

BBS Annual Meeting and Conference Liverpool, 28–30 September 2007

The meeting was held at World Museum Liverpool, starting with a tour of the herbarium and library along with an opportunity to view an exhibition of rare and unusual bryological books.

The conference dinner was held on Friday evening in a 210-year-old club, Liverpool's Athenaeum, which was also the venue for the council and committee meetings.

The main Saturday programme began with an experimental workshop session in the museum's Community Base, where draft copies of the new BBS Field Key were available for testing along with unidentified samples from the museum herbarium. A video microscope was provided, along with conventional binocular dissecting microscopes and a range of floras; experienced bryologists provided informal guidance to beginners.

After a buffet lunch, the afternoon session began with five bryological papers and one poster; three of the talks were supported by PowerPoint slides, the others being read in the tradition of historical papers. Summaries are presented below. The meeting then

transferred to the Museum's main lecture theatre for the Annual General Meeting, which concluded at around 5.15 in time for the Tropical Bryology Group to have a brief get-together. The evening meal was held at ASK, a modern restaurant located in Queen Square close to the Museum.

Sunday's excursion to a large raised bog in Shropshire was led by Martin Godfrey, with considerable

help from the warden of Whixall and Fenn Mosses National Nature Reserve, Joan Daniels (see p. 58). I would like to thank them in particular, as well as all our speakers and exhibitors, all those who contributed to the organization of the meeting, and Vanilla Catering.

John Edmondson

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ABSTRACTS OF POSTERS

BBS Field Guide September 2007 Update

All species descriptions (around 560 mosses and 200 liverworts/hornworts) have now been received and typeset, and these are available as low-resolution PDFs online via a link from the BBS homepage. Sam Bosanquet has completely reworked the Field Key, and we now have a comprehensive key to species of *Sphagnum*, thanks to Andy Amphlett and Sandy Payne. We intend to produce a 'prototype' version of the guide for those who have contributed text and/or illustrations to test in the field, and anticipate that the first edition will be available towards the end of 2008. We are still short of several photographs and drawings and lists of these have been posted on the *Field Guide* website. (See p. 70 for the latest *Field Guide* news.)

Ian Atherton, Society for General Microbiology (e i.atherton@sgm.ac.uk)

*Phylogeography of *Chiloscyphus semiteres*, an invasive liverwort in W. Europe*

Chiloscyphus semiteres is a dioicous hepatic with a pan-south temperate distribution, native to Australia, New Zealand, Chile and the Cape. In Europe, it was first found on the Isles of Scilly (UK) in 1955, where only males are present. Populations in western Scotland (where both sexes occur) are thought to have been independently introduced. It is also widespread in southeast England (only females). On the continent it was first mentioned from Belgium and the Netherlands in 1991 (the first find dating back to 1956). Female plants are widespread there, whereas male plants are restricted in distribution, the two sexes showing almost exclusive distributions. This distribution pattern suggests at least two introductions. In order to further track the invasive history of the species, we initiated a study of the chloroplast DNA variation in both the introduced and native ranges. A total of 17 haplotypes were found. Three haplotypes (A, B, L) were found in the introduced range. The distribution of these haplotypes is highly structured, showing little overlap. The haplotype distribution patterns we observed suggest that the species has been introduced at least three times in Europe. A haplotype network revealed two groups of haplotypes separated by 11 mutations. These two groups likely correspond to two varieties (*var. semiteres* and *var. canaliculata*). Haplotypes from these two groups were introduced in Europe.

Olivier Raspé & Herman Stieperaere, National Botanic Garden of Belgium (e herman.stieperaere@br.fgov.be)

ABSTRACTS OF PAPERS

Knowledge gaps in bryophyte distribution and prediction of species-richness

Understanding the distribution of species' is fundamental to conservation planning and hence it is important to quantify and locate the main gaps in knowledge. Within an area of north-west England this study predicted bryophyte species-richness in

1220 tetrads (2x2-km squares) using a quasi-Poisson regression model. The number of raindays (≥ 1 mm rain) each year was clearly the most important predictor variable in the model, followed by total nitrogen deposition and percentage cover of broad-leaved woodland. A comparison of model predictions with present records was used to locate the main

knowledge gaps in bryophyte distribution and assess the overall completeness of the present inventories for North Lancashire and South Lancashire.

Des A. Callaghan, Edge Hill University, Ormskirk
(e descall@blueyonder.co.uk)

The discovery of British and Irish bryophytes

We have been slowly compiling a database of the first records of mosses and liverworts in the British Isles. Our talk presented some preliminary results. There are difficulties in identifying 'first records' of common and conspicuous species from the bryological literature of the 17th century. Nevertheless, many species can be clearly identified. These include some discovered at sites in south-east England which now sound rather unpromising, such as *Bartramia pomiformis*: 'On the ditch bank a little on this side of Mother Huff's on Hampstead Heath'. The changing pattern of discoveries in the 18th, 19th and 20th centuries was outlined and trends in the nature of the bryophytes found over the years are examined using attributes from BRYOATT. We also identified the bryologists who added most species to the flora, and discussed what the study of first records may tell us about the broader history of bryology.

Mark Hill & Chris Preston, CEH Monk's Wood, Cambridgeshire (e cdpr@ceh.ac.uk)

The influence of social background on the emergence of British field botanists in the 17–19th centuries: William Wilson (1799–1871), a case study

The textile industry, non-conformism and medicines prominently influenced the character and development of many British field botanists in the 17–19th centuries. After discussing why and how these factors seem to have favoured the development of field botanists, William Wilson of Warrington was considered as an example. (A full transcript of Mark's talk can be found on p. 28 of this issue.)

