Botanical Society of Scotland

President’s Report
2015/16

John Grace
2015/16: a particularly successful lecture programme

Best lecture programme ever, at BSS

BOTANICAL SOCIETY OF SCOTLAND
2015/2016 LECTURE PROGRAMME

EDINBURGH

All lectures are held in the Lecture Theatre of the Royal Botanic Garden, Edinburgh, 20A Inverleith Row, Edinburgh, EH3 5LR at 5.30pm. Tea will be served from 5pm. Abstracts of the lectures and biographical notes of the speakers will be available on the Society’s website two weeks before each lecture.

21ST JANUARY 2016
Prof Alistair Hetherington
University of Bristol
Tales from the water-gate: leaf surface stomata, what they do and why they are important

25TH FEBRUARY 2016
Dr Sarah Woodin
Aberdeen University
100 years of vegetation change in Scotland

24TH MARCH 2016
Nick Stewart
Independent Botanist
Aquatics in Scotland: the overlooked well beneath

14TH APRIL 2016
Dr Charlie Clutterbuck
City University
The relationships between people, plants and science in determining where our food comes from.
(This lecture will be suitable for children)

19TH MAY 2016
Dr Karen Lee
John Innes Research Centre, Norwich
Getting inside carnivorous plants
The lecture will be preceded by a walk-round the insectivorous plants in the RBGE plant houses at 4.30pm and AGM at 5.30pm

24TH SEPTEMBER 2015
Professor Roy Watling
Royal Botanic Garden, Edinburgh
What Beatrix Potter can tell us about fungi

22ND OCTOBER 2015
Dr Richard Milne
University of Edinburgh
Divorcing the Scruffa: how and why molecular data has changed plant classification
(=tea will be 15 minutes later than usual at 5.15)

19TH NOVEMBER 2015
Professor Alastair Fitter
University of York
Friendly fungi or business partners? A mycorrhizal medley

17TH DECEMBER 2015
Scott Wilson
Independent Forest Ecologist, Aberdeen
Native woodlands in Scotland - some knotty problems: past, present and future

Thanks to Maria Chamberlain
Summer Programme of Field Meetings, sometimes joint with other Societies

Also numerous ad hoc meetings

**Saturday 20th March 2004, 10.30 am**
**MOSES AND LIVERWORTS OF SOUTH INCH, PERTH**
**Joint with PAMS (PERTHSHIRE SOCIETY OF NATURAL SCIENCE)**
Leaders: David Chamberlain and Allan Godfrey
Meet at South Inch Car Park NO519 238 (chargable). Further information from Allan Godfrey at allan.godfrey@btinternet.com. Records will be collected for the Urban Flora project.

**Tuesday 26th May, 7pm**
**LICENSORS OF SCUNDRY**
**DUOPTHIP PARK**
**Joint with DUNDEE NATURALISTS**
Leaders: Graham Burnside and Malc Ballinger
Meet at Duopthip Park car park NO739 735. See www.dundeenaturalists.org.uk. Records will be collected for the Urban Flora project.

**Saturday 25th May, 10am**
**FORAGE FOR YOUR LUNCH**
**CRAWCOTTAM PARK, EDINBURGH**
Leaders: Richard and Nenette Milne
We will pick our edible plants and cook them in a local church hall. Booking required. There may be a small charge for the use of the hall. Please contact nenellean@easynet.co.uk if you wish to attend.

**Sunday 12th May, 2003**
**FUNGUS UNDER THE MICROSCOPE**
**Joint with WATER OF LEITH CONSERVATION TRUST**
**AND FROG WELLPETT GROUP OF SOUTH EAST SCOTLAND**
**General Meeting**
21June rsd (edinburgh eh1 3lt)
Leaders: Neil Mcleod and Maria Chamberlain
The workshop will go over the life cycle biology of the major fungal groups and concentrate on the microscopic characters which are often needed to confirm ID. We will all collect material for observation in the vicinity of the Centre. Book with Maria Chamberlain at mcg1902@btinternet.com as numbers will be limited.

