity's work and has paid any annual subscription (any such body being called in this constitution a "member organisation").

(2) Every member shall have one vote.

(3) Each member organisation shall appoint an individual to represent it and to vote on its behalf at meetings of the Charity; and may appoint an alternate to replace its appointed representative at any meeting of the Charity if the appointed representative is unable to attend.

(4) Each member organisation shall notify the name of the representative appointed by it and of any alternate to the secretary. If the representative or alternate resigns from or otherwise leaves the membership of the organisation, he or she shall forthwith cease to be the representative of the organisation.

(5) The Executive Committee may unanimously and for good reason terminate the membership of any individual or member organisation: provided that the individual concerned or the appointed representative of the member organisation concerned (as the case may be) shall have the right to be heard by the Executive Committee, accompanied by a friend, before the final decision is made.

6 Honorary Officers.

At the annual general meeting of the Charity the members shall elect from amongst themselves a chairman, a secretary and a treasurer, who shall hold office for a period of 3 years from the conclusion of that meeting and shall be eligible for immediate re-election.

7 Executive Committee.

(1) The Executive Committee shall consist of not less than 9 members nor more than 20 members being:

(a) the honorary officers specified in the preceding clause;

(b) not less than 6 and not more than 12 members elected at the annual general meeting who shall hold office from the conclusion of that meeting;

(2) The Executive Committee may in addition appoint not more than 5 co-opted members but so that no one may be appointed as a co-opted member if, as a result, more than one third of the members of the Executive Committee would be co-opted members. Each appointment of a co-opted member shall be made at a special meeting of the Executive Committee called under clause 10(1) and shall take effect from the end of that meeting unless the appointment is to fill a place which has not been vacated in which case the appointment shall run from the date when the post becomes vacant.

(3) Ordinary members of the Executive Committee shall serve for 2 years and retire from office at the end of the second annual general meeting after the date on which they were elected to office, but are immediately eligible for re-election.

(4) The proceedings of the Executive Committee shall not be invalidated by any vacancy among their number or by any failure to appoint or any defect in the appointment or qualification of a member.

(5) Nobody shall be appointed as a member of the Executive Committee who is aged under 18 or who

would if appointed be disqualified under the provisions of the following clause.

(6) No person shall be entitled to act as a member of the Executive Committee whether on a first or on any subsequent entry into office until after signing in the minute book of the Executive Committee a declaration of acceptance and of willingness to act in the trusts of the Charity.

8 Determination of Membership of Executive Committee.

A member of the Executive Committee shall cease to hold office if he or she:

(1) is disqualified from acting as a member of the Executive Committee by virtue of section 72 of the Charities Act 1993 (or any statutory re-enactment or modification of that provision);

(2) becomes incapable by reason of mental disorder, illness or injury of managing and administering his or her own affairs;

(3) is absent without the permission of the Executive Committee from all their meetings held within a period of six months and the Executive Committee resolve that his or her office be vacated; or

(4) notifies to the Executive Committee a wish to resign (but only if at least three members of the Executive Committee will remain in office when the notice of resignation is to take effect).

9 Executive Committee Members not to be personally interested.

(1) Subject to the provisions of sub-clause (2) of this clause, no member of the Executive Committee shall acquire any interest in property belonging to the Charity (otherwise than as a trustee for the Charity) or receive remuneration or be interested (otherwise than as a member of the Executive Committee) in any contract entered into by the Executive Committee.

(2) Any member of the Executive Committee for the time being who is a solicitor, accountant or other person engaged in a profession may charge and be paid all the usual professional charges for business done by him or her or his or her firm when instructed by the other members of the Executive Committee to act in a professional capacity on behalf of the Charity: provided that at no time shall a majority of the members of the Executive Committee benefit under this provision and that a member of the Executive Committee shall withdraw from any meeting at which his or her own instruction or remuneration, or that of his or her firm, is under discussion.

10 Meetings and proceedings of the Executive Committee.

(1) The Executive Committee shall hold at least two ordinary meetings each year. A special meeting may be called at any time by the chairman or by any two members of the Executive Committee upon not less than 4 days' notice being given to the other members of the Executive Committee of the matters to be discussed but if the matters include an appointment of a co-opted member then not less than 21 days' notice must be given.

(2.) The chairman shall act as chairman at meetings of the Executive Committee. If the chairman is absent from any meeting, the members of the Executive Committee present shall choose one of their number to be chairman of the meeting before any other business is transacted.

(3) There shall be a quorum when at least one third of the number of members of the Executive Committee for the time being or three members of the Executive Committee, whichever is the greater, are present at a meeting.

(4) Every matter shall be determined by a majority of votes of the members of the Executive Committee present and voting on the question but in the case of equality of votes the chairman of the meeting shall

have a second or casting vote.

(5) The Executive Committee shall keep minutes, in books kept for the purpose, of the proceedings at meetings of the Executive Committee and any sub-committee.

(6) The Executive Committee may from time to time make and alter rules for the conduct of their business, the summoning and conduct of their meetings and the custody of documents. No rule may be made which is inconsistent with this constitution.

(7) The Executive Committee may appoint one or more sub-committees consisting of three or more members of the Executive Committee for the purpose of making any inquiry or supervising or performing any function or duty which in the opinion of the Executive Committee would be more conveniently undertaken or carried out by a sub-committee: provided that all acts and proceedings of any such sub-committees shall be fully and promptly reported to the Executive Committee.

11 Receipts and expenditure.

(1) The funds of the Charity, including all donations contributions and bequests, shall be paid into an account operated by the Executive Committee in the name of the Charity at such bank as the Executive Committee shall from time to time decide. All cheques drawn on the account must be signed by at least two members of the Executive Committee.

(2) The funds belonging to the Charity shall be applied only in furthering the objects.

12 Property.

(1) Subject to the provisions of sub-clause (2) of this clause, the Executive Committee shall cause the title to all investments held by or on behalf of the charity to be vested either in a corporation entitled to act as custodian trustee or in not less than three individuals appointed by them as holding trustees. Holding trustees may be removed by the Executive Committee at their pleasure and shall act in accordance with the lawful directions of the Executive Committee. Provided they act only in accordance with the lawful directions of the Executive Committee, the holding trustees shall not be liable for the acts and defaults of its members.

(2) If a corporation entitled to act as custodian trustee has not been appointed to hold the property of the charity, the Executive Committee may permit any investments held by or in trust for the charity to be held in the name of a clearing bank, trust corporation or any stock-broking company which is a member of the International Stock Exchange (or any subsidiary of any such stock-broking company) as nominee for the Executive Committee, and may pay such a nominee reasonable and proper remuneration for acting as such.

13 Accounts.

The Executive Committee shall comply with their obligations under the Charities Act 1993 (or any statutory re-enactment or modification of that Act) with regard to:

- (1) the keeping of accounting records for the Charity;
- (2) the preparation of annual statements of account for the charity;
- (3) the auditing or independent examination of the statements of account of the Charity; and
- (4) the transmission of the statements of account of the Charity to the Commission.

14 Annual Report.

The Executive Committee shall comply with their obligations under the Charities Act 1993 (or any statutory re-enactment or modification of that Act) with regard to the preparation of an annual report and its transmission to the Commission.

15 Annual Return.

The Executive Committee shall comply with their obligations under the Charities Act 1993 (or any statutory re-enactment or modification of that Act) with regard to the preparation of an annual return and its transmission to the Commission.

16 Annual General Meeting.

(1) There shall be an annual general meeting of the Charity which shall be held in the month of April in each year or as soon as practicable thereafter.

(2) Every annual general meeting shall be called by the Executive Committee. The secretary shall give at least 21 days' notice of the annual general meeting to all the members of the Charity. All the members of the Charity shall be entitled to attend and vote at the meeting.

(3) Before any business is transacted at the first annual general meeting the persons present shall appoint a chairman of the meeting. Subsequent annual general meetings shall be chaired by the elected Chairman, but if he or she is not present, before any other business is transacted, the persons present shall appoint a chairman of the meeting.

(4) The Executive Committee shall present to each annual general meeting the report and accounts of the Charity for the preceding year.

(5) Nominations for election to the Executive Committee must be made by members of the Charity in writing and must be in the hands of the secretary of the Executive Committee at least 14 days before the annual general meeting. Should nominations exceed vacancies, election shall be by ballot.

17 Special General Meetings.

The Executive Committee may call a special general meeting of the Charity at any time. If at least ten members request such a meeting in writing stating the business to be considered the secretary shall call such a meeting. At least 21 days' notice must be given. The notice must state the business to be discussed.

18 Procedure at General Meetings.

(1) The secretary or other person specially appointed by the Executive Committee shall keep a full record of proceedings at every general meeting of the Charity.

(2) There shall be a quorum when at least one tenth of the number of members of the Charity for the time being or ten members of the Charity, whichever is the greater, are present at any general meeting.

19 Notices.

Any notice required to be served on any member of the Charity shall be in writing and shall be served by the secretary or the Executive Committee on any member either personally or by sending it through the post in a prepaid letter addressed to such member at his or her last known address in the United Kingdom, and any letter so sent shall be deemed to have been received within 10 days of posting.

20 Alterations to the Constitution.

(1) Subject to the following provisions of this clause the Constitution may be altered by a resolution passed by not less than two thirds of the members present and voting at a general meeting. The notice of the general meeting must include notice of the resolution, setting out the terms of the alteration proposed.

(2) No amendment may be made to clause 1 (the name of charity clause), clause 3 (the objects clause), clause 9 (Executive Committee members not to be personally interested clause), clause 21 (the dissolution clause) or this clause without the prior consent in writing of the Commissioners.

(3) No amendment may be made which would have the effect of making the Charity cease to be a charity at law.

(4) The Executive Committee should promptly send to the Commission a copy of any amendment made under this clause.

21 Dissolution.

If the Executive Committee decides that it is necessary or advisable to dissolve the Charity it shall call a meeting of all members of the Charity, of which not less than 21 days' notice (stating the terms of the resolution to be proposed) shall be given. If the proposal is confirmed by a two-thirds majority of those present and voting the Executive Committee shall have power to realise any assets held or on behalf of the Charity. Any assets remaining after the satisfaction of any proper debts and liabilities shall be given or transferred to such other charitable institution or institutions having objects similar to the objects of the Charity as the members of the Charity may determine or failing that should be applied for some other charitable purpose. A copy of the statement of accounts, or account and statement, for the final accounting period of the Charity must be sent to the Commission.

Nominations for Committee of the Natural Sciences Collections Association

The Committee, as voted into office at the IGM in Manchester last year, has served for one year from the IGM to the first AGM as directed by IGM. Nominations are now required for all officers and members of the NatSCA Committee. Presently serving officers will be eligible for re-election to committee.

Tenures to be three years for Chair, Secretary and Treasurer and two years for Editor, Membership Secretary up to 10 other committee members.

Nominations for the committee, proposed and seconded by NatSCA members, should be made to Paul Brown, Secretary of NatSCA, at the address below by 30th March 2004 ie 28 days before the AGM.

Elections to be held at the NatSCA AGM at 4 pm. Tuesday 27th April, 2004 in Dublin.

Post:

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Name of Nominee:

.....

Proposed by:

Name.....

Signature.....

Seconded by:

Name.....

Signature.....

Paul A. Brown [Secretary NatSCA], Department of Entomology, Natural History Museum, Cromwell Road, LONDON SW7 5BD.
Tel:- 0207 942 5196, Fax:- 0207 942 5229, e-mail:- pab@nhm.ac.uk

**please cut out this page and send it to the secretary,
Paul Brown, Department of Entomology, Natural History Museum,
LONDON, SW7 5BD**

One Year Secondment to Canada
- Suzanne Lewis: Lead Curator & Conservation Officer
Entomology Department, The Natural History Museum, London

I have been a curator in the Entomology department of the Natural History Museum, London for 12 years now. After successfully completing an MA in Museum Studies I was looking to further continue my career development. One way I felt I could achieve this was by working with another collection and or in a different institute. After consideration I recognised that the care and conservation of collections is my particular interest and direction. For this reason I looked to Canada at the Canadian Conservation Institute (CCI) and the Canadian Museum of Nature (CMN). I applied to do two, three-month internships at CCI and also contacted Rob Waller, Chief conservator at the CMN to suggest the possibility of a work exchange.

I left London at the beginning of October 2001 to start the first of two internships at CCI. This was a wonderful opportunity as CCI is recognised internationally as a pioneer in the conservation of cultural heritage. I spent six months at the Canadian Conservation Institute (CCI) working on two conservation projects. The first of which was an investigation of the suitability of Parylene N and Parylene C coatings for the preservation of entomological specimens. Thin films of parylene have been successfully used in a range of disciplines, some of which have been for the preservation of delicate and valuable artefacts, e.g. papers from the Titanic. Working with Malcolm Bilz at CCI our investigation is further development of work already carried out with parylene in conservation. The purpose of our study was to determine whether parylene coating entomological specimens is an effective and realistic method of indefinitely preserving these specimens without compromising the morphological characters that are critical for taxonomic research. It was hoped that coating a range of insect specimens would strengthen and protect them from environmental conditions that cause deterioration without obscuring or altering morphological features necessary for the identification of the specimen or inhibiting the extraction of DNA. The results and conclusions were very encouraging and have been submitted to *Collection Forum*.

The second internship was a joint project with Tom Strang from CCI, Rob Waller, CMN and myself, undertaken largely at the Canadian Museum of Nature. The project was divided into three parts, firstly an evaluation of pest control features included in the design and construction of the museum building. Pest control data was collected and compared from other new collection facilities around the world and finally a risk model for pests in museums was produced. The pest risk model is the most significant and exciting piece of work produced during this internship. It is hoped that this work will be written up and published in the coming year.

