

# Forest Ecology Group Report for 2000-2004 incl.

## Overview of the last 3 years

The group continues to be very active facilitating, on average, two meetings per year. The types of events have also been extremely varied ranging from small symposia attracting 30-40 delegates to larger international conferences with attendances of over 250. The meetings invariably attract a mix of academics, managers, policy makers and occasionally people from the local community. The problem of poor attendance at field meetings appears to have lessened considerably. For example, of the 93 delegates attending the pinewoods conference in June 2004, over 50 attended the field trip despite the poor weather. Similarly, the field meeting during the genetics conference (September 2003) was well attended. The message seems to be pick interesting areas for field trips and make sure these are not simply short add-ons to the end of meetings allowing people the option of ducking out.

The group also meets every year at the BES Annual Meeting. In 2003, group aims and rationale were revised. The web site was revamped in 2003/2004 and will now function as the main method of communication between the group and the outside world (as agreed at the 2004 BES annual Meeting).

Jonathan Humphrey took over as secretary of the group from Keith Kirby in January 2003. A new secretary will be sought for the group in time for a handover period September-December 2005. The aim will be to introduce the "secretary-elect" to the group at the BES meeting in September 2005.

A full programme of events has been finalised for 2005 and in outline for 2006. **Interest in group activities remains high and the Meetings Committee are invited to approve the continued existence of the group for the next three years.**

## Report for 2002

The mid-Wales field meeting postponed from 2001 because of foot and mouth was cancelled because only 4 people registered. The meeting on restoring replanted ancient woodland sites (Coventry, September) was a success with more than 100 participants.

## Report for 2003

Proceedings of the Restoration of Wooded Landscapes Conference (Sept 2000) and of the NVC woodlands conference (2001) were published in 2003, the former as a special Forestry Commission publication (Humphrey *et al.*, 2003) and the latter as a JNCC publication (Goldberg, 2003).

Two successful meetings were held in 2003. The first: *Working and Walking in the Footsteps of Ghosts: The ecology, archaeology and management of ancient woods and associated land – coincidence, conflict and compromise, or sustainability?* (May 29<sup>th</sup>-June 1<sup>st</sup>) was held at Sheffield Hallam University (organised by the South Yorkshire Biodiversity Group, with support from a variety of other bodies including the British Ecological Society and English Nature). Over 250 attended.

The aims of the meeting were to:

- address relationships, links and potential conflicts arising in wooded landscapes in the context of the historic landscape, archaeology and ecology;

- Raise issues of potential problems and compromises in woodland management related to the historic palimpsest of human activity and management, and the nature of the woodland resource.
- Review challenges of understanding the archaeology of woodlands in relation to ecology, and the consequent implications for contemporary woodland management, considered in the context of ideas of sustainable woodland management.
- Highlight the implications that history may have for today's manager. Relationships between antiquity and dead wood, and continuity and woodland fauna and flora were explored, through the theme of understanding the past, to inform the present, and to influence the future of our ancient woodland resource.

The proceedings of the meeting will be published as a book by Castlepoint Press (Oliver Rackham's publisher). Due date is end December 2004.

The second meeting was entitled: *The Genetic Conservation and Management of British Native Trees* held on 4<sup>th</sup> and 5th September 2003 at the SNH Battleby Conference Centre, Perth, consisting of one day of talks followed by a field day in Highland Perthshire. Topics covered over both days included:

- science underlying genetic management in native trees
- genetic history of British native tree populations
- creation of population inventories for British native trees
- researching adaptive variation in British native trees
- development of policy for the conservation of UK forest genetic resources
- conserving genetic resources as a component of forest biodiversity
- genetic management of trees on the Continent
- seed source zonation for British native trees.

The meeting was organised by Dr. Scott McG. Wilson in collaboration with Forest Research, Scottish Natural Heritage, The Royal Scottish Forestry Society and the BES (Forest Ecology Group and Ecological Genetics Group). Around 40 delegates attended the meeting from a variety of backgrounds. There will not be any published proceedings, but a book of extended abstracts is available from the group web site.