**Saturday 22nd June, 2003**
**CRAIG VERRIE and FERNFOLIA HAMILTON, R. I. O.**
**JOINT FIELD MEETING WITH RWIPS**
**Joint with RWIPS**
Camelon (NO611 919) is a Collective located at the head of Gleninn o’Whitlam approximately 6.5 kilometres north west of Troquear in the north west corner of the Loch Lomond and the Trossachs National Park. Camelon forms part of the Glen Hengist Special Area of Conservation. The Area is a species rich calcicolous grassland. Ruthie and I will lead the walk which may be from 3 to 4 hours in length. Meet at the west car park at 3pm. Bring cake (optional) and a good sturdy pair of walking boots.

**Tuesday 24th June, 2003**
**RODICKS HILL, STIRLING**
**Joint with DUNDEE NATURALISTS**
Leaders: Brian Ballinger and Anne Ward
Meet at Explorers car park NO549 370 see www.rodicks.co.uk. Records will be collected for the Urban Flora project.

**Saturday 23rd July, 2003**
**DUNBAR: ANGLISSTANE ATHLEWSAITE**
**Joint with RWIPS**
This will be an all day event. Meet at Dunbar car park NO686 359

**Sunday 1st August, 2003**
**ECCLESTON: HAREWOOD HOUSE**
**Joint with RWIPS**
This will be an all day event. Meet at Harewood House NO686 359

**Saturday 7th September, 2003**
**ASSOCIATION OF NORTH EAST SCOTLAND**
**Joint with DUNDEE NATURALISTS**
Leaders: Andrew Brown and Graeme Mcpherson
Meet at Harewood House NO686 359

**Sunday 21st September, 2003**
**FUNGUS FORAYS IN HARRIERS WOODS**
**Leaders: Stephen Missel**
Meet Car Park at Hume Church – NT 48107
Access off crossing at Hume some three miles from A90 on the B4 road from Inserton to Haddington.

**Sunday 10th October, 2003**
**BRIDOGATES AT BLOXWORTHY, EDINBURGH**
**Leaders: David Chamberlain**
Meet at The Blaxford Hotel car park in front of the Royal Observatory - NS 1511. This outing will be especially geared to novices and students. Records will be collected for the Urban Flora project.

**INSTRUCTIONS FOR MOST MEETINGS:** Please bring with you waterproof clothing, suitable footwear, a rucksack and packed lunch. Botanical society members are covered by the Society’s Insurance. The leader will warn participants of possible risks. Contact the Programme Secretary, Maria Chamberlain at mcg1902@btinternet.com for further details or queries concerning transport to meetings. Check www.international-society
Perth urban habitats around the River Tay with the Perth Society of Natural Science, Saturday, 19th March 2016. Bryophytes
The Society’s academic journal, *Plant Ecology and Diversity*
Edited by Laszlo Nagy, published by Taylor and Francis, six issues per year

**Articles with Scottish flavour**

*Red deer impacts on the montane *Racomitrium lanuginosum* moss-heath community in north-west Scotland*

Oliver Moore** and Michael J. Crawley*

*School of Natural and Social Sciences, University of Gloucestershire, Cheltenham, UK; 2Department of Biology, Imperial College London, London, UK.*

(Received 24 July 2014; accepted 30 November 2014)

**Background:** The effect of sheep grazing on the internationally important moss-heath community of the British uplands has been well studied but less is known about the impact of red deer (*Cervus elaphus*).

**Aims:** To compare the impact of different densities of red deer on heather and heather associated with moss-heath vegetation at Beinn Eighe Nature Reserve (low deer density) and a traditional sporting estate at Letterewe (with higher deer density, Scotland).

**Methods:** Suitable pairs of summit study sites were selected at random, and species cover data were collected from thirty 1 m² quadrats at each location. The indirect group count method was used to estimate red deer usage. Generalised linear models were fitted to the data.

**Results:** Mean grazing damage was significantly higher in two of the Letterewe study sites compared with their Beinn Eighe counterparts. Bryophyte cover and height in general matched the pattern for *Racomitrium lanuginosum* in that they were not significantly different between any of the study site pairings. Differences in mean deer density between the Beinn Eighe and Letterewe proportions as a whole, and red deer numbers actually using the exposed summit non-heath vegetation were estimated to be very low. Therefore, grazing cover within the Letterewe summit study sites was not significantly different from that at Beinn Eighe.