From April to October 2002 I benefited from working at the CMN on an exchange with the only Entomology curator and was responsible for loan, visitors, enquiries, exhibition liaison, tours to the collection in addition to recurating and labelling the majority (approximately 200 drawers) of the Curculionidae (weevil) collection. The Entomology collection is largely made up of Coleoptera with approximately 700,000 prepared specimens. In addition to my curatorial work I spent 20% of my time at CMN working with Rob Waller's team of Conservators and continued the pest project I had started at CCI.

My year in Canada was rewarding both for personal and professional development. Leaving everything and everyone behind for a whole year can be difficult but it was definitely worth it to meet and work with a huge range of friendly professionals.

CCI was created in 1972 to provide the proper care and preservation of Canada's cultural heritage and to advance the practice, science and technology of conservation. The Institute has worked closely with hundreds of museums, art galleries, academic institutions, and other heritage organisations to help them better preserve their collections. As a Special Operating Agency of the Department of Canadian Heritage, CCI has widened its scope of activities and now markets its services and products around the world. CCI is a very different working environment to that of a museum as it has no collection and is driven by conservation research and solving problems for the museum environment. I found my time at CCI incredibly valuable, having so many conservators working on so many disciplines in the same building. Everyone was so friendly and helpful I was able to gain a huge amount of information and a completely different perspective to museum work.

The natural history collections at The Canadian Museum of Nature were moved to the Natural Heritage Building, a purpose built collection and research facility in 1997. I had the great fortune to work in this building. This was useful in many ways as the Entomology department at the Natural History Museum, London plan to move their collections to a new building in the near future. It was interesting to see what features were added to this purpose built facility and how everyday work with the collections had been improved. I was made very welcome at CMN by all the staff and they were again so friendly and helpful they made my stay both enjoyable and useful.

I would like to offer my special thanks to:

Malcolm Bilz & David Grattan - Conservation Processes & Materials Research, CCI

Tom Strang - Preventive Conservation, CCI

Rob Waller & Conservation team, CMN

Francois Genier, Jean-Marc Gagnon, Bob Anderson - Invertebrate Collections & Research, CMN

Mike Fitton, David Carter & Dick Vane-Wright - Entomology Department, NHM

Suzanne Lewis

Lead Curator & Conservation officer

Entomology Department

The Natural History Museum, London

Society for the Protection of Natural History Collections Annual Conference
‘Modern Museums: Balancing Tradition and Technology’
Lubbock, Texas. June 15th-19th 2003

Sue Lewis & Paul Brown

This year's (18th) SPNHC meeting, themed on ‘Modern Museums: Balancing Tradition and Technology’, was held in the high plains city of Lubbock, Texas, and hosted jointly with the Museum of Natural History, Texas Tech University. In total, 110 delegates attended, including a Dutch man (Dries van Dam, ICOM's Natural History Collections Working Group chair), a Dane and four Brits. (Simon Owens from Royal Botanic Gardens at Kew and Rob Huxley, Sue Lewis & Paul Brown from the Natural History Museum, London), the rest consisting of 11 Canadians and 92 Americans (with 3 expat Brits including Chris Norris) and a lone New Zealander.

Sunday 15th. The first official SPNHC activities of the week for non-committee members consisted of a field trip. Waiting for the ‘coach’ we saw a number of Desert Cottontail *Sylvilagus audubonii* and Black Tailed Jackrabbits *Lepus californicus* around the museum. No coach arrived but the longest stretched Excursion SUV limousine we had ever seen, took 11 of us to the Pan Handle Plains Museum at Canyon, Randall County, see the comprehensive displays on natural history and human life of the southern high plains.



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The Palaeontology display of local Triassic and Cenozoic fossils was particularly good with a full range of different sized Bison species. We then carefully entered and descended into Palo Duro Canyon, the second largest Canyon in the USA (120 x 20 miles and 800 feet deep) and studied the late Triassic red sandstone and gypsum strata where lurked a large black widow spider female with eggs. Heavy recent rain had caused there to be much standing water and the arid plain to bloom with flowers. In the evening, one of the members declined attendance of the outdoor musical extravaganza ‘Texas’ and was rewarded with views of coyotes, mule deer, golden-fronted and red-headed woodpeckers and painted buntings.

The technical sessions started on **Monday 16th** and included Keynote speaker Terry Yates (Vice Provost for Research, University of New Mexico). His excellent talk discussed networking with other institutions and raising the profile of the importance of our collections to broaden our horizons in the search for new, less obvious and larger funding opportunities. Just because we enjoy what we do does not mean it is not important so we should be more vocal and demonstrate our importance. We all wished that we had a ‘Terry’ working for our museum!

Texas Tech University Museum tours

Dr Marilyn Houck and Henry Crawford presented the Invertebrate Collections. The col-

lection is rich in insects (520000 specimens, 325000 ant specimens) from Texas and South-eastern USA and Mexico, insects associated with *Prosopis* (Mesquite Trees) from Argentina to the USA and in vertebrate endo- and ecto-parasites from the USA (60000 specimens). 71000 specimens are out on loan to 18 research institutions in the USA and Brazil. Environmental conditions vary between 68-74°F and 45-50% R.H. After the discontinuation of the use of naphthalene and PDB, all incoming material is frozen to -80°C for at least three days. In the wet collections, they use BioQuip Resistall paper and Lexmark Z54 inkjet printer (#70 black ink) and dry labels are printed on BioQuip acid free 36-pound white 100% rag paper with a laser printer. All fluid collections are double sealed, inner vials with cotton or polyethylene cap within glass jars with polypropylene lids / polyethylene liners. All microscope slides are stored horizontally to avoid slip by gravity. There followed an ice-breaker reception in the Museum's Sculpture Court where Richard Monk's four gifted young children gave an excellent and extended string quartet recital.

At lunch-time delegates visited MacKenzie Park to see 'Prairie Dog Town', a large colony of Black Tailed Prairie Dogs *Cynomys ludovicianus* confined behind a low wall with two pairs of Burrowing Owls with chicks occupying vacant prairie dog burrows.



Special interest group meetings:

Conservation Group - chaired by Gretchen Anderson. A rather quiet meeting with reports of local problems. Paul Brown reported on the latest developments in research into the Thermo-Lignum heat treatments.

Integrated Pest Management Group - chaired by AMNH. This was the first pests special interest group meeting at a SPNCH conference, which proved in contrast to the previously reported meeting, to be very successful following the inspirational presentation Richard Monk gave in Montreal on using GIS system to monitor pests at Texas Tech. University. Seventeen delegates felt that everyone was doing IPM but all slightly differently and there needs to be some co-ordination. The AMNH and the Smithsonian have been collaborating and developing IPM procedures by implementing a database that can be used by both institutes and using a bar-code system. Suzanne reported on the major progress achieved by the IPM Group at the Natural History Museum, London. She also suggested that we would be interested in collaborating in producing an international standard rather than a North American standard that could be useful to everyone. There is a sense that the smaller museums are looking to the Nationals for guidance and I believe we are in a position to do that with the work that has already been done. [Following this meeting Suzanne invited Chris Norris to talk to the NHM, London IPM Group and the NHM and the AMNH have agreed in principle to collaborate to work towards the development of a useful IPM standard.]

Speakers on **Wednesday 18th** included N.B. Frank Walski (Smithsonian Institute) 'Shipping specimens and compliance with dangerous goods regulations'. We were much unsettled to here that USA and international regulations control the shipping of specimens in alcohol, formalin and other preservative chemicals! Sending specimens abroad by air, either by hand or in luggage requires additional requirements as listed in the International

Air Transport Association guidebook. Specimens in alcohol should go by cargo and be fully documented. Regulations dictate how specimens should be packed, in what container, in what quantity (500ml in 30 ml tubes is permissible) and what labels and documents are required. All packers of specimens must undergo special training. At present most specimens are shipped in violation of the US postal regulations. Shipping under the “excepted quantity” and using UN certified containers could reduce the cost of using registered carriers such as ‘FedEx’. How many of us are presently breaking the law those responsible for sending and packing offending parcels will be subject to large fines!

Business on **Thursday 19th** included the SPNHC AGM. As part of the ‘New Business’, Paul Brown, gave notice of the 20th annual meeting of SPNHC planned to be held from 12th to 18th in June 2005 and to be hosted by The Natural History Museum, London in association with NatSCA and GCG. The theme is hoped to be setting, maintaining and implementation of standards throughout natural science collections management, curation and conservation. The workshop will be on Risk Assessment. A motion to accept the invitation from the London local SPNHC committee was passed. He also passed on the news to the meeting of the successful merger of NSCG with BCG to form NatSCA. Chris Norris, gave notice of next year’s 19th annual SPNHC meeting in New York, 11th-16th May 2004 to cover two main themes; 1. Emergency Preparedness, Response and Salvage and 2. Management of Frozen Collections. This to be held jointly with International Society for Biological & Environmental Repositories (ISBER).

The afternoon was spent exploring Lubbock’s retail experience and dodging torrential rainfall. Lubbock is the hometown of Buddy Holly so to recognise this, SPNHC held their annual banquet at the Buddy Holly Center & Museum with a live cover band and the Europeans, as usual, leading the dancing from the front.

Friday 20th saw the start of the two-day SPNHC workshop was entitled ‘Use of Technology in Museums’ and consisted of a series of lectures with very little in the way of the practical workshop sessions, which we had envisaged. Some of the presentations though long were of interest. Richard Monk (Texas Tech University, Lubbock) welcomed participants and introduced the workshop.

The talks this year were very interesting and to a high standard and much very useful information was taken back to the work place. Many of the presentations will be published in ‘Collections Forum’. We thank Richard Monk and his team for organising the conference and for extending to us the famous West Texan hospitality.



Herbaria in Danger in the US

The Iowa Issue: Organismal and Environmental Biology

- Diana Horton, Director and Curator, University of Iowa Herbarium, University of Iowa

The University of Iowa Herbarium is one of the collections that presently is threatened with closure. The Friends of the University of Iowa Herbarium has an immediate request.

We solicit your support of our efforts to keep the Herbarium at the University of Iowa. Even if you have already written a letter, please take a few moments to sign our new online petition and forward the URL to anyone you think might be willing to sign. We are circulating this nationally and internationally in the taxonomic and collections communities in the hopes of generating a massive response that we could use to pressure university administrators who seem determined to proceed with a needless and senseless plan to divest the collection.

It has been suggested that the situation with the University of Iowa Herbarium is different from others where herbaria are being closed, because the University of Iowa collections will be transferred to Iowa State University. It is crucial for people to understand that, if the administration's plan is carried out, this Herbarium will be closed, and there will be far-reaching, long-term negative impacts for organismal and environmental biology at the University of Iowa (see below). Even though the collections will be accessible elsewhere, closure of this Herbarium will severely undermine organismal and environmental biology at this university. It is on this basis that we ask you to support our efforts and sign the petition.

<http://www.PetitionOnline.com/herbarui/petition.html>

If you have time to write a letter of support, please address it to:
University of Iowa President Skorton (david-skorton@uiowa.edu), and copy to me:
Diana Horton, Director and Curator, University of Iowa Herbarium
(diana-horton@uiowa.edu).

Undoubtedly, field investigations of plants in eastern Iowa, the region with the greatest biodiversity, will be greatly reduced, even though our work over the last 10-15 years demonstrates that there is a great deal still to be learned about plant distributions in this part of the state. The loss of the Herbarium also will compromise the quality of the educational experience for Liberal Arts students at the University of Iowa and it will seriously undermine the Green Track of the popular Environmental Sciences Program. Our outreach program, via presentations; tours for students from surrounding colleges and schools; assistance with identification; and the Herbarium web site, will cease. Overall, fewer people will learn about plants, collections-based research, the environment and conservation, and fewer will have ready access to a vital resource for assessing the environment. In short, the closure of the University of Iowa Herbarium will eliminate a centre for organismal and environmental studies, and reduce the resources dedicated to promoting these vital aspects of biology.

- Over the last ten years, more than 10 native species never before recorded from the state have been discovered in eastern Iowa by people using the Herbarium.
- Over the last ten years, 100 publications/reports/creative works and over 30 theses have been based on use of the Herbarium. Over the same 10-year period, class use of the Herbarium averaged over 300 students/year in 10-12 courses
- We have an active outreach program that includes presentations to conservation groups, schools and colleges, and the Herbarium web site averages over 4,000 Requests for Pages and over 1,000 Distinct Hosts Served monthly

LATEST NEWS:

On 29th February, our attorney sent a Cease and Desist letter to the Office of the University Counsel at Iowa State University, respectfully requesting that Iowa State University and its employees cease and desist from moving forward with either the packing or the removal of any Herbarium specimens.

At 4 PM on 1st March 2004, four people from Iowa State University, including Director Lynn Clark and Curator Deb Lewis, arrived at the University of Iowa Herbarium accompanied by University of Iowa Department of Biological Sciences Chair Jack Lilien, and three other Department of Biological Sciences faculty, Joseph Frankel, Gary Gussin and John Meninger.

When I informed Chair Lilien and Dr. Clark that, as Curator, I did not give them permission to access the Herbarium, Chair Lilien responded that he was giving the Iowa State people access. I explained to them that by accessing the Herbarium over my objections, they are violating standard Herbarium and Museum regulations. Chair Lilien said that he was giving them permission to pack the collection.