The group also sponsored a thematic session at the BES Annual Meeting in Manchester entitled: *Large mammals as landscape-scale influences on temperate and boreal forests*. We did not receive as many offers of talks as expected but nevertheless the session was well received by those attending. Franz Vera delivered an excellent key note presentation, but there were also presentations on cattle grazing, beavers and wild boar. In the long-term we expect to see increased debate regarding the role of large herbivores in influencing woodland dynamics.

## Report for 2004

### *Pinewood conference*

The conference on native pinewoods (Ecology of Large Native Pinewoods: past, present and future – Drumnadrochit 14-16 June 2004) attracted nearly 100 delegates and was a great success. The organisation was undertaken mainly by Forest Research (Jonathan Humphrey) and Stirling University (Dr Richard Tipping). The impetus for this meeting came from a desire to celebrate the designation of Glen Affric as Scotland's newest National Nature Reserve and to hold a follow up to the last great pinewood gathering "Our Pinewood Heritage" held in Inverness in 1994. The aims of the conference were to: bring together researchers, land managers and those in the local community with an interest in pinewood ecology and biodiversity; share

experiences and information; review progress to date and identify future research, conservation and restoration priorities.

The key note address was given by Bob McIntosh, director of Forestry Commission Scotland. Reviewing progress over the last ten years, it is clear that while targets for the establishment of new native pinewoods have been exceeded, more work is needed on expanding, restoring and improving the condition of existing pinewoods. There is a debate about how ambitious we should be, especially in relation to expansion, given that semi-natural open ground will inevitably be lost to woodland, resulting in possible negative impacts on biodiversity. There are also differing views about how existing pinewoods should be managed – leave to natural processes or intervene to modify forest structure, tree composition and dynamics.

Site specific solutions will be part of the key to resolving these dilemmas, but the extensive pinewoods of western Norway provide some clues as to how Scottish pinewoods could look in the future. Norwegian pinewoods are subject to large climatic gradients over short distances where the wet oceanic pinewoods of the west grade over a few tens of kilometres to the dry, continental pinewoods of the more easterly inner fjords. Pinewood dynamics also change markedly in relation to this gradient, the oceanic pinewoods being subject to wind disturbance – the continental pinewoods more affected by fire. Many of the northern Scottish pinewoods are subject to similarly short climatic gradients, which undoubtedly affect growing conditions and ecosystem dynamics.

The issue of climate change and its influence on the pinewood ecosystem was a major area of debate in the conference. Historical research emphasised the profound effect that changes in climate – and associated short-term extreme events, can have on forest development. In Glen Affric particularly, the dominance of pine has waxed and waned in response to climate and human disturbance, with cold wet periods associated with loss of pine to blanket bog, and warm dry periods promoting increased abundance of broadleaves on better soils. The success of present day pinewood projects will hinge on taking into account current weather and climate change models.

Discussions over the three days of the conference also revealed how little we know about the biodiversity of Glen Affric and other northern pinewoods compared to the likes of Abernethy and the Strathspey pinewoods. For example, fungal, lichen and invertebrate assemblages have been little studied, particularly those associated with deadwood and uncommon trees such as aspen. The debate continues as to whether these habitats should be artificially enhanced, and key species translocated in the landscape to speed up the restoration process. Such activities should ideally be informed by a robust understanding of the interrelationship between different components of the ecosystem. Our understanding of the effects of disturbance on stand structure and regeneration is improving raising the prospect of improved models of stand development and dynamics. At the more detailed level, research on the monoterpene composition of pine foliage is beginning to reveal a fascinating link between chemical diversity and the diversity of invertebrate, fungi and plant communities; demonstrating a direct correlation between genetic and ecosystem level processes.

When it comes to pinewood management the vision is long-term, 100 years or more being a suitable time frame. The vision has to be open-ended to allow not only the forest to develop and evolve, but also permit peoples' aspirations about what they want from their pinewoods to evolve as well. Local community involvement and interest in management issues is at an all time high, and there is active participation by community groups in the planning of management activities in Glen Affric. One of the main action points is to find more effective ways of involving local communities in the research underpinning current management. There is a need to make the process of how research findings are integrated into management more transparent to a wider range of stakeholders. On the issue of forest use and rural development, the recent rise in eco-

tourism is revealing the tensions between desires for increased development/economic prosperity versus low key informal recreation use/quality of life. Resolving these tensions while keeping all parties bought into the process will be a challenge.