**Keywords:** Beinn Eighe; bryophyte; *Cervus elaphus*; grassland; lichen; sheep grazing; summit vegetation

**New in 2016, The Grubb Reviews**

*Plant Ecology & Diversity* 2015

**Impact Factor**

*Plant Ecology and Diversity* has seen an increase from 1.766 to 2.349

**Most highly cited article so far, n=187**

*Plant Ecology & Diversity*
Vol. 1, No. 2, November 2008, 147-160

**Alpines, trees, and refugia in Europe**

II. John B. Bark5** and Katherine J. Willis6**

1Department of Biology, University of Bergen, Bergen, Norway; 4Oxford University Centre for the Environment, University of Oxford, Oxford, U.K.; 5Environmental Change Research Centre, University College London, London, UK.

(Received 18 December 2007; final version received 16 May 2009)

Refugia were critically important for species survived in both glacial and interglacial stages of the Quaternary. The classical view of glacial stages is that alpine and arctic plants were widespread in the lowlands of central Europe and around the margins of the continental and alpine ice-sheets, whereas trees were restricted to localised refugial areas in southern Europe and the Mediterranean basin. New palaeobotanical evidence in Europe suggests, however, that this classical view is incomplete and that tree distributional ranges during the glacial stages were more extensive and included many local areas of small populations in central and eastern Europe growing in so-called "cryptic" refugia. We argue that this concept of "cryptic" refugia is also applicable to arctic and alpine plants during temperate interglacial stages where small localised populations grew in naturally open habitats that are not beyond or above the frost limit. Determination of the whereabouts of these cold- and warm-stage "cryptic" refugia is very important in our understanding of the spatial patterns of present day genetic diversity and the possible limits of spread of trees in response to future climate change.

**Keywords:** alpine plants; arctic plants; cryptic refugia; Holocene; Last Glacial Maximum, macroscopic charcoal; Quaternary; plant macrofossils; pollen; trees
The Urban Flora Project – about 19,000 records so far

But more recorders needed! Are you going on holiday to the western parts of Scotland?
Urban Flora: let us focus today on some of the rarer plants

(..rare in Scotland, sometimes common in England and Wales)
List of southerners we’ve found

*Senecio inaequidens* @ Granton, Edinburgh

*Atropa belladonna* @ Edinburgh

*Conyza canadensis* @ Leith, Edinburgh

*Festuca arundinacea* @ Bo’ness

*Galinsoga quadriradiata* @ Edinburgh

*Polypogon viridis* @ Granton, Edinburgh

*Saxifraga granulata* @ Cramond Island, Edinburgh

*Allium carinatum* @ Dundee

*Epipactis helleborine* @ Bo’ness

*Lilium martagon* @ Blairgowrie

*Olearia avicenniifolia x moschata* @ Ayr

*Carpobrotus edulis* @ Portpatrick
Warming brings southerners to the north

Isotherms moving 15 km north per year (Beniston 2013)
Biogeographic zones and species density


Far more of them in the south

Natives and archaeophytes
Species often map by summer temperature

*Buddleja davidii* (Butterfly-bush)
An Edinburgh street
Different patterns expected in urban environments

Hypothesis: we will find southern species in our northern towns and cities
A southerner comes north

Found in Edinburgh streets and allotments, many sightings this year

Galinsoga quadriradiata (Shaggy-soldier)
Another southerner comes north

*Senecio inaequidens* (Narrow-leaved Ragwort) found at Granton
Carpobrotus edulis (Huttentot Fig), Cliff at Portpatrick
A woodland example

*Epipactis helleborine* (Broad-leaved Helleborine) in a wood at Bo’ness

“said to be more common in Glasgow than anywhere else in Britain (Allan & Woods, 1993).”
Saxifraga granulata (Meadow Saxifrage)
Crammond Island, Edinburgh

Spreading in the North-East

WWII fortifications at Crammond Island
Are northern species absent from (warm) cities? (the converse hypothesis)

*Pyrola media*  (Intermediate Wintergreen)
*In a wood at Bo’ness*
But some species are evidently temperature-insensitive
Not a southerner but a kiwi, relation to temperature unclear

Olearia avicenniifolia x moschata (O. x haastii) (Daisy-bush) Ayr

Oliver Cromwell’s Citadel, Ayr
The End
Many thanks for listening