We have learned just now that the Iowa State people intend to work through the night and to transport the collections to Iowa State in the morning. Earlier, Dr. Clark told me that the collection would be packed beginning, March 1st and transported to Iowa State beginning March 15th. Phillip Jones, the Vice President for Student Services, and Marcus Mills, Senior Associate Counsel for the University of Iowa 'joined the crowd' of University of Iowa Administrators, and Charles Green, Director of Campus Security also is here.

Threat to the Department of Botany at the University of Tennessee, Knoxville
- David K. Smith, Associate Professor and Curator, UT-Knoxville

The possible demise of the herbarium at Iowa seems to be another symptom of academic malnutrition that is destined to a state of starvation. We are heading toward a third world status by crippling our informational foundations in whole plant systematics. This trend is infecting all programs where whole plant science is being replaced by emphasis on structural and mechanistic [mostly molecular] aspects of plants.

This letter is to make you aware of another grave situation that threatens the existence of the Department of Botany at the University of Tennessee, Knoxville. For reasons not totally known, the Botany Department has been placed on a university list for review and consideration for dissolution. This decision has been spun from the upper administration, to identify programs and departments within the university that don't meet selected criteria for productivity. In the case of Botany we do not meet the quota of undergraduate majors, among other criteria. Since we are a department nested in a Division of Biology, we are not competitive with Microbiology, Ecology and Evolutionary Biology, and Biochemistry/Cellular and Molecular Biology. These other departments appear more productive because they benefit from higher numbers of majors; many of which are preparing for pre-professional, health careers [Medical, Dental, Pharmacy, etc.]. Hence it is unusual for such motivated students to select a Botany major for their undergraduate degree. It is probably not at immediate risk in this phase of our reorganisation; but it will have to be reassigned to some unit, and one that will have little practical use for it. My fear of course is that the long-term future is unknown, and the Herbarium may become a management issue for its new owners. There is no discussion at this time to gift, sell or dismantle the Herbarium.

It is my personal belief, and shared by many colleagues, that a comprehensive university like Tennessee will be self-abasing by dumping its Botany Department. It is a poor investment by the powers of upper administration to assure [guarantee] that a presence of strong plant sciences will continue at Tennessee by distributing faculty into other surviving departments. The core and heart of a centralised botanical faculty will be fragmented; and it is likely that attrition will result as faculty retire, or relocate, and their positions will be filled by other sorts. Another key element is the fate of the Herbarium and its staff. While we have been told [?promised] that no faculty or key staff will be furloughed by a reorganisation, that may be no more than a belief in faith.

As most of us are veterans of administrative chess, we expect that a decision to dissolve Botany has already been made. And now we are only stepping through the process to legitimise and validate the decision.

However, I invite any of you who wish to join the resistance to write a letter of concern that addresses the irreversible consequences of loss to the national and international community of Plant Scientists. In the least, I would want my administrators to have to read the written word of concerned colleagues in the face of their decision.

I am hoping the sense of my letter will be read as a greater call and concern for the demise of departmental units that embrace all of the Plant Sciences, not just for those units

that have Herbaria. I see a trend in the past few decades of suffocating the centrality of Plant Science programs; and when dissolutions and mergers occur, there is a gradual de-emphasis of whole organismal, plant systematics as they become starved of graduate student training opportunities. Herbaria are often part of the demise, and it seems they must be part of a formal Plant Science unit to survive and be functional. My fear is the dissolution of Botany at Tennessee will eventually have a negative ripple effect on the presence and function of the Herbarium.

If you choose to voice your concern, send a letter to:

Dr. Stuart Riggsby, Dean
College of Arts and Sciences
Alumni Memorial Building
University of Tennessee
Knoxville, TN 37996

And:

Dr. Edward Schilling, Head
Department of Botany
437 Hesler Biology Building
University of Tennessee
Knoxville, TN 37996

Maintaining Support for Herbaria in the 21st Century

- Alan Prather, MSU Dept. of Plant Biology, Michigan State University

A Discussion Section held at the Botany 2003 Meetings in Mobile, AL on 19 July 2003
Co-organizers: L. Alan Prather, Michigan State University and Lynn G. Clark, Iowa State University

At the Botany 2003 Meeting in Mobile, AL in July 2003, a discussion section was held to consider the current challenges facing herbaria. The discussion section was co-sponsored by the American Society of Plant Taxonomists, the American Bryological and Lichenological Society, the American Fern Society, and the Botanical Society of America and co-organized by L. Alan Prather and Lynn G. Clark. Five panelists contributed to the session: Barbara Ertter (University of California, Berkley), Gerald (Stinger) Guala (National Science Foundation, NSF), Aaron Liston (Oregon State University), Muriel Poston (NSF), and Judith Skog (NSF). The program included a panel presentation, followed by a brief question and answer period; break-out sessions focused on narrower topics, and a group discussion at the conclusion. There were an estimated 80 people in attendance, with a smaller number participating in the break-out sessions and final discussion.

Maintaining support for herbaria has long been problematic, but the pressures are increasing in the current environment. In the near future, several herbaria are likely to be closed and many more are likely to have their institutional support reduced. Nearly all curators will be under increased pressure to justify the support that they receive. The panel/discussion section focused on several related issues:

- 1) How do we justify our existence?

- 2) What should our programs be doing to maintain support and demonstrate relevance?
- 3) How do we get the larger systematics community to discuss these issues and to promote collections-based research?

I. Introduction: Alan Prather briefly introduced the topic and provided an overview of specific situations where there are recent or ongoing crises. Lynn Clark introduced the five panelists.

II. Panel Discussion: The first panelist to speak was Barbara Ertter, who presented her ideas about using node-based interactions among regional herbaria as a mechanism to move the floristic inventory of the U.S. forward, while at the same time building community support for herbaria. The impression may be that the flora of the U.S. is well-known but current distributional data are not adequate for informed management decisions and, furthermore, one estimate suggests that 5% of the vascular plant species in the U.S. remain unknown to science. Furthermore, distributional data are woefully incomplete. Herbaria should take the lead role in completing the floristic inventory. Because most discoveries are made at the local level, what is needed is a network to support local activities. Ertter's model of increasing the effectiveness of local floristic efforts is a node-based model, incorporating local and regional herbaria. Local herbaria would provide material and intellectual resources and develop human resources, all directed to focused floristic work at the local level. Regional herbaria would provide coordination among local herbaria and would interface with other regional herbaria to facilitate communication at the national and international level. The structure would be formalized and participating institutions would have to apply to become a member and would be required to meet certain minimum expectations. The node structure would facilitate individual herbaria in presenting their mission and in acquiring support.

The second panelist to speak was Aaron Liston. He spoke about the successful program at the Oregon State University Herbarium, and commented about the lessons they have learned. He pointed out the need for herbaria to remain open and easily accessible. High visibility and the perception of access are a prerequisite for success, as is integration into the department or unit. At universities, the curator should be a tenured professor so that the herbarium has a respected spokesperson. Undergraduates should be integrated into the herbarium to fulfill the educational role of the herbarium and to provide inexpensive labor; NSF funds are available for this. Curators need to take an active role in educating administrators about the importance of collections. Workshops and outreach programs should be developed to keep the local community involved, especially in ways that enhance the herbarium. Local floristic work should be a priority for herbaria because it keeps a local constituency and provides a clearly defined role of the herbarium that administrators will appreciate.

Judith Skog then provided a NSF-wide overview of opportunities for natural history collections. She encouraged everyone to visit the NSF website and educate themselves about the myriad of programs that could provide support to collections. Crosscutting programs, that are sometimes overlooked, include Major Research Instrumentation (MRI) for equipment and Science and Technology Centers (STC) to enhance intellectual and physical infrastructures within and between disciplines. Within the Directorate for Biological Sciences (BIO), Frontiers in Integrative Biological Research (FIBR) provides awards to support integrative research which addresses major questions in biology, and Research Coor-

dination Networks (RCN) in Biological Sciences was established to encourage and foster communications and collaborations among scientists with common goals and interests. Both of these programs are potential sources of funds that could benefit natural history collections. Within the Division of Environmental Biology (DEB), several programs are of direct relevance: Partnerships for Enhancing Expertise in Taxonomy (PEET), Biodiversity Surveys and Inventories Program (BS&I), and Systematic Biology. One upcoming opportunity to keep watch for is a potential new program, National Ecological Observatory Network, or NEON. Dr. Skog also stressed the need to include support for collections in research proposals, especially those requiring voucher specimens (e.g., Tree of Life).

Muriel Poston discussed the role and importance of the Biological Research Collections (BRC) program. This program provides support for biological collection *enhancement*, computerization of specimen-related data, and research into methods for specimen curation and collection management. This is the program that most directly supports herbaria, but the many other programs mentioned above should not be overlooked. Stinger Guala followed Dr. Poston and discussed the Biological Databases and Informatics program, which encourages new approaches to the management, analysis, and dissemination of biological knowledge. He commented that he receives few proposals from botanists, but that digitization and imaging are critical aspects of collection enhancement. The emphasis should be on high-throughput data capture. Participants in the discussion were encouraged to learn more about all of these programs.

III. Break-out Sessions and Follow-up Discussion: Two break-out groups discussed the themes of 1) node-based interactions among herbaria and 2) educating administrators. For the first theme, the following points emerged in that group: many regional networks are already developing; formalization of networks by certification might provide some leverage for support; all sizes of herbaria should be involved; compilation of existing records is important but targets also need to be established (e.g., species distributions); and obtaining funds for a workshop might be a way to get this started. For the second theme, the following points emerged: a herbarium is no different from any other academic unit, all are under scrutiny; it is important to talk to administrators about grants and outreach activities; administrative structures vary in terms of the level to which the herbarium reports directly; it is important to work with native plant societies; and an obvious common characteristic is that herbaria take up a lot of space.

In the general discussion that followed the reports from the two groups, the following points were made:

- Judy Skog noted that the node-based network is similar to the NEON model, and that a natural history museum could be distributed regionally and continentally. She also suggested that herbarium directors consider inviting congressperson staff to visit.
- Barbara Ertter noted that there is a public expectation that mapping should be completed already; the public in general does not have an understanding of the work that remains to be done.
- Robert Gropp, representing AIBS, suggested that talking with NSCA would be a good idea, and that he is interested in exploring ways to do a workshop, get information out, etc. Tim Lowrey agreed that NSCA would be a logical place to start.

Other comments and suggestions (without attribution) were:

- Organization: does museum structure or independent existence provide more safety?
- Many regional groups are developing already, though not necessarily for floristic inventories. Other ways networks can work besides floristic approaches?
- Is certification of herbaria a good idea?
- Is there some forum (e.g., SPNHC) that we can use or build to track herbaria?
- What are ways that information can be shared, and how can societies help?

How can resources be distributed more effectively? A LISTSERVE was suggested as a good starting point for discussion, and Aaron Liston volunteered to set this up. As a post-script, the new list serve has already been established by Aaron and is being served from Oregon State. As of this writing, there are over 260 subscribers, and there have been many lively discussions. To subscribe, or to learn more about the list, visit <http://scarab.science.oregonstate.edu/mailman/listinfo/herbaria>

Publicity suggestions included making friends with your local science reporter, and getting articles into your institution's alumni magazine.

Use collections to get information on collectors as a development database.

Property rights issues must be taken into account in creating databases; working with landowner-oriented groups is worthwhile. We need to fully understand and document what remains to be done. Having a coherent mission, and being able to articulate it well, is important, especially when the herbarium is under scrutiny. A good example is the herbarium at the University of Arkansas, where their mission to complete the Flora of Arkansas helped them survive closure, while other parts of the former Museum did not survive. Sharing our experiences and ideas should help us come to a broader understanding of these issues and should be beneficial to all of us, even those of us not directly threatened in this present environment.

Acknowledgments: We would like to thank the five panelists who agreed to discuss their thoughts and experiences: Barbara Ertter, Gerald (Stinger) Guala, Aaron Liston, Muriel Poston, and Judith Skog. We also thank the supporting societies, and Jeff Osborn, the Program Director for the meeting. Barbara Ertter supplied us with a CD-ROM version of her presentation and Dick Jensen and Anna Monfils gave us their notes, so that the summary might be as accurate as possible.

AAM Position Statement on University Natural History Museums and Collections

*- Jason Hall, Director, Government and Public Affairs,
American Association of Museums*

The American Association of Museums (AAM) expresses its deep concern that a significant number of America's natural history museums and collections affiliated with universities are currently threatened with severe financial cutbacks, dispersal of collections, and outright closure.

At risk are collections of irreplaceable objects, such as geological, paleontological, zoological and botanical specimens, anthropological and historical artefacts, and archives. These collections are held in trust for the public; they are the priceless heritage of this and future generations; and they constitute critically important resources for new knowledge. University museums provide unique contributions to the public good through education and research. Their collections are a shared legacy, serving as a constantly growing database to document the diversity and history of life on earth, to develop strategies for the management of natural resources, and to find solutions to some of the world's most pressing problems, from biodiversity conservation to the discovery of new medicines. In addition, exhibits and programs in university museums help to advance broader understanding of the scholarly and scientific enterprise.

AAM urges university administrators, trustees, state legislators, and alumni to do everything in their power to preserve, protect and support their university museums and collections of natural and cultural history. Temporary financial difficulties must not be allowed to interfere with the overriding responsibility of the governing authority to be effective stewards of these collections and to safeguard the public interest by assuring continued access to them.

AAM strongly urges the leadership of universities, and their museums to work together to develop creative financial and organizational strategies that will secure their museums and collections for future generations.