In conclusion, the conference was undoubtedly successful in bringing together a wide range of interest groups and sharing information. Holding the indoor session within the Glen Urquhart Community Centre brought conference delegates into the heart of the local community and allowed scientists, managers and community representatives to engage in productive dialogue and discussion. As noted in both the opening and closing addresses to the conference, this consensual approach marks a changed attitude to pinewood issues. No longer do the special interest group, the academic researcher or professional manager work in isolation; there is now a shared vision of how pinewoods should be conserved and managed, and a commitment to work together to solve outstanding differences.

Lists of presentations, abstracts and details of posters are available on the web site [www.britishecologicalsociety.org/articles/groups/forest/FEG%202004%20programme](http://www.britishecologicalsociety.org/articles/groups/forest/FEG%202004%20programme)

The journal *Forestry* has agreed to publish the proceedings of the meeting and the tentative timetable is for completion of drafts by January 2005 with publication in Aug/Sept 05. The conference budget is set out below (Table 1). Only some of the BES contribution was needed for funding conference expenses.

**The secretary requests approval from the Meetings Committee to use the surplus money for part funding an editor for the conference proceedings. The total cost of which is estimated at around £ 3000.**

Table 1. Pinewoods conference breakdown of income and expenditure

	<b>Income</b>	<b>Expenditure</b>
BES	1000	
Booking fees	4160	
Postage		44.65
Badges/delegates pack		65.73
Bus hire		440
Conference venue and catering		1465
Admin time		483.6
Admin expenses		190.95
Flier preparation & distribution		620
Photography/media		300
Invited speaker costs		655.23
<b>Total</b>	<b>5160</b>	<b>4265.16</b>
Surplus	894.84	

## *Bat conference*

The conference “Managing trees and woodlands as a habitat for bats”; Bournemouth University 16-17 September was held in support of current initiatives aiming to provide guidance to managers of trees and woodlands, regarding how best to manage these habitats for bats. The conference featured 11 spoken presentations (plus an introduction from Dr Adrian Newton the organiser), together with a poster display (which featured about 12 posters). There were also two field outings held in conjunction with the event, the first an evening visit to the New Forest, where delegates were able to see bats at first hand, and observe recent developments in trapping methods in action. The second field outing was held on the Friday afternoon, when approximately 60 delegates attended a visit to Mottisfont Abbey, owned by the National Trust. This is a SAC designated solely for its barbastelle bat colonies. We were able to visit a number of roost trees identified by a current research programme, and discussions focused on the management of the woodlands within the estate with respect to meeting the needs of bats present.

The meeting was attended by 150 delegates drawn from the bat ecological research community, national and county bat groups, and a large number of conservation practitioners including reserve managers, foresters (including many representatives of the Forestry Commission) and arboriculturalists. The meeting was unique in terms of bringing this combination of people together, and many comments were received from delegates to this effect.

The spoken presentations were of uniformly high standard, and the spoken part of the meeting was rounded off with a discussion session, focusing on 'Identifying best practice'. This was designed to support a new initiative, being undertaken by the Forestry Commission and English Nature with the Bat Conservation Trust, aiming at developing practical guidance for environmental managers regarding managing trees and woodland for bats. The outcome of the meeting will therefore feed directly into development of this guidance (and thereby potentially inform future policy), and was therefore most timely in this respect.

A website is being developed that will enable anyone to download the powerpoint displays presented at the meeting. This will form the only 'published' output of the meeting. This strategy has been adopted to place the information presented in the public domain as quickly as possible. Also, the FC/EN/BCT initiative mentioned above will publish the outcome of its own activities in due course, and therefore provide a means of disseminating the results of the discussion held at this meeting. Table 2 includes details of the conference budget.

Table 2. Bat conference – breakdown of income and expenditure.