Mark Lawley, Ludlow, Shropshire
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'Tutored eyes': the observational skills of 19th century Lancashire bryologists

The limited number of 19th century bryologists has led to the assumption that mosses and liverworts were of interest to specialists only. In my paper I showed that leading bryologists such as William Wilson, Richard Spruce and Benjamin Carrington not only first learned how to look for mosses in the field under the guidance of artisans such as Samuel Gibson, Jethro Tinker, John Nowell and John Horsefield, but also came to rely on them as collectors. By examining how artisans conveyed botanical information to one another at meeting in public houses and in the field, I considered the ways in which they honed their observational skills, and how their confidence in their visual acuity shaped their interactions with learned bryologists. Far from characterizing artisans as 'mere' collectors with easy access to the field, bryologists like Wilson valued and admired them for their 'tutored eyes'.

Anne Secord, Department of History and Philosophy of Science, Cambridge
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*Phases of bryological exploration with the tropical moss genus *Macromitrium**

Macromitrium is a large and complex genus which poses many taxonomic challenges for the tropical bryologist. *Macromitrium* attracted a large number of superfluous names during early phases of bryological exploration, largely due to the differing taxonomic concepts employed during that era. A great deal of taxonomic work is still required to produce an accurate picture of bryophyte diversity in the tropics. I illustrated this talk with an example from my recent research into the *Macromitrium* genus in Africa. Future exploration of bryophyte diversity on a molecular level will further enhance our understanding of this complex genus.

Joanna Wilbraham, Natural History Museum, London (e j.wilbraham@nhm.ac.uk)

Fenns and Whixall Moss is a raised bog neatly bisected by v.c. 40, Shropshire, to the south and v.c. 50, Denbighshire, to the north. Previously extensively worked for peat and, after this finished, colonized by birch with some conifer plantation it has been adopted as a National Nature Reserve and cleared to allow it to regenerate back to a bog. Because of this it has an interesting mix of vegetation types, from quite dry, almost heath, areas

to open water via remaining and increasing raised bog. Just outside the NNR proper there is still some birch encroachment to add to the variety.

Some 16 BBS members were joined by Joan Daniels, the site warden, and what must be a first for a BBS excursion, a small film team consisting of John Hardy with Rachel Davies on camera and Sara Bellis as sound and interviewer. Their work is now available on the on the BBS website. Fenns and

Field Excursion to Fenns and Whixall Mosses

30 September 2007

Martin Godfrey



Whixall Moss has been formally surveyed on a couple of occasions as part of its ongoing management and is visited regularly by Field Studies Council students, so is rather well-known bryologically. Nevertheless, Mark Hill did manage to find one new vice-county record for Shropshire, *Brachythecium mildeanum*, albeit in the car park!

Our first stop, in an area of mire birch wood at the edge of the NNR provided a certain amount of surprise

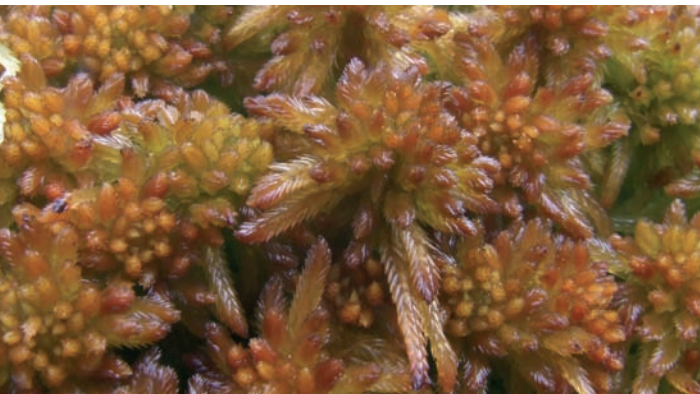
and amusement when both *Grimmia pulvinata* and *Orthotrichum anomalum* were found growing as epiphytes on a birch. The specialities of the site are

◁ Whixall Moss.

▽ Martin Godfrey, our first BBS movie star, and Joan Daniels are interviewed by Sara Bellis at Whixall Moss.

▽ Martin's co-star, Mark Hill, explains the finer details of *Sphagnum* for the camera. All photos Ian Atherton





Dicranum bergeri and *Sphagnum pulchrum* so Joan took us to an area, known as the Cranberry Beds, which had not been used for peat cutting to look for them. The dramatic orange of the *Sphagnum* was found after a short search and was much admired. The *Dicranum* took a bit more finding but, after a few false starts with *D. bonjeanii* and its undulate leaf tips, we were rewarded with a good colony displaying a difficult to describe but very characteristic colour and jizz. In the same area we found a rather problematic *Sphagnum* bearing many of the field characteristics of *S. angustifolium*. This didn't completely convince Mark Hill who took some away for further study; he later declared it to be a rather atypical example of *S. fallax*.

After lunch Joan was keen for us to have a look at the nearby Bettisfield Moss, which she had fairly recently cleared of conifers. Although at first sight pretty lumpy with old stumps it was clearly beginning to recover and had a good range of *Sphagnum* and other mire species. The site also had some willow Carr along one edge to provide a bit of variety.

I would like to thank Joan Daniels for her authoritative and entertaining contribution to the success of the visit. In particular her explanation of the various management activities was particularly valuable in interpreting the site.

Martin Godfrey

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◁ Some of the species found at Whixall Moss during the September 2007 BBS field excursion.

From top to bottom: *Cephalozia connivens* (Jonathan Sleath), *Sphagnum pulchrum* (Ian Atherton), *Dicranum bergeri* (Jonathan Sleath) and *Sphagnum russowii* (Jonathan Sleath).