AAM also strongly urges universities, museums, governmental agencies, foundations, and other stakeholders to begin a national dialogue with the aim of providing long-term stability for America's university museums of natural history and their irreplaceable collections. A major aim is to strengthen connections to constituencies that can speak in support of these important museums.

American Association of Museums
1575 Eye Street, NW, Suite 400
Washington, DC 20005
email: jhall@aam-us.org

The Conservation of Sir Hans Sloane's Collection of Vegetables and Vegetable Substances

- Zoë Miller, MA Conservation student, Camberwell College of Arts, London

Abstract

A continuing project to assess, database and conserve Sir Hans Sloane's 'Collection of Vegetables and Vegetable Substances' is under way at the Natural History Museum. This article follows its progress and discusses the historical relevance of the collection.

Historical background

The Vegetable Substances Collection consists of over 12,000 small boxes containing seeds and their pods, fruit stones and various other plant matter. The boxes have glass tops and bottoms and wooden sides with decorative, marbled and sometimes gilded paper coverings. The seeds are sealed within these and all have handwritten labels describing their contents and catalogue number in iron gall ink. They are stored side by side in wooden drawers numbered 1-90 with a four -volume register detailing the contents and origin of each specimen.

Physician and naturalist Sir Hans Sloane started the collection around 1700, but many specimens came from other notable collectors such as the Duchess of Beaufort, Mark Catesby, and James Petiver as well as objects collected on Sloane's famous trip to Jamaica. The collection also contains material from the Bahamas, Guinea, Paraguay, the East Indies and North America. Some of the specimens are more curious than botanic, such as 'mummified fingers', 'goat's blood' and 'silkworm cocoons' which, along with many Chinese herbs amassed by Sloane were believed to have medicinal properties. Many are very unspecific as to origin or contents, labelled with descriptions such as 'a pod' but are considered to be of immense historical value as they are a part of the original collection purchased from Sir Hans Sloane by the nation, forming the British Museum in 1753.

The collection survey and database

Last summer, a survey of the collection began, to ascertain how much of the collection was present and in what state of repair. It had been largely left untouched since the 1940's when many broken and fragile boxes had been repaired with gummed tape and some replaced altogether with cardboard boxes after the botany department had been hit by a bomb in the Second World War. Many of the boxes are covered in heavy black soot and have become very brittle and weakened as a result.

The drawers in which they are stored are in a good condition but were also very dirty. The boxes were sometimes packed tightly into them and many labels and paper fragments vulnerable to pressure and abrasion. Some have broken glass and loose wooden sides and their contents have leaked into the drawer. Another cause of degradation was from previous insect attacks, leaving the seeds powdery and small holes in the sides of the boxes. Dead insects could even be seen amongst the pips and stones.

One of the biggest problems was that there was no digital record of the collection and its contents for use by museum staff or the general public, and as the handwritten registers are arranged numerically, locating a particular specimen is impossible unless you know the number. So the first stage was to set up a database, detailing each specimen, its contents,

the drawer number in which it could be found and a barcode number so that each specimen could be easily called up if required for research. As there were over 12,000 individual items in the collection, it was decided that a conservation project would do the most good if each object could be assessed and stabilised, leaving recommendations for further work in the future. This meant that rather than concentrating on the full treatment of a few specimens, every box in the collection could be examined. This formed the objective of the project and treatment decisions began from there.

A condition statement was drawn up to assess what the major sources of damage are and what proportion of the 12,000 boxes were stable, how many were in need of some attention and how many were highly unstable requiring immediate work. All the boxes were found to be dirty, mainly soot and loose surface dust, with only minimal staining, and dried adhesive residues could be observed on the glass tops and bottoms of each box, sometimes obscuring the specimen from view. The dirt was contributing to their continuing degradation, making their environment inside wooden drawers even more acidic. The coloured paper (red, green, black, yellow, gold) was faded with some loss of the gilding but most remains intact as an accurate record of decorative papers of the period. The labels had suffered some tearing and many were folded, particularly those which were larger than the boxes upon which they were adhered. Corners were dog-eared and some labels peeling off. The iron gall ink handwriting was in a reasonable state with some strike-through, and only a small proportion of the letters dropping out due to the gallo-tannic acid in the ink. Those boxes with broken sides or glass were classed as most in need, as the contents were leaking with one or two specimens lost altogether.

Whilst the condition of the boxes was assessed, the drawers were vacuumed using a museum vac with a thin nozzle, and lined with manila paper to buffer the acidity of the wood where it was in contact with the boxes.

Conservation

Loose dirt, powdered specimen residues and insect frass were brushed off each box and then a chemical sponge used to gently pick up soot and dirt from the delicate gilded paper. An eraser worked well to remove discolouration from the labels as this paper was more robust and could withstand a rubbing motion. Dried adhesive residues were scratched off the glass (using a scalpel) of boxes that were sound in structure and then the glass was swabbed with a damp cotton bud to pick up any loosened particles.

The next stage was to re-adhere any peeling labels or dog-eared paper using a 5% solution of methyl cellulose and a fine brush, subsequently rubbed into place through bondina with a bone folder. Methyl cellulose was chosen as it is not a food source for insects or other pests found frequently in herbarium collections and it could be made quite viscose to reduce the amount of moisture introduced into the collection. It also resists becoming mouldy (as wheat starch pastes do) and could last through long periods of work.

Many of the boxes were too fragile to be repaired or cleaned as handling caused the wooden sides to crack or specimens to leak out. Some of the paper holding the glass in place had become torn and the square piece of glass could be opened like a 'lid'. These boxes were tied with library tape as a temporary measure and all boxes that were leaking due to glass or paper damage were put in small transparent bags.

The boxes were replaced in the drawers in catalogue number order for easy retrieval in the future and all treatment carried out to each box was entered in the database, and a condition rating given from 1-4. This rating gives an overview of recommendations for further treatment, 1 being stable where no further treatment is required and 4 describing those boxes which require full conservation intervention to ensure their continuing existence and enable them to continue to be consulted for research and study.

Proposed further work

Due to the tight storage of the Vegetable Substances collection and financial demands on the herbarium as a whole, the proposed treatments for the worst affected specimens involve individual phase boxes to be constructed out of manila, and which fold around all four sides of the paper and glass specimen boxes in a design similar to book wrappers. This would be restricted to the most damaged, as the space within the drawers does not permit for a layer of card around each box. As the botanical specimen is sealed inside each box, consultation for research purposes is expected to be minimal but their potential for display in an exhibition is great as the 300 year old, hand crafted boxes are of enormous aesthetic and historic interest.

The value of historical collections in natural history museums

Some of the collection can be seen currently in the Kings Library at the British Museum and a selection of boxes were on display last autumn in an exhibition marking the 250th anniversary of Sir Hans Sloane's death and his achievements as a prolific collector, at the Natural History Museum in London. They accompanied the (in)famous 'Vegetable Lamb of Tartary' a curiosity which Sloane acquired from the Royal Society, thought to be a lamb which grew on a stem from the ground, but which has now been identified as a rhizome from the fern *Cibotium barometz*.

Collections such as Sloane's 'Vegetable Substances' are of enormous value to museums in that they ground the continuing research and practices of natural history in a great scientific tradition and remind those who work with these objects of the persistence and curiosity of the greatest collectors in history. The longevity of these objects and others like them depends upon ongoing care and preservation. Their deterioration would be a great loss to the museum and the nation.

Acknowledgements

Full acknowledgements go to Hannah McPherson (Royal Botanic Gardens, Sydney) for her work designing and implementing the survey, to Rika Matsushima (fellow student on masters degree in conservation at Camberwell) and to curator Victoria Noble of the Botany Department at NHM.

Cleaning Natural History Material with Lasers

- Lorraine Cornish: Senior Conservator,
Palaeontology Conservation Unit, The Natural History Museum, London

Laser cleaning in conservation is a relatively recent technological advance. The selective and highly controlled removal of surface contaminants is generally accepted as a major advantage over conventional cleaning methods. The Palaeontology Conservation Unit of the Natural History Museum in London is currently evaluating the use of a Q-switched Nd:YAG laser on natural history material.

The term LASER is an acronym for Light Amplification by the Stimulated Emission of Radiation. The light produced is monochromatic and the beam is highly focused (collimated). Lasers are produced in a variety of forms and the available wavelengths range from ultraviolet to infrared.

In 1999 a Joint Research Equipment Initiative was set up between the Natural History Museum, Imperial College of Science, Technology, and Medicine, the Victoria and Albert Museum, The Royal College of Art and the Tate Gallery. This has enabled the institutions involved to jointly acquire a dual wavelength laser, equipment, which would have been prohibitively expensive under normal circumstances.

The group chose the Q-switched Nd:YAG dual wavelength laser, as it is the most commonly used laser for cleaning laser conservation. It has been in development since the mid-1960's and is perceived by users as a very reliable and compact tool. The beam delivery is via a multi-jointed, articulated arm or through optical fibres, with a handpiece for the user to direct the beam onto the object. The laser emits the most appropriate wavelength and energy of radiation for selective cleaning of a wide variety of surfaces. The Nd:YAG laser is currently used by conservators for cleaning a range of materials; for infrared cleaning (λ 1064nm) materials such as marble, sandstone, terracotta, plaster, ivory, bone, parchment and limestone have been successfully treated. For visible green (λ 533nm), cleaning work has concentrated on artifacts such as paper, stained glass and paintings.

A Q-switched laser is found to be very effective for cleaning natural history samples. The Q-switch acts as an extremely high-speed shutter and shortens the pulse length of the laser. This results in an extremely intense pulse of energy with very short pulse duration. The short pulse length ensures little or no temperature rise in the underlying surface and, therefore, little risk of thermal damage.

Herbarium sheets were treated in the past with mercuric sulphide in order to prevent pest attack. Over time this coating oxidises and leaves a black residue. The remaining contaminant can still be seen imprinted on the opposite sheet.



The main advantages of laser cleaning over more conventional cleaning methods are: *Minimum contact* - the energy is delivered as light so there is no mechanical contact with the object surface, thereby allowing the treatment of fragile surfaces.

Localised - the laser will only clean where the beam is directed. The beam size can typically range from less than a millimetre to a spread of one centimetre making it a precise tool.

Selective - the energy from the laser is monochromatic. By choosing an appropriate wavelength that is strongly absorbed by the layer to be removed, and only weakly absorbed by the underlying surface, selective cleaning is possible.

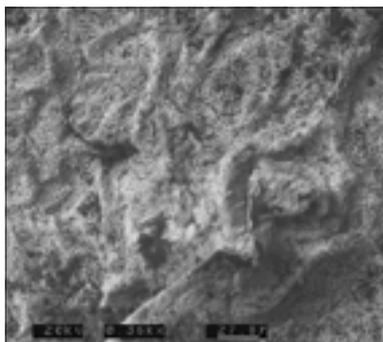
Control of cleaning - once the laser has been switched off the cleaning process stops immediately.

Selection and Procedure

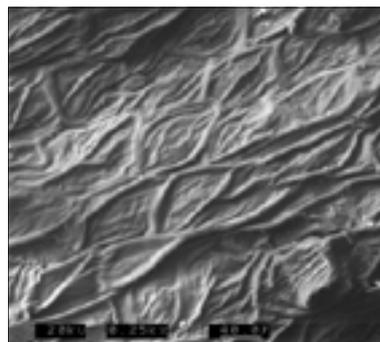
Samples from duplicate collections are selected for cleaning on the basis of one or more criteria; accumulation of dust, encrustation (physical or biological), chemical degradation or alteration and importantly that none of the samples were suitable for conventional or more established cleaning methods. An initial examination and record of the condition of the sample is made and images are taken. Test areas are cleaned using the laser, using different pulse rates and focal distances. A number of successful tests have been carried out on a variety of natural history objects (Cornish and Jones 2002) for example the leaf of the herb *Silene inflata* - removed from a herbarium sheet. It was found covered in a black pollutant suspected to contain mercury. The dried leaf sample had been treated during the 19th Century with mercuric sulphide as a method to prevent insect infestation. Many herbarium sheets show the presence of this black surface coating. Subsequent testing of the leaf surface by x-ray diffraction identified the pollutant as metacinnabar (mercuric sulphide, HgS). There is no established cleaning technique available plus there are Health and Safety considerations.

Treatment with the laser has readily removed the metacinnabar but left the leaf sample intact. This can be shown through the preservation of cellular structures in the desiccated leaf, e.g. veining and stoma.

Current work involves the removal of conductive coatings on microfossils and removal of surface pollutants from bird's eggs. Watch this space!!



Study under SEM shows the leaf before cleaning...



...and after.

Cornish, L, and Jones, C. 2002, 'Laser cleaning of natural history specimens and subsequent SEM examination', *Conservation Science 2002*. Edited by Townsend, J., Eremin, K., & Adriaens, A, Archetype 101-106.

Report from the National Council for Conservators & Restorers

NatSCA is, at present, a constituent organisation of NCCR (National Council for Conservators & Restorers). The latest news from NCCR is that the plans for the Convergence (merging) of the 'main stream' Museum Object Conservation organisations continues smoothly. The main stream organisations consist of; British Antique Furniture Restorers Association (BAFRA), British Association of Painting Conservator-Restorers (BAPCR), Institute of Paper Conservation (IPC), Photographic Materials Conservation Group (PhMCG), Scottish Society for Conservation & Restoration (SSCR), United Kingdom Institute of Conservation (UKIC) [NSCG's old parent]. The 'Vanguard Group' who are guiding the Convergence Project, consists of representatives from CCF, IPC, PhMCG, SSCR and UKIC. The consultancy firm Blue Spark, has been engaged to effect a satisfactory and smooth convergence. They have produced a convergence consultation document, which can be studied further on NCCR's website at <http://www.nccr.org.uk/convergence/index.html>, along with other relevant discussion documents.