<b>EXPENDITURE</b>			
<b>ITEM</b>	<b>NO. OF DELEGATES</b>	<b>COST</b>	<b>TOTAL COST</b>
Lecturing Costs	10	£180	£1,800
Rooms Cost	2	£250	£500
Fieldwork Cost	1	£450	£450
Printing	1	£100	£100
Administration Time	1	£5,200	£5,200
			<b>£8,050</b>
Catering Day 1	150	£7.5	£1,125
Catering Day 2	150	£6.5	£975
			<b>£2,100</b>
			<b>£10,150</b>
<b>INCOME</b>			
<b>ITEM</b>	<b>NO. OF DELEGATES</b>	<b>INCOME</b>	<b>TOTAL INCOME</b>
Delegate Fee	150	£45.00	£6,750
Catering Charges - Day 1	150	£8.00	£1,200
Catering Charges - Day 2	150	£8.00	£1,200
BES Donation	1	£1,000	£1,000
			<b>£10,150</b>
		<b>SURPLUS</b>	<b>£0</b>

## Events in 2005

The programme of events for 2005 has now been finalised although precise dates will need to be agreed for two of the meetings.

### *Assessing biodiversity changes in British woodland 1971-2001 end June 2005*

The countryside and its woods have changed much over the last 50 years and will continue to change. Farming and forestry practices alter in response to socio-economic demands; there may be gradual responses as woods felled in the 1940s grow up again, or to trends in climate change or atmospheric pollution; and sudden responses to events such as the 1987 storm in south-east England or the Dutch elm disease outbreak. These changes affect the composition and structure of our woods: some species will increase, some decrease.

We cannot prepare for future changes unless we understand how woods have changed in the past. We need to be able to separate the effects of long-term, but cyclical processes from directional change, which may be of lower amplitude during the time period concerned.

This one day meeting will discuss the findings from a resurvey of 103 woods spread across Britain that were first surveyed in 1971. Standardised methods of describing the trees, shrubs, ground flora, soils and general habitats present were used that were then repeated in 1999-2003 (for convenience referred to subsequently as the '2001 survey').

Draft Programme (speakers provisional, not all yet approached)

1. The main survey

Introduction to the Project;  
Methodology of survey and analysis;  
Main vegetation changes

2. Putting the work in a wider context

Links to climate change studies  
Links to CS2000 results  
Links to woodland inventories  
European dimension (Cost E25/Forest Focus)

The proposed budget is:

c. £800 for venue (location not yet fixed); £15 per person to cover refreshments, and conference materials – estimated attendance about 100 people

English Nature will supply up to £1000. The Forest Ecology Group will contribute up to £1000, depending on final budget and numbers who do in the end attend.

*Czech (Moravian) beech woods, August 2005*

This meeting will be organised by Radim Hédl of the Institute of Botany, Czech Academy of Science with support from the Forest Ecology Group. The aim of the meeting is to bring together an international community of people concerned with the conservation and management of beech woods in Europe. The emphasis is on field trips to selected beech woods in Moravia (eastern Czech Republic). Participants mainly from the Great Britain and Czech Republic are expected, although people from any country are welcomed to participate. The central point will be Brno, a city in the NE Czech Republic, located on the transition of three biogeographical provinces. The meeting should last for 3 + ½ days. About 20 to 30 participants are intended. About a half-day for an introductory session and two whole-day field trips to several representative beech woods are planned.

Institutional support is being sought from the British Ecological Society Forest Ecology Group, the Czech Botanical Society, other institutions and private persons in the Czech Republic. The meeting will be announced on the web pages of the both BES and CBS. A brochure (or an issue of one of the Czech botanical periodicals) presenting papers by the participants will be prepared.

A proposed schedule is:

(0 day: arrival to Brno)

1<sup>st</sup> day: Morning: Brno, short introductions and rather informal presentations; afternoon a transfer to the first place, in the Jeseníky Mts. Overnight stay.

2<sup>nd</sup> day: A field trip to the selected beech woods in the Jeseníky Mts. Evening transfer to Brno, overnight stay.

3<sup>rd</sup> day: A field trip to one of the Carpathian mountain ranges close from Brno, visit of the selected places. Evening: transfer to Brno, overnight stay.

4<sup>th</sup> day: Final meeting, end of the whole meeting.

