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NSCG Newsletter

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much of an overlap with BCG and GCG is their in our membership? Do those members not at the AGM share their pro-merger views?

Establishing the discipline of conservation within the Natural Sciences has been hard work; NSCG is now known as the point of contact for both mainstream conservators and collection managers and curators seeking information. Would a merged group still maintain such a profile?

“NSCG is not concerned with systematics, biodiversity, field work, surveys, biological monitoring, recording and curation. This is the concern of the BCG. NSCG is a group for natural science conservators and for biologists interested in learning about natural science conservation. There is an overlap as fortunately curators wish to use conservation materials and techniques, but they should be learning this from a specific source and that is experienced Natural Science Conservators. NSCG is unique in what it is trying to achieve and has started to raise its profile quite considerably. Natural science conservation is extremely important in its own right and should be able to continue to do its good work without its being encompassed by a stronger, richer body”.

2. Two-way merge is not desirable as compared to a three-way merge.

One view stated is that “a merger is only sensible if it brings together BCG, GCG and NSCG. There would be no benefit for a two-way merge - this could be misinterpreted as group ‘x’ being weak and having to join up with group ‘y’ to become financially viable, or to increase membership or to increase influence. A three-way merge with specialist meetings plus a joint AGM would be a much better vision and would not suffer from the above negative spin”. Many who wish to see a merger would prefer all three groups to be involved to be like the SPNHC model.

The ‘straw poll’ voting slip is enclosed with this edition of The Newsletter along with an SAE. Please use it to represent your views and return it to Amanda Sutherland a.s.a.p.

Pyrite Decay Seminar

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The NSCG ran a very successful one-day seminar on Pyrite Decay on the 27th February 2001. The seminar, co-ordinated by Adrian Doyle, was held at the Natural History Museum, London and was very well received, with approximately 25 people attending. The day was divided into the morning session of six talks by guest speakers and after lunch a visit to the Palaeontology Conservation Unit to see demonstrations of different treatments for pyrite decay. The last hour of the day was set aside for refreshments and informal discussion.

Paul Davis – A curators requirement for pyretic specimens

The first speaker was Paul Davis, a curator of Palaeo-Botony specimens at the Natural History Museum. He discussed the relationship between curators and conservators within collections management and the potential conflicts that may arise. The role of these two clearly overlap in the caring of objects although there are some subtle differences. Curators wish to handle and extract information from the specimens, whereas conservators are primarily concerned with the preservation of the specimens. This conflict is duplicated in the primary function of the museum, to hold the collections as a permanent resource to be held in trust for future generations and it's mission to maintain and develop its collections and use them to promote discovery, understanding, responsible use and enjoyment of the natural world. Paul Davis discussed the importance for the conservator and curator to communicate with each other and to identify common aims, needs and priorities with particular emphasis on specimens that had evidence or the potential to suffer pyrite decay.

David Gray – A case study: *Liopleurodon*

David is a conservator in the Palaeontology Department of the Natural History Museum, London. The specimen of *Liopleurodon ferox*, a pliosaur from the Oxford clay was found near Peterborough, about 60 years ago. David discussed the conservation and storage of the upper and lower jaw

of this specimen. The specimen was cracking and breaking due to pyrite decay caused by inappropriate environmental storage conditions. The previous conservation and repair treatments were outlined. Then David demonstrated how he had recently made a thorough attempt to understand the true nature of the specimen decay and solutions he had implemented for the long term storage of the specimen. This specimen was later shown to the group in the afternoon in the Palaeontology Conservation Unit.

Adrian Doyle – Barrier films and microclimates

Adrian Doyle is a conservator in the Palaeontology Conservation Unit at the Natural History Museum, London. Adrian described how he produced a large-scale 'micro-climate' enclosure for actively decaying pyritic plant specimens. To overcome the problem of having to use individual Stewarts® boxes for each specimen, he demonstrated how an existing, free standing, two cubic metre collections cabinet could be wrapped in a moisture resistant barrier film, (Marvelseal® 470), to provide a large scale 'micro-climate', using Art-Sorb® as an environmental control.