The Institute for the Conservation of Historic and Artistic Works in Ireland (ICHAWI) and The Irish Professional Conservators' & Restorers' Association (IPCRA) are not yet at liberty to join in the merging process for political reasons but they (like NatSCA) will be kept informed of all developments. NatSCA is termed an 'hybrid organisation' with members who are of other disciplines as well as Conservators (curators, collection managers, educators etc.) and we are grouped with the similar 'mixed interest' organisations, the Society of Archivists (SoA), British Horological Institute (BHI) and Care of Collections Forum (CCF). Even though NatSCA is a 'hybrid organisation', we are still, at present, influential on NCCR committee with Simon Moore representing the Professional Development Board and myself as reserve NatSCA rep.

The draft documentation states that hybrid organisations will [probably] not be merged with the new organisation and may not have a vote. Individual NatSCA members who are accredited via (and are members of) UKIC will be eligible as individual voting members of the new organisation. NatSCA will be represented on the Advisory Council; will be an associate member of the new organisation and will be invited to send observers to relevant meetings of the Governing Body of the new organisation. It has yet to be decided whether individual NatSCA members can become individual members of the new organisation, and at a special membership rate. One reason why we left UKIC to form NSCG was because of the high membership rates to cover the cost of individual conservator accreditation. Options for hybrid organisations will remain open for the time being and we are being informed while NCCR converges and becomes the 'new whole entity', which could be in place by September 2004. We await decisions to be made at further merger meetings to discover our individual and corporate inclusion.

NCCR agrees with being inclusive to those who are not primarily professional conservators and to those, such as the Institute of Conservation Scientists, who have shown less interest in merging with the new organisation. We (NatSCA) support the moves to merge NCCR member organisations as 'united we stand for the good of Conservation' and we will ensure that NatSCA will be 'The Group' to consult on all matters to do with Natural Science Conservation in the future. If you have views on the subject, then tell your NCCR representative and please write a letter to 'NatSCA News' for publication.

Natural History Collections at Birmingham Museum & Art Gallery

- Jane Arthur, Head of Collection Services, Birmingham Museums & Art Gallery

For the last 3 years Birmingham Museums & Art Gallery has been looking for a way forward for the natural history collections that would provide long-term preservation and access to these important collections. A Natural History Advisory Board was set up in 2001 with membership from specialist groups and national museums.

- recommend a way forward for the NH collections at BM&AG
- provide specialist advice relating to the care, management, interpretation, access and future collecting

In their initial discussions on the natural history collections the Advisory Board emphasized the need to retain the collection in the region and if possible to find a solution that maintained the collection as a whole. In July 2002 Birmingham City Council and the University of Birmingham agreed in principle a partnership to bring together the biological collections from the University Herbarium, Lapworth Museum of Geology and the School of Biosciences with those of BM&AG to develop the Birmingham Museum of Natural History. The aims of the museum would be:

1. To provide secure and appropriate storage for natural history collections to ensure their long term preservation
2. To implement a programme of assessment and conservation
3. To implement a programme of documentation
4. To create access to the natural history collections for students, researchers and the general public
5. To implement a programme of education and outreach for natural history collections
6. To promote a partnership between the University of Birmingham and BM&AG
7. To provide opportunities to present academic research to the general public

A condition survey of all BM&AG's natural history collections was undertaken in August 2002 by a group of conservation specialists co-ordinated through the Natural Sciences Conservation Group. Following discussions on the project with Heritage Lottery Fund we submitted a bid for a project-planning grant in November 2003 that we hope will develop the aims of the project particularly relating to audience development and access to the natural science collections. If successful this will inform the full bid to HLF to refurbish and fit out a space in the Aston Webb building at the University for the Birmingham Museum of Natural History. The project would also provide for a three-year programme to catalogue, store and make accessible the joint natural history collections through on-line resources, displays and education/outreach packages. Bringing these collections together will create a centre of regional and national significance.

Part of BM&AG's natural history collection is on loan to Thinktank for the "Natural World" gallery and an associated programme of education and learning has been developed at Thinktank since opening in September 2001. The proposed natural history museum complements the displays at Thinktank. These together with the Lapworth Museum of Geology, the City and University Botanic Gardens and the Nature Centre would enable the development of a regional centre of excellence for the natural sciences in Birmingham that would be significant and unrivalled outside London.

The scope of the Natural History collections is outlined in the Collecting Policy 2003-2008 approved by Birmingham City Council in October 2003.

Workshop & Conference Reviews

Two GCG workshops: Marine Reptiles and Microfossils

- Steve Thompson: Keeper of Natural History, Scunthorpe Museum

These are a pair of workshops that I attended last year, for different reasons and which turned out to be useful in different ways. Each illustrated the fact that you can't necessarily tell from the programme how an event is going to be useful.

Marine Reptiles

The first of the workshops was a marine reptiles workshop, run by Mark Evans and Arthur Cruickshank at Leicester Museum in June. I attended this because this represents a part of the palaeofauna that we are able to collect from our collecting region, and because it is rather a specialist subject, and I would always need to turn to the experts for in depth knowledge of the subject.

Mark began by giving an outline background to the subject, noting that these animals represented some of the most iconic of museum specimens, and are part of the reason why the Jurassic has become so well known, although, as with dinosaurs, they are by no means all Jurassic in age. And it was pointed out that, of course, these animals are not, in fact, dinosaurs themselves. Their relationships to other vertebrate lines was briefly looked at and the fact that they were only secondarily marine, having been terrestrial animals that re-invaded the marine environment. The modifications required to allow this to happen were considered, and it was pointed out that the locomotion method for many of them, including the well known plesiosaurs was not swimming as such, but flying underwater.

From the outset, it was clear that I had no more than a rudimentary understanding of the field, as it turned I wasn't really aware of even the basic grouping of marine reptiles. This was where we moved into the more detailed part of the workshop, looking at the four principal reptile groups, as divided by the skull structure.

There was then a substantial period spent looking at the different groups of animal, some 18 groups in all. For each one, we looked at the identifying features and the geological range in which it lived, and picked up on those species that were known from the British record.

We recapitulated on the recurring evolutionary themes exhibited by these animals and looked at the distribution of families through time. We then looked at the most common, or at least the most familiar, of the families, the ichthyosaurs, plesiosaurs and crocodiles, in more detail and with regard to the British record.

The workshop finished off by looking at a range of specimens from the collection at Leicester, to give people a hands on experience of the actual fossils.

The workshop was extremely interesting, particularly when these are beasts that I might expect to be found in my own patch. Indeed, when one was reported only a month or so later, I was in a good position to call on the expertise I needed to deal with identification and recovery. (Sadly, although the report was accurate, two days digging showed that the

original, very promising finds (a series of large vertebrae) were all that had been preserved at that spot. Nevertheless, such finds are always a good possibility, and it is comforting to know that there are people to call on when needed.)

I can also recommend the workshop to other people, should it be run again. These animals are among those most familiar to the layman, and so form a good deal of the interest in natural science collections. I believe you can not know too much about these things and this represents a good way to acquire a little bit more knowledge about something that you may well be asked about.

Micropalaeontology

My motivation for attending this workshop was really just one of personal curiosity. Like most curators, I suspect, I have no microfossils in my collections (or at least no specimens that were collected for this purpose), and so this was not likely to impact upon my own professional activities. Or so I thought. But it just goes to show that you can never tell what things will come in handy, as I shall explain later on.

The workshop was run by Giles Miller and his colleagues at the Natural History Museum in September and we began with a tour of the collections. These do not necessarily have the highest profile among the NHM's collections, but they are substantial collections, and microfossils are of great importance in both academic and commercial research. The collections at the museum have been strengthened in recent years by the acquisition of the BP collection and that of the University of Aberystwyth, both of which cover most microfossils.

We began with an introduction to micropalaeontology in its broadest terms with a run through of all the main microfossil groups, and how they are dealt with in the department, and Clive Jones gave us a tour of the collections. The problems faced in the documentation, preparation, conservation and use of these specimens are rather different to those faced by most of us, who can at least see the objects we are working. So how do you label a specimen that is less than 1/20mm across? Such objects are mounted for use with a microscope, and this led onto a discussion of mounting methods, and how this related to the type of microscopy used.

Conservation of the material is not confined to the object itself, because the mount and mountant are equally to be accounted for in maintaining the collection, and the various different aspects of conservation were looked at. In addition to the labelling specimens, the broader aspects of documentation were discussed, and we were shown the database development that is currently taking place. Also shown were some of the databases that have already been developed, including those containing images and which are being developed for online use. These are available through the NHM website, and a particularly good example is that of the Duxbury collection, which we were shown by Andy Henderson, who had been developing this. It's well worth a look when you have a spare moment (<http://www.nhm.ac.uk/palaeontology/> and follow the links to micropalaeontology).

We also had a look at how they generate many of these images, and Clive Jones demonstrated the techniques. Because the depth of field of the microscopes is so small, only a small part of a specimen is in focus at any one time. They get round this by taking many exposures, changing the focus slightly each time, and then cutting and pasting among the

images using PhotoShop. I had, in fact done this myself to get an image of an insects eye using pictures taken down our museum microscope. It was kind of reassuring that the decidedly jury-rigged effort that I had used was actually exactly the same as that used by the professionals. To be fair, though, I should point out that they have now acquired some software that very cleverly does this automatically, turning what was once hours of painstaking and eye-straining work into a push of a button job.

We finished off by going down to the conservation labs, where Lorraine Cornish and Derivilla O'Dwyer showed us how they are dealing with the cleaning of a set of glass models of microfossils. These are the most beautiful and unbelievably delicate creations, some consisting largely of scores of fine glass filaments. The mere contemplation of trying to clean such objects would be enough to make me want to go and lie down for a long time, but this is currently a research project for some of the conservation team, to try and establish the most effective ways of restoring these stunning items.

So, all in all, a fascinating workshop, and one which actually may turn out to have a practical benefit. I had always assumed that trying to use microfossils was beyond the realms of possibility for mere mortals such as myself, although I have looked at the possibility of sectioning limestones to see the fossils contained therein. However, after discussing things with the staff there, I have decided to see if I can extract some fossil from the abundant supply of mudstones we have in our area. People are fascinated by fossils in the first place, and to be able to show them these tiny animals and the exquisite detail they exhibit would be a most unusual and popular project. But I may well need some help, so I may be heading back for more advice.

Solving fungal problems in heritage collections

- Simon Moore, Natural Sciences Conservator

All day seminar by Mary-Lou Florian at the Natural History Museum, 6th November 2003.

Based around her rather cryptically titled book *Fungal Facts* (publ. *Archetype Publications* 2002) and which was part of the seminar package, Mary-Lou Florian of the Royal British Columbia Museum in Victoria, gave an intense and mind-boggling day of facts about the way that fungal organisms affect and grow in the collections that we tend. Assisted by James Black of *Archetype Publications*, who wrestled with perverse carousel projector magazines, she took us back to basics, outlining many of the facts and factors that we, as conservators, once (may have) learned but largely forgotten. This included the definitions of humidity and the building blocks of water physics and how this can both affect and effect fungal growth. We were also reminded about differentiating between slow freezing causing membrane-piercing ice crystal growth as opposed to blast freezing which preserves cell membrane integrity and how glycerol prevents freezing by acting as a reducer for water eutectic.

Since she was talking about ascomycete fungi and their forms of reproduction we learned much about conidial formation, their differentiation from spores and how they can be easily distributed among all sorts of heritage media, especially paper. We looked into the staining of conidia, using eosin, to test their viability and their causing fox spots on paper and how to differentiate from iron spots and that such fungal growth usually causes aes-

thetic rather than actual damage. We looked at pictures from both light and scanning electron microphotographs differentiating fibres and microfibrils from hyphae and conidia from other related bodies.



Conidia will soon find their way onto damp tissue

On the preventive side she talked about the avoidance of creating microenvironments suitable for fungal growth such as the oft-overlooked problem of placing watercolour paintings against cold walls in summer. The prevention of dust and how it is attracted along light beams, which act as dust pathways and that dust acts as a carrier of infesting conidia as well as carrying nutrients for fungi. We were also reminded about avoiding cross- or re-contamination when moving objects that have been sterilised.

For the organic/biochemists there was even a moment discussing β -glucans and their relationship with melanin and their relevance in slime, also how to remove melanin-based pigment staining from media using (1-3 glucanase) enzyme chemistry. We also touched on the removal of such staining bodies using chamois leather or by using laser cleaning.

Mary-Lou kept the pace going all day but finding her English audience rather shy than she is used to and tending not to reply to open questions, she had to coax answers from us!

Altogether it was a thorough fact-filling day, even if it was rather like a university mycology lecture. I know that some found it too technical and 'back to basics' where they were hoping more for basic tips on collection-related and more updates on environmental problems.

Bearing in mind the attendance fee, I found that the seminar room was not up to standard since the presentation suffered from daylight infiltration, too basic projection equipment and interfering machinery noise. I found, however, that Mary-Lou was a powerhouse of information and not once did I find my eyelids drooping!

NOOX3

*- Suzanne Lewis: Lead Curator & Conservation Officer
Entomology Department, The Natural History Museum, London*

NOOX3 a two day conference on anoxic and reduced oxygen environments hosted by the British Library and the Natural History Museum, London on the 3rd-4th November 2003. The conference was co-ordinated by Chris Collins, The Natural History Museum, London and David Jacobs, from The British Library. This was the third conference on this subject and was made up of one day of lectures at the British Library and one day of workshops at the Natural History Museum.