Table 3 . Estimated costs to be funded by FEG

Item	Cost
Subsistence costs for two organisers	£100
Transportation	£200
Other costs (room and equipment rentals, unexpected costs)	£100
Brochure with papers	£160
<b>Total estimated costs</b>	<b>£560</b>

*Atlantic Oakwoods, Oban: 14-16 September 2005*

Firm plans are in place for a conference on the ecology and management of Atlantic oakwoods. There will be two days of discussion followed by a field excursion to study some of the local examples of these woods. The aims of the meeting are (1) to bring together research scientists, land managers, conservationists and all who share an interest in these woods; (2) to provide a forum in which to present current knowledge on the ecological diversity and past management of the woods; and (3) to identify needs for conservation and further research. The proceedings of the symposium will be published in the Botanical Journal of Scotland. The programme comprises 8 sessions, each with two or three speakers. These are:- Definition and Distribution; Genetic History; Cultural History; Present Structure and Composition (diversity and plant species groups - 3 sessions); Faunal Relationships; Conservation and Management Policy. There will also be a poster session.

The conference organisation is being led by the Botanical Society of Scotland (<http://www.diatom.free-online.co.uk/>) in partnership with Forest Research ([www.forestresearch.gov.uk](http://www.forestresearch.gov.uk)) Scottish Natural Heritage ([www.snh.gov.uk](http://www.snh.gov.uk)) and the Forestry Commission ([www.forestry.gov.uk](http://www.forestry.gov.uk)). Further information is available from Patricia Cochrane [[pat@bhillriseed.u-net.com](mailto:pat@bhillriseed.u-net.com)].

Table 4. Estimated budget at 24<sup>th</sup> August 204 assuming 120 delegates (including 30 speakers/session chairmen)

Expenditure

<b>Accommodation</b> Corran Halls Teas and coffees 4@£1.10 for 120 Lunches 2@£7 for 120 <b>Total</b>	£452 £528 £1,680 <b>£2660</b>
<b>Speakers' expenses</b> Travel (budget air fare or standard rail) 30@£130 Accommodation 20@£60 for 2 nights Dinners 30@£20 for 2 nights <b>Total</b>	£3,900 £2,400 £1,200 <b>£7,500</b>
<b>Publicity</b> Printing of flyer Postage <b>Total</b>	<b>£840</b>
<b>Administration</b> Shiela Wilson Badges Abstract Booklet Poster Boards <b>Total</b>	£450   <b>£800</b>
<b>Contingency</b>	<b>£1,500</b>
<b>Field Meeting</b> (50 participants) Transport Lunches <b>Total</b>	£300 £400 <b>£700</b>
<b>TOTAL</b>	<b>£14,000</b>

Income

Botanical Society of Scotland	£1,500
British Ecological Society	£1,500
Forestry Commission	£4,000 (to request)
Field Meeting 50@£14	£700
Registration fees 90@£70	£6,300
<b>TOTAL</b>	<b>£14,000</b>

Student expenses: Registration £70, overnights £25, food, £30, travel £75; total per student £200. 15 student bursaries would cost £3,000. If £3000 were requested from SNH for student bursaries any money not used for that purpose could be put towards extra costs of printing more and/or better illustrated, copies of the proceedings of the Symposium in *BJS*.

## **Requested Budget for 2005**

£1500 sponsorship of Atlantic oakwoods conference

£560 sponsorship for Czech Beechwoods meeting

£1000 sponsorship for meeting on long-term vegetation change

£650 travel expenses for Secretary to attend Annual Meeting and Meetings Committee meetings

**Total requested: £3710**

## **Outline plans for 2006**

Draft proposals are being prepared by John Rodwell (Lancaster University) for a meeting on the establishment of new woodland on brownfield sites (North-west England). Peter Hobson (Otley College) is preparing a proposal for a meeting on forest ecosystem management. Ralph Harmer (Forest Research) is preparing a proposal for a meeting on bramble.

## **References**

Goldberg, E. (2003) National Vegetation Classification: 10 years experience using the woodland section. JNCC report No. 335.

Humphrey, J.W., Newton, A.C., Latham, J., Gray, H., Kirby, K.J., Quine, C.P., and Poulson, E. (eds) (2003) *The Restoration of Wooded Landscapes*. Forestry Commission, Edinburgh.