



CAPER2008

CEH, Environment Centre Wales
33rd Annual Meeting

17th - 19th March 2008

Programme and Abstracts

Secretariat sponsored by DEFRA

COMMITTEE ON AIR POLLUTION EFFECTS RESEARCH

CEH Bangor /Bangor University 17th - 19th
March 2008

Programme

Registration at the CEH reception desk in the
Environment Centre Wales

(Car parking permits will be sent out, there hopefully will be spaces)

Lunch from 12.30

Departure times for field visits once you have all signed up

Afternoon Programme Monday 17th March

Choice of field visits

Laurence Jones will lead a trip to the Nitrogen addition x grazing
experiment at Newborough.

Douglas Godbold and Gina Mills will lead a visit to Aber to the
FACE experiment and the solardomes.

Alwyn Sowerby will lead a visit to Climoor the roof study
experiment on a moorland

[Bring waterproof footwear]

Meeting of the Terrestrial Umbrella PIs

18.30 HOT BUFFET (CEH)

19.30 Welcome Bridget Emmett

Poster Pub and display by ADC at CEH

**Accommodation in Tegfan Y block 10-15 min walk up/down hill
from CEH**

Tuesday 18th March

Breakfast from 7.30 am in hall Plas Gwyn dining room.

Talks at CEH Bangor

Session Chair: Neil Cape - Ozone in the uplands and beyond

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|-------|---|---|
| 09.00 | Felicity Hayes
(CEH Bangor) | Impacts of increasing background ozone concentration on interspecies competition in grasslands |
| 09.20 | Gina Mills +
Kirsten
Wyness (CEH
Bangor) | Ozone impacts on stomatal control and carbon turnover, including carry-over effects during the winter |
| 09.40 | Simon Peacock
(Newcastle
University) | Impacts of ozone on upland grassland and hedgerow plant communities |
| 10.00 | Jeremy
Barnes
(Newcastle
University) | Impacts of ozone on natural vegetation: Are we barking up the wrong tree? |
| 10.20 | Sue Benham
(Forest
Research) | Using commercial tree nurseries to monitor visible ozone injury-an evaluation |
| 10.40 | COFFEE | |

Session Chair: Mike Ashmore - Bogs and all that

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| 11.00 | Kerry
Dinsmore
(CEH
Edinburgh) | Greenhouse gas budget of fully vegetated peatland mesocosms; effect of water table depth and vegetation/microtopography |
| 11.20 | Kerstin
Wedlich
(University of
York) | Ecosystem response to O ₃ in lowland raised bog mesocosms - final results |
| 11.40 | Jennifer
Williamson
(CEH Bangor) | How does tropospheric ozone affect carbon gas emissions from wetlands? |

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| 12.00 | Pauline Currey
(Macaulay) | Interactions between atmospheric nitrogen deposition and carbon dynamics in peatlands |
| 12.20 | Sanna Kivimaki
(CEH
Edinburgh) | Carbon and N cycling in <i>Sphagnum capillifolium</i> in response to N deposition and N form |

12.40 LUNCH CEH

Session Chair: David Fowler - Nitrogen Issues

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| 14.00 | Lucy Sheppard
(CEH Edinburgh) | Do we need to consider N form in relation to Critical Load setting? |
| 14.20 | Laurence Jones
(CEH Bangor) | Model based risk assessments of the vulnerability of rare coastal species to N deposition |
| 14.40 | Ed Rowe
(CEH Bangor) | Translating forecasts of ecosystem responses to N and S pollution into policy-relevant biodiversity indicators |
| 15.00 | Harry Harmens
(CEH Bangor) | Mosses as biomonitors of atmospheric nitrogen pollution: relationship between the N concentration in mosses and modelled n deposition for different UK habitats |
| 15.20 | Nigel Bell (Imperial College) | Open air laboratories project(opal) |
| 15.30 | TEA | |

Session Chair: Bridget Emmett - From Science to Policy to Delivery

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| 16.00 | Ian Strachan
(SNH) | An introduction to conservation issues |
| 16.15 | Rob Kinnersley
(EA) | Developing a role for biomonitoring in Environment Agency Permitting |

16.35	Jane Hall (CEH Bangor)	Critical Loads - Maps or Mystique: issues involved in 'downscaling' critical loads
16.55	Khalid Aazem (CCW)	PPC and the Habitats directive assessments for power stations and intensive livestock
17.15	Simon Bareham (CCW)	Protecting biodiversity from air pollution:- progress made, opportunities missed and future challenges
1900		DINNER at the Hall of Residence Plas Gwyn dining room.
20.30		Committee meeting tbc venue

Wednesday 19th March

Breakfast from 7.30am in hall move out **return keys**

CEH Bangor

Session Chair: Simon Caporn - In situ N responses

09.00	Chris Field (MMU)	The effects of nitrogen on the decomposition, mineralisation and turnover of organic matter in three contrasting ericaceous-dominated ecosystems.
09.20	Elena Vanguelova (Forest Research)	Long-term trends in rainfall, throughfall and soil solution chemistry in the Level 2 forest monitoring plots in the UK
09.40	Carly Stevens (Open University)	Biodiversity of European grasslands - gradient studies to investigate the impact of atmospheric nitrogen

9.50	Suzi Chang (Imperial College London)	deposition on acid grasslands How do pollution driven changes in heathland community composition affect ecosystem function
10.10	Odhran O'Sullivan (University of Sheffield)	Recovery in extractable N concentrations after cessation of artificial N additions
10.30	Alan Jones (Imperial College)	Investigating nitrogen deposition signals in <i>Calluna</i> -dominated lowland heathland systems in England
10.50	COFFEE	

Session Chair: David Fowler

11.10	Chris Freeman (Bangor University)	Phenol Oxidase: An enzymic latch on a global carbon store
11.40	Jo Clark (Leeds University)	Can increased DOC in streams and lakes be explained by changes in acid sulphate and seasalt deposition in catchment soils?
12.00	Emma Green (Imperial College)	Characterising the effect of N deposition history on heathland recovery following fire
12.20	Douglas Godbold (University of Bangor)	Field face system: Tree responses to elevated atmospheric carbon dioxide
12.30	Nigel Bell (Imperial College)	34 years of CAPER
13.00	LUNCH (CEH) and depart	