The lecture programme was interesting, informative and varied. The first talk given by

Bob Childs described an ambitious but exciting use of anoxic environments. Bob has been involved in a project to provide a display case outside Liverpool Street station open to the light, pollution, extremes of temperature and humidity and other agents of deterioration that would normally make a conservator shy away from such a project. However, with Bob's advice and a purpose built anoxic display case, The Kindertransport Sculpture is now in place.

The two talks that followed covered different aspects of barrier films. Chris Collins told us about his recent research on the long-term stability of barrier films and outlined some ideas for future developments. Adrian Doyle continued on the subject of barrier films but concentrated on the heat sealing properties of one type of barrier film, Escal®.

The next series of presentations covered the practical application of anoxic environments within collections. This aspect surprised me, as it seems that many more collections are actively using anoxia as a method of treatment or storage than I had appreciated. This is significant change and progress from the Cardiff anoxia conference, in November 1999, where a few people were using anoxia and testing out the possibilities it could provide for museum collections and conservation. I found this encouraging, as there is the general feeling that this is now a tried, tested and realistic method for treating and storing collections.

An oxygen free environment as a pest treatment and control was the subject of the next few presentations. Anoxic environments proves to be an effective and timely option for pest control with the banning of Dichlorvos and with no other fumigant insecticide available for use in collections and exhibitions. David Pinniger gave an overview of factors contributing to the success and limitations of anoxic and temperature treatments as a pest control. Basically highlighting the fact those physiological differences between insect species and their life stages dramatically effects their tolerance to such treatments. To follow this Thermo Lignum, a German company outlined their process for pest eradication. This involves subjecting infested items to a core temperature of 52°C for 3 hours, while maintaining relative humidity within a pre-set narrow band of 10% change, thus eliminating the effects of drying the specimens and objects.

The final presentation of the day was a very interesting account of the salvage operation at the Municipal Library in Prague following the severe flooding in 2002. The process used to dry books was vacuum packing, a technique derived from the food industry but modified in Great Britain for conservation purposes. The wet or frozen volume is wrapped in unwoven textile then covered with layers of absorbent paper on both sides and then the whole thing is inserted into a polyethylene bag and placed into the vacuum equipment. Air is withdrawn from the bag and sealed. The water migrates rapidly from the volume being dried to the absorbent papers until the amount of humidity in the whole bag is equalised. The bag is cut open the absorbent material removed and the process repeated several times until the book is completely dry. The method was recommended as a suitable method for salvage of historical collections, as it proved useful for drying a whole range of library materials. It is a gentle drying method, unlike freeze drying, the process does not deform the books.

The second day of the conference was made up of a series of four, hour long workshops, which complimented and added to the previous day's lectures. The first workshop we

were shown the products available from Mitsubishi Gas Chemical (MGC), more specifically the oxygen free packaging using the RP system. We were shown the types of barrier film, oxygen scavengers, pumps and sealing systems available. We were shown how to use the products and given an opportunity to try them ourselves and given samples of some of the products.

The second workshop was an opportunity to see the Thermo Lignum chamber and learn more about how this heat treatment works. Phil Ackery also explained some of the research that has been done at the NHM to explore this treatment as a possibility for pest control.

The next workshop was a demonstration of the vacuum packing system used in Prague as a salvage technique for saturated items. We were shown how the water is extracted from a wet book and also how other specimens had been stored in this way using a more suitable long-term barrier film. The system is available and has been adapted by Conservation by Design Ltd.

The final workshop was hands-on, where we were given an opportunity to learn a little about the specification of different barrier films available, and their suitability for long term storage of objects. We also were given the chance to use different heat sealers to get an insight of the difficulties that may occur with different products. This was a very useful session for those looking to use this system in their collection as you were able to test the products available and make an informed decision as to what system would be most appropriate for your needs.

I found the two days were very useful, the organisation was also very good which made the whole thing enjoyable as well as interesting.

Conservation Techniques

One day course in conservation techniques at Camberwell College of Arts
10am - 4pm
July / September (exact date to be confirmed)
10 places

This one day practical course of workshops and discussion is aimed at collection managers, conservators, and museum and gallery staff who want to learn more about the conservation duties in a modern collection.

Topics covered on this course include :

- Tear repairs
- Surface cleaning
- Consolidation of bindings
- Strapping / support

Price: £80

For information, please contact:
Victoria Noble
The Natural History Museum
V.Noble@nhm.ac.uk / 020 7942 5734

Book Reviews

British and Irish Pug Moths: A guide to their identification and biology

Reviewed by Paul A Brown

The Pugs comprise the most enigmatic group of the Geometrid macrolepidoptera (Geometridae, Larentiinae, Eupitheciini) consisting of four genera *Eupithecia* Curtis, *Chloroclystis* Hübner, *Pasiphyla* Meyrick and *Gymnoscelis* Mabille, totalling 52 species recorded in Britain & Ireland. This user friendly and well-illustrated book will greatly help curators and recorders identify those un-named and misidentified 'little-brown-jobs'.

Adrian Riley alone finished this long awaited and completely updated work after the sad death of Gaston Prior in 1994. This book greatly increases our knowledge of the group and replaces the slim soft-back '*An Identification Guide to the British Pugs*' by David Agassiz et al., of 1981, published by the British Entomological & Natural History Society. The work also greatly develops the coverage of Pugs in Bernard Skinner's '*Colour Identification Guide to Moths of the British Isles*', 1984, better reflecting the true extent of infraspecific variation. Riley & Prior dispense with the need for a dichotomous key (as used by Agassiz et al. and by A. C. Johnson, 2002, *Atropos* 17:29-32.) because of the difficulty in interpreting colour and identifying worn specimens. They instead propose the procedure of comparing your specimens with:

1. the colour plates
2. with the text descriptions
3. with similar species
4. with illustrations of abdominal plate and/or genitalia
5. appropriate geographic range, flight period, preferred habitat and presence of preferred food-plant. It is presumed that the reader knows how to dissect the genitalia.

The Photographic illustrations consist of eight colour plates of life-size, set specimens by David Wilson, three plates organised by taxonomic relationship and five plates usefully organised by similarity of wing pattern. One criticism is that the set specimens photos are at life size, a little small. In Vladimir Mironov's recently published book, '*The Geometrid Moths of Europe, Volume 4*' (Apollo Books, Stenstrup, Denmark 2003, 463 pp), covering the 138 European Eupitheciini, his Pug plates are 1.5 times life size and show more detail, albeit on a larger page size of 240 x 170 mm. Why waste space, with large amounts of empty page in the smaller Riley & Prior, when you could have the space filled with larger and finer detailed illustrations, as in the Mironov volume.

There are also four excellent colour plates of living imagos photographed by Jim Porter, Ulrich Ratzel, Robert Thompson and Paul Waring. Most of the text figures occur at the back of the book although useful thumbnail drawings of differences in wing pattern are distributed through the text. The line drawings of the dorsal aspects of final instar larvae are very good and show more detail than the small colour photographs of pug larvae in Jim Porter's '*Colour Guide to Caterpillars of the British Isles*' (1997, Viking). Drawings of the isolated male abdominal plates and aedeagi (showing the important ornamentation), and female bursa copulatrix, are mostly clearer than those in Agassiz, (e.g. The aedeagi of Sloe and Green Pugs) but not quite as good as the complete genitalia illustrations of Mironov, showing relative shapes and sizes of the complete genitalia. Riley & Prior's

thumbnail impressions of isolated male valvae are relatively poorly illustrated.

Distribution maps (not found in Agassiz) are by vice-county and not by more detailed 10km and are based on records from Rothamsted Insect Survey, Biology Records Centre, county recorders, museums, and published and private sources. [A brief look through the maps shows that *E. pusillata* is not recorded for the Burren in Ireland where it has been/is common.] There is a glossary, a table of phenology (stating what stage of the life cycle is expected in which month of the year), ten pages of comprehensive larval host-plant records, 21 pages of References and Bibliography, with a useful brief note on subject matter, and eight pages of index with Latin and English name synonymies.

The text includes a systematic checklist and a checklist of subspecies and aberrations and an historical review. Another useful short chapter covers breeding and rearing. The species accounts consist of a brief British Isles history of records, descriptions of the imago, genitalia, infraspecific variation, comparison with similar species, life histories with descriptions of ovum, larvae and pupae and discussion of flight period, habitat, distribution, collecting and rearing. Eleven species are listed and discussed as erroneous identifications and a further two species discussed as being likely to occur, although the other seven species described by Agassiz et al, as being in this category, have not turned up since 1981 and are not therefore discussed. This is a little short sighted as who can tell what might turn up during the next hot summer and on the next southerly airflow from Europe!

I recommend Riley & Prior as a must for British & Irish lepidopterists', curators and recorders, as it covers all that most would wish to know about our Pug fauna and at £29.50 it is also very good value. Mironov is the other good Pug book of 2003 but at circa £68 is the better choice for 'Pug fanatics' with a broader European Interest.

A Short History of Nearly Everything by Bill Bryson

Reviewed by Steve Thompson

I very recently heard this described by a friend of mine, himself a science teacher, as the best book he'd ever read. I wouldn't quite go that far, but having now read it twice, I can say that it is well worth a read, and actually better the second time round.

There are, I suspect, many people who don't like, even can't stand, Bill Bryson's books. On the other hand, he was voted by one national paper (The Observer?) a couple of years ago as an honorary national treasure. Their reason was "Ok, so it took a foreigner to show us what we were really like". Well quite so, and in as witty and deeply affectionate way as you could hope for. I suspect that one of the reasons for disliking him is that his style of writing is seen as being rather "downmarket", even childish. I would suggest that it is deceptively colloquial, and that it is this style that also makes him as popular as he is. Furthermore, it allows him to be unashamedly personal in his observations, and to let his enthusiasm, disgust and other feelings show through.

It is a style that lends itself well to the project he undertook with this current book, being as he freely admits, a complete ignoramus about the world of science. All too often, science is interpreted by people who are too familiar with their subject for people who are

unable to grasp the full implications of much of what they are being told. As a result, the real wonders of science are lost on many people, even though the said interpreters are likely to start off by telling us how amazing the universe is.

Bryson shows this nicely in his introduction by telling us the story of seeing an illustration in a book at school that showed a cut away section of the Earth. He describes how he thought it was a miracle that scientists could know what the Earth 4000 miles below our feet was like, and excitedly took the book home that night to find out more. He found to his dismay that it was neither exciting nor even particularly comprehensible. He says of the author, "It was as if he wanted to keep the good stuff secret by making all of it soberly unfathomable".

On the following page, he says, of the question as to whether the oceans were growing more or less salty, and whether this was something we should be concerned about, "I am very pleased to tell you that until the late 1970s the scientists didn't know the answers to these questions either. They just didn't talk about it very audibly". His thesis is, in part, that scientists *should* talk about these things more audibly, that many, if not most people are fascinated by not just the findings of science but the process by which they are found. Science as a process is itself a great drama, with as fascinating and flawed a cast of characters as is found on TV or in films. But most of this is hidden from the layman, and this is very sad. Bryson spent, eventually, three years reading, and asking a lot of very knowledgeable people a lot of "outstandingly dumb" questions, in order to piece together what is an unashamedly personal view of the story of science. Even if the book had not been very good, it deserves to be read for that alone.

But it is a good book. It takes a delightfully winding route through science, from looking at the beginning of everything through to considerations about our future, moving broadly from the physical sciences through the earth sciences and onto the life sciences, albeit with many diversions along the way. On my first reading, I was distracted in the first half of the book by what I felt were an unreasonable number of silly little mistakes. For instance, at one point he refers to Scheele working with both prussic acid and hydrocyanic acid, which are actually the same thing, and at another that there are about as many neutrons as protons in an atomic nucleus, which is only true for the lighter elements. However, I mention these simply so that I can now say that this is quite irrelevant. Even when they are more notably in error, they do not in any way detract from what he is trying to say. In any event, on second reading, it became quite apparent that, as far as I could tell, there were actually very few such mistakes. In fact (as I was counting), I can tell you that I found just 16 instances in the whole 423 pages, which would be impressive for anybody, never mind someone starting from his position. I suggest that if, when you read the book, you come across such instances, just say, "oops" and carry on reading.

Against that are very nice examples of how he manages to put his message across. On p126, there is a beautifully simple comparison between electrons orbiting nuclei and the blades of an electric fan, possibly the best I have come across. And on p40, he illustrates one of the many delightful ironies in the story of scientific discovery, naming 14 of Edmund Halley's achievements, any small selection of which would have guaranteed his ongoing reputation, and then pointing out that "the one thing he didn't do was discover the comet that bears his name".

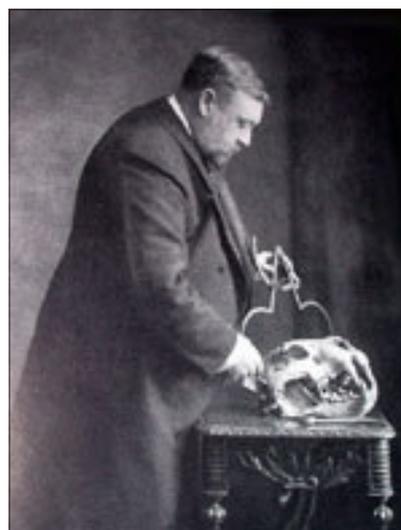
It is this particular brand of personal viewpoint and familiar representation that makes this both an excellent book to recommend to people wanting to get a feel for what science is all about and a good read for those of us with more background knowledge. Indeed, my friend's particular enthusiasm was based on the idea that it would be good for all science teachers to read the book to help them see the big picture and to fire their own enthusiasm for the subject.

It also serves the purpose of an introduction in another very valuable way. It has a set of notes to go with each chapter, which themselves contain many references to the literature, and a 14 page bibliography, nearly 300 books, many of which have become standards in the interpretation and popularisation of science. If you are a Bill Bryson fan, you will no doubt have read this book already. And if you can't stand those ignorant amateurs getting into things they were better staying out of, just put that to one side for a while and read it anyway.

Rowland Ward, Taxidermist to the World

Reviewed by Simon Moore

Many of us know of Pat Morris's keen interest in the history of taxidermy and taxidermists and may have attended his lectures on the A-Z of taxidermists. I missed the letter W, unfortunate since it must have been fascinating. His book, covering the biography of Rowland Ward as a person and author plus the history of the firm, is both encyclopaedic and balanced with humour, including much material from the final years of the firm. The fact that the firm outlived its celebrated principal by 64 years is a fitting testament to its work and workforce.



Both the firm of Rowland Ward and the significance of its product come up repeatedly in my own work as natural sciences conservator and adviser. This book will be a most useful tool since it shows many examples that typify Ward taxidermy combined with the paper labels and ivory discs that were used as the firm's stamp of manufacture with date ranges where known. Other Ward artefacts are also listed and show the firm's chronological progression from Piccadilly through Grosvenor Street and finally to Wood Green as social taste in taxidermy gradually dwindled.

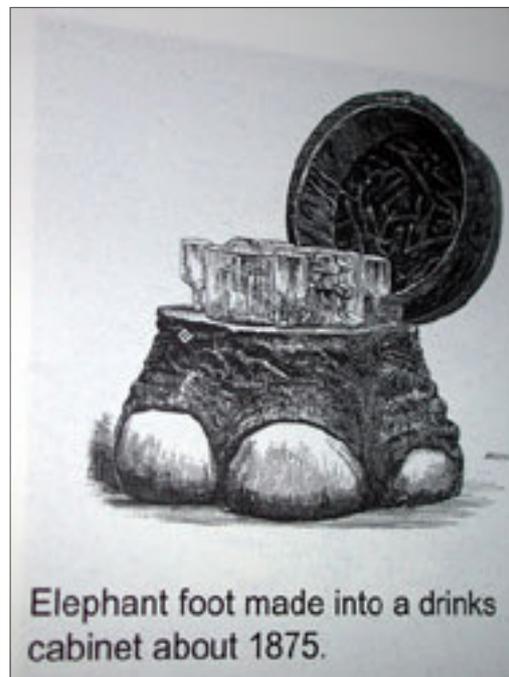
The social history is every bit as important as the taxidermy focus, the glittering clientele on the one side but showing how items that we would presently consider either non-PC or kitsch, were quite the norm during the heyday of British taxidermy. The Hall Porter's chair built from a young elephant's body would be reviled today but would have been popular as a rich man's novelty and may still grace the hall of a large property. For me the drinks cabinet (c. 1875) made from an elephant's foot (even with a hinged lid!), typifies the eclectic angle of taste in the High Victorian period when attitudes towards ex-

exploiting animals were very different to those of today. The author keeps an open mind and sense of humour towards these social aspects that would appal nowadays. The author gently reminds us that lapses in taste were 'down to the customer' and not necessarily the firm that made them!

The book also gives an insight into the workaday life of the 1950s and 60s at the workshop in Leighton Place, not so long ago, yet how different from the present. The type of work, including specialised packing and the long hours and small wages! The author has worked in potted biographies of many employees, some of whom are still living. He shows their character and humour in a refreshingly candid way. This candour extends to the occasional failures, usually from improving on the initial work of a native preparator in the field!

The author lets us in on such trade secrets as the facsimiles that were made of the Dodo and the Great Auk and how 120,000 feathers would have to be glued onto each manikin! The latter is particularly significant since the genuine birds command huge prices at auction. Prices from period catalogues and special jobs are also quoted to giving an idea of the economic changes and show how much people were prepared to pay for an item or commission.

Despite its rather hefty price for a comparatively slim volume, the book is packed with information about taxidermy techniques and changing attitudes balanced with period social history and humour.



CONSERVATION FOCUS
Notices, Adverts & Meetings

Information:

New Name for National Museums, Libraries and Archives Body

The Council for Museums, Archives and Libraries is dropping the name "Resource" from its title. The organisation, which provides leadership across the sector and strategic advice to government, said it would be known in future as the Museums, Libraries and Archives Council, abbreviated to MLA.

When it was established in 2000, the organisation was given the title "Resource: The Council for Museums, Archives and Libraries". Mark Wood, MLA Chair, said: "The name Resource has always been a source of some puzzlement and confusion. The Board felt unanimously that we needed a name which is concise and spells out clearly what the organisation does.

The change will come into effect from 9 February.

MLA Launches Disability Database for Museums, Archives and Libraries

Providing online access to a database of 200 trainers, auditors and consultants specialising in disability issues is the latest step towards reducing access barriers in museums, archives and libraries by Resource. The database designed and built by Resource in partnership with the nine Regional Agencies, is the first online service of its kind for the cultural sector.

The database is rich in information to help museums, archives and libraries to find support and advice on all disability issues; all available at the touch of a button. Want to find a consultant who specialises in deafness awareness training? Locate someone who works close to your institution or who specialises in academic libraries or can do a DDA audit? All such questions can be answered by the disability database.

Marcus Weisen, Resource's Disability Officer, said: "In the past databases of disability trainers, auditors and consultants in the cultural sector were merely address lists and they were not available on the web. With this new system, we can allow users to browse categorised listings to find the best match for their needs. This unique database is set to stay and grow. We will be working closely with the Regional Agencies as well as disability organisations to promote it, update it and expand it."

The database has been developed in response to the need expressed by the museums, archives and libraries who took part in Resource's national 'Survey of provision for disabled users in museums, archives and libraries' (2001). Many expressed difficulty in gaining access to disability trainers, auditors and consultants.

Museums, archives and libraries who commission audits, training and consultancy work will also find guidance about the range of services on offer and developing a brief in the Resource Disability Portfolio Guides "Training for Equality" and "Audits".

The disability database is part of Resource Disability Action Plan, which includes the Disability Portfolio and the self-assessment Disability Toolkit for museums, archives and libraries.

Information:

Disability Website
<http://access.museophile.net/>

Owners of .museum domain websites may be interested in the website, dedicated to aid accessibility to museum-related websites for disabled users. This website allows access to selected museum-related websites using a text-only filter based on the Betsie tool to aid the partially sighted and blind web users. The size, colour and font of text is selectable at the bottom of each page. In particular, any museum with a .museum domain name can use this service. It is recommended that such a link is put at the beginning of the home page so that blind and partially sighted users easily find it.

Prof. Jonathan Bowen, Professor of Computing
 Faculty of Business, Computing and Information Management
 Email: jonathan.bowen@lsbu.ac.uk

Hist-nat-hist: a new email discussion list

The Society for the History of Natural History has set up a new email discussion list aimed at those with an interest in the history of natural history. Hist-Nat-Hist is designed to promote enquiries and discussion relating to any aspect of the history of natural history. As well as requests for information or answers to other people's enquiries, the list welcomes notices and reviews of conferences, meetings, publications and exhibitions.

You can join via the list homepage at: <http://www.jiscmail.ac.uk/lists/hist-nat-hist.html>
 or by sending an email message to: listserv@jiscmail.ac.uk

Leave the subject line blank, and put the following text in the first line of the message:

SUBSCRIBE hist-nat-hist Your Name

When you join the list you will receive an email confirming your membership, and advice about using the list.

We would particularly welcome announcements about museum events, online collections databases and other museum resources which might be of interest to anyone researching the history of the life sciences.

Simon Chaplin, Senior Curator, Museums of The Royal College of Surgeons of England,
 email: schaplin@rcseng.ac.uk

CALL FOR SUBMISSIONS

Museum Anthropology, the journal of the Council for Museum Anthropology of the American Anthropological Association is seeking submissions on topics of relevance to museum anthropology, art, museum studies, critical museology, and material culture broadly conceived. We are particularly interested in receiving papers related to the following topics:

- the current state of university anthropology and natural history museums
- the museums of consciousness movement
- museums and intangible cultural property
- museums and international cultural policy
- museums in conflict zones and at times of war

Museum Anthropology is a peer reviewed journal published by the American Anthropological Association and the University of California Press. In addition to scholarly articles, we also publish book and exhibition reviews, commentaries, research notes, and listings of current exhibitions.

Please contact the Editor, Christina Kreps, at ckreps@du.edu or

Information:

BECOME A FRIEND OF ICOM-CC and GET CONNECTED TO CONSERVATION-RESTORATION

ICOM Committee for Conservation (ICOM-CC) (<http://icom-cc.icom.museum>) connects the many and varied conservation-restoration activities dedicated to preserving the tangible and intangible, moveable and immovable cultural heritage of the world.

A membership of one of ICOM-CC's 22 Working Groups (<http://icom-cc.icom.museum/WorkingGroups>) is only possible for those individuals who are full members of the International Council of Museums (ICOM) and who have registered ICOM-CC as their International Committee. However, now a new membership category has been inaugurated: the FRIEND OF ICOM-CC and the STUDENT FRIEND OF ICOM-CC. FRIENDS OF ICOM-CC can connect with this international group of conservator-restorers, conservation scientists and curators by joining a specialist ICOM-CC Working Group, gaining access to electronic newsletters and notices, and taking part in Working Group activities. They can achieve insight and understanding regarding the multifaceted role of conservation in the world today.

FRIENDS OF ICOM-CC can share their experience and alert the professional community to special issues in their context or region. They will keep up to date with new research and developments. They can join in the debate and activity of a specialist Working Group, and help support public outreach and professional education in conservation around the world. They are offered reduced subscription fees for the Triennial Meetings that bring together Working Group Members from around the world.

REGISTER IN 2004 AND GET THE 2005 MEMBERSHIP FOR FREE!

A FRIEND OF ICOM-CC membership normally runs over one calendar year. However, taking into account the relative proximity of the ICOM-CC 14th Triennial Meeting in The Hague, The Netherlands, September 2005 (<http://icom-cc.icom.museum/TriennialMeeting>), the ICOM-CC Directory Board has decided to provide FRIENDS full membership of the ICOM-CC network until 31 December 2005 for those who register now. So register now and get the 2005 membership for FREE! It should be emphasised that membership of the FRIENDS OF ICOM-CC will also entail you to the low ICOM registration fee at the upcoming Triennial Meeting. Registration as a FRIEND OF ICOM-CC is possible by contacting the ICOM-CC FUND Secretariat (secretariat@icom-cc.org) in Rome. Registration will become effective after the receipt of the registration fee.

The registration fee is:

FRIEND OF ICOM-CC: € 40.00, respectively € 20.00*

STUDENT-FRIEND OF ICOM-CC**: € 25.00, respectively € 10.00*

*The World Development Indicators Database of the World Bank lists countries liable for a reduced fee (http://icom.museum/sec-report02-03_eng.html). The lower fees are also applicable to ICOM members who have chosen another International Committee than ICOM-CC for their free membership. If these ICOM members would want to become an active member of one of ICOM-CC's Working Groups they must also register as a FRIEND OF ICOM-CC.

** To be documented with college/institute (photo) ID. A Student Membership automatically terminates after five (5) years. After expiration the former Student Friend must either become an ICOM member or a Friend of ICOM-CC in order to preserve benefits and membership of the ICOM-CC network.

Subscriptions to Friends of ICOM-CC will support the ICOM-CC Fund, a foundation working purely for charitable purposes aimed at promoting ICOM-CC and its activities and publicising it within the international 'conservation and restoration community' and museums in general, as well as to the public at large throughout the world.

Meetings:

NatSCA - Annual Conference & AGM
'Natural History is Cultural History'
National Museum of Ireland, 26-28 April 2004

Monday 26th April 2004

Registration in Natural History Museum, Merrion Street. The museum will be open for registration and tours from 10.30 throughout the day.

- The exhibitions of the Natural History Museum will be available all day - this is a special opening for NatSCA conference delegates.
- Drinks reception for delegates in the Natural History Museum starting at 5pm.

Tours are one hour's duration and the venues are within 15 minutes walk of each other. Tours will be held at the following times depending on demand: 11.30am, 2.00pm, 3.30pm. Delegates will be able to attend a maximum of 3 tours throughout the day depending on time of arrival. Any delegates wishing to see specific collections or facilities not included in the general tours should make arrangements in advance - e-mail: naturalhistory@museum.ie

Tour options:

The Natural History Museum buildings – Mr Nigel Monaghan (NMI)

The Entomological collections – Dr Jim O'Connor (NMI)

The reserve stores at Beggars Bush – Mr Mark Holmes and Ms Julia Sigwart (NMI)

Trinity College Dublin, Geological Museum – Dr Patrick Wyse Jackson (TCD)

Trinity College Dublin, Herbarium – Dr John Parnell (TCD)

Trinity College Dublin, Zoological Museum – Dr Martyn Linnie (TCD)

Tuesday 27th April 2004

All events are based at the headquarters of the National Museum of Ireland

- Presentations from various speakers in the morning
- Tours of Conservation Building, Collins Barracks 2.30 – 4pm

This new facility was completed in 2001 and has receiving areas, quarantine, library and studios for x-rays, laser ablation, paper, archaeology, heavy objects, textiles and furniture.