By using radio telemetric data loggers to monitor the environment, he showed that the wrapped cabinet provided a humidity level of approximately 45%, necessary to slow down further deterioration, within a range of +/- 4.5 relative humidity compared to the general collections area of +/- 16.9% during the 4 month trial period. This enclosure has allowed the installation of three hundred susceptible and actively decaying fossil plant specimens, thereby giving time for a systematic long-term conservation program to be undertaken as well as providing a suitable storage area after treatment.

Caroline Butler – Treatments at the National Museums & Galleries of Wales (NMGW)

Caroline is a geological conservator at the NMGW, Cardiff. Caroline explained how a variety of techniques had been tried over the years to halt the destruction of significant parts of the collections, some of which worked and others such as Dettol and PVA have not. Caroline went on to say that at the NMGW they had not found one solution to pyrite decay but used a number of different approaches in an effort to combat the problem.

- Firstly the palaeontological and mineralogical stores are air-conditioned although they do not always remain within the set parameters, microclimates are used for susceptible and deteriorating specimens.
- Another area being pursued to help prevent collections being subjected to fluctuating RH a 'low humidity cabinet' is currently being tested. Specimens are being removed from the main collection and stored separately in this facility.
- The Waller experimental ammonia method is used to treat the condition. Palaeontology specimens are commonly treated in NMGW whereas minerals are rarely treated.
- Fossils from certain locations are particularly susceptible to pyrite decay. Casts are made of some new specimens from those sites so that if deterioration does occur there is still a record of the specimen.
- Specimen labels have deteriorated due to contact with acid decay products. A project identifying and treating the damage has been initiated by NMGW.

Alison Stooshnov – Pyrite damaged paper label conservation.

Alison is a paper conservator at NMGW and is currently working on a project identifying and treating specimen labels affected by pyrite decay. This is the first time that pyrite decay of labels has been studied. While some attempts have been made to treat associated label, they have generally not offered a complete solution. Alison discussed that, to treat damaged labels and to provide further protection it is necessary to:

1. Remove pyrite decay products
2. Clean the paper
3. Neutralise the paper
4. Provide a stable support
5. Provide long-term protection
- 6.

Alison discussed the conservation method and materials she has used to address these problems.

Joy Irving – Pyrite Mineral Treatments

Joy Irving works at the Oxford University Museum of Natural History. She has been working on the mineralogy collection and discussed the procedure she used to treat the minerals in the collection at Oxford. She described how she carried out the Ammonia Hydroxide / Polyethylene Glycol treatment giving a step by step guide with accompanying slides. Joy then went on to say how the specimens were packed in stuart boxes after treatment and then stored in wooden drawers.

The afternoon was made up of practical demonstrations in the NHM palaeontology lab of two different treatments used for pyrite decay.

1. Ethanalamine thioglycollate in Industrial Methylated Spirit
2. Ammonia Hydroxide / Polyethylene Glycol

As these treatments were demonstrated the merits of each treatment were discussed. After the demonstration the group were show around the lab and also had a chance to see the *Liopleurodon ferox* specimen David Gray had conserved.

The last hour of the day was left for refreshment and an informal discussion about issues that had been raised during the day or any other conservation problems that people wanted to discuss.

Adrian designed a questionnaire for the attendees and had a positive response to the day. The informality, good value for money and a good balance of lecture and practical were good points of the day but the lack of provided lunch reduced the chance to network.

The lack of advertising was also noted, having missed advertising in GCG's newsletter 'Coprolipe' although UKIC newsletter 'Grapevine' advert attracted some attendees. There did seem to be a genuine interest in further one day seminars of the same format of presentations and practicals and several topics were put forward. However, most attendees did not see the need to set up a Pyrite Decay Special Interest Group, as this was such a specialist field and personal contact by email should suffice.

The day was a success largely due to Adrian Doyle's organisation, for Bob Entwistle for chairing the sessions and for the staff of the PCU for helping with the afternoon session so I would like to thank him once again for a very useful day.



← The Lectures

The Demonstrations →



← The Tours