- The NatSCA AGM will be held in this venue between 4 – 5pm.
- The conference meal will follow at about 8pm.

Wednesday 28th April 2004

All events will be based in the lecture theatre of the National Botanic Gardens

- Presentations until 2pm
- Tours of the facilities at the Botanic Gardens starting at 3pm.

Posters

There is space in this venue for a poster session on any museum related subject. Please contact the organisers in advance if you wish to present.

All enquiries to **Jo Hatton**, Grant Museum of Zoology, Dept. Biology, Darwin Building, University College London, Gower Street, London, WC1E 6BT. E-mail: joanne.hatton@ucl.ac.uk
Tel: + 44 (0)20 7679 2647.

Information:

Summer Internship - Natural Sciences Conservation
American Museum of Natural History

The Natural Sciences Conservation Laboratory of the American Museum of Natural History is offering a 10 week summer internship for a graduate or advanced-level student in conservation or a related field. The internship will focus on the conservation and preservation of natural science specimens and will involve the student in all current lab activities. Such activities include: applying a risk assessment model to the scientific collections, researching the long-term stability of current specimen preparation techniques, developing new approaches to specimen preparation, treating special collections, and developing standards for the long-term preservation of scientific collections. Specific interests of the selected applicant can also be accommodated.

A stipend will be provided as support over the 10-week period. Any interested parties should send a CV and cover letter to:

Lisa Kronthal
 Conservator of Natural Sciences Collections
 Office of the Associate Dean of Science for Collections
 American Museum of Natural History
 79th Street at Central Park West
 New York New York 10024

Meetings:

AAM Annual Meeting & MuseumExpo(tm) 2004
Thursday, May 6 - Monday, May 10, New Orleans, LA

The American Association of Museums invites you to attend the most comprehensive conference & exposition for museum professionals

HIGHLIGHTS

- Learn the latest from the best! More than **140 educational sessions** offer professionals at all levels solutions to real-world problems
- Tackle the issues of importance to the small museum at the first-ever **Small Museum Day**
- Visit **MuseumExpo**- the nations largest showcase of museum products & services- for one-stop shopping, making new connections, and keeping abreast of the latest technology, tools, and techniques
- **Network** with colleagues and museum leaders
- Gain innovative tips and innovative solutions to the challenges you face at the **Marketplace of Ideas**
- Celebrate the richness and diversity of New Orleans' museums at exciting **host committee evening events**
- Be inspired by our keynote speakers- award-winning author and musician **James McBride**, internationally renowned choreographer **Twyla Tharp**, and management guru **Michael Schrage**
- Boost your educational experience by attending **workshops** designed for intensive, hands-on learning in small group settings

Visit www.aam-us.org/am04 for up-to-the-minute details. Questions? Call 202.289.1818.
Register by March 5th and save \$60 off the advance registration rate!

Meetings:

NatSCA - Annual Conference & AGM
'Natural History is Cultural History'
National Museum of Ireland, 26-28 April 2004

COSTS:	Booking received by 27th Feb	After 1st Mar
NatSCA members / students - whole conference *	£45	£50
NatSCA members / students - one day ♣	£25	£30
Non-members - whole conference *	£60	£65
Non-members - one day ♣	£35	£40

*whole conference = attendance for either 2 or 3 days (Mon-Weds or Tues & Weds only)

♣ one day = Tues or Weds only

Conference dinner will cost approx £22 (in Euro's, excluding drinks) to be paid upon registration in Dublin

ACCOMMODATION : Details with a range of options of hotels/B & B's will be sent when registered, otherwise delegates are advised to source own accommodation.

NatSCA members should already have received a booking form. To obtain additional booking forms or further information please contact NatSCA conference organiser:

Jo Hatton, Grant Museum of Zoology, Dept. Biology, Darwin Building, University College London, Gower Street, London, WC1E 6BT. E-mail: joanne.hatton@ucl.ac.uk Tel: + 44 (0)20 7679 2647.

For Dublin specific enquiries contact **Nigel Monaghan**, Keeper of Natural History, National Museum of Ireland. E-mail: **monaghan@museum.ie**

The Society for the History of Natural History - Annual Meeting, 2004

The next annual meeting of the Society will be held in Cambridge on Friday 21st and Saturday 22nd May 2004. The meeting is being organised in association with Cambridge University's 'Cabinet of Natural History' seminar group. Details are still being arranged, but the program will include:

- a reception at Darwin College, which was once the home of Darwin's son, George and his daughter, the author and engraver Gwen Raverat.
- visits to several of the University's museums, including the Whipple Museum for the History of Science, the Sedgwick Museum of Earth Sciences, the Museum of Archaeology and Anthropology and the University Museum of Zoology
- a visit to the Darwin Correspondence Project, housed in the University Library, to hear a talk about the project and see some of the items from the Darwin Archive, which are not normally on display to the public.
- a morning of papers on issues connected with natural history in Cambridge.
- For anyone staying until Sunday, we are organising a trip to the University Botanic Gardens, whose director, Professor John Parker, has very kindly agreed to give us a guided tour.

The Society's **Annual General Meeting** will be held on Saturday lunchtime, 22nd May, in the Old Library, Darwin College.

Please contact Jim Endersby if you would like to be kept informed about the meeting.
 email: cambridge@shnh.org

Meetings:

SPNHC 2004: Emergency Preparedness, Response & Salvage
19th annual meeting of the Society for the Preservation of
Natural History Collections
May 11-16, 2004

Next spring the American Museum of Natural History will host the 19th annual meeting of the Society for the Preservation of Natural History Collections May 11-16, 2004. The theme of the 19th Annual meeting is Emergency Preparedness, Response and Salvage and as part of this year's activity we will be devoting one day of the conference's technical sessions to talks focusing on issues relating to emergency preparedness and response. In addition, a one-day workshop that deals with practical issues encountered in responding to the first 24 hours after a disaster, the most critical time period, will follow the meeting.

The International Society for Biological and Environmental Repositories (ISBER) will join SPNHC and organize a specialty session covering issues related to biomaterials, partnerships with zoos and other live collections and setting up tissue repositories. Several talks within this session will also deal with Emergency Response and Salvage efforts specific to these novel collections.

Founded in 1869, the American Museum of Natural History is one of the world's largest repositories of natural history specimens. Occupying four city blocks on Manhattan's Upper West Side, its collections of natural science specimens and anthropological artefacts are global in scope. AMNH is home to some 200 scientific staff, including more than 40 curators who carry out research in anthropology, biology, earth sciences, astrophysics, molecular systematic, and paleontology. The meeting promises to be an exciting week with collection tours, workshops, discussion groups, and a trip to Yale's new Environmental Science Center.

For more information, visit www.spnhc.org and follow the links to SPNHC 2004, or contact Chris Norris, Department of Paleontology, American Museum of Natural History, Central Park West at 79th Street, New York, New York 10024;
Email: norris@amnh.org

30th Annual CAC Conference and Workshop
Quebec City (Canada), 25-30 May, 2004

The Workshop will be held at the Musée national des beaux-arts du Québec, followed by the Conference at the Musée de la civilisation. Both events will offer simultaneous translation in English and French. The Conference will be held from May 28 to 30, 2004. Abstracts on all aspects of conservation are invited. In addition to formal papers, submissions for posters and video presentations are also welcomed.

Workshop

Theme: Unusual materials, unconventional treatments

This two-day workshop will be held from May 25 to 27, 2004 and will provide a forum where museum professionals, conservators and educators can share ideas and learn about treatments that explore uncharted territories. The goal of this workshop is to draw information from past experiences that required unconventional treatment solutions or new approaches for packing, display, and storage of objects or works of art. Workshop content will be delivered as case studies, group-discussions and panel presentations.

Meetings:

NFBR Conference 2004
Natural partners – biodiversity observations and collections

National Museum & Gallery of Wales, Cardiff
2nd July & 3rd July 2004 with optional field excursions on Sunday 4th July

- To examine the apparent divergence between field observations, collections and archives, especially the role of museums in biodiversity documentation.
- To consider data quality, validation, networking, interoperability and access to biodiversity resources (e.g. information, records, specimens and archives).
- To examine progress in integrating the collation, management and providing access to biodiversity resources.
- To consider the need for future action in these areas.

Friday 2nd July
 1000 onwards **Registration**
 1030 **Coffee, posters and demonstrations**

Session 1
 1100 **Keynote address**
 1130 **Functions of museums and record centres and how they have changed**
 1200 **The form and function of archival collections**
 1230 **Use of technology in providing access to information about biodiversity**
 1300 **Lunch**
 1345 **NFBR AGM for NFBR members, or opportunity to view museum**

Session 2
 1430 **Local and regional biodiversity networks and LRCs – recent developments**
 1500 **Links between national and international biodiversity and collections networks**
 1530 **Tea, posters and demonstrations**
 1600 **Developing networks of data suppliers**
 1630 **Engaging the public: outreach, training and education**
 1700 **Introduction to Day 2 workshops**
 1710 **End**

Saturday 3rd July
 1000 **Workshops 1-3 convene**
 1 Data validation and verification
 2 Management and role of collections
 3 Management and role of archives
 1100 **Coffee, posters and demonstrations**
 1130 **Workshops 1-3 reconvene** (opportunity to choose different workshop)
 1230 **Lunch**
 1330 **Plenary session**
 Topics to cover Feedback from workshops
 Funding
 Standards and their implementation
 Outreach and training
 Proposal, discussion and approval of Recommendations
 1500 **End and Tea**

Sunday 4th July
Optional field excursions to sites in South Wales.

Courses:**Preventative Conservation in Museums, Galleries and Archives****29th March - 2nd April 2004**

A series of modular courses at The Natural History Museum incorporating and building upon the successful *Insect Pests in Museums*, and of interest to all those with responsibility for natural history specimens, ethnographic collections, textiles etc.

- 29th March: *Storage & Handling* - principal contributor Chris Collins
Registration £60.
- 30th, 31st March: *Insect Pests in Museums* - principal contributor David Pinniger
Registration £120.
- 1st, 2nd April: *Environmental Monitoring* - principal contributor Chris Collins
Registration £150.

Further details, including registration forms, available from Paul Ratcliffe,
Department of Palaeontology, The Natural History Museum, Cromwell Road, London SW7 5BD
e-mail: P.Ratcliffe@nhm.ac.uk

MUSEUMS ASSOCIATION SEMINAR: *Is your museum fully accessible?***23 February 2004**

0915-1615 - Church House Conference Centre, Dean's Yard, Westminster, London SW1P 3NZ

In October 2004 significant new duties will come into force under the Disability Discrimination Act. Museums and galleries will be required to make reasonable adjustments to remove all physical barriers to services for disabled people or provide the service by an alternative method.

This one-day seminar will focus on what these reasonable adjustments are and what kind of changes to policies, procedures and practices are needed to ensure the requirements are met. It will examine accessible environments, inclusive design and construction processes for both historic and modern buildings, and discuss issues likely to come to prominence in the future.

This seminar is designed for senior managers, heads of services, development officers and all those with a remit for disability issues:

- * a practical understanding of the Disability Discrimination Act
- * views and experiences of disabled experts
- * guidance on planning accessible environments and services
- * best practice example in the adaptation of historic buildings
- * guidance on making disability access integral to the work of museums and galleries

Information Centre

A number of related organisations will take part in an information centre, offering essential advice on disability issues. Delegates will also receive the Resource Disability Portfolio; a collection of 12 guides on how best to meet the needs of disabled people as users and staff in museums and galleries.

For information visit www.museumsassociation.org and scroll to "Forthcoming events" at the bottom of the homepage

Courses:

The Leicester Spring School in New Media

20-22 April 2004

University of Leicester

The Leicester Spring School in New Media is a three-day course that, through a spirit of collaboration (between public and private agencies, practitioners and training providers), aims to promote innovation and change, contribute to capacity building, and to help UK museums meet the challenges of the digital age. The School is an occasion to reflect upon the impact and potential of digital media on the modern museum - timely at this moment when 'digital heritage' figures so largely within both the present activity and forward thinking of the sector. Organised by the Department of Museum Studies, University of Leicester and supported by the Museums Computer Group

Through a mixture of masterclasses, practical workshops, seminar discussions and demonstrations, the 18 participants have the chance to debate issues, share best practice, identify trends and opportunities, and build informed and effective strategies for working with new media in a museum context. This year, registration at the School will incorporate (on Day 3, 22 April) attendance at the UK Museums and Web conference 2004 - "Web enabled: museums, online access and ability", also being hosted at the University of Leicester's Department of Museum Studies.

The School is not aimed primarily at ICT specialists, but rather museum practitioners from a variety of areas of work who wish to expand and enhance their knowledge, and their museum's potential, for future work with new media.

DAY 1 - 20 April:

- defining 'digital heritage': theories and concepts
- managing the project: from concept to digital product
- working with 'e-tangibles': digitisation and copyright

DAY 2 - 21 April

- supporting e-learning: principles, practice and products
- developing effective interactives: from theory to practice
- writing for the web: accessibility and usability

DAY 3 - 22 April

"Web enabled: museums, online access and ability"

Costs and accommodation

The fee is £150 (for the three days). This includes the study materials, tea and coffee through the day, a drinks reception at the end of Day 1 and an evening meal on Day 2

Thanks to concession rates agreed with the University, accommodation is also available at very competitive rates (subject to availability) at two local hotels a short walk away from the venue.

To provide an environment that is conducive to learning and active participation, the School is, at present, limited to just 18 places. We anticipate demand will be high. Please note, therefore, that places will be allocated on a first come first served basis.

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<http://www.le.ac.uk/ms/professional/springschool